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ICLARM TECHNICAL REPORTS 12

# A Japanese fishing joint venture: worker experience and national development in the Solomon Islands

Sarah K. Meltzoff and Edward S. LiPuma



INTERNATIONAL CENTER FOR LIVING AQUATIC RESOURCES MANAGEMENT  
MANILA, PHILIPPINES

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NOV 11 '83

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Published by the International Center for Living Aquatic  
Resources Management, MCC P.O. Box 1501  
Makati, Metro Manila, Philippines

Printed in Manila, Philippines

Meltzoff, S.K. and E.S. LiPuma. 1983. A Japanese fishing joint venture:  
worker experience and national development in the Solomon  
Islands. ICLARM Technical Reports 12, 63 p. International  
Center for Living Aquatic Resources Management, Manila,  
Philippines.

Cover: Solomon Islanders preparing for skipjack fishing.  
The traditional method, canoes, poles and shell hooks.  
Photo by Sarah K. Meltzoff.

ISSN 0115-5547

ICLARM Contribution No. 115

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## Preface

The seeds of this research were sown in 1973 when the senior author (S.M.) spent seven months in the Solomons as a Traveling Fellow of the Thomas J. Watson Foundation. Research at this time was done in Small Malaita among the Sa'a, traditional bonito fishermen, and among the Fanalai villagers, home of the porpoise hunters. Solomon-Taiyo Limited (STL) was just taking shape at this time and the Sa'a people were interested and concerned about the Japanese fishing company in their seas. The Fanalai people of Pt. Adam were looking more to the possibilities of earning money as fishermen and soon after S.M. returned to America, her main informant went to work for STL writing letters to her on those early days at Tulagi.

In order to start this project, S.M. did preliminary research in London, summer of 1977, at the Overseas Development Ministry (ODM), the Tropical Products Institute (TPI), and the colonial archives. In New York, she interviewed those in charge of fisheries development and South Pacific desk at the United Nations Development Programme, and Taiyo's Park Avenue Headquarters. In Washington, she spoke to those in charge of fisheries policies at the World Bank, the State Department and National Marine Fisheries Service (NMFS). The picture of global expansion of skipjack industries was coming into focus.

The Rockefeller Foundation and ICLARM (International Center for Living Aquatic Resources Management) agreed to sponsor the next two years of fieldwork, October 1978-November 1980. Visiting ICLARM three times, at the beginning, middle, and end of the research, S.M. started out in Manila, headquarters also for the Asian Development Bank and the FAO/UNDP South China Sea Fisheries Development and Coordinating Programme.

Though the extensive fieldwork for this study was done exclusively by Sarah Meltzoff, the work is a collaboration of talents as well as personalities. Sarah Meltzoff wrote the social and political sections, while Edward LiPuma contributed the economic analysis.

Opinions and conclusions are of course those of the authors and not necessarily of the sponsoring organizations.

SARAH K. MELTZOFF  
ICLARM Research Fellow  
Columbia University

EDWARD S. LIPUMA  
NSF Research Fellow  
University of Chicago

**A Japanese Fishing Joint Venture:  
Worker Experience and National Development in the  
Solomon Islands**

**SARAH KEENE MELTZOFF**  
*ICLARM Research Fellow*  
*Columbia University*

**EDWARD LIPUMA**  
*NSF Research Fellow*  
*University of Chicago*

MELTZOFF, S.K. and E. LIPUMA. 1983. A Japanese fishing joint venture: worker experience and national development in the Solomon Islands. *ICLARM Technical Reports* 12, 63 p. International Center for Living Aquatic Resources Management, Manila, Philippines.

**Abstract**

Development of marine resources, especially tuna, is the key to national development for many newly-independent states of the South Pacific. They have industrialized fishing through joint ventures—collaborations between host governments and multinational corporations. Based on two years' field research, this report illuminates the first decade (1971-1981) of a tuna fishing joint venture between Taiyo Gyogyo of Tokyo, the largest fishing company in the world, and the Solomon Islands Government. It describes the history and operations of Solomon-Taiyo Limited, and the subsequent formation of National Fisheries Development, a second joint venture specifically devoted to the creation of a national, Solomon Islands fishing fleet.

A detailed examination is made of the two poles of industrialization. The first pole is the internal dynamics of the joint ventures, the manner in which Taiyo's capital, expertise, management and world marketing networks are coupled with the human and natural resources of the Solomons. The second pole is the national work force. The report explores how workers' cultural backgrounds determine their work habits, expectations, aspirations and the social pressures they must shoulder as citizens in both modern and traditional worlds.

**Introduction**

Joint ventures have dramatically changed the dynamics of tuna fishing in the South Pacific. Beginning in the late 1960s, colonial powers sought new ways to generate sources of foreign exchange for their South Pacific dependencies. The understanding was that economic development, so long ignored, would have to begin in earnest before independence was granted. International development agencies, reflecting the philosophy of colonial administrations, not only aided the creation of new industries but initiated the search for them. With the extension of maritime jurisdiction from 12 to 200 miles, the development of tuna fishing became an obvious choice. Less obvious was the institution of joint ventures and the impact of industrialization on the social economy.

Several converging forces favored this line of development. Distant-water fishing fleets, in particular those of Japan, were exploiting the fish stocks of the South Pacific, especially tuna. Denied access to these stocks they would suffer overcapitalization and unemployment, and economic dislo-

cation in their countries. Moreover, the advent of the 200-mile zone coincided with an escalating demand for tuna in the first world. It was in the best interests of foreign-owned tuna fleets to secure access to these newly claimed resources.

While the developing countries of the South Pacific have always had artisanal fisheries, they are limited in the financial, managerial and technical resources needed to fully exploit offshore fisheries. This is especially so for the tuna industry with its sophisticated organization for catching, processing and marketing the fish. Thus, there is a strong impetus for South Pacific countries to collaborate with transnational companies to extract the maximum benefits from their fisheries. These converging forces have inspired joint venture agreements in Papua New Guinea, Fiji, Nauru, the Solomon Islands and French Polynesia, as well as a series of licensing and processing arrangements in these and other countries.

The present study centers on Solomon-Taiyo Limited, the joint venture established between the Japanese transnational, Taiyo Fishery Company, and the Solomon Islands government. This focus flows not only from the fact that tuna joint ventures offer an excellent example of development policy—the Solomon Islands government perceives fisheries development as the key to attaining social objectives—but also from the reality that other, mostly smaller, South Pacific states regard these ventures as test cases, models to guide their future plans and policy.

Our study centers on three entities that are interdependent yet separate in organization. The first and most important is the working community. This comprises not only the young men who labor for Solomon-Taiyo, but the villages from which they come and to which many, but not all, return after several years. These men and those they affect back home are the essence of national development. They are at once the ostensible beneficiaries of economic progress and its social result. As a question of development it might be so phrased: whether the Solomons is to build a permanent, skilled labor force, bound to an urban environment, that restructures the balance between city and village, and thus the society and politics of both; or whether the labor force will remain transient and unskilled, always flowing back to the village, and thus leaving things relatively unchanged. A clear point is that both lines of development, nowhere more pronounced than in the tension between industrialization and decentralization, are highly politicized.

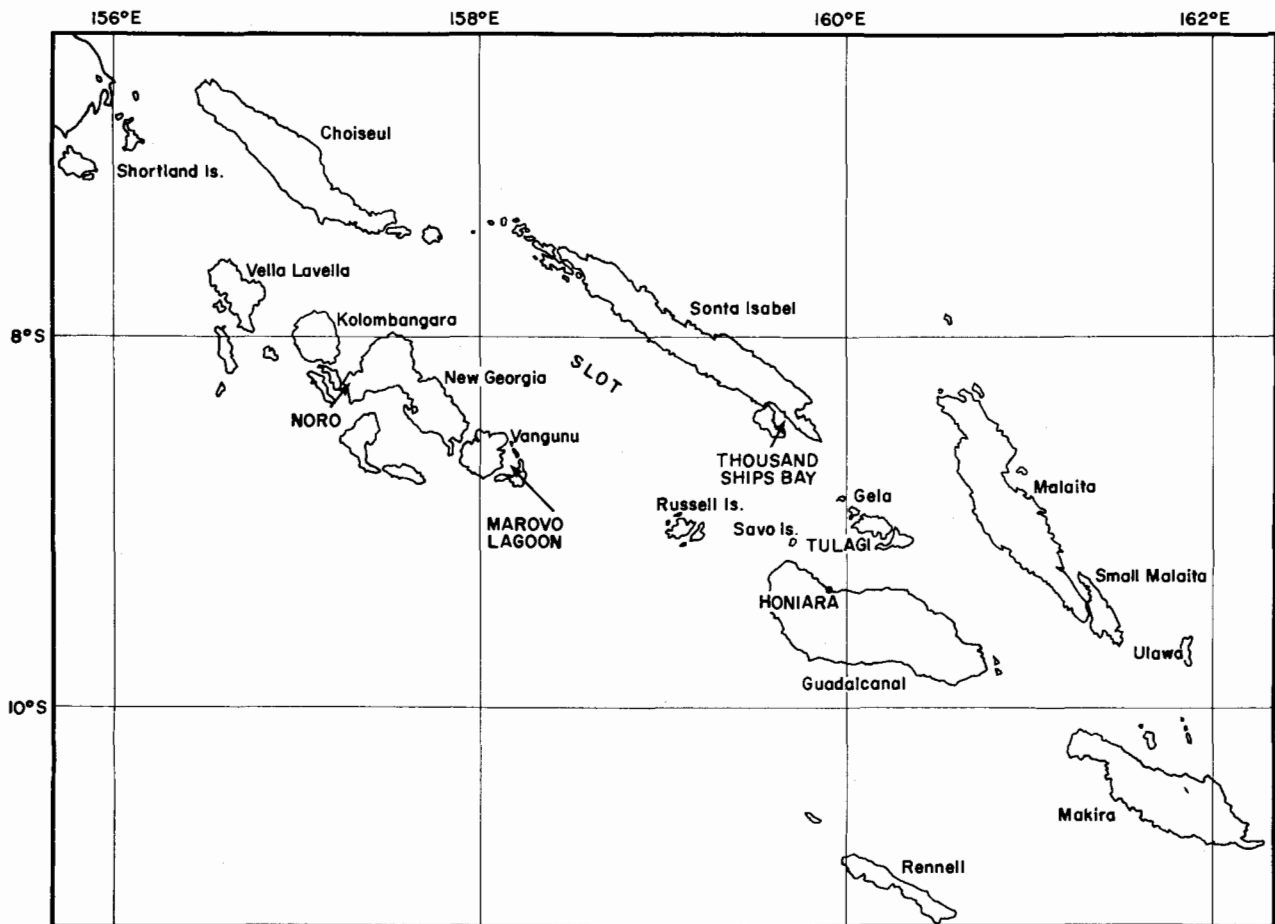
The second entity is Solomon-Taiyo Limited (STL), which couples Japanese management, money and machines to the human and natural resources of the Solomons (SI). Our focus is the history, structure and economics of the company, especially as the interests of the Solomon Islands Government and those of Taiyo diverge. In Taiyo, the Solomons has joined itself to a large transnational with diverse and worldwide investments. When the Protectorate was established in 1893, the Taiyo family firm had already been in business for over a decade; today, its yearly sales, in the neighborhood of \$3.6 billion, far exceed the GNP of the Solomons.

Solomon-Taiyo accounts for almost all the commercial tuna fishing done in Solomon waters, having a monopoly on fishing access within the 12-mile limit. The enticement for an emerging state is national development through fishing industrialization. STL is an ethnic mix, with Japanese managers at Honiara head office and shorebases, Okinawan captains and crewmen, board directors from Commonwealth countries, as well as the polyglot Solomon Island laborers.

The third entity is the Solomon Islands Government (SIG), particularly its national development programs and policies and how they have evolved with sophistication in transnational business.

While STL has substantially increased government revenue and foreign exchange, it has not been greatly successful in the provision of social services or the transfer of technology and management skills; virtually no service program for training nationals has been instituted. The performance of STL has prompted the formation of National Fisheries Development (NFD). Its goal is to build and operate a fleet of skipjack catcher vessels under national command. Although Solomon-Taiyo owns 25% of NFD, and the current contract commits NFD to selling its catch to the joint company, the government perceives it as a rising competitor. Most of the national hopes, from training to employment to worker family housing, now rest with National Fisheries Development.

The Solomon Islands claimed a 200-mile Exclusive Economic Zone (EEZ) in 1978. Taiyo continued to have a monopoly on the rich fishing grounds inside the Main Group Archipelago; this encompasses the Slot (see Fig. 1) and 12-mile territorial seas around the surrounding islands. The new 200-mile EEZ allowed the Solomons to start to negotiate licensing agreements to sell further access rights.



The Solomon Islands showing major localities mentioned in the text.

The Japanese government stepped in to work out a longlining accord for the extended zone. The SIG also granted licenses to Korean and Taiwanese vessels already longlining in the area. The change was not in increased fishing in those more distant waters, but in the right of the SIG to collect fees for extant fisheries. The hidden costs to the SIG, as to all littoral states, are the surveillance and monitoring of the new license agreements.

This study is an anthropologist's assessment of the impact of fishing industrialization on a South Pacific country, with the Solomon Islands the salient example. The study's primary objectives are:

1. to detail the impact of fishing industrialization and development policy on the social economy of the village
2. to describe the STL and NFD workers and their points of view; specifically how their cultural backgrounds inform their work habits, expectations, aspirations, and the social pressure that they must shoulder as citizens in both modern and traditional worlds



3. to provide an account of the joint venture, especially the silent political interests and undercurrents of ethnicity that shape much of the face-to-face interaction between Islanders, Europeans and Japanese
4. to elucidate how the institutional structure of Taiyo Fishery Company informs the policies, negotiating practices, and pressures on overseas managers, and to identify arrangements between the transnational and workers that are profitable and fair for both parties
5. to put forward suggestions for fisheries development in the Solomon Islands, particularly concerning the impact of the industrialization and the national development of human resources
6. to indicate the regional implications of STL and NFD, in particular (a) how neighboring states can benefit from the SI experience in skipjack development and (b) how the sharing of industrial fishing information and cooperation through the Forum Fisheries Agency (FFA) can strengthen the region.

Our enterprise departs from mainstream studies on development. Most report the objective results of programs, typically expressed in statistics relating to the amount of invested capital, projected returns, the percent of employees of local origin, production schedules and income levels. Without questioning the obvious merit of such data—indeed we use them throughout the study—we believe there is another, less visible side of development. One reason that many reports center on the objective is that the authors do not have the time, training, or linguistic resources to look beyond development, to see it from the perspective of the beneficiaries. Yet, national development is a social process owing as much to internal conditioning as to outside agencies. A real question is how successfully do development programs interplay with the existing social system. A skilled and reliable Solomon Islands working community does not rise like the Pacific tides at an appointed hour, nor as a direct realization of any development program. It is present at its own making, having an active hand in the outcome.

A point implicit throughout the analysis is that cultures are integrated wholes. To phrase it in economic argot, Solomon Island society is a thoroughly integrated structure, all of its parts are interlinked and mutually reinforcing. A development program cannot transform economic conditions without transforming social, political, moral, and legal conditions as well. The repercussions will often undermine an economically sound program. To institute a change without knowing the likely consequences is to invite failure. Frequently, small alterations that do not materially damage the economics are the real difference between success and failure. A development plan should anticipate its effects. Only then can it make provisions for minimizing its impact, or create a substitute for the social support it has removed.

There is a large body of anthropological writings that could help us understand the seeds and conditions of change in the third world. More, there are field workers with years of experience at the village level and a good knowledge of the language.

In the West Pacific, the basic literature on development work includes Bedford and Mamak (1975, 1976), Boutilier (1978, 1979), Boutilier et al. (1978), Chapman (1970), Ogan (1972), Davenport (1961, 1962), Pitt (1970), Meltzoff and LiPuma (in press), Rew (1974), Rodman and Cooper (1979), and Salisbury (1970). For references outside the West Pacific see van der Pas' (1973) annotated bibliography. For a specific development study of fishing see Lawson and Kwei (1974) and Johnson (1977).

Unfortunately, anthropologists rarely have applied their insights or experience, and only recently have they begun to participate in development projects. They have remained aloof especially from industrialization projects, preferring to write of culture in the past or the modest change from cash cropping. This report is a small effort to begin to redress this omission.

Development projects, especially joint ventures, are politically sensitive, and the investigator's attempts to gain access to information is sometimes curtailed or frustrated. Thus, STL provided data on the amount of tuna produced and the number of local employees but other information was impossible to obtain directly.

Within the Solomon Islands government, the Ministry of Youth and Cultural Affairs, which sponsored the study, was extremely supportive. Some other departments were also supportive, including Central Planning, Home Affairs, Trade Labor and Industry, Hansard and Statistics. However, while many individual ministerial officials were open and forthright, others were guarded or evasive. STL was naturally reticent to divulge information on politically sensitive issues like baitfishing. Baitfishing involves village politics and is potentially divisive. Thus, although local leaders were supportive, it was not possible to visit prime baitfishing villages.

The political complications were inevitable and instructive, though they made discovering how and why STL works an intricate research project. Certainly any understanding needs to encompass not merely the mechanics of the development project, but how the people involved influence it to further their own ends. They enlist the project for purposes that far transcend, and are sometimes counterproductive to, its development. To cite only the obvious, local politicians may wish to accumulate power or wealth for their own province or village, expatriates to advance their own overseas careers, workers to buy a wife or political leverage back home, Japan to promote its economic interests in the South Pacific. Because of the sensitive and controversial nature of much of the information collected, every attempt was made to corroborate it from other sources. What emerges from this extensive fieldwork is, we believe, a study with useful insights into the formulation and implementation of a joint venture, with important lessons for those embarking on similar negotiations elsewhere in the South Pacific.

The various issues investigated and locations of fieldwork were as follows:

*Biological issues:* For fisheries policy and technology, the biology experts shared their data at Scripps Oceanographic Institute, National Marine Fisheries Service at La Jolla and Honolulu, the South Pacific Commission's Skipjack Tagging Programme in Noumea, New Caledonia, and at the Food and Agriculture Organization, Rome. The University of the South Pacific, Suva, Fiji, and Fisheries Departments in Suva, Fiji, American and Western Samoa, and Port Moresby also supplied valuable information.

*Local Processing and Pricing:* Comparative data were obtained by visiting Zamboanga, southern Philippines, the developing cannery base for the Moro Gulf where 70% of the Philippine skipjack are taken; Pago Pago, American Samoa; Ovalau Island, Fiji where the government has a joint venture with the C. Itoh Company; Kavieng, New Britain, proposed site of the Starkist Papua New Guinea cannery, and Port Moresby to interview officials in Finance, Primary Industry, and Legal Departments; and Terminal Island, California, the Starkist overseas development headquarters.

*Overseas Tuna Fishing and Marketing by Japanese Transnationals:* This involved interviewing officials from the Japan Tuna Association and from Taiyo and Mitsubishi; working out of Starkist Asia's Tokyo office to observe their international tuna marketing and back-up operations; analyzing price schedules for tuna at major fish markets and landing ports in Japan; collecting life histories of tuna charter boat owners and captains who fish in the Solomons and New Guinea for the tuna transnationals; and a one month intensive Japanese course at the Australian National University and ongoing language study.

*Workers:* Research here centered on visiting the shorebase at Tulagi to interview workers, Okinawan fishermen, and Taiyo, NFD and STL managers; the Honiara headquarters of Taiyo, STL, NFD and Fisheries Department; and the Malaitan villages of Fanalei, Walande and Sa'a.

## The Solomon Islands

### SETTING

The Solomon Islands form one of the principle archipelagos of Melanesia, lying between 5°S and 12°S. Stretching in a double chain across the western Pacific are the six main islands—Choiseul, Isabel, Malaita, New Georgia, Guadalcanal, and San Cristobal—and numerous smaller ones. The islands are mountainous and covered by tropical rain forests; ringing them are mangrove swamps which serve as nurseries for marine life.

The land area of the Solomons covers only 27,566 km<sup>2</sup>. However, the archipelago extends some 1,400 km from one extremity to the other, and with the advent of the 200-mile Exclusive Economic Zone (EEZ), the Solomons control more than 100,000 km<sup>2</sup> of the western Pacific, much of it rich in fish, particularly tuna. Fish migrate through the channel between the double chain of islands, feeding on the baitfish that abound in the passages, lagoons and reefs.

Most Solomon Islanders live in small, dispersed settlements along the coast. Inland communities usually have no tradition of the sea and tend to be even smaller in size. No less than 80% of the islands' population resides in villages of fewer than 200, although urban centers are growing in response to the growth in industry. The village is still the cornerstone of Solomon Islands life, still highly influential in the social economy. Village members recognize common descent and intermarriage as basic principles of relationship. The ethic is to own land communally, share food, money, property and business connections; there is an enduring solidarity that transcends the village setting and becomes an important dimension of urban life, influencing the behavior of government officials, business leaders, industrial workers and artisans. Indeed, what Solomon Islanders call the "wontok" system (see p. 38) is the social thread tying together many economic, political and legal relationships.

Subsistence production is the primary industry of rural households. Solomon Islanders are most knowledgeable and skillful in farming and fishing; and they do much subsistence production even in urban areas. Wage income carries only about a quarter of the country's households; most people work for money only intermittently. The principal crops grown are cassava, yams, taro, coconuts, bananas and papaya. Depending on locale and season, people hunt iguanas, turtles, porpoises, birds, as well as bonito, kingfish and many reef fishes. Regional differences in ecology and culture generate the exchange of goods, such as fish, porpoise teeth and shells (both used as custom wealth), building woods, pigs and vegetable foodstuffs.

The Solomons derive export income almost entirely from agricultural resources. Copra, fish (predominantly tuna), timber, and palm oil and kernels earn more than 80% of total receipts. Because export income derives from only a handful of products which have had little or no processing, and because the price of these products has been unstable for at least a decade, earnings have fluctuated erratically from one year to the next. This is particularly true for copra and tuna which account for nearly 50% of exports. This uncertainty, typical of small-island economies, makes long term planning difficult. In addition, it tends to undermine the credibility of development programs.

As in many South Pacific countries, export production in the Solomons is structured along regional, ethnic and economic lines. Large-scale commercial ventures—mostly owned, financed, and operated by Europeans—predominate. Smallholders, mostly Solomon Islanders, have only a small share of production and not infrequently encounter problems in marketing their goods (e.g., transportation). Rural communities are marginally involved in commercial enterprise and have few opportunities for earning cash on a consistent and reliable basis. Guadalcanal, with its fertile plains, European population, and transnational-owned industry, and New Georgia, the economic and cultural center of the western provinces, have strong concentrations of large and smallholder operations and market the majority of exports. Income disparities—for example, New Georgia cash crop income is triple that of Malaita and San Cristobal—reflect island differences. The results are regional differences in wealth, power and political commitment.

#### SOCIAL HISTORY

Many contemporary Solomon Islands attitudes, ethics and behaviors that determine the course of development, have roots in colonial history. This is particularly true in the fields of labor relations, marketing, wage employment, economic expectations and technology. All have been defined and redefined within the context of contact. The Solomons have not had a pacific history. They have endured wholesale labor recruitment (blackbirding) (Corris 1973); the evangelical tide of nearly a dozen western missions; a turbulent process of pacification in which considerable British and Islander blood was shed (Boutilier 1979); the occupation by Japanese, then American forces during World

War II; a strong Marching Rule cargo cult, and secessionist movements. Today and in the years to come the challenge is to unify more than 70 cultures, all linguistically separate and varying in their degree of, and receptivity towards, national development. The most significant result of the Solomon Islands experience has been the emergence of economic beliefs and practices which blend custom and capitalism in a specific way.

Intensive contact with Europeans and their economic interests dates from the colonial labor trade (Parnaby 1964). Beginning in the 1860s, blackbirders enticed Islanders to work on the sugar plantations of Queensland and Fiji. There was a steady stream of recruits, probably some 30,000 before the turn of the century; on Malaita, the most heavily recruited island, a third of the male labor force was indentured at any point in time. But it was not only this absence which transformed the economy. Workers were paid in trade goods and so vast amounts of material culture entered the Solomons. Iron tools eased the burden of cultivation and allowed the more rapid manufacture of custom money. Firearms made a new business of hunting, not to mention warfare (White 1979), and people developed a taste for mirrors, beads and other luxury items. The influx of new goods coupled with the capacity to produce old ones more rapidly transformed values and created a permanent place for western goods within the social economy.

Blackbirding initiated a pattern of labor migration that became woven into the society. In order to obtain select western goods (including money) and experience the larger, more European world, men volunteer for contract labor thereby securing their place in the village polity. They envision their period of service concretely as:

- 1) temporary, with no expectation of training or career
- 2) an opportunity to earn a small amount of individual wealth which they can distribute in their name
- 3) done in the company of male relatives of the same age cohort (wives, children or sisters remain in the village)
- 4) a rite of passage by which they enter manhood.

Although Britain outlawed blackbirding in 1904, there has been a continuous demand for such labor interrupted only by the 1930's copra depression, the 1942 Japanese invasion, and the Marching Rule Movement from 1945 to 1949. Given this demand for unskilled labor, it is not surprising that the pattern of temporary wage employment remains strong.

On 7 July 1978, the Solomons ended more than 80 years of British rule, although the years of development, to transform the British Solomon Islands Protectorate into a self-reliant state, were just beginning. Gun salutes from Commonwealth and US Navy warships commemorated Independence, and perhaps also their respective roles in contact history. Internal affairs, however, were less sanguine; the western province delayed celebration after prolonged threats of secession.

This regionalism may well mean that fisheries development, if not well-planned politically, will finance secessionist movements. It is no secret, for example, that the western province perceives the development of a tuna and a copra base at Noro, New Georgia, as the key to economic independence and political leverage. The projected Noro tuna cannery would be five times larger than the present one at Tulagi, with the copra wharf capable of handling global shipping. The revenues generated from such projects are expected to be considerable.

The most important counterweight to regionalism is the national school system which brings together a wide variety of the best students from across the Islands. Education and contact promote intergroup friendships and also marriage. They serve to generate a corps of elites who demonstrate solidarity regardless of island of origin or language. The best educated have become the civil service elite who manage the government. Similarly, many of the politicians, though lacking formal education, have formed inter-island allegiances. Labor stints on plantations and fishing bases also serve as an instrument of national integration, although to a lesser extent because wontoks (see p. 38) associate mostly with each other.

Whether on the plantation or across the negotiating table, the interplay of ethnic feelings among

Solomon Islanders, British-Australian and Japanese inflect the tenor of labor relations. Such feelings generally lead an underground existence, as the spirit of cooperation is the official point of view. But time and recent experience have not so much erased the prejudices born in World War II as transmuted them. The Japanese invasion force took control of the Solomons in 1942. The British were forced to flee the island and instructed the people to have minimal contact with Japanese. Local plantations, already in a serious state of depression, terminated their operations. For obvious reasons, British expatriates hated and feared the Japanese, and transmitted these feelings to the Solomon Islanders. The Japanese, on their part, were absorbed in the war effort and made scant attempt to win the loyalty and friendship of the local populace. Also, they could speak neither English nor Pidgin and were culturally conditioned to maintain distance. When the American military penetrated the central Solomons the British drafted as many able-bodied men as they could, transporting them to work for the Americans as everything from day laborers to bush scouts. An unprecedented situation, far removed from the colonial experience, developed. Solomon Islanders shared the dangers as well as the vast supplies of war with a new, more egalitarian-minded, English-speaking people. By sharing freely and socializing with Islanders, the Americans unknowingly triggered a deep-seated cultural response: brotherhood and the "wontok" system. Seeing black American soldiers only confirmed indigenous perception. Not surprisingly, many Solomon Islanders adopted their American "brothers" attitude towards the Japanese. However, this antipathy was not deep-rooted or universal. Villagers on Malaita, where there was no fighting, rescued the victims of isolated plane crashes regardless of nationality.

#### GOVERNMENT AND POLICY

The Solomon Islands system of government is a parliamentary democracy with a unicameral legislature. The National Parliament consists of 38 members, including the Prime Minister and his Cabinet. A party system is still in its infancy; there are no strong platforms or philosophy and members switch parties easily and without stigma. Almost all members of Parliament vote as independents, making it more difficult to reach a rapid consensus on major policy issues. This reflects the traditional political system which is based on consensual rather than adversary principles, and thus frowns on factions.

Development planning, especially as linked to decentralization, has been a paramount goal. Two development plans have been formulated: the first (1975-1979) was to prepare the country for independence and greater self-reliance, and the second (1980-1984) is to make strong headway in industry and infrastructure.

The development plans aim to entice foreign investment and develop primary industries, such as fisheries and timber, through joint ventures with foreign corporations. The plans envision that the developing industries will furnish adequate foreign exchange when present UK assistance winds down. However, they also call for the Solomons to boost national welfare by acquiring control over some corporations. The key step is localizing technical and managerial jobs traditionally held by foreigners. While both aims of the national plans are worthwhile, they conflict in many issues and have resulted in an investment climate that is lukewarm. Direct foreign investment, chiefly by British, American and Japanese firms, is running at about US\$5 million per annum, hardly outstanding given the natural resources of the Islands.

#### The Tuna Fishery

The commercially important tunas in the Pacific include skipjack (*Katsuwonus pelamis*), albacore (*Thunnus alalunga*), bigeye (*Thunnus obesus*), yellowfin (*Thunnus albacares*), and two species of bluefin, the southern bluefin (*Thunnus maccoyii*) and the Pacific bluefin (*Thunnus thynnus*). Skipjack, also commonly known as bonito, is the most abundant. Its commercial and international importance has been increasing in response to the escalating demand for tuna, principally by first-world countries.

The structure of skipjack populations in the Pacific is complex and by no means fully understood. While it is known that spawning occurs in equatorial seas where water temperature rarely dips below 28°C, and that the young tuna migrate towards the edge of their range for pre-reproductive grazing (Bardach and Matsuda 1979), skipjack migration patterns remain mostly an enigma.

In the course of their migration, schools of skipjack might pass through the territorial waters of different littoral states, giving each state a limited and serial opportunity to exploit a given school of skipjack. Some states have access mostly to juvenile populations, others primarily to adults. It is not unusual, for example, to catch up to 50% "rats" (under 40 cm long) in the Philippines but almost no juveniles in more eastern waters.

Central to the skipjack fishery and its management is the relative vulnerability of the species to the three types of commercial gear: longline, pole and line, and purse seine. Decisions on appropriate gear ride less on biological concerns than on political, social and fiscal ones. Landing price, fuel costs, tuna quotas, access to baitfish, availability of labor, offloading facilities and local demands are all taken into account. Significantly, gear selection is a critical point at which the social benefits of fishing (e.g., employment, manpower training) collide with pecuniary interests.

Longlining is used to catch the deep-swimming billfish and tuna, like albacore and bluefin. The skipjack associate in swift surface schools, usually of 2 to 3 t, but which can aggregate into large schools on occasions; 500 t being known in the Solomons. Accordingly, the skipjack are principally vulnerable to pole and line and purse seine. The latter is the most technologically sophisticated and capital intensive of the fishing methods. When a seiner locates a school, the seine net is deployed in a huge circle around the skipjack using a powerful tender or another fishing vessel. The closing steps are to purse the bottom line, then the top, and to brail the fish into icing or freezing holds. Because skipjack will swim under the seine net if not discouraged from doing so by cold layers of water, purse seining was unsuccessful in the Western Pacific until combined with the use of floating rafts or *payaos* (=raft), a traditional Philippine fishing gear to which fish are attracted. Fishermen anchor the *payao* at sea, its underside rigged with palm fronds or other materials. The skipjack are attracted and congregate in the shelter of the raft and when concentrations of fish are large enough, the purse seiner closes in and harvests the catch. The use of *payaos* made purse seining of this species economically viable. Recently, *payaos* have given way to the use of deeper nets to contain the tuna.

Pole-and-line vessels in the Solomons, usually of 59 t, have a jutting prow with a fishing platform. Water-spray nozzles stud the sides of the vessel; they are used to disrupt the water surface with a spray to veil the fishermen and simulate feeding frenzy. The tuna are chummed using live bait from the foredeck wells. The best bait species do not scatter but remain near but not beneath the boat. If the bait scatters, the tuna will be drawn out of range of the vessel. As the skipjack attack the baitfish, they also bite fishermen's lures and are slung onto the deck, losing the barbless hook in the process. Experienced fishermen maintain a steady rhythm, flicking fish after fish on board while the frenzy lasts. The Japanese have devised a labor-saving automatic poling device, but the mechanical fishing arms lack human timing and sensitivity.

A most significant feature of pole and line is that it demands the support of a parallel fishery to supply live bait. This has proven problematic in the Solomons despite easily caught, adequate supplies of baitfish. Commercial fishermen must capture bait from the Islands' encircling reefs, all of which the villagers own by tradition, yet not in the sense of Western private property, a point baffling to both Japanese and American company officials. According to Solomon Islands custom, a clan as a whole owns a reef in perpetuity; no one has the right to alienate it without the consent of the clan body, and profits gleaned from it must be shared. A chief or big-man has jurisdiction over the reefs owned by his clan, but this amounts to no more than a stewardship—the reefs are his wards. Members of other clans in the village have inalienable rights to the reef's resources, provided they compensate the chief or big-man, and thus his clan, with fish, money, services or political allegiance. Thus, it is not clear whether commercial baitfishers should compensate the clan, the chief, other reef users or some combination thereof.

Skipjack occur in very large numbers over an immense area of the Pacific. Indicators of resource size are that catches in recent years have continued to increase proportionately with increased fishing effort, and the maximum sustainable yields are thought to be well above present landings. There are serious gaps in the scientific understanding of skipjack biology, e.g., the number and distribution and degree of interaction of separate stocks; the growth, recruitment, natural mortality rates and migration habits are still not well known.

The South Pacific skipjack fishery was examined by the South Pacific Commission in a four-year biological study—The Skipjack Survey and Assessment Programme—completed in September 1981. Data from the Programme are still being analyzed. An interim report on the activities of the Programme in the Solomon Islands is available (Kearney and Lewis 1978) and the final report is expected to provide an assessment of both skipjack and baitfish resources of the Solomon Islands.

The relationship between catch and effort in a fishery is typically thought of as a parabolic curve in which the maximum sustainable yield (MSY) occurs at some intermediate level of fishing effort and stock size (Gulland 1977, 1978). It has been shown that the attainment of MSY is not usually a suitable objective in a fishery. This led to the concept of optimum sustainable yield (Roedel 1975), in which social, economic and often ethical concerns, which inextricably tie management to politics, are also considered. Developing countries may regard potential benefits from their fisheries primarily in terms of sources of employment and food, or as a means of obtaining foreign exchange and modern technology rather than trying to maximize profits.

The reality is that fisheries management is an ongoing process in which diverse groups, from government departments to foreign fishing fleets, push for social and economic interests that are not infrequently at odds. This is true for the skipjack industry in general and its joint ventures in particular.

### The Solomon-Taiyo Joint Venture

#### ORIGINS

All of the interest in the habits of skipjack, methods of exploitation, access to baitfish, and fisheries management flow from the value of tuna as a marketable resource. As late as 1970, no commercial tuna fishing was done in Solomon Islands waters. In 1973 the joint venture, Solomon-Taiyo Limited, was established and five years later National Fisheries Development (NFD) was formed. By 1977 the Solomons was deriving more than 8 million dollars (US) yearly from skipjack operations (South Pacific Commission 1978) and fishing accounted for nearly 30% of the value of all exports (SI Statistical Yearbook 1979). Equally great is the potential for national development through employment, access to modern technology and manpower training.

Four main changes motivated the making of joint ventures in the South Pacific; or, more precisely, made it mutually advantageous for transnational corporations and less developed countries to join hands. The first is that the demand for tuna worldwide rose to the point where current fishing grounds could no longer easily support it. FAO figures indicate that in the past 20 years there has been a more or less steady upswing in demand for tuna, mostly in Japan, the United States and the European Economic Community (EEC). It became increasingly difficult for albacore, yellowfin and big-eye tuna fisheries to keep pace without ruining the stocks or encountering economic problems. For example, the influential Japanese Fisheries Agency (1979) estimated that longliners now exploit yellowfin at near-maximum levels, and that greater fishing intensity would prove not only economically unviable but would damage the stocks. The result has been a shift towards skipjack in the past decade.

The second change was major revision in the international law of the sea. Many littoral states have extended their maritime jurisdiction from 12 to 200 miles, as well as invoking an archipelagic principle. They have gained exclusive economic rights to the seabed minerals, including oil, and to all fisheries. The individual Pacific states have increased their economic zones more than tenfold

while the international commons has shrunk to only a fraction of the Pacific. The developing countries of the South Pacific now have possession of huge fishery resources, principally tuna and related species. However, while they have always had artisanal fishing—indigenous cultures that hunted bonito from sewn-plank canoes—they lacked the capital, skills and technology to initiate a fishing industry alone.

The third change was the expansion of the Japanese fishing industry across the Pacific (Junko 1980). Difficulties in obtaining baitfish, and then fishing grounds once 200-mile limits came into effect, as well as a shortage of manpower, inspired this expansion. In 1963-64 advances in live-bait handling techniques enabled the Japanese to expand into southern waters. The impetus to develop year-round fishing for their pole-and-line boats blossomed into a "skipjack boom" (Suda 1972). A decade later, the number of vessels had burgeoned without a corresponding increase in the available fishing grounds. Vessel size was also growing, but without any further improvements in bait-handling techniques. There developed a constant struggle to fill the holds before the baitfish perished, and indeed overhead rose and catch per unit effort fell. In short, the industry was over-capitalized. To make matters worse, the same expanding Japanese economy that had financed the capitalization made it more difficult to recruit fishermen. With income levels high and unemployment low, few Japanese were willing to give up homelife for distant-water fishing.

As the Japanese fishing expanded into southern waters it became necessary to either improve bait transport or methods of offshore capture. But neither technical knot was readily broken, and the Japan Fisheries Agency suggested circumventing the problem through licensing and joint venture agreements with resource owners. In 1971, Taiyo-Gyogyo (Fisheries Corporation) negotiated an agreement with the then British administration of the Solomons. In this, Taiyo was following her national competitors who had recently worked out arrangements with the Australian administration of Papua New Guinea. From the transnationals' perspective the situations were promising: the passages and lagoons of the Solomons and Papua New Guinea held the best baitfishing areas in the South Pacific; there was a willing and inexpensive labor force; and the tuna resources were rich. For skilled labor they could tap the Okinawan fishing masters and essermen (baitmen) from Sarahama, Miyako Island, who would sail their fleet of second-hand pole boats down to the Solomons and Papua New Guinea, and charter vessel and expertise at lowest prices. The Okinawans were at home in the tropical seas, having fished the waters of Micronesia before World War II, and proved successful skipjack fishermen. Moreover, the unskilled component of the crew on the chartered boats was composed of Islanders, thus satisfying the government condition that foreign companies employ nationals and initiate localization. With one swift agreement the transnationals settled the baitfish and manpower problems, hence minimizing the imminent danger to the Japanese tuna fishing industry posed by the 200-mile Exclusive Economic Zone (EEZ).

The fourth change was in the political situation in South Pacific States. Awakening in the late 1960s was a conscience of independence that would culminate in the emergence of Papua New Guinea, the Solomons, and other states. Their colonial history had long since tied independence to the task of generating a sound social economy capable of supporting further development programs. For the Solomons especially the expansion of Japanese fishing interests and the revisions of the law of the sea could not have come at a more auspicious time. With independence on the horizon, Taiyo made its offer to conduct a pilot study; if skipjack operations proved fruitful a long-term agreement would follow. The British were quick to seize the opportunity of tuna industrialization. It would furnish an immediate and hopefully lasting source of economic stability. That the Solomon Islands, like other South Pacific states, has a limited resource base, served to magnify the importance of Taiyo's offer.

The goals of the two parties, Taiyo and SIG, were, and still are, quite divergent:

Taiyo, and from a much broader perspective a Japanese government actively involved in creating a global business diplomacy, desires that STL:

- 1 — supply tuna for Taiyo and Japanese marketing, distribution, and trade networks on a long-term basis



- 2 – purchase products, rent equipment and borrow money from Taiyo and its subsidiaries, who are in turn purchasers and agents for other Japanese companies
  - 3 – build good will to promote further business dealing between the Solomons and Japanese companies
  - 4 – expand as a purchaser and supplier to benefit Japan in general and Taiyo more specifically
  - 5 – exclude other, especially non-Japanese, fishing companies while increasing STL quotas.
- The SIG political elite, and from a narrower viewpoint, local politicians and leaders want STL

to:

- 1 – generate foreign exchange credits for an economy that must import appreciable amounts of raw materials and finished products
- 2 – produce substantial revenues to strengthen the central government and finance capital improvements
- 3 – stimulate the evolution of a skilled, stable, and fluid labor force willing to work at internationally competitive rates
- 4 – provide the country with modern technology in fishing and related operations, particularly canning
- 5 – acclimate Solomon Islanders to industrial machinery and hardware, and train them to work with it
- 6 – serve as a base for expanding the industrial infrastructure that permits and lures other industry
- 7 – aid rural development through the dispersal of baitfish royalties to local communities.

#### THE HISTORY OF SOLOMON-TAIYO

Around 1970 Taiyo began to survey fishing potential in the southwest Pacific, notably the waters of Papua New Guinea. Fishing was found favorable, but competitors outmaneuvered Taiyo, which then turned its attention to the then British Solomon Islands Protectorate (BSIP). Company and government officials met for a series of talks and Taiyo proffered a proposal to undertake a fishing survey at no cost to the government. It then flew the key government officials to Tokyo where they signed on 28 April 1971 a brief "Memorandum of Understanding." It covered only in the broadest strokes the intent and limits of the Taiyo survey. Importantly, it was signed without the knowledge of the full Governing Council.<sup>1</sup>

Colonial administrators sensed that the Islands' politicians and people would not appreciate the long-term benefits of a fishing industry. Rather, they would focus on their distrust of the Japanese, a legacy of World War II, and their fear that outsiders would "steal" fish and shells. The agreement did indeed arouse local ire that only slowly and never fully subsided.

The "memorandum" outlined a survey to assess skipjack and baitfish resources and the potential for a locally-based fishing industry. In exchange for fishing rights Taiyo assented to:

- "provide the Government with a full report on its survey at two monthly intervals"
- "employ Solomon Islanders—to the maximum extent feasible"
- "provide the Government with a proposal concerning the establishment of a locally-based fishing industry"

For the British negotiators the final provision was the essence of the matter, the rest of the agreement basically a lure. The "Memorandum" was, however, only a single-page document with omissions that distinctly favored Taiyo. It gave the company free fishing access to all Solomon Island waters (to the

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<sup>1</sup>Under BSIP Council System the British High Commissioner was the chairman of the Governing Council Private Committee. This committee was composed of Committee Chairmen appointed by the High Commissioner. British advisors to each committee appeared with them to explain and advise on technical matters.

12-mile limit) for the duration of the survey (18 months). And as survey operations developed, their initial attractiveness to the government quickly dimmed, for although the survey was "risk free" it was also expressly commercial and became highly profitable. From the outset, Taiyo's four catcher boats and two refrigeration ships made good catches which were frozen and exported to Japan. In addition, Taiyo exported not only skipjack, as the British had envisioned, but baitfish. The search for live bait was, after all, one of Taiyo's prime reasons for coming to the southwest Pacific. Its own Fish Resources Survey Plan submitted to the government called for the export of live bait for Japanese fishing vessels elsewhere.

Local resentment flared as some Solomon Islands politicians and villagers alleged that the Japanese were being handed their bait and tuna free. Recall that at this time the Solomons administrators were focused on unearthing a source of revenue for a Protectorate approaching independence. Their lack of experience in fisheries matters was compounded by the absence of a public forum. It was not until the survey was well underway that the Solomons realized the advantages of eliciting expert advice from FAO.

In September 1971, four months into the agreement, Taiyo reported catching 790 t of skipjack at an attractive catch per unit of effort. Following this initial bonanza Taiyo sought to augment its "research" by adding 11 catchers and 3 refrigeration ships to the original fleet. Government negotiators, wiser for experience and burned by public criticism, insisted on revising the contract. They negotiated a "Further Memorandum of Understanding" which was both more detailed and more focused. In return for the right to deploy additional vessels, Taiyo agreed

- "not to export live bait"
- "to pay the Government a premium of A\$500 upon each catcher for each month of operation"<sup>2</sup>
- "to reduce the survey from eighteen to fifteen months"

The most crucial clauses of the revised agreement outlined the content of any future accord. The Japanese fishing industry, after a decade of expansion, was now consolidating and Taiyo was under pressure to retain access to the new and lucrative resources of the Solomons. In a show of good faith, Taiyo made a commitment towards establishing a locally-registered and jointly-owned, shore-based industry that would process locally whenever feasible and employ and train nationals to the maximum extent possible.

During the survey, Taiyo caught in excess of 12,000 t of skipjack, and enough bait to permit even larger operations. Although slowed by two cyclones, each catcher averaged more than 3 t of fish per working day. The company netted several million dollars from the venture; in return the Solomons gained a well-managed survey and a lesson in transnational business.

Towards the termination of the survey, Taiyo produced a feasibility study which advocated the creation of a joint venture. However, the very nature of their survey operations—mothership based, limited to a single currency (yen), and fully integrated—precluded investment and return projections for such a venture. Less accurate desk projections would thus become the figures on which negotiators would rely. On 5 July 1972 Taiyo submitted a comprehensive "Proposal for Participation in the Development of the Fishing Industry."

Taiyo was then more than the world's largest fishing company. Since the war it had pursued an aggressive policy of diversification that had brought 72 subsidiaries under its roof. These embraced shipping, shipbuilding, cold storage, livestock production, oil and sugar refining, marketing, banking and telecommunications—in short, a thoroughly integrated structure whose nucleus was fishing. Aware that unclaimed fishing grounds belonged to an earlier era, Taiyo had already made joint ventures from India to Argentina. Its intent in the Solomons was to secure as much fish as possible to process

<sup>2</sup>Until 1976, the Australian dollar was the domestic currency of the Solomons; and until May 1979, the Solomons dollar was pegged to the Australian dollar on a one-to-one basis. A\$1.00 = US\$0.90 (1980)

and market for the EEC and Asian outlets, to feed its own industries (e.g., livestock), and to maintain its supply obligations to customers, such as Van Camp Sea Food Inc.

In negotiations, Taiyo executives weigh concessions to the Solomons against the overall gains for the transnational company. These gains may include profits from processing and marketing, savings on overhead to subsidiary industries, maximizing the use of capital equipment (especially that no longer suitable to Japan), shutting off access to rival companies, the development of commercial channels to permit the marketing of products unrelated to fishing (e.g., sugar), and tax concessions (Tugendhat 1972). Rarely, however, can outsiders determine the substance of these less visible gains and, thus, the true dimensions of Taiyo's negotiating position.

By contrast, the aims and objectives of the Solomon Islands Government were evident: the immediate generation of revenue, training and employment of its national labor force, and export earnings. The realization of these objectives was made more urgent by a fall in the price of copra, a mainstay of the economy. To compensate for its lack of expertise in fisheries affairs, SIG assembled fishing experts from FAO, Rome and hired a chief fisheries officer with a commercial background to assist in the negotiations. The Fisheries Department became the government agency that set policies for managing and monitoring the joint venture.

Prior to the formal negotiations the SIG notified Taiyo that:

- a 25% "free ride" on joint venture shares, and
- a 10% export duty on frozen fish

were non-negotiable. For its part, Taiyo came to the bargaining table with proposals geared to establishing a regional base for its distant-water fishing fleet. Taiyo pressed for the following:

- pioneer status for the new company to cut its tax burden during the developing years
- the charterage rather than purchase of catcher boats to avoid large capital outlays
- exclusive rights to buy and market the products of the joint company
- priority rights for the mother company's own vessels within Solomon Islands waters
- free land on which the shorebase would be built
- 5% commission on all canned and frozen fish marketed by Taiyo.

Note that government priorities centered on fiscal issues rather than the social conditions under which nationals would work. During the discussions, labor relations were only touched upon.

The joint venture talks shed the secrecy of the first agreement and drew in relevant SIG officials from the departments of Natural Resources, Lands, Safety, Marine, Customs, Taxation and Labor. To solicit local support for the impending venture, a point was made of keeping local politicians informed. The negotiations presented not only a clash of interests, but of styles, arising from cultural differences.

Taiyo and the SIG hammered out a compromise agreement which centered mainly on monetary issues. The government position was that the 10% duty and the 25% equity were the price Taiyo would have to pay for preferential access to the country's resources. Taiyo bargained intensely to obtain their priority objective: a base facility to service company vessels fishing in the southwest Pacific. Throughout the negotiations, Taiyo unsuccessfully moved to introduce a provision for housing its entire southwest Pacific fleet.

The SIG was successful in obtaining, at no expense, 25% equity in the joint company. However, two provisions diluted the value of their holdings: one limited the initial authorization of capital to 50% and the other set a steep loan/equity ratio of 6:1. Taiyo conceded the 10% export duty on frozen fish, although a concessionary rate for the first three years tempered its effect. The joint company was granted exclusive rights to Solomon waters for ten years, thus assuring Taiyo a supply of fish for the near future. The parent company was ceded sole foreign marketing rights for the products of the joint venture, and a commission of 5% on canned tuna and 3% on frozen fish. At least in the early years, chartered Okinawan boats would be the mainstay of the STL fleet, even though they constituted the largest operational expense. Other ancillary provisions reduced taxes on Taiyo, provided for a free shorebase, and outlined operations.

As neither Taiyo nor the Solomons wanted to depend on STL profits to realize their incomes, both took their rewards through other channels (e.g., export duty, interest on loans, transshipment charges). As a result, the financial projections showed that STL would be marginally profitable (Allan, Charlesworth and Co. 1977), a point that would become telling in any recession in skipjack prices or significant jump in operating expenses. Indirect profit-taking of this magnitude generates unstable financial conditions, especially in the high-risk business of fishing. Thus in 1976, its best year, STL registered profits in the thousands, and in 1978, its worst year, suffered losses in the millions. The significant point is that STL is most akin to a cross between a licensing/managing agreement and a subsidiary company.

The joint venture agreement was signed into effect on 4 November 1972 and by March of the following year operations had begun. For the Solomons the emphasis and tone of the document represented a decision to establish primary industries before developing human resources. Issues of manpower training, baitfish negotiations, provision of housing, social and medical facilities, safety, conditions of employment, and public relations were mentioned only in general terms. No clear-cut objectives or schedules—other than the percentage of nationals to be employed—were set. Indeed, STL agreed no more than to “use its best endeavours” to attain reasonable progress. The absence of guidelines also reduced the power of government officials to enforce health and safety standards; and in practice they have little sway over STL operations. Moreover, that the company ledger would always show minimal profits, even in the best years, means that an investment in training or medical programs can always be judged too costly—for example, housing at the Tulagi base is inadequate but STL reports that it does not have the funds to cover new construction.

In March 1973, Solomon-Taiyo landed its first skipjack under the terms of the joint venture agreement. By late August, the first shorebase opened at Tulagi. Its facilities included a cold store of 600-t capacity, ice plants of 25-t capacity, and a brine freezer of 45-t capacity. By October a cannery commenced modest production of 600 cases per day. Before the end of the year, an “arabushi” smoked fish factory complimented the cannery.

In January 1976, the second shorebase opened at Noro, with slightly larger and more modern facilities. STL sells frozen fish in bulk to overseas canneries, mainly Van Camp, which has had a longstanding supply agreement with Taiyo. The joint venture markets its canned skipjack through Taiyo to the EEC, and in small amounts to Japan. The dark meat that is judged not suitable for export is distributed locally under the “Solomon Blue” label.

In its fishing operations, Solomon-Taiyo performed creditably for a young company. Its catcher contingent averaged in the neighborhood of 3 t/day/boat and total catch advanced towards 18,000 t per annum in 1978. However, the annual catch has fluctuated erratically. Table 1 illustrates the

Table 1. Skipjack catch and utilization<sup>a</sup> (in tonnes).

Year	Total catch	Change from previous year	% Change	Frozen/exported	% Frozen	Canned	% Canned	Smoked	% Smoked
1970	—	—	—	—	—	—	—	—	—
1971	4,165	—	—	4,165	100	—	—	—	—
1972	12,138	+7,973	191	12,138	100	—	—	—	—
1973	5,511	-6,627	183	5,091	92	321	8	—	—
1974	10,958	+5,447	99	8,400	77	1,836	17	429	4
1975	7,526	-3,432	31	3,641	48	2,619	35	1,006	13
1976	15,464	+7,938	105	12,052	78	2,076	13	1,120	7
1977	13,000 <sup>b</sup>	-2,464	16	9,764	75	1,900	15	980	8
1978	18,204	+5,204	40	14,518	79	1,836	10	1,037	6

<sup>a</sup>Tonnage figures for catch and utilization are from the Solomon Islands 1979 Statistical Yearbook, page 82.

<sup>b</sup>Figures for 1977 are estimates.

fluctuations in total catch and in the distribution of sales. Note that landings have see-sawed greatly, the only discernible trend being a decrease in the percentage of change. Note also that frozen fish account for upwards of 70% of the exports.

The joint company netted a slight overall profit, returns generally hovering near the break-even point. By direct and indirect taxation (e.g., import duties on Japanese luxuries or the withholding tax on interest, the SIG extracted revenues which favorably tilted their balance of payments and cash flow. Local employment skyrocketed and STL has become a cardinal source of unskilled jobs.

The growth of the joint company saw the ascendance of the Fisheries Department. It evolved from a minor limb of the Agriculture Department into a virtually autonomous agency within the Natural Resources Ministry. The brief of the Fisheries Department was bifocal: one division was to develop small-scale fisheries and the other to manage the government's interest in the joint venture. As the department evolved, management became its primary objective and strongest arm. It became the Government center on all matters involving the joint venture, from tuna quotas and pricing schedules to surveillance and labor relations. Concordantly, the money and personnel allocated to Fisheries expanded rapidly.

The Fisheries Department aimed to ensure that Taiyo and SIG abided by the spirit of the contract and that STL continued to produce revenues. For example, the verification of landing prices became a constant duty because there was no simple means of determining rates. By virtue of the Fisheries Department's specialized functions, STL's pivotal position in the economy, Islanders' sensitivity to outsiders fishing their waters, and the personalities of key people, strictly fisheries matters became meshed with political ones. Decisions could no longer be made on the basis of biological or economic merit alone.

During infancy, the joint venture suffered from communications and cultural barriers leading to pitched fights between Okinawans and Solomon Islanders aboard the catcher boats. STL workers were further uninspired by sub-standard housing, health and safety conditions. Outside the STL shore-base, catcher boat crews baited village morals by chasing women, encouraging prostitution, and "stealing" baitfish. The urgency in the making of the joint venture forced the government to entrust management to the Fisheries Department before that Department had time to become fully organized to deal with these ensuing problems.

#### POLITICS OF BAITFISHING

Baitfishing is an electric issue, being the political point at which the government, commercial fishing interests, and artisanal fishing directly conflict. Interestingly, the Solomon Islands government does not officially recognize the claims of reef ownership. Notwithstanding, Solomon-Taiyo Limited pays compensation to reef owners in the person of chiefs or big-men. Neither the government nor Solomon-Taiyo balks at compensation, even though this constitutes a strong form of recognition of ownership. This is due both to the unwillingness to challenge custom and to the low price of baitfish. Up until March 1980, the joint venture paid only \$3 per boat per night for as much bait as they could take. This is considerably less than the \$15 per bucket paid in Japan (Matsuo 1973) and \$20 per bucket in Hawaii (Hester 1975). After a new agreement was negotiated in early 1980, the price of baitfish rose four-fold, although even the new levels are comparatively low.

Many villagers believe commercial bait and tuna fishing have diminished their canoe catches. A few communities have refused to rent their reefs to bait fishermen on the grounds that the loss of baitfish deprives them not only of tuna, which come inshore to feed on the bait, but also the rainbow runner, kingfish, and other species that associate with the skipjack. In Ontong Java, where fish and coconuts are the staples, and at least one New Georgian village, leaders have denied access to bait fishermen. They feel they are experiencing excellent fishing as a result.

Both the Fisheries Department and Solomon-Taiyo are anxious to quell village fears and to instill the idea that failure to cooperate with baitfishing interests jeopardizes national development.

Certainly the foreign exchange and employment generated by pole-and-line fishing would suffer without a reliable baitfishery.

Although active fishermen in the community often oppose baitfishing, some villagers are only too happy to reap the windfall of bait royalties. Solomon-Taiyo regularly receives written requests about bait royalties from a variety of people, including government leaders.

Solomon-Taiyo pays the bait royalties into the account of a few persons rather than the village as a whole, certain landowners and chiefs who they designate "trustees" of the village account. However, these individuals are under no legal obligation to share the royalties; money can be withdrawn from the account only at their behest. Some spend only for their own person; others help build schools and churches; still others disburse the money widely to relatives. The common denominator is that all of these trustees derive a measure of political power because they control the keys to the community's wealth.

One result of this payment procedure has been continuing friction within villages over the use and abuse of royalty monies. The problem is that the procedure takes advantage of the social order of the village by paying chiefs—the custodians of the reefs; but, at the same time, it undermines order by introducing an outside source of wealth which lacks the moral and legal controls found within the local economy (see Salisbury 1968).

A means of sidestepping the entire baitfishing issue is to employ the purse seine as it requires no parallel fishery. But, so far, the Fisheries Department has viewed this method as economically and politically unsound. In terms of wage earners, purse seining would reduce the number of offshore jobs. More, it would replace the unskilled labor of pole-and-line fishermen with high cost equipment. In terms of the village, the development of a baitfishery would continually feed cash into the rural economy. Hence, the Central Planning Office proposed that villagers participate more actively in baitfishing instead of renting reefs. This proposal has received little support. Neither STL nor villagers wish to put the responsibility of daily supply of bait on the shoulders of the community. Tight bait schedules, essential to commercial fishing, just do not fit into the routines of Solomon Islands life. More to the point, the money offered for a hard day's fishing is barely more than the rent. Nevertheless, the Central Planning Office feels compelled to offer the local baitfishing project as it would suit the aim of village cash development. Their 1980 development plan cites it as a target.

#### LONGLINING AGREEMENT

The initial 1973 joint venture agreement prohibited purse seining and longlining. It did, however, anticipate these possibilities and stipulated that any new agreement be based on a separate feasibility study. Taiyo initiated a long-term Coral Sea resources survey in 1973. Global "oil shock" and licensing problems interrupted operations which recommenced in 1976. From Taiyo's vantage, the survey demonstrated the value of longlining and by March 1977 they proffered a proposal. The target species was yellowfin and the market the quality *sashimi* trade in Japan.

SIG, too, wished to gear up a longlining industry under the aegis of Solomon-Taiyo. Their reasons were varied but consistent, with a strong emphasis on the development and protection of these fish stocks. Their foremost interest was in establishing a profitable new industry that would contribute to the treasury. More, longlining would complement the existing pole-and-line operation as it focuses on the deep-swimming yellowfin, big eye and billfish rather than surface-swimming skipjack. It would also maximize use of the existing capital equipment. In particular, the cannery could take advantage of the yellowfin season from April to November when the skipjack catches are slumping. An additional motive for SIG was a desire to begin to gain a measure of control over the Japanese, Taiwanese and Korean longliners which had for many years been fishing the Solomon Islands.

The Taiyo proposal depicted a marginally profitable venture that would require special concessions from the Solomons if it were to be feasible. Essentially, the Solomons was to become a port of call for the longliners based in Japan and flying Japanese colors; the crew, with the exception of a

few unskilled positions, were to be Japanese drawing rather high salaries; and Japanese longliners were to be ceded priority access over all other vessels. Other crucial decisions were to be laid in the hands of STL management, the majority of whom were Taiyo men. The SIG, with FAO advice, rejected the proposal. They took issue with the accuracy of Taiyo's projections which purportedly showed that a locally-based operation using intermediate size boats was unfeasible.

The Solomons and Taiyo conducted negotiations in Honiara for several days in March 1977. But Taiyo's representatives, who were not the top of the line executives, were unauthorized to deviate from the original proposal. Discussions quickly ground to a standstill.

The Taiyo negotiators could only read the government's position, but not create their own. They flew back to Tokyo without giving notice of intent to reassess their stance and return a better offer. To increase the ante the SIG contemplated taking the longlining proposal to Starkist, already in neighboring New Guinea. Effective, this ploy would surface again as Starkist would like to gain access to Solomons resources.

The proposal was debated several times before an agreement was initialed. There was to be a two-year pilot project using two large and two intermediate-class longliners. They were to fish almost exclusively for the *sashimi* market, for although sales to a cannery demanded lower capital outlay and overhead on freezers and handling the profits were not enticing. Hence the larger and smaller vessels bearing elaborate  $-60^{\circ}$  F freezers were to work in tandem, the small boat transferring its catch to the large one for transshipment to Japan. Royalty rates were set at \$1,000 a month per vessel for the larger longliners and \$500 for the smaller ones. Taiyo was granted exclusive access within the Slot and 12-mile limit. As a further concession neither import nor export duties were imposed and all profits were for Taiyo's account, the joint venture receiving a management fee. At the conclusion of the trial period STL had the option of buying from two to four longliners for its own operations.

The longline agreement stipulated that any catch would not be counted against the 30,000 t quota set for skipjack, as the target species was yellowfin. Other companies and countries have since petitioned for and purchased licenses covering the area between 12 and 200 miles. In 1979, the Minister of Natural Resources reported that as many as two dozen Japanese longliners and pole boats were paying \$350,000 against the annual catch of 6,000 t of skipjack and 2,000 t of other tunas (Parliamentary Debate on 28 May). In addition, Taiwanese boats have bought a license to longline out of the coldstore base in Santo, Vanuatu (New Hebrides). Some of the longliners, unfortunately, fish in the vicinity of the traditional bonito (skipjack) hunters of the Southeast Solomons, on Makira. Local hunters now assume that the longliners take their skipjack; and they thus resent their presence. There is a recurring theme of Islanders misunderstanding the nature of industrial fishing and the Fisheries Department doing a poor job of public education.

#### 1978-1979 RENEGOTIATIONS

In the 1978 season Solomon-Taiyo incurred a substantial loss of nearly 4 million dollars. The ostensible reasons for the financial fall were:

- poor catches in the first five months of the year when landing prices for skipjack were high, followed by good catches when the prices fell due to a world over-supply
- expenditures for Okinawan charterage, interest on Taiyo loans, capital equipment, etc., were all paid in yen while the sales of skipjack were in dollars; as the yen appreciated against the dollar, STL was caught in a currency squeeze.

Although the Fisheries Department was cognizant of the charterage rates and the depressed catches it was caught by surprise when the STL management informed it of the huge deficit.

SIG then requested a meeting to negotiate remedial measures, including recapitalization. The two principals met in November 1978. Both stressed that all parties concerned with the joint venture

must bear the burden of the losses and share in refinancing. Taiyo, in response to a roster of recommendations submitted by the Solomons, accepted as its contribution:

- reduction of the charterage costs negotiated in February 1978 with Okinawan boat owners
- waiver of their Arabushi Technical Advisory Fee for 3 months
- reduction in the interest rate charged to STL from 9.84% to about 6.5%
- increased effort to obtain the best price for STL exports, especially frozen fish.

The last two points deserve special attention as they strike at the heart of the relationship between Taiyo and the Solomons. Taiyo's interest charges on the 5 million dollar loan to STL were higher than that which the joint company could have negotiated through either independent financing or a development bank. Taiyo's concession to step-up efforts to locate the premium price for STL exports makes it clear that this was not done as a matter of routine. The 1978 landing price figures, supplied by the Japan Fisheries Agency (JFA) support this assumption. Below (Table 2) are the 1978 ex-vessel prices for frozen skipjack, representing the combined average of 66 ports in Japan (Japan Fisheries Agency 1979).

The JFA, furthermore, reported only slightly lower prices at canneries in American Samoa where Taiyo markets most of STL's tuna to Van Camp. Yet, Taiyo received markedly less for STL tuna than the average American Samoa price. The Solomons Ministry of Finance noted that STL often obtained \$500/t and in December 1978 had to dump 2,000 t for as low as \$300/t. Note also that the Japanese figures show a decline in the second half of 1978 of only approximately 12%.

For transnationals, pricing is a complex business which can never be reduced to any one line of exchange.<sup>3</sup> Taiyo was not necessarily interested in soliciting the best price for STL's fish, even if settling for a lower price reduced its commission. Taiyo was willing to give a discounted price on frozen fish to its fisheries partner, Van Camp, for other concessions (e.g., loan assistance, and marketing or distribution rights). Of course, while such deals may maximize overall return on the sale of fish, most of these profits did not accrue to STL's account. There was a clear danger in Taiyo being the sole marketer of STL fish, a formidable conflict of interest that Taiyo's shareholding in STL or

Table 2. Average monthly landing prices for skipjack tuna in Japan, 1978.

Month	Landings in tonnes	Price US\$/t
January	7,600	946
February	11,616	937
March	25,338	900
April	25,500	918
May	12,749	815
June	6,127	699
July	12,865	699
August	9,085	884
September	12,681	852
October	15,795	847
November	14,470	773
December	19,425	800

<sup>3</sup>When dealing with American tuna processors there is a further complication. The U.S.A. landing price bears little relationship to the net economic value of the tuna because the price is set by agreement and not by the market itself. Prices derive from special share arrangements between captains, processors and crew (King 1978).



commissions on frozen fish cannot overcome. Governments cannot expect transnationals to curb this standard behavior without introducing incentives, especially competitive marketing (c.f. Ozawa 1979).

In the negotiations of November 1978, Taiyo also urged that the joint venture improve its operations and financial structure by:

- increasing the issuance of share capital by one million dollars
- increasing the equity holding of the SIG from 25% to 49%
- increasing the wholesale price of locally-sold canned fish and persuading retailers to absorb the difference
- rescinding the 5% dividend proposed for STL accounts for 1977
- amending depreciation schedules to reduce the taxable base.

Taiyo argued that the SIG should assist STL by extending special tax concessions on the export duty and withholding tax, and by permitting the use of purse seiners to boost catches. Taiyo also expressed reservations about NFD, specifically that competition between NFD and STL would undermine the operations of the joint company. Negotiations broke down when SIG refused to give a reduction in taxes; Taiyo felt the government position was inconsistent with the spirit of the joint venture agreement.

The major stumbling blocks were:

- SIG desired another seat on the STL Board of Directors to give it parity with Taiyo, since its purchase of an additional 24% equity brought government holdings to 49%
- the SIG tender to purchase the additional shares at the nominal sum of 10 cents per share, since under the joint venture terms, the net asset value, then negative, determined the cost of purchase.

Stock acquisition based on net asset value was a crucial safeguard for the SIG, especially in these early years when it was learning the ropes of fishing with a transnational.<sup>4</sup> These terms helped insure that Taiyo managers would not conspire with the mother company to manipulate a loss of great magnitude. In this event, the government could claim additional 24% equity at no cost.

It quickly became apparent that the SIG proposition to augment its equity at nominal cost to obtain parity was unacceptable. Taiyo proposed to dissolve STL on the grounds that such terms were both unfair and unprofitable. Inasmuch as this threat embodies elements of Japanese culture and business strategy it is worth reviewing.

Taiyo argued that in Japanese business practice the details of a written contract were less essential than maintaining its spirit. An ethos of fairness and moral commitment must guide the partnership. Had not Taiyo negotiated a reduction in 1978 charterage rates with Okinawans by appealing to this principle? Hence, though charterage fees were legally set, the Okinawans bent to the reality of falling American fish prices and yen appreciation. Taiyo pointed out that STL was only one of the nearly 80 subsidiaries and a score of joint ventures worldwide.

Negotiations recommenced at Taiyo's Tokyo headquarters in March 1979, when SIG decided to buy the additional shares at par value (\$1 per share) in exchange for a continuation of the export duty and parity on the Board of Directors, now redefined as 3 and 3.<sup>5</sup> Taiyo, citing charterage and

<sup>4</sup>An accountant cannot detect many deliberate cost overruns simply because they turn on operating decisions. For example, a manager can consistently increase rental fees on refrigeration ships belonging to the mother company by calling for them before the catch is ready to be loaded. This ploy is especially attractive if the ships are currently inactive. To an accountant such fees would appear as constant, non-discretionary overhead, particularly as he possesses neither the data nor the ability to evaluate the merits of operational decisions, however, costly such "decisions" may prove.

<sup>5</sup>Although the addition gave the government another vote, parity remained elusive because the agreement harbored the provisos that the Chairman of the Board then had a casting vote and that the majority shareholder appointed the Chair. In effect, a 3:2 Taiyo majority was simply elevated to a 4:3 majority.

marketing services it had rendered to STL, pushed for a 2% boost in sales commissions on frozen fish. This was amended to a management services contract and a revised marketing and distribution agreement.

In the interim, SIG sought the necessary information to redraft the marketing and management contracts. Information they requested from STL only trickled in because STL's Japanese management could not release the data until it had consulted the Tokyo hierarchy. Taiyo's management, in Japanese fashion, had to approve every detail by consensus. Note that STL seemed to possess a divided identity. When borrowing from or marketing through Taiyo, STL was an independent company enjoying no special privileges. In its operations and inner management, however, STL had no independent voice insofar as Taiyo's own executives staff the head office and fishing bases. Overall, SIG complained that STL paid standard rates for Taiyo's services even as Taiyo's management decided how STL would spend its operating funds. Accordingly, SIG, had to operate a parallel organization to monitor Taiyo if it wished to leave STL management in Taiyo's hands. The joint venture, in effect, had a bilateral economic structure. On one side, Taiyo rented the Solomons' skipjack and baitfish resources for the price of export duty and other taxes. On the other side, the SIG accepted the liabilities of partnership (i.e., recapitalization) in return for access to information and a voice in STL's social policy (e.g., hiring of nationals).

In summary, the negotiations produced the following results:

- SIG finalized its purchase of an additional 24% of STL shares from Taiyo for SI\$240,000
- a further 1 million shares at \$1 were issued, Taiyo buying in at \$510,000 and the SIG at \$490,000
- SIG gained a third Board Director but no greater control over the vote
- Taiyo received a technical services agreement which paid 2% of sales for recurrent services (e.g., charterage of Okinawan boats) and 3% of sale price for procurement of one-off items
- a revised marketing and distribution agreement which maintained the former commission levels.

### Ethnicity and the Expatriates of Solomon-Taiyo

#### THE MANY DIVISIONS OF INTEREST

The Solomons owns 49% and Taiyo 51% of STL until a new agreement (Second Joint Venture, p. 55) takes effect in 1983. The division of equity is also a division of interests in the most fundamental sense, and it is an axiom of corporate management that divisive interests, leadership and personalities lead to internal warring and poor performance (Rosow 1974).

Taiyo, as a private Japanese corporation, presents a single face. The government, by contrast, is democratic in principle and thus cannot help but present a variegated front. The various Departments and executives may not only have conflicting interests but may vie for power by playing upon these conflicts. Also, the opposition party defines itself in contrast to the views of those in power and adds to Solomons disunity. Finally, Parliament members may distrust transnationals in general or have constituents who dislike or support STL activities (Lewis 1966).

#### THE STRUCTURE OF DIVISION

Within STL, face-to-face interaction is the dominant mode of everyday communication. Face to face, the slogan speaks, is the "Pacific Way." The implication is that telephones and telex, letters and memos, imply emotional as well as geographical distance; that animated conversation is the exemplary means of communication; and that the social universe is a small community where people know others' emotional make-up and intentions.

Face-to-face interaction reveals emotions more fully than other forms of communication. Where words speak of ideas and objects, tone and volume of voice, inflexion and intonation, gestures and postures, convey emotions. Rage, fear, loneliness, happiness and shame all belong to paralinguistics.

They are under less conscious control than words chosen carefully, often slipping through the social censor to reveal inner feelings. Indeed, many expatriates have, and find it hard to hide, racial contempt for Islanders and each other. Islanders, in turn, harbor resentment and hostility which they express in sulking and insubordination. People unconsciously expect to unravel the emotional code, dependably and fluidly. But the Japanese, Okinawans, Islanders and expatriates all have slightly different rules for emotional display, and this complicates their face-to-face interactions. Japanese may sink behind extreme politeness and generous smiles during a time of rising frustration and anger. Solomon Islanders, to the bane of Europeans, find it hostile, rude, and impolite to look an interlocutor in the eyes. A further complication is that a single speech behavior can emit simultaneous, often contradictory, emotions. The words can be a simple request to offload a boat, but the tone of voice can be laden with curt authority, the smile ambiguously friendly. To begin understanding this interface between personnel one must understand STL's divergent character standpoints.

For Taiyo, STL is primarily a business enterprise in uncertain waters, as Taiyo and SIG must negotiate differences in business outlook, culture and national interests.

For the executives who run the government, STL is a main source of Islands revenue and a bellwether of economic development. STL is also an industrial octopus with numerous arms that demand a degree of expertise and sophistication that the SIG finds imposing. This stems, in part, from the rapidity of recent economic development; many government posts are not well-defined and some employees have very little formal academic or technical training.

Many of the national elite have a political stake in opposing transnationals and have directed considerable verbal fire at what they feel is the exploitation of the Pacific by first-world business.

The following account describes the ethnicity of the various nationals involved and its effect on STL operations.

#### JAPANESE MANAGERS

Japanese brought in from Taiyo, Tokyo, hold exclusively the executive positions of power and policymaking. They fill a handful of major executive posts led by the General Manager, Base Managers for Tulagi and Noro, Cannery Manager for Tulagi, and several Assistant Managers. The managers are all hierarchically ranked on the basis of seniority, education and family connections into six grades. Taiyo rotates the subordinate managers about every four years. The senior men have spent years moving between overseas bases, from west Africa to Alaska, captaining fishing convoys, and supervising giant floating factory ships. Junior officers, recruited from prestigious fisheries universities, are dispatched to these foreign operations as part of their initial 5 to 10 years training. Some are destined to a life abroad, others will return to Taiyo offices in Japan (Ozawa 1979). The General Manager has responsibility for the operations and financial progress of STL and for determining policy. In concert with the other Taiyo managers at STL, he makes decisions on fishing operations, cannery production, capital construction, and social services offered to national workers. He sits on the Board of Directors of NFD and STL, being chairman of the latter. On major decisions, however, he must consult the Tokyo head office; thus there is a constant flow of information about STL to senior executives in Tokyo (c.f. Rohlen 1974).

With one exception, the Japanese managers live in separation from their families for the duration of their overseas work (Nakane 1970).

To offset cultural and familial separations, company associates form close allegiances. Even in Japan, business' demanding social obligations isolate Japanese men from their homelife. There is a disjuncture between home and office which excludes wives from business entertaining; husbands consider it unmanly to tell wives about business affairs. Men index their loyalty and fidelity to company through hard work, and indeed achieve self-realization through service to company (De Vos 1973). A common system of values—loyalty, intimacy, identity—links the corporation and family, the two social and imbricated universes within which men move. This allows close ties to business associates to compensate for familial distance created by business schedules and policies.

While this togetherness sublimates the pain of cultural distance it also prevents the Taiyo men from forming friendships with local people, from empathizing with their problems and needs, and from understanding local motives regarding work and pay. In essence, the Japanese cultural system functions as a distancing mechanism in foreign settings.

The total association between Taiyo and its personnel materializes in the history and operations of STL. Although the Japanese managers are the executives of STL, charged with developing the joint company, in fact their future, loyalties, and cultural instincts lie with Taiyo. Insofar as Taiyo and the SIG have competing objectives and rewards this poses a problem for the Government. Thus, the oft heard SIG complaint that the joint company has no separate identity from its parent.

This commitment to group loyalty and harmony by STL managers contrasts with Solomon Islands labor practices which are founded on a different culture and history. National workers frustrate Japanese expectations and STL managers are thus appalled by what they see as the Solomon Islanders' casual commitment to work, disregard for authority, and lack of fidelity to the company. By Japanese standards this is an accurate appraisal. Of course, for the Islander, wage labor is but one cog of a larger economic framework devolving on the village, wherein lies his locus of loyalty and devotion: gardening, fishing, producing copra, and doing whatever else he must to assist the clan and extended-family enterprise. These people guarantee his social prosperity and protection as, in an analogous manner, the Taiyo company guarantees them to its Japanese workers.

The social practice of temporary wage labor migration is ingrained as part of an historical pattern perpetuated by wages so low that men find it impossible to support and house their families. Ironically, STL continues this tradition of a subsistence wage which forms the backbone of transience. Village lifestyle is both foreign and invisible to the Japanese sequestered on bases and in town, as is the tradition of transient labor they unwittingly reinforce.

Taiyo's managers, like many others from literate cultures, imagine the village as "primitive", not only technologically but socially. This justifies crowded housing and a monotonous mess hall diet because these are viewed as no less hospitable than the conditions into which the workers were born. Further, inasmuch as nationals are not going to remain long in the company, there is no point in training them or expending money or effort to improve their talents, the social climate or social services.

From the Japanese ethic, the Islanders are incapable of becoming members of the company, of identifying with Taiyo and achieving self-realization through work. Their spare time is rife with drinking and fighting that undermines company harmony. They shelter wontoks who seem to settle in for extended stays on the base, sneaking them food from the company mess. The Solomon's idea that loyalty lies in "kinship", and nowhere else, runs entirely counter to Japanese belief.

The Japanese also find the cultural differences which affect the flow of interaction between people difficult to fathom. Where the Japanese are basically a homogeneous group with a strong heritage of internal rank and hierarchy (Benedict 1946), Solomon Islanders are heterogeneous in the extreme with a long tradition of relatively egalitarian systems. The Japanese find it hard to conceptualize relationships outside those of senior and junior, especially when they coincide with different ranks within the company. As a result, the Solomon Islanders appear recalcitrant, insubordinate, defying higher authority in a manner explicable only by reference to their "uncivilized" cultures. Again this strikes at the heart of the relationship between nationals and Japanese. It also inspires the managers who feel somewhat threatened by this egalitarian behavior, to act superior and imperious, a behavior pattern that Islanders scorn and ridicule in private. Indeed, joking expresses and diffuses their anger towards the Japanese.

In effect, the cultural circumstances of STL have established a circle that impedes the development of human resources as well as industrialization. It is important to see that this circle is not orchestrated. Rather it is the interlocking of two social patterns whose gears are set so differently that friction is inevitable.

## OKINAWAN FISHERMEN

Okinawans now, and in the foreseeable future, constitute an important force in STL operations. They are captains and crew on all the catcher boats in a ratio of approximately 10 to 13 with Islander deckhands (actual numbers proportional to the number, size, and ownership of the boats fishing). The proportion of STL's fleet directly chartered from Okinawan owners is decreasing as the joint venture acquires its own vessels.

As boat owners in need of finance and fishing masters who command the charter crew, Okinawans interface with Japanese management. As fishing masters and boat crew they spend repetitive two- to three-day periods at sea, often putting into base for but an hour to exchange the fish for fresh supplies of ice, fuel, and food (Kuchikura 1975). On board they thus interact intensively with the Islander crew, a situation which heightens the potential for both strong bonding and violence. Accordingly, the personalities involved have great bearing on the tenor of Islander-Okinawan relations.

For historical reasons still unclear, almost all of the catcher boat owners and Okinawan skipjack fishermen are Sarahama people coming from a small clutch of islands—Miyaka, Irabu, and Ikema—in southern Okinawan waters. Their language and culture are distinct from the neighboring Okinawan groups on Okinawa Island, the seat of government and the center of US military occupation until 1974. Both skipjack fishing and baitfishing are part of their technical mastery, which sets them apart from other Okinawans and makes them adaptable to the conditions of southern-seas skipjack fishing.

Since before the war when they were active in Borneo, Philippines, Taiwan, and in the Micronesian seas of Palau, Truk, and Ponape, Sarahama fishermen have been year-round journeymen of the southern waters. One estimate (Kato, personal communication) is that 80% to 90% of the male population were abroad fishing or running a large processing plant on Palau. The war suspended fishing and exiled the Sarahama from their favorite overseas fishing grounds. After the war, the major fishing companies began to enter the area. For Taiyo, the Sarahama people, live-bait skipjack fishermen by tradition, at home in the southern tuna seas, willing to endure long stints away from home, and to work for a modest wage, were the natural choice. The Sarahama tradition of chartered catcher boats and/or crew flowered rapidly starting in the late 1960s. By the early 1970s many US and Japanese companies were competing for Sarahama boats, charterage rates rose dramatically, and new entrepreneurs were eager to borrow money to invest in catchers. With just several exceptions, however, these new owners had a strong fishing history.

Although rich in fishing skills and relatives who could be recruited, Okinawans, with only a few exceptions, had insufficient family collateral to secure financing for a catcher boat. Thus each potential boat owner, or *senshoo*, forged an agreement with a fishing company—Starkist, Taiyo, Kaigai, to name the most important—who would capitalize a modest second-hand wooden catcher in exchange for purchase rights on the tuna netted. The companies extended long-term loans, looking as ardently at the owners' fishing experience as at their financial position, and this established the borrowing structure for the Okinawan fishing industry. Indebtedness currently runs as high as one million dollars for a *senshoo*. For the companies, the indebtedness of *senshoos* afforded management sufficient control over production to make long-term commitments such as a joint venture.

At first the small number of overseas boats meant that Sarahama crews were readily available and wages modest, both in relative and absolute terms. But, as in prewar days, they proved to be excellent tuna fishermen, the kin-structured boats operating with a high level of incentive, coordination, harmony, and skills. Soon Starkist, Taiyo, Kaigai, and Kyokuyo, all wishing to expand operations in the Solomons and Papua New Guinea, were competing heavily for the Sarahama catchers and crews. The number of boats escalated quickly; and the companies made concerted efforts to attract the best boats and crews. Good crews thus became more valuable and this drove up wages even faster than inflation. The owners mediate between the transnationals and crews, as they are tied into both groups by a web of social and financial obligations. Hence in their struggle to win the

best boats manned by the keenest and best equipped crews the companies turn the competition over to the *senshoo*. He attracts crewmen through his network of kinship and business ties that penetrate the fishing community. Owners know that they exist by virtue of their connections rather than just money. Indeed, no company or individual, no matter how rich, could expect to hire a first-rate crew—one that was loyal, successful, and trustworthy—unless they had social ties.

The Sarahama practice is also to recruit deckhands and other crew from their kinsmen. While this approach may not always enlist the best seamen from a technical standpoint, compelling social and economic advantages outweigh calculation based purely on individual skills. The conditions of skipjack fishing—long periods in close quarters, swells of intense activity which disrupt the rhythm of eating and sleeping, danger of bad weather and flying hooks—magnify these advantages.

Since the advent of the joint company, the interaction between the Okinawans and Solomon Islanders, especially those from Malaita, has been both a point of government concern and an illustration of social accommodation. The flow of events divides the first decade into two phases: an initial period of conflict and work adjustment lasting roughly five years, followed by a gradually building accord still marred by occasional flare-ups.

Before experience and time bridged their differences, Islanders and Okinawans only communicated by gestures, even in tense working situations, as when the catcher came upon a skipjack school. As both sides were condemned to non-verbal communication, little training of Islanders was possible. In addition, the Safety Inspector with the Ministry of Industry, Trade and Labor found that the language barrier was the foremost safety hazard.

For their part, Islanders, through a blend of fact and fancy, fear the Okinawans. One current myth is that Okinawans, and indeed all Orientals, are black belts in the martial arts, endowed with the karate powers of Bruce Lee whose movies of violence and revenge are enormously popular in the Solomons because they appeal to the tradition of pay-back warfare.

While fears contribute to conflict the most frequent and immediate cause is work schedule. Fishing boats, whether off Tulagi or New York City, must fish intensively to turn a profit. Such regime runs counter to the Solomon Islands work pattern which seeks to combine production activities with leisurely social intercourse. Insults are universally cast and fights precipitated on the best of boats over the compulsive drive of Okinawans to fish around the clock, baitfishing by night and tuna fishing by day to turn the greatest profit. The temptation is for Okinawans to perceive Islanders as innately lazy and for Islanders to see Okinawans as irrationally greedy. After more than a decade of contact, the stereotypes persist.

For the Okinawans, fishing has a significant religious dimension that is instrumental in determining success or failure. Onboard every catcher boat, in the quarters of the fishing master, there is a small glass-paned shrine harboring the Funadama, or boat spirit. A decade of contact has taught Islanders to respect the Okinawan's religion and to tread lightly on their ritual practices. The religious tolerance shown by both sides is part and product of a larger cultural accommodation that has slowly evolved as the relationship between Solomon Islanders and Okinawans matured.

Those Islanders who have not abandoned offshore work have picked up the nuances of Okinawan kinship, routine, and cuisine. Certainly one of the bonuses for the Islanders crewmen is the variety and quality of the food on the catchers. Okinawans regularly serve chicken wings, eggs, canned pork, and soy sauce, all delicacies in Solomon Islanders eyes. More, the locals, noticing that Okinawans use chopsticks, eager to eliminate cultural fences and explore new terrain, asked to use chopsticks too. The request helped break the practice of *de facto* segregation at meal time and Islanders began to acquire Okinawan tastes and table manners.

Some Islanders have even learned Sarahama language. A distinctive language is part of the Sarahama identity, a means used to construct and maintain the we/they division. Hence, when Solomon Islanders acquire the Sarahama tongue, even in an abbreviated and broken fashion, it narrows the cultural distance. The social and psychological value, magnified by the microcosm of the boat, is as great as the strictly communicative value. It opens the door to friendship, training, and social exchange. The effort of Islanders to learn Sarahama is itself an act of friendship and social commitment.

money, the driving principle is the making of a social relationship. The relative social positions and mutual needs of exchangers, not the market, set the rate of exchange. Second, exchange is between social groups even when the main agents are individuals. They are representatives of their clans and, at least implicitly, carry out transactions in the clan's name as well as their own. One result is that for Island workers an action by a specific Japanese manager is an action of the Japanese group. Third, exchange is meant to initiate or underwrite social intercourse. Accordingly, work is a social experience, replete with all the courtesies, manners and habits reserved for sociality. Modern industry, however, draws an iron distinction between worktime and leisure time. STL cannot tolerate workers taking random breaks to gossip, chew betel nut and tell anecdotes, all mainstays of the village work regime. Fourth, there is the expectation that the exchangers will deepen their relationship and mutual commitment over time. So the longer a man works at STL the more he expects STL to take an active interest in his welfare and that of his family.

Solomon Islanders have adapted to this changed work environment. Conceptually, they understand plantation labor as a degenerate form of exchange, one that desocializes labor at the expense of moral and effective gains. They see STL as an environment in which the Japanese suspend the social entailments of labor exchange. However, behavioral adjustments are never uniform as not all components of behavior evolve at the same speed.

Another telling difference between industry and village lies in the motivation to work. In the village, labor (typically gardening, fishing or crafts production) is a primary step in attaining prestige, recognition, social position and security. These rewards are incentives to work; they underpin the entire motivational system surrounding labor. Moreover, the community's constant watch and evaluation of workers spurs them to work diligently on pain of losing their personal reputation. Contrast this with plantation or industry where there are few direct social rewards for performance. Industrious STL workers receive little prestige, status, or security, either from management or fellow employees.

In essence, the social bases of labor and its institutional supports have been pulled out from under workers. What has developed in their place is a cross between western individualism and Island clanship. Thus, young men aver that it is imperative to acquire money to buy goods and improve their standard of living. At the same time, they cite their best reasons for wage earning as the need to pay taxes, contribute to their Christian church, finance village businesses, and pay school fees for relatives. So far, however, only a small amount of cash flows back to the village; most men, feeling alienated and confused at the shorebase, waste their wages on alcohol, gambling and disposable goods. Accordingly, there is still not sufficient incentive for men to remain on the job once they marry and assume the responsibilities of manhood.

## EMPLOYMENT

A census in July 1979 revealed that 279 STL men were employed at the Tulagi shorebase. And in the last three years of the joint venture, the number has fluctuated around this figure. There is a seasonal adjustment with more men working in the peak fishing months, May through October, than when the vessels are at anchor December through February. Offshore, July 1979, 96 STL men were employed onboard the 15 Okinawan charter boats plus about 68 crewmen on STL's errand-running, mail and supply crafts. In addition, NFD's *Solomon Fisher* out of Tulagi hired 16 Islander crew members bringing the total of offshore workers to 180. The number will probably decrease in the near future as STL trims its labor force in favor of mechanization.

As noted, Noro is scheduled to switch positions with Tulagi in the second decade of the joint venture to become the primary shorebase with a cannery. Tulagi will revert to Noro's role as a coldstore/transshipment port. In preparation, STL began trimming Tulagi's work force as early as 1980. Through redundancies, sackings and attrition STL aims to reduce the onshore force by 20%.

## JOB DESCRIPTION AND WAGE RATES

At Tulagi, there are seven specialized plant operations, each under the supervision of an Islander foreman: Base Office, Cannery, Smoke Factory, Power House, Coldstore, Mess and Carpentry Shop. Then, there are the seven 9-man labor sections (A through G) each composed of a section leader, fork lift driver, storekeeper and hands. Three labor sections work the day shift, three work the night shift and the seventh is off every 24 hours. The three sections on duty at any one time take turns handling the wharf, brine and ice operations.

When a catcher loaded with skipjack docks at Tulagi, the labor section working on the wharf swings into action to provide fuel, ice and supplies. The wharf hands and the crew fill baskets with fish down in the hold and then shoulder them up to the outstretched arm onshore. The fish are then put onto pallets. Once the storekeeper sitting by the scale records the tonnage, the fork lift driver moves the pallets to the brine tanks. The boat crew loads supplies and fuel onto the boat; they also place future orders with the storekeeper. STL rules allow only crewmen to load the supplies to insure sole catcher responsibility for theft and error.

While these operations are in progress, the ice section wheels over chipped ice on lorries to stash in the hold (most catchers are still ice boats). Other catchers coming in behind layer out from the wharf, sometimes impatiently shouting for their turn to offload and restock for immediate departure for the baitfishing grounds. Late afternoons tend to be busiest since baitfishing is done at night for the next day's chumming of skipjack. Well-orchestrated wharf, ice and brine teams can unload 10 t of skipjack and have the boat casting off in a half-hour. Onshore speed is important, less because it makes a difference in the amount of fish landed than that it assures Okinawans that Islanders work hard in their cause.

The offloaded skipjack soak in brine for about 10 hours. At this point a brace of coldstore workers, bundled in fur-trimmed parkas incongruous to the tropics, mound the fish into the cavernous freezer. The skipjack remain in the coldstore vault until transshipped or utilized by the Smoke Factory or Cannery. Since STL transships more than 75% of its catch, there are periodic surges in activity when foremen assemble as many men as possible to load the great bulks of tuna onto vessels bound for American Samoa or San Diego.

The mess unit prepares three meals a day for almost all onshore men. The job requires little in the way of organization as the menu never varies. The workers eat Honiara-made packaged hardtack with tea for breakfast and skipjack accompanied with rice at other meals. The sole exception is Saturday when the mess serves tinned meat. The mess unit is responsible for chopping the day's firewood and preparing the skipjack. As they might in the village, the men butcher the skipjack on a tree stump with machetes. If organization poses no problem, policing the mess line is a constant and unrewarding task. From management's standpoint, their most important job is to verify who in the food queue is a worker and who is a wontok trying to freeload. Time and again STL has concocted schemes to distinguish workers from wontoks. Perhaps the most successful has been in hiring men from Gela to manage the mess as they have the fewest wontoks.

At STL there are three levels or grades of workers: A, B and C, respectively. A represents unskilled labor and in 1979 constituted approximately 93% of the nationals employed. B represents partly-skilled labor, mostly carpenters and mechanics, and constitutes the remaining 7% of the work force. C is the skilled management designation and to date no national has reached it. Wage scales for the A grade are as follows (as of February 1979):<sup>6</sup>

three months probationary period	SI\$1.12 per hour
three months to 12 months	SI\$1.23 per hour
12 months to 24 months	SI\$1.28 per hour
24 months to 36 months	SI\$1.33 per hour

<sup>6</sup>SI\$1.00 ≈ US\$1.30.



Beyond the base pay there are allowances for hardship posts. Coldstore workers, night-shift fish gutters and machine workers all collect an additional 20¢ per day. Overtime is time and a half and holiday pay is double time. Skill rather than time served determines wage rates at level B; and on average they are 98% higher than grade A wages.

A Solomon-wide misconception is that STL issues "free rations" to all its employees. In fact, STL deducts \$18 monthly for meals. However, most workers believe they get free rations, since they never see nor have seen the deducted money. A few workers, generally married foremen with families, are granted a meal contract which pays them a food allowance to cook for themselves. But by 1980, STL had placed a freeze on new meal contracts, thus, inadvertently or not, discouraging married men from joining STL. The myth of "free rations" stems from the fact that the majority of plantation workers must "fightem rations", that is, spend their wages for food. The lure of free food attracts wontoks to STL. They come both for employment and just to eat, especially as the mess serves bonito, traditionally a prestige food reserved for ceremony.

#### RECRUITMENT TO STL

Most workers are recruited by other workers and they do this in two main ways. In the first, workers go home on leave or meet wontoks in Honiara and convince the brother or close childhood friend to keep them company and taste the benefits offered by STL. They cite the adventure and free rations and the beer. Emotional and personal comfort afforded by such companionship is significant for workers raised in tight-knit, supportive communities. In the second, a close relative or friend arrives at Tulagi for a visit. During his stay, which may last anywhere from a day to several months, the worker finds his relative a position. The visitor, his bonds pre-established, emotional supports and village friends in place, has few reservations about seeking or accepting a job.

In the third and less frequent form of recruitment, men simply walk in off the streets of Honiara and approach the STL personnel management in the head office. They face fellow Islanders who can trace their character from the flow of information through wontok networks. Yet, even when men walk in off the street it is not unusual for them to be introduced by a relative who already works for STL. The logic of social introduction requires the presence of intermediaries in some form. Thus, recruitment at STL follows the traditional dictate that one does not intrude upon another's village or business without an invitation or introduction to eliminate mistrust on both parts. What is different nowadays, is that the intermediary no longer has to be a close relation as he did a generation ago. More than likely, Islanders will come to consider business partners as suitable intermediaries in the near future.

#### THE MIGRATION PATTERN OF YOUNG MEN

In the last 15 years, there has emerged a characteristic pattern of migration for young men. Its form resembles traditional labor migration, though the implications and effects are different.

Most youths leave school at the termination of primary education, few venturing into high school or college. The school-leaver finds himself at home in a village whose lifestyle and pace cannot compare with the stories he hears over the airwaves or from teachers. He lingers about the village, lending a hand in family enterprises, playing soccer with other youths, and listening to music cassettes brought in by others. Bored by village life, unable to secure a post in the government bureaucracy or a position in business because of meager education, he is game for contract labor. Thus a wontok on leave will easily recruit him to wage earning.

For villagers, labor migration implies that the goals of modernity have not been met, especially in the realm of education. Today's youths are the first generation to receive mass education. At least in the very beginning, parents felt that they were exchanging school fees, a heavy burden on their small cash incomes, for long-term wage earning positions in government and business for their sons. Education was a major departure from tradition, an unprecedented investment, and thus its failure

## Aspects of Fishing in the Solomon Islands

Photographs by S.K. Meltzoff



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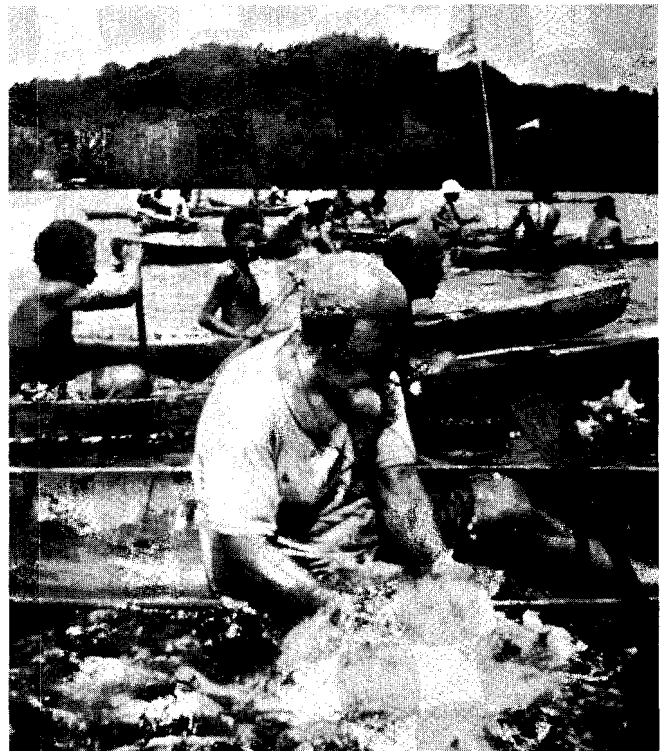
1. Sarah Meltzoff with children in a village on Small Malaita.

2. Porpoise hunting at Fanalei, Malaita. Hunters herd the porpoises into the nearby passage, then everyone in the village sets out in canoes, clapping flints underwater to drive the porpoises into a mangrove cove where they can be wrestled into the canoes.

3. Traditional bonito hooks: the one on the right of one piece of pearlshell is for trolling behind the canoe; the one on the left, a tortoise shell hook bound to a pearlshell lure, is for casting in front of the canoe. Hunters today use these old hooks as well as the modern versions.

4. Solomon Taiyo Ltd. tuna base at Tulagi. Catchers at rest during the January-March hiatus when the Okinawan charter crews go home for a rest.

5. Noon at the Solomon Taiyo Ltd. base, Tulagi. Tulagi has had no local population since the start of British colonial rule in the 1890s.



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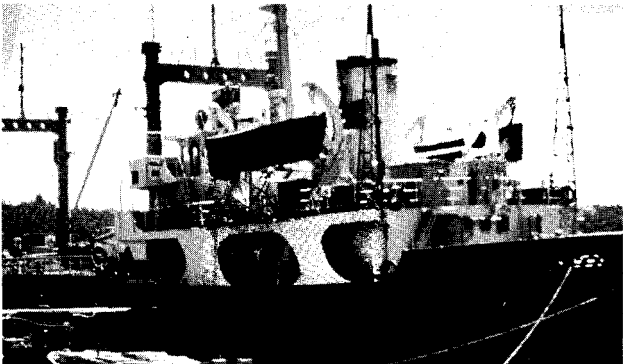
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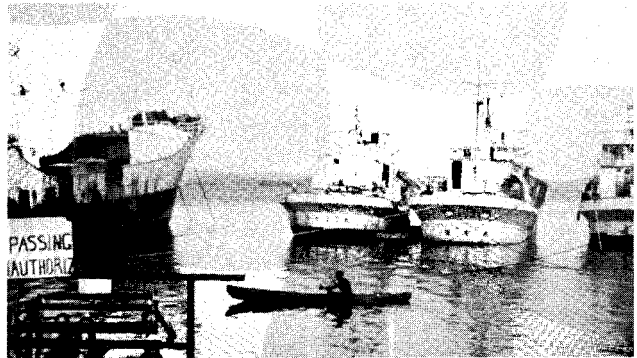
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6. Nearby islanders come to STL to trade garden produce with the crews and to see the bigger overseas transshipment vessels coming in for the frozen skipjack. Here an islander passes behind catcher boats at Tulagi.

7. Japanese from Taiyo, Tokyo, came to Tulagi to experiment with *payao* rafts: the raft is anchored in deep waters, trailing coconut fronds on which grow seaweeds. The bonito congregate around the *payao*. Fishing around the *payao* saved STL trial catchers time locating skipjack. Taiyo hopes to be allowed to use purse seiners around *payaos* and eliminate the need for baitfishing.

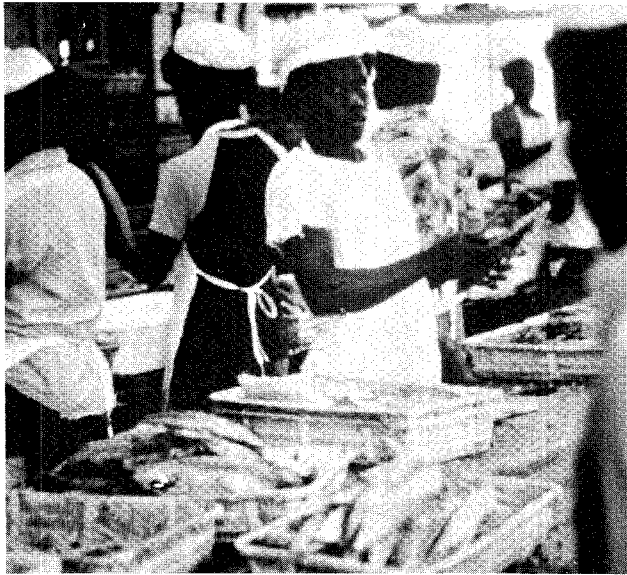
8. Transshipment of tuna to Van Camp in American Samoa and San Diego. Van Camp has been Taiyo's trade partner since just after World War II.

9. Skipjack thaw prior to canning at Tulagi: about ten tonnes a day are thawed for Tulagi's tiny plant of World War II vintage machinery.

10. Cans, newly pressed, are washed: importing the tin plate to make cans is the major cost of canning in the Solomons and an argument used to call local canning unfavorable.

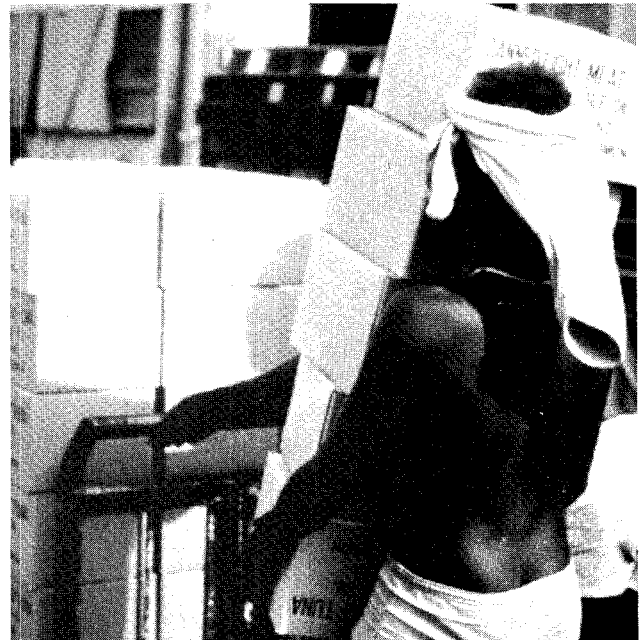


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11. Fish cleaners have a high rate of turn-over: young women would be preferable but the Tulagi environment is too rough for women. If the new cannery at Noro is built, they will try employing commuter women as fish cleaners.



12

12. Canned skipjack, "light meat" variety, is mostly shipped to the European Economic Community because of the Solomons' Commonwealth status and associated advantages with import duty.

13. The Smoke Factory processes about half the tonnage of the Tulagi cannery: they smoke the loins for three days, turning the skipjack into *arabushi*, a Japanese staple for soup stock. All *arabushi* is marketed in Japan. The Smoke Factory is just a tin shack, whose poor circulation produces a sour grade of *arabushi*. STL may end this form of processing.



13

14. Cook prepares skipjack every day for the islanders' mess at Tulagi.

15. Rainbow over the coconut plantation: copra is one way to earn cash while at home. Copra money is shared among the family members, while a wage can be diverted into consumer goods and consumables such as beer.



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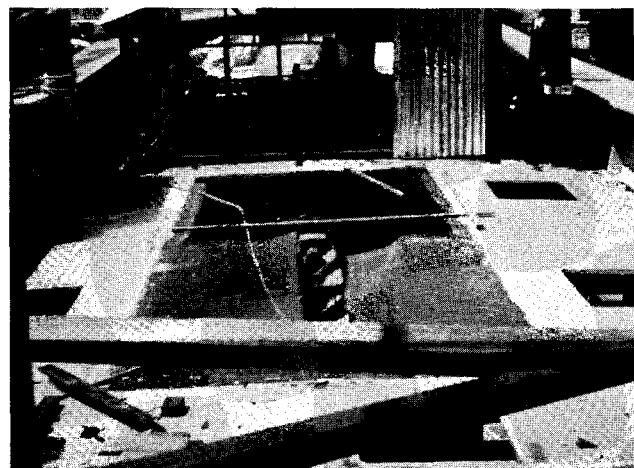
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16. Six Malaitans built their own leaf houses along the Tulagi shore. STL and the Central Island Province officials wanted to remove these houses and send the men back into the cramped barracks.

17. There are only eight married quarters at STL, Tulagi; there is a long waiting list because men are lonely for their wives and want to bring them here despite the trouble of managing a marriage in such a place. Some marriages brought here ended. Many men also left to marry.

18. Shed for building ferroceement vessels at the National Fisheries Development site in Sasape Harbor, close to STL at Tulagi.

19. Coldstore operator in his parka brings home a fish for his wontok visitors to eat.

20. The hull of the first ferroceement boat; the NFD yard was the biggest ferroceement operation in the third world.

to instigate change all that more conspicuous. When the youth leaves for a plantation or STL, his parents realize that his caliber of work does not warrant a prolonged stay away from the village. Accordingly, they assume he will return and make their plans with him in mind. The type of work he is doing minimizes their fears that he will marry a woman from another Island group, for STL and other plantations are basically all-male environments.

At the STL base, the youth finds that the novelty of work wears thin quickly. There are few chances to purchase worthwhile goods or to socialize with women or to lead the privileged life depicted in weekly movies at the Tulagi shorebase. The solace of alcohol, soccer with age mates, and store-bought goods and cakes compete with feelings of alienation and frustration. So the average young man quits after a year and a half and moves on to another job, perhaps staying with a wontok in the interim. Eventually, out of a job, the hard realities of wage employment evident, the man returns to the village as expected. Not infrequently, a worker's parents have been purchasing shell money, porpoise teeth and other bride wealth with the money he sends home. Encouraged, the man takes a wife, and becomes locked into the village regime.

One consequence of this labor pattern is that at any point in time there is a drifting mass of young men who move from job to job, locale to locale, before returning to the village, perhaps a bit more worldly-wise and cynical about their prospects in "civilization."

#### WORK CONDITIONS AT TULAGI

Work conditions—housing, food, safety, training, and treatment—at Tulagi have never been ideal. Although STL is a joint venture, shaped with the helping hand of development agencies, conditions are comparable to the other expatriate-run plantations around the Islands. So much so that most workers assume STL is owned and operated exclusively by the Japanese. From a practical point of view, the workers' perception is on target, for the Japanese do control work conditions and do rely on the plantation model laid down in the colonial era. The SIG appears to have little influence to determine work conditions. Some workers blame their own national elite, who they feel are more interested in the development of industry (and by implication the government bureaucracy) than in the welfare and development of their countrymen.

At best, STL managers have understood that Islanders integrate work with sociality, that unfair treatment builds an explosive resentment, and that exchange of gifts is the critical social lubricant. What they have not understood, and indeed what only a few expatriate managers have ever understood, is that the wontok system is, for Islanders, the indispensable source of stability and kinship away from home; and that workers will never tolerate a public shaming, whatever the reason, because such behavior is utterly unacceptable by Island standards and traditionally was nothing less than an invitation to violence.

At worst, some managers have been disinterested in working conditions. Recently a manager banned the traditional gratuities of fish given the wharf hands by the Okinawan crews for fast service, and erected a 4-m barbed-wire fence around the STL plant operations, creating an internment camp aura. The fence's purpose was to keep out workers' relatives and monitor the theft of food and clothes. In the space of a few weeks the atmosphere at Tulagi and the attitude of workers did an about face. Clearly, it is more the personality and philosophy of the individual manager than express company policy that determines work conditions at Tulagi.

Moreover, Japanese behavior toward overseas foreign employees tends to be more erratic than towards Japanese at home, where a powerful set of social norms and rules govern face-to-face interaction and management-employee relations. From a worker's perspective, Japanese management is arbitrary and confusing, especially since each Japanese person is thought to represent the Japanese group at large. The worker's model, of course, is the clan, whose members implicitly coordinate their behavior towards any outsider. Also, the official policies and rules governing workers are vague and their application non-uniform. The perceived confusion and arbitrariness from the worker's viewpoint promotes transience as it inhibits him from identifying with the company.

According to workers, housing at Tulagi has been a constant source of irritation. The company block houses tend to be overcrowded with six cots per room plus the inevitable contingent of wontoks camped on the floor. Village houses may sometimes sleep as many people, but the social psychology is entirely different. Where the closeness among family members feels snug and secure—being a sharing of space—among strangers it is an invasion of personal space that nurtures suspicion and friction. The negative consequences of overcrowding are aggravated by the architecture of the typical labor quarters: cement walls, low ceilings, few windows and a tin roof inhibit air circulation and cooling. Better housing is feasible. In 1980, the Copra Board designed and built houses at Noro which incorporate the virtues of indigenous architecture: verandas, stilts, high ceilings and open walls. Another major housing problem is the inadequate number of quarters for married employees.

To discourage wontok visitors, STL has an explicit policy of rooming relatives in separate houses. While this does reduce the number of wontoks and their length of stay, it also breeds resentment and the problems of strained tempers and thievery. Listening to workers talk, it becomes clear that unruly behavior and "running away" will persist in the absence of better housing.

To escape what they see as sub-standard housing, some north Malaitian workers have begun building leaf houses on stilts on the shore. In the traditional style, the houses are constructed of wood and imbricated sago-palm thatching which afford ventilation. House members are kinsmen, thus obviating the risks of theft and harmful magic. STL feels that the workers' building their own houses erodes their authority and control over the base. So far they have taken no direct action against the builders, but have lobbied with the Central Island Province to condemn the new houses on the grounds of unsightliness. Nevertheless, they are no more or less unsightly than village constructions ever are. Moreover, this is not the only settlement of leaf houses to spring up in the past few years. Closer to NFD grounds, just beyond the Smoke Factory, is a compound made-up principally of men from Sandfly Island, most of whom work in the Factory. In the absence of company or government interference, the number of leaf house settlements may increase into the future.

The organization, decor and naming of the houses expresses the complex tangle between custom and civilization. As opposed to STL housing, workers can find a sense of personal order in the familiar dwellings and sounds of the sea slapping time on the posts underneath. The houses hold a cross-section of blood-kin, in-laws and wontoks, making it a microcosm of the modern village. The members share food, clothes, personal effects and language. But at the same time, the members call their houses "clubs," paint them with contemporary western emblems, and give them such names as the Lonely Boys Lodge, Malaitian Eagle, and Black Disciples. Adorning the walls, torn from Japanese and Australian magazines, are pictures of cars, sexy ladies, pop stars and the Concorde jet in flight. To the heart of the matter, "club members" say they talk over the strange feeling of straddling two worlds and two sets of expectations at once.

Alcohol and food are significant problems at STL. Workers' "free rations" take them under the open-walled mess roof for two meals of tuna and rice a day, broken only by the Saturday serving of tinned meat. In contrast to the village diet, there are no fruits or vegetables or nuts, and by WHO standards the diet is inadequate. Fortunately, most workers supplement the diet whenever possible. Workers continually complain about the monotony of the diet and often cite it as a reason for leaving the company.

Important is the sociology of food, for its exchange and sharing are at the core of Solomon Islands societies. Food marks and creates the value of social relationships; the amount of care that is put into food selection and presentation is an indication of the state of the relationship. For STL shore workers, their mess has a negative implication because it seems to deny the responsibility of social exchange. It is interpreted as meaning that STL does not care about them and is unwilling to honor its part of the bargain. By the same token, the catcher boat crews' first comment about their job is that they eat the same food as the Okinawans. Because of its social meaning, food, whether for a shore worker or catcher crewman, is the first detail of a job that comes to mind. The managers ignore the workers' gripes about the food because "village meals are equally as repetitious."

Never having spent time in a village, the managers seem unaware that village food choices include a wide variety of fishes, shellfish, root crops such as taro and yams, papaya, bananas, nuts, "bush cabbages," and coconuts whose oily milk is prepared in many ways.

The consumer cycle on Tulagi seems geared to promote transience. As the island contains very little other than a bar, restaurant and two trade stores, there is nothing in the way of entertainment except soccer and a weekly film. Given this and the monotony of food at STL, workers tend to be bored and to purchase beer and food at the local outlets. Workers repeatedly go on drinking sprees, especially on pay days, and even the few who avoid alcohol consume their wages on bread, cake, soda and other edibles. As retail market competition on the Island is decidedly low, prices are correspondingly high for the captured audience. The upshot is that most workers dissipate their wages, often entirely, on simply relieving their boredom. This frustrates their desires to accumulate some savings and makes wage labor seem a bare alternative to the village.

Especially because of the drinking and fighting there is a firm separation between Tulagi's two neighboring shorebases. Although STL and NFD bases are but a 10-minute walk from one another, there is minimal interaction and socializing. STL workers do not, nor are they allowed to, arrive unannounced at NFD's door. They come expressly to visit relatives and wontoks. The reason for this is that NFD is trying to create a family atmosphere, next door to what many Islanders regard as the Solomons "toughest base, station or plantation." NFD managers and workers alike feel compelled to protect their interests by maintaining social separation. Their exclusion of "unknown" STL workers imbues NFD further with a sense of community; by customary law, outsiders cannot enter the village without invitation or purpose. By contrast, STL is open to anyone and there is no social self-regulation. Thus, STL has acquired the anonymous, uncontrolled and ambiguous persona of a non-village. Where NFD, like all villages, is self-policing, protection extends no farther than the individual wontok group at STL.

#### SAFETY STANDARDS

The Solomons industrial officer, an expatriate, has been unsuccessfully attempting to upgrade the marginally adequate safety standards at STL. He began in 1980 to prosecute STL for violations of the safety code as a last resort. The initial test case, scheduled for 25 February 1980, was over an Islander's loss of an eye while fishing. Eye injuries are commonplace. In 1979, STL reported five serious eye injuries: in two of these cases the eye was lost. The trial which centered on the failure of STL to report the accident within the prescribed 7 days was revealing:

While fishing aboard an Okinawan vessel, a hook caught an Island crew member in the eye. The Okinawan captain, not wanting to disrupt the fishing, kept on fishing and then moved off for the bait grounds. Not until the middle of the night, when the fishing was completed, and some 8 hours after the incident, did the captain transport the man to a local Anglican mission aid post, which, like all such posts, is staffed only with a nurse. The injured man had been pleading all the while to go to a hospital. If the crewman had been taken immediately to one of the region's hospitals, the catcher would have lost between 3 and 4 hours of fishing. Eventually, when the nurse could arrange for the man to be shipped to Honiara hospital, the eye was already lost.

One result of the trial was that STL agreed to issue to Islanders the broadrimmed hats that have become the trademark of the Okinawan fishermen. The hats, according to STL, shield the fishermen from flying hooks as well as the sun.

There is, however, no remedy for the Okinawan's style of fishing: sleep and safety appear to be secondary to landing the maximum amount of fish. When a catcher is on a school, and things must happen quickly, poor communication is the greatest hazard. Communication barriers are just now beginning to dissolve with the advent of Pidgin Okinawan among old Island hands. Plans for a book to teach the Okinawans Pidgin English have faded.

#### WORKER PERCEPTIONS OF WORK

One of the aspects of STL explicable only in terms of ethnicity is that managers have different standards for behavior for Japanese as opposed to Solomon Islands workers. In Japan, as in the



Table 3. Homesites of Tulagi workers (1979) (N = 612).

Island	Percentage of total SI population	Population density <sup>1</sup>	Intensity of cash cropping <sup>2</sup>	Number employed at Tulagi <sup>3</sup>	Percentage of total employed
Savo	0.5	52.3	moderate/low	19	3.1
Polynesian Out.	3	18.9	moderate	28	4.5
Nggela	4	18.2	intense	57	9.3
Vella Lavella	6	16.8	intense	60	9.8
Malaita	30	14.2	moderate	240	39.2
Eastern Is.	6	11.8	moderate	57	9.3
Guadalcanal	16	6.0	intense	39	6.3
Shortland Is.	1	5.1	high	5	0.8
Roviana	6	4.7	intense	16	2.6
Makira	7	4.2	low	7	1.1
Marovo	3	3.3	intense	20	3.2
Choiseul	6	3.0	intense	28	4.5
Santa Isabel	6	2.6	moderate	36	5.8

<sup>1</sup> Population density measured in people per square kilometer (after SI Statistical Yearbook 1979).

<sup>2</sup> Measured as intense, high, moderate, low and very low.

<sup>3</sup> The total number employed includes all men on the 1979 STL work record whether they have been fired, retired or made redundant. Given the high turnover rate, the number greatly exceeds the active work force at any point in time.

Table 4. Homesites of Noro workers (1979) (N = 381).

Island	Percentage of total SI population	Population density	Intensity of cash cropping	Number employed at Noro	Percentage of total employed
Savo	0.5	52.3	moderate/low	8	2.1
Polynesian Out.	3	18.9	moderate	1	0.3
Nggela	4	18.2	intense	0	0.0
Vella Lavella	6	16.8	intense	124	32.6
Malaita	30	14.2	moderate	25	6.6
Eastern Is.	6	11.8	moderate	0	0.0
Guadalcanal	16	6.0	intense	7	1.8
Shortland Is.	1	5.1	high	16	4.2
Roviana	6	4.7	intense	80	21.0
Makira	7	4.2	low	0	0.0
Marovo	3	3.3	intense	80	21.0
Choiseul	6	3.0	intense	32	8.4
Santa Isabel	6	2.6	moderate	8	2.1

Before examining these tables further it is worth describing the main reasons men seek work at STL and other wage earning jobs. The conscious and articulated reasons are to:

- 1) send home wages to accumulate a sufficient bride price to marry when the job ends
- 2) send home wages to pay school fees for a relative, usually as a move in a series of exchanges within or between households
- 3) send home wages to capitalize a clan business and thus secure a permanent place in the clan's collective enterprise
- 4) gain experience with the work, foods, peoples and behaviors of the outside world
- 5) buy consumer goods such as radios, beer and trousers, and whatever else is novel within the context of a rural clan-based society
- 6) purchase luxury goods which can be circulated within the village to enhance a man's economic position in the exchange system

- 7) escape the tight social hierarchy of the village, especially in the case of men from low ranking clans who have little land and thus no potential for cash cropping.

Workers naturally join STL for a combination of these reasons as well as more personal ones. These reasons, which stand as both motivations and explanations of action, fall into three categories. The first is that men join STL to gain social objectives by strengthening their cash position in the village economy. Solomons societies now calculate brideprice—payment a man's clan makes to the clan of the bride—in dollars and cargo as well as custom shell money and porpoise teeth. Strengthening one's cash position as a means to social status is frequently indirect, as when a man earmarks his wages for school fees, a brother's brideprice, or a clan business. As village cash production is still in its infancy, migration labor is a primary means of achieving these ends.

The second category of reasons centers on self-initiation into the modern consumer economy. The connecting link between categories is that consumer goods are exchanged in both the urban and village setting where they construct and cement social relations. But there is also a conflict here that reflects the point and counterpoint of custom versus civilization. Men are torn over whether to send cash home and distribute cash and goods to relatives in a customary manner, or whether to adopt not only the consumerism but the ideology of the West which stresses the individual over the social group. A common frustration, noted earlier, is that workers siphon so much of their wages into beer, foods and gambling, that the social goals are not realized. Certainly those men who do not strike a proper balance between consumerism and long-term village goals feel a keen sense of disappointment and unfulfillment.

The third category represents those individuals who have no intention of returning to the village, at least when they originally migrate. In fact, those who escape to urban work often return to the village only to leave again. Ultimately, though their reasons for migrating are different, their migration pattern resembles the mainstream.

Beneath the ostensible and immediate reasons for industrial labor are a set of underlying causes which also explain the composition of the labor force. Perhaps the most important cause is increased competition for scarce land and reef resources. Due to improvement in medical delivery, the outlawing of infanticide, and the church prohibition on the use of contraceptives, the population of the Solomons is spiraling upwards at 3.4% per annum. For select areas, such as Malaita and Savo, the surge is at least one percent higher. The population profile is a classic broad-based pyramid, characteristic of population explosions (SI Statistical Yearbook 1979). The consequences of population increase depend on land use, rules of land tenure and the mode of production. In the Solomons and throughout the Pacific, village development claims ever-increasing amounts of land for cash cropping. Because the mode of production is slash and burn agriculture, any decrease in fallow periods usually results eventually in lower yields. This, in turn, demands that more land be put under cultivation. The situation is further complicated in that land is held in perpetuity and only under unusual circumstances, such as government intervention, can it be alienated. This means that while land circulates freely within a clan, transfers of land between clans to readjust man-land ratios are made more difficult.

It is not just that cash cropping in concert with population boom decreases the availability of land. The influx of cash from copra, cocoa and palm oil makes it all the more imperative for households with no cashcrop income to secure it elsewhere. Access to money becomes a symbol of modernity and social status. A worker at Tulagi, instinctively aware of being caught in this cycle, wrote recently that "we (workers) are fools for money now."

Other factors which influence the composition of the work force are educational levels and historical involvement in casual labor. Education and history particularly touch Malaita. Malaitans tend to be less highly educated than people from other provinces. For example, an average of 33% more Western Province youths attend primary school than Malaitans (SI Yearbook 1979); and this difference probably trebles at a secondary level. Moreover, Malaita has been a source of casual labor since the 19th century, and the entire system of migratory labor is ingrained and institutionalized

there to a greater degree than in any other area. The result is a high percentage of Malaitans at Tulagi. Indeed, the presence of many Western Province workers at Noro is, in part, an artifact of STL policy which aims to hire locally and discourage the immigration of men from Malaita and other eastern islands.

The nature of recruitment skews the composition of the work force in that it occurs as a chain reaction set off by the experience and the needs of pioneer workers. Thus, an island such as Savo sends very few men to STL although it has a high percentage of migrant laborers, mostly going to copra plantations. Conversely, Choiseul has sent a string of wontoks to STL.

#### THE WONTOK SYSTEM

The wontok system, as it has come to be known in Pidgin English, is the social touchstone of migrant worker life. Relationships of clanship and brotherhood, which in the village define and animate people's acts, are but fragmentary at the shorebase or plantation. To compensate for this telling loss, Solomon Islanders have transposed the principles of village relatedness to those who speak the same language. Essentially, a common language or "one talk", to translate literally, is a metaphor for kinship-like relations. While the bloodlines do not exist, the other side of kinship, the pervasive and enduring solidarity that binds people emotionally, remains. If wontoks are friends, by the same logic, friends are wontoks. In this fashion, the wontok system "customizes" existence away from home. Historically, it provides security against theft, bad magic, and isolation, the perdurance of reciprocity, emotional support and camaraderie that ideally is the essence of work in the village. As one pundit phrased it: "money is to the West what kinship is to the rest." The implication is that kinship, more than anything else, is a system for organizing such diverse phenomena as political allegiances, work groups, emotional supports and investments. For STL workers, the wontok system is the pivot on which most interaction, claims and obligations, most loyalties and sentiments, turn.

Wontok, like the term brother in English and other languages, including those of the South Pacific, is a flexible term of reference which can have a range of meanings depending on the context of use. Speakers can apply "wontok" to those who come from the same village or those who come from a different island but desire to create a kin relation. Wontok expands and contracts with context; and usually the term carries greater emotional load and a higher level of expectation the more narrowly speakers use it. The most narrow meaning of wontok is those persons who speak the same tongue and have the same customs. Often, in fact, they can trace a relationship to a common relative through the intricate wiring of births and marriages. In slightly broader use, it includes all those who speak the same language even if dialect differences and geographical separation occasionally strain intelligibility. In a broader and perhaps most common use, wontok signifies all those who come from the same island, such as Malaita or New Georgia, though many distinct languages are spoken on both islands. By further expansion, wontok embraces all Solomon Islanders as opposed to Europeans, Americans or Japanese. Thus it is common in the newspaper to see reference to all Solomon Islanders as wontoks; and indeed, this is the name of the Papua-New Guinea local newspaper. The ultimate and common denominator for these various usages is that a wontok is one who desires to share food and clothes, provide physical and emotional support, accept certain rights and obligations, and participate in the solidarity (Rew 1974; Levine and Levine 1979).

The cultural concepts embodied in the wontok system are instruments to bind individuals who wish to enter a sharing relationship. Wontoks thus organize naturally into small informal groups which share food, clothes and entertainment, and sometimes fight side by side. The result of this commonality is that the group develops a visible social identity. In the case of the Malaitan Eagles or Black Disciples, the social clubs mentioned earlier, the group baptizes itself and solidifies further around common housing. As the wontok units are typically no more than five strong, a worker usually has wontoks in more than one such faction and may play one off against the other in certain instances. The composition of the informal units is rather fluid, both because of transience and because individuals align according to their current interests. Clearly, one result is that an outsider

coming to STL steps into a social world of friends and quasi-kinsmen. He is instantly drawn into the tissue of group concerns of wontoks already on the shorebase. Fundamentally, wontoks possess strong social obligations and rights towards one another that transcend individual whims or desires. The ethic commands a man to assist a wontok—for example, to raise money or fists—regardless of whether he feels that the wontok is acting reasonably. It is this imperative which makes the wontok system so pervasive and powerful.

The wontok groups, however informal and fluid, constitute tiny organizations within the company organization. Yet, wontok groups are founded on entirely different and often antithetical principles from the company. This is not true of the labor union, which, being the inverse image of the corporation, allows labor and management to have separate perspectives on the same unquestioned issues. The wontok system is built on the premise that loyalties to kin supersede all other loyalties, including those towards STL. Thus, what appears to a Japanese manager to be rank irresponsibility may be a high moral duty to a wontok.

An illustration is the storekeeper whom STL fired justifiably for theft. As storekeeper, he felt he had a greater moral and social obligation to distribute store goods to wontoks than to husband company profits. So he would sneak out all manner of goods as gifts until he finally gave his job away. Note that the position of storekeeper is hardly enviable, for he is caught in the crush between the opposing systems.

At STL, the wontok system generally wins when it comes into conflict with management policies. One reason the wontok system has frustrated Japanese management is that management has tried to work against rather than with this tenacious social system. To uproot the system, STL has deployed a number of strategies, such as forbidding any wontoks to share workers' quarters. Of course, STL has had no negating effect, and may even encourage the wontok system by opposing it. After all, workers' social identity and emotional investment is bound up with the wontok group, not with a company that the Japanese appear to own in full and do fully operate. Since the inception of STL there has been constant friction between Japanese managers and the wontok system.

Promotion is a point where Japanese attitudes and the wontok system meet. Wontok groups are composed of a set of core members around which other men flow. This nucleus provides a point of stability and gives the group visibility. Characteristically, village leaders become the centers of wontok groups and friends and relatives from the village, attracted by a wontok and leader, join them at STL. In the unskilled labor market of STL, strong personalities and leadership are important criteria for rising into the more interesting and prestigious jobs, such as fork lift operator and coldstore worker. STL management, drawn by the personality of leaders, offers such men the higher status jobs. By the same virtue, those who hold higher posts cement their roles as wontok leaders by bringing in higher wages and thus an increased ability to give gifts.

STL management feels that the wontok system lowers efficiency and cuts profits significantly. There is a constantly large, though shifting, population of visitors. They frequent the STL mess to dine on bonito and rice and share in the "free rations" for which STL is so famous. To prevent wontoks from eating at the mess, STL has tried T-shirts, meal tickets, plates, identification cards, and a roster of other ploys, but to no avail. From the workers' viewpoint, STL has a social obligation to share food with their visitors. Sneaking food to wontoks is not viewed as dishonesty, but a means of forcing STL to live up to the responsibilities it has sought to abrogate. Correspondingly, workers develop a sense of obligation to share food and lodging with Japanese managers, should the manager appear in their home villages. Of course, while relationships are reciprocal and motivated by the Solomon Islands ethic, and in this sense fair by indigenous standards, reciprocity is never realized. The Japanese do not visit the villages and do not think to explore the reverse side of the relationship. Given their outlook, such behavior is impractical and irrelevant. Be this as it may, the unofficial practice of distributing food to non-employees encourages "lieus"—the Pidgin term for those unemployed men who drift around from one workplace to another, and a euphemism at STL for the casual labor pool of wontoks. Having institutionalized the labor pool, STL benefits greatly

from lieus, signing them on as overtime labor and ready replacement of sick or runaway workers.

The wontok system has become the system which holds the STL workforce together. Villagers are drawn to STL by the presence of wontoks already at the shorebase. The wontoks who shadow the base are the immediate source of casual labor. Most importantly, the wontok system furnishes the social and psychological infrastructure of the village; it recreates the conditions that allow workers to function comfortably. Given the awful magnitude of change between village and shorebase, workers could not cope successfully without the presence of wontoks. Workers implicitly recognize this reality; occasionally it becomes all too apparent as when the Gilbertese man, shamed and publicly fired by the Japanese engineer, drank himself into a stupid frenzy by evening, and then after announcing his intentions of seeking revenge, stabbed the engineer in his bed. Workers attributed his radical behavior to the lack of STL Gilbertese, wontoks who would comfort him and act as a brake on his impulses. The difference, workers explain obliquely, is between the uncontrolled violence of the individual who has been abandoned by rationality and sense of proportion, and the controlled response of the social group.

The wontok system will evolve, not dissolve, despite the assaults by STL. Its functions are simply too critical in the lives and minds of the workers. A more moderate alternative for STL would be to follow the example of NFD which builds around the family structure of kinship and wontok ties. Indeed, STL could use the symbolic capital of the wontok system by encouraging wontoks to build, live and cook in their own houses, and to work side by side in different sectors, such as the cannery or coldstore. To a degree, wontoks naturally congregate and thus they have already ordered much of base life on this principle.

#### MANPOWER TRAINING

STL managers stress performance and productivity. The constant message is that STL's performance will improve when management roots out the lazy, careless, inefficient workers plus those who instigate strikes or slowdowns in protest of company conditions, wages or benefits. Overlooked are the existential conditions. This is nowhere more true than in the area of manpower training, especially because at this stage of modernization, people place a lot of stock in education, more, in fact, than the social situation and economy might warrant.

Clearly, one reason for the lack of fervor and quality of STL workers is that the training and career advancement programs offered during the first decade of the joint venture have been minimal. It seems that the STL conditions selectively filter out intelligent and ambitious Islanders. Of the 1,110 workers on record at STL, only 3 had been to national secondary school and only 15 (slightly more than 1%) had received training at STL (Table 5).

STL has avoided training Islanders and aiding them in career advancement ostensibly because the Islanders will only desert the company and never show the proper level of loyalty. To make matters worse, over the past decade STL has become committed to a hardened attitude towards training nationals. Thus STL discourages or dismisses Islanders who are educated and committed and hires

Table 5. Manpower training levels as of mid-1979 (N = 1,110).

Category	Number	Percent of total
Workers with any technical training	41	3.7
Workers trained by STL	15	1.4
Workers trained at HTI in fisheries	13	1.3
Workers with high school education	3	.3
Workers with Form 2 education	94	8.5

deliberately the least educated who, having the fewest choices of jobs, are least likely to offer resistance to social conditions or press for manpower training. At the same time, the absence of family-level wages, attractive housing and career advancement not to mention the general atmosphere of the base, reinforce the traditional pattern of temporary, casual, manual labor demanding a minimum of energy and interest.

Islanders acquire fisheries training from two sources: the Honiara Technical Institute (HTI) Fisheries Training School and a Japanese government program. Designed in 1975 to assist the Solomons localize its tuna fisheries, HTI's program is sponsored by the European Development Fund, an overseas arm of the EEC. The Fund has contributed US\$270,000 to the project, absorbing costs for buildings, equipment and two teachers to tutor on fishing and engine maintenance, respectively. The EEC stipulates that funds be used to purchase EEC products only, despite the reality that Solomons fishing is done exclusively with Japanese equipment. Fortunately, there is sufficient overlap between the two types of gear to make training feasible, if not always ideal. However, acquisition of Japanese gear is crucial. The Fisheries Department redistributes to HTI and NFD Japanese gear which it obtains from the Japanese Fisheries Association in exchange for longline licenses. Taiyo also sells the department fishing gear at reduced prices.

The HTI program is set up so that students start off with an introductory 10-week course which includes a one-week practical at sea. Fifty students have graduated from the first three classes. Next they embark on an 18-month practical fishing period; those who do well on the practical will be recalled for a new round of courses leading to a Coxswain First Certificate. Such certificates are preparation for training leading to Mate Solomons and Mate Pacific as the Solomons' own breed of fishing masters. HTI's teacher has ordered radar, an echosounder and a satellite navigator in hopes that the school can begin training on more sophisticated equipment. Currently, only Mate Pacific certificate holders understand navigation and can use a sextant, extremely important for long-lining which often takes the boat out of sight of land. Standards for Mate Solomons are presently very low because men are passed to fill the legal crew quota requirement for commercial boats.

So far, HTI has done all the advertising and recruiting of students. The school feels, however, that the active participation of STL and the other fishing outfits would bring improvement, since they know which men are most suitable and what kind of training is needed to meet the current labor market. However, cooperation has not yet materialized; the exception being NFD which cooperates with HTI on the one-week practical.

HTI offers men without academic qualifications a rare opportunity to train for marine certification. Although originally, STL was to provide such education as part of its contribution to national development, STL sent no trainees to HTI's first three 10-week courses. In view of upcoming joint venture negotiations, and knowing that the SIG intended to push harder for manpower training, STL requested to fill all 20 places in the fourth HTI course. HTI insisted, however, that 25% of the slots remain open to the public to encourage villagers to learn modern fishing technology.

The other source of fisheries training is the Overseas Fishery Cooperation Foundation (OFCF). OFCF is a semi-governmental, non-profit agency sponsored by the Japanese Ministry of Agriculture, Forestry and Fisheries. Its official goal is "to have cooperation with the coastal fishing areas through the Japanese private fishing enterprises." OFCF is one of three Japanese government training organizations which share some facilities and work in unison, training for the Japanese government. OFCF receives overseas trainees but is not in direct contact with foreign states; it works through overseas companies. Thus, if STL wishes to send trainees to Japan, it tells Taiyo who in turn approaches OFCF. Starting their fiscal year in March-April in rhythm with the fishing companies, OFCF broadcasts its plans and budget to Taiyo and the companies operating in Papua New Guinea (Kaigai, Kyokuyo and Hokoku).<sup>8</sup>

<sup>8</sup>By 1980, Starkist had taken over all Japanese tuna fishery interests in PNG.

Taiyo has sent students from the Solomons, Indonesia and Senegal; Kaigai and Hokoku from Papua New Guinea; and Kyokuyo from Papua New Guinea and Senegal. Since 1973, Taiyo has sent four Solomon Islanders to OFCF in Japan for training. OFCF bears all expenses of the trainees: airfare and daily transportation, living costs for five months, including a ¥2,000 (US\$10) daily allowance. Taiyo managers complain about the "extravagance" of the allowance, feeling it spoils Islanders for the wages they will receive in the Solomons.

The course at OFCF has proven only marginally successful. The time span is too short for Islanders to overcome the "culture shock" of moving into a highly technological society. The preparatory one-month course in Japanese language and culture has not been a sufficient buffer. Given the direct correlation between the familiarity of the social environment and rate of learning, the results are predictable. But perhaps the most important factor is that Islanders are used to learning through hands-on experience. It is not, as Europeans and Japanese are apt to claim, that Islanders lack abstract thinking ability; rather, they have not developed an abstract learning ability. In Japan and the West such ability is both historically recent and the product of years of schooling. Islanders can think abstractly within their own cultural situations. Western artists have admired Pacific art for its abstract representation.

There are several implications for training programs. First, all training should be strictly compartmentalized. Second, as much training as possible must be done in-situ. Only hands-on training will have a reasonable level of success. Third, those Islanders who receive training will not transmit their knowledge via organized verbal presentations. They may explain an operation they have learned in the course of performing it, but they will not provide an explanation out of context.

Even those workers who receive some training are not likely to stay with STL for any appreciable length of time. Trained workers do not get what they feel is a sufficient salary, nor do they get the recognition from the Japanese they desire. NFD has had no problem retaining the men it has trained. Where the annual turnover rate for trained personnel at STL is around 19%, the rate at NFD is less than 2%. The critical point here is that, for Solomon Islanders, respect and status play a more significant part in retaining employees than simply salary.

### National Fisheries Development

National Fisheries Development is a national development program run by and for the Solomon Islands. Its goal is to build a national fishing fleet. It is funded in part through a loan from the Asian Development Bank and has received grants in equipment and expertise from Japan and New Zealand. NFD began to organize its operations in 1978 when the general manager was recruited. As of 1980, the management consisted of two engineers, a New Zealand ferrocement expert, the general manager, a retired Taiyo man as fleet manager, and two Solomon Islanders; they were training about 50 employees. NFD owned two fishing boats (both grants from the Japanese) and was building 10 ferrocement catchers and 20 baitboats.

#### ORIGINS

National Fisheries Development had all the qualities of a satisfying project. Taiyo wanted to develop the fishing industry in order to obtain more tuna to trade; the Japanese government sought wider markets on the forecast that Western countries would tighten their restrictions and thus reduce imports from Japan; the Asian Development Bank desired to expand its plans for industrial development in the South Pacific; and the Solomons was anxious to localize the fishing business.

The Japanese government donated the catcher vessels *Fisher* and *Hunter* to the SIG. NFD chartered the vessels to begin its fleet. The Japanese also sent the Solomons other boats for research, transportation, and refrigerated transshipment, and sponsored a fisheries training school in Auki, Malaita, manned by two Japanese overseas volunteers. Through its association with STL which is the exclusive buyer of NFD fish, Taiyo gained the marketing and distribution rights to NFD's

potential catch. It was in Taiyo's interest to have the Solomons bear the soaring fuel costs and risks related to fluctuating catch rates. Taiyo goals were thus (1) to gain prestige and foster good will by encouraging national development, (2) sidestep the costs and uncertainties of doing the actual fishing; and (3) retain full access to the catch and control (through STL) over NFD's plans for diversification and expansion. One can also see similar interests in the encouragement that both Starkist and Taiyo give Okinawans to borrow money to buy their own charter boats. And, as it turns out, neither NFD nor the Okinawans have been as pliable as the transnationals had hoped.

Taiyo's original conception was that NFD would supply additional fish to STL plus shoulder the high costs and risks of fishing. The burden, of course, would be lightened by foreign aid and the philosophy that NFD was as much in the business of education as fishing. From Taiyo's perspective the SI Fisheries Department would also be more inclined to facilitate entry conditions for NFD than for the joint venture. In addition, the rise of NFD fitted Taiyo's long-range objective of phasing out of fishing in favor of marketing. Recall that Taiyo's in-house projections showed fishing to be only marginally profitable, with every indication that even slim profit margins could soon vanish. The NFD plan envisioned that by the mid 1980s STL's fleet would be comprised of equal numbers of NFD, Okinawan and STL catchers. This would curb costly dependency on Okinawan boats (charterage fees surpassing 50% of costs) and accelerate localization, by then a charged political issue which routinely captured headlines. Indeed, Taiyo hoped its support of NFD might assuage the anger surrounding the charge that the transnationals had taken advantage of the Solomons.

#### THE ADB LOAN AGREEMENT

The Solomons project set two precedents for the ADB: the loan was its initial step into the South Pacific and the first time it became involved with a foreign company. The loan, requiring a feasibility study by the Fisheries Department and orchestration by the Finance Department, took about a year to germinate. The process began with a senior ADB representative approaching the head of the Natural Resources Department with the offer to finance a local fishing industry. The representative suggested establishing a shorebase at Sasape, an excellent natural harbor next door to STL's Tulagi Island plant, and building ferrocement catcher boats because they required less training, capital outlay, and were free of the marine worms that bored holes in wooden hulls. The ADB official also conferred with Taiyo's Japanese managers in the Solomons. Subsequently, ADB dispatched an economist and a financial analyst on a fact-finding mission. They reappraised the project and conferred again with STL and the Fisheries Department, since the offloading, coldstore facilities and marketing of the catch would be in STL's hands.

Rapid progress was made on arranging the finance. Late in 1977, the ADB approved a US\$3.6 million loan to the Solomon Islands Development Bank; they would in turn lend the money to NFD as part of a larger US\$5.9 million development package. Spread over 40 years the ADB loan has a grace period of 10 years, with an annual service charge of 1%. Initial capitalization of NFD was set at US\$2 million with STL providing 25% and the SIG 75%. The plans which supported the loan called for the construction in 1978 of two 50-t vessels, fishing to commence within the year. Projections were that NFD would own 10 operating catcher boats by 1983, gradually replacing chartered Okinawan boats with its own. As well, NFD would begin building 20 baitboats as well as a warehouse, staff housing, a new slipway and landing wharf.

In order to guarantee the success of NFD and thus the repayment of the loan, the bank agreement specifically directed NFD to sell all fish to STL. This would guarantee an outlet for the neophyte company which did not possess the skills and contacts to market skipjack. The mandatory sale of fish from NFD to STL was agreed upon in good spirit, as if all parties were happy with the selling arrangement and ignorant of the reality of monopoly. Thus, the lack of any negotiating formula or standard means of computing fish price in the original contract would soon become a sore point.

Shortly after the loan was approved, the SIG purchased (for SI\$250,000) the Sasape site which



the Fisheries Department thought was a going concern replete with shipyards, slipways and plant, demonstrating their desire to launch NFD with deliberate speed. To the ADB, which had first suggested Sasape as NFD's home, it was a show of good faith. However, Sasape's infrastructure needed to be rebuilt from the ground up, as buildings were in disrepair and the electrical wiring had been condemned. The rebuilding was a mixed blessing. While it delayed the NFD program and catapulted building costs, it also allowed the new general manager to redesign the shorebase according to his philosophy, with better standards, and meeting the current needs of the Islands. Worker experience gained during the reconstruction would prove invaluable training when the actual boatbuilding got underway.

Several well-trained and reliable Solomon Islanders from the shipyards, who would become NFD's leadership nucleus, joined the new company.

#### THE NFD PHILOSOPHY

From the start NFD has had its own personality and philosophy, directly reflecting the values of its leadership. The general manager's philosophy centers on instilling capitalist values and incentives, such as the pure exchange of money for labor. It entails providing job security, training, and advancement for workers, and creating stability through the construction of a new community which features all the support mechanisms of a traditional village. The success of this philosophy and development of NFD depends on the degree to which capitalist and Solomon Islands behavior can be integrated.

Inasmuch as NFD wishes to erect a western model of labor relations—one based on a relatively permanent, skilled, well-paid, and financially motivated labor force—it will have to find creative answers to transient labor. Recall that STL's management complains about the chronically high turnover rate and uses it to justify recourse to labor pools. In contrast, NFD's general manager projects that by providing a sense of community and setting workers on career and leadership paths, a permanent labor force will evolve. Indeed, early experience of NFD shows a much lower turnover rate can be achieved.

NFD's goals, while realistic, are also difficult to attain because they aim to transform practices which have become deeply ingrained in Solomon Islands cultures. For more than a century, transient labor has been the dominant historical pattern. This implies that some individuals and groups (e.g., village leaders and families involved in local business) will have an interest in preserving the present system. In addition, some workers will not be career-oriented, at least in the western sense, because they were not socialized to be. We anticipate that conversion of the labor force will be difficult. To succeed NFD must have the wherewithal to push ahead with its fundamentally sound plan, for it will likely endure some early failures: fishermen who do not report to work, section leaders who leave unexpectedly, and craftsmen who leave their trade after being trained at NFD expense.

Hammering out a tradition of Islander leadership will be the hardest task of NFD. Neither the existing business establishment nor the colonial structure of the past have done much to cultivate local leadership skills. The NFD plan is to build a hierarchy of section leaders, predominantly from the ranks of married men who have established their credibility in past service. While married men are more expensive to support because of their families, they are also more stable and responsible for the same reason. NFD gives section leaders special privileges because they are NFD's future "intelligentsia." Opportunities to better their talents, rising wages, and family housing reflect this policy. The concept of establishing local leadership redefines the role of general manager. The latter must remain at the top ("as admiral") offering suggestions and stepping in when needed, but "the separate captains must retain command of their ships." This leads to the assumption of responsibility and the confidence to take charge, both keys to viable localization. Top local managers live side by side with expatriates in houses of one quality. There is no discrimination here or in the voice given them by the general manager as to crew hiring, wage adjustments and policy formation. Of equal importance, yet rarely mentioned in development reports, are all the small actions which

build confidence, and leave a larger lasting impression that transcends the value of any one policy. It is easy from afar to underestimate the value of securing invitations to formal gatherings, simply assuming by tone of voice, gesture, or behavior that a manager will handle a problem tactfully and efficiently, or introducing a man with respect. That an Islander manager took part in crew selection in Japan impressed many Islanders at NFD and beyond.

Insofar as NFD is to abandon the concept of the labor pool, it must create a responsible labor force, men who identify their personal interests with those of the company. The philosophy is to rely on the crew's sense of duty to perform well and show up on time, even though management is very aware that a catcher held at dock or irresponsibly manned is costly. Such responsibility is not a free-floating quality, but firmly rooted in the social conditions of work, specifically whether workers perceive the job as integral to their life plan, whether they have a family to support, and whether the job earns not only money but social status and recognition by friends and relatives.

Because NFD does not feel that garnering a large profit is a first priority, it can focus on long-term gains at the expense of immediate return. The company reinvested June 1978 earnings of SI\$75,000, mostly from slipway repairs, in manpower training and worker welfare. If this policy is pursued faithfully, slowly a labor force will emerge composed of the most skilled men in their most effective roles. Towards this objective, NFD rotates men through the various posts to see where each performs best. Training for professional shipwrights, electricians, engineers, welders, carpenters and fishermen is underway for promising candidates. In about a decade NFD hopes to earn a healthy profit because of its high concentration of skilled craftsmen.

Some of the men who participated first in the construction of the Sasape base and then the boats themselves will eventually shift to fishing. Others will continue with shipbuilding and maintenance of yard and boats. Lengthening the lead time in recruitment permits NFD to scout widely to find suitable men. At least in the beginning, this is the effective means of sidestepping the casual labor system. Nationally, NFD advertised in the News Drum, the weekly government paper, and over the radio station. By early 1979, over 200 men had responded showing up at NFD's Honiara head office and at Sasape. The managers then interviewed the candidates and hand-selected the best. The process underscored the value of Solomon Islands managers, for through the SI reputation network, where everyone is a known entity since birth, the managers were able to assess accurately the honesty and industry of applicants. They were also able to pick up "coconut news" of good and available men and send them radio service messages to join NFD.

#### THE CONTEXT OF THE NFD PHILOSOPHY

NFD believes that Solomon Islanders work best in the village, where they are surrounded by their families and a community which oversees the behavior of its members. When individuals act immorally or against the spirit of the community the knives of gossip are sharpened to broadcast community indignation. The understanding that nationals work better in a village environment has inspired NFD to create a village atmosphere at Sasape quite different to the traditional plantation environment of the STL base. The long-range plan of NFD is to transform Sasape into a permanent and family-oriented base complete with housing, medical clinic, transportation, retail stores, school and church. The base is meant to cater to those raising children and extended families, two forces that energize the village. An indispensable part of the NFD plan is to pay men a living wage. The crucial difference between wages at NFD and STL is not that NFD pays more, but that it pays a wage which enables a man to support his family comfortably. Precise numbers are less important than this practical difference which allows a permanent work force to evolve.

The notion that the village is a cohesive and encompassing level of social organization permeates the development literature on the Solomons and other South Pacific countries. It aligns well with the western ideal of the village, already a romanticized notion of a snug community, harmonious and cooperative by nature. It encourages expatriates and field-workers to perpetuate the myth of village

unity. Ironically, the village, itself, as an institution, is a product of colonial influence (c.f. Belshaw 1950), scattered clan hamlets were the traditional arrangements (Scheffler 1964). Today, the spatial organization of the village reflects this historical division, as each clan has its exclusive lands and reefs. In practice, most Solomon Islands villages tend to readily dissolve into political and legal factions. Recall the furor over reef ownership and the distribution of baitfish royalties. The dominant and controlling level of organization is the clan or line (Ross 1973; Keesing 1975), not the village which represents a fragile compromise between clans. And most cooperation is in the context of European activities: school committees, church groups and the like. In all fairness to casual observers and field officers, the village does present itself as a cohesive unit, instinctively closing ranks in the presence of strangers. The NFD idea of a village as the highest level of organization is thus a foreign concept, imported for more than a century now by missionaries, British colonial bureaucrats and others. If the NFD community is a success, it will not be because it recreates the cohesive strength of the village, but because Solomon Islanders now call a foreign institution their own.

In NFD, community building and worker productivity flow into the issue of material incentive. NFD management sees the situation of motive in terms of western folk notions of why people work: to increase their personal material holdings. This is true only to the extent that Solomon Islanders have assimilated expatriate values: the industry of the small-business Chinese, the work ethic of the Christian missionaries, and the consumer habits of Europeans. Noteworthy is that the degree of assimilation varies greatly throughout the Islands.

NFD is extremely proud of the success of its worker loan program. It offers modest (up to SI\$500) interest-free loans to long-term employees, usually craftsmen. More than a financial transaction or a worker benefit, the NFD loan program has immense symbolic value. NFD management sees the process of borrowing responsibly for home improvement as a victory for its policy of encouraging community development and a sign that its workers are developing a concern for their material standard of living.

Currently, wages are still funnelled into the village system. Workers typically spend their wages to buy a bell, a statue or cross for the village church, to help a relative through school, to buy "custom money" for a marriage payment, or contribute to a clan feast. In addition, articles of clothing and select consumer goods, particularly radios, watches, sunglasses and knives, are exchanged among kin and so often find their way to the village.

With regard to worker motivation, NFD, STL, and indeed all industrial projects in the Solomons, presume the existence of a structure of social relations common to capitalism. There is a trinity of implicit premises locked into industrialization:

- 1) workers lack an alternative means of making a living (e.g., rights in perpetuity in garden lands or reefs) and must labor to acquire the material necessities of life
- 2) workers have no fixed standard of living and thus will perpetually be motivated to work by their desire to consume goods at ever increasing levels
- 3) society recognizes the right of workers to reap personally the rewards of their individual labors.

For the most part, however, Solomon Islanders do not subscribe to these values. So time and again they have frustrated first-world planners and entrepreneurs by failing to embrace the work ethic of an individually-based consumerism. The collective industry of self, family, and kinsmen cares for the material wants of people. Conversely, an Islander should distribute any surge in his level of material well-being to kinsmen and friends. The moral imperative is to spread the wealth; and the community considers those who husband their possessions as greedy, offering moral condemnations as "Mr. Me" and the cutting aphorism: "young man, rich man, dead man." Thus, the simplicity of the concept of wage labor disguises the magnitude of change involved. Motivating a given Solomon Islander to work industriously for himself, for material goods, and at an ever increasing level, requires a transformation in the structure of social relations. NFD should expect that given the wages they pay, their workers will be inundated by wontoks, seeking their share of the money and goods.

## POLICY AND OPERATIONS

Developing industries in the South Pacific face a double bind, one that impedes their escape from the grip of dependency. If they shun sophisticated equipment, they find it is heavy weather competing against the industries of more developed nations. If they go with high technology (e.g., sonar), they create the problem of effectively using and servicing such gear. Often the developing states have neither the trained personnel to operate nor to maintain it. So they must refer its use and repair to outside experts. This is an especially difficult dependency to throw off; it underlines the fact that the development of an industry entails the co-evolution of related industries and institutions.

In its operations, NFD has attempted to steer a middle road between high and low technology. NFD is not building the newer, costly brine tank boats that have recently been introduced at STL. The brine boats, with their cold storage and electrically driven compressors, offload tuna in peak condition. NFD has opted for the more traditional and labor-intensive ice system which yields a lower grade of fish and a concomitantly lower fish price. However, management foresees that the reduced capital outlay will more than compensate for the price differential. NFD has purchased engines for all of the proposed catchers, though some are several years from completion. The idea is that identical engines will simplify training and stocking of spare parts. Although good men are in short supply, NFD plans to keep six men at a time in the Honiara Technical Institute, rotating them as they receive tickets or certification. This will upgrade NFD staff engineers so that all are qualified to handle the new (450-hp) engine.

NFD's ideal order of priority is fishing, shipbuilding and ship repair. Realistically, the order of importance may well be reversed due to the escalating costs of fishing and the great demand for ship repairs in an insular state. This diversification is one of NFD's primary assets. Ship repairs and boat building will always attract local business, and may insure the prosperity of the venture even if fishing becomes no more than a sideline.

The Japanese government donated two sophisticated catcher boats, *Hunter* and *Fisher*, to NFD shortly before the opening of its inaugural season (1979). On the *Fisher*, a northern Japanese crew was chosen; on the *Hunter*, an Okinawan crew. The latter did well, but the *Fisher* had the worst catch of the fleet. The Okinawans clearly have no rivals in pole-and-line fishing. However, given their high charterage costs, NFD would like to charter lower-priced Filipino and Korean boats as used in the Papua New Guinea skipjack fishery.

Ironically, the introduction of ferrocement boats (see the discussion below) has worked to deepen Solomons dependency on Okinawan crew. NFD is afraid to gamble with the reputation of the ferrocement boats; and given the political context in which NFD operates, the political fallout from a poor catch record could be worse than the financial loss. Thus, NFD plans to use the best Okinawan fishing masters and crews during the introductory years. The ratio will be 40% Okinawan to 60% Islander at first, the number of Islanders gradually increasing as they gain confidence in and experience on the ferrocement boats. If national politics intervenes, the sway of localization may pressure NFD into substituting Islanders before they are ready. NFD must navigate between the politics of localization and the economics of fishing.

With ADB encouragement, ferrocement was chosen for the NFD fleet because of its advantages for a developing country: it is non-corrosive, requires less skill in construction, and is labor rather than capital intensive to build. The government of New Zealand, where the marine use of ferrocement was popularized, contributed the design, technology and expertise for NFD.

Unfortunately, ferrocement has numerous drawbacks and NFD is planning to discontinue their production after the initial batch of ten. The major problem is that impact damage is frequent in consequence of the numerous reefs; grounding shatters large segments of the hull. As a result, steel armature is needed against reef damage and wooden fenders to prevent damage when docked alongside other boats (as when offloading).

Nor is design the sole weakness of ferrocement. It does not capitalize on existing natural and human resources and is thus only a marginal advance to development. First, wood is an indigenous resource and building wooden catchers would stimulate economic self-sufficiency. Although the cost of ferrocement is about 2/3 that of wood, the net national cost is nearly identical since NFD must purchase the mesh and cement abroad, thus exporting currency. Second, wooden boats would generate greater employment than ferrocement, providing a chain of jobs from the saw mills to the shipyard. On the social side, the idea that Solomon Islanders would have special difficulty learning to master wooden boat building is wide of the mark. Knowing and using wood are part of their cultural vocabulary.

The Solomon Islands Parliament is well aware of the shortcomings of the ferrocement vessels. During the 28 May-26 June 1979 session, the opposition party passed a resolution reading:

"That this Government seriously reconsider and, if necessary abandon, the idea of building further ferrocement boats to be used in this country."

The point is that the choice of ferrocement was determined more by the chance circumstances of international aid than by the needs of Solomons development.

#### THE POLITICS OF PRICING

NFD sells all its skipjack to STL at a predetermined price. NFD is not, however, an autonomous business simply supplying a neighboring customer. It must depend on STL for fuel, administration, supplies, offloading, and coldstorage, to cite only larger costs. STL owns 25% equity in NFD and the companies are supposed to be parallel and cooperative. STL has agreed to calculate the fish price offered to NFD by simply deducting its overhead from the Terminal Island skipjack price. Every six months the NFD Board of Directors renegotiates the price, presumably to adjust to market fluctuations and inflation. In the first six months of 1979, NFD received US\$472/t when the Terminal Island (U.S.A.) price was US\$760, meaning STL deducted US\$288/t for materials and services. Although the net price was low, NFD was unable to bargain, having no direct knowledge of STL overheads.

Early in 1980, STL offered NFD an increase of S\$19/t to S\$375 (US\$487)/t, since skipjack prices at Terminal Island had increased from US\$760 to US\$900/t. Meanwhile NFD learned that the Terminal Island price had soared to US\$1,100/t, US\$900 being the price of lowest grade fish only. Further, at the end of 1979, the price in American Samoa, where STL delivers its frozen fish, was US\$1,200/t.

In these circumstances, and although it appeared that NFD was legally obliged to sell to STL only, the former initiated negotiations with Starkist in Papua New Guinea. The end result of negotiations was that Starkist was given rights for a trial survey in the Eastern Outer Islands (outside the main archipelago), and NFD agreed to continue selling to STL, who offered an extra S\$100/t.

### Local Processing and the Development of Noro Cannery

#### INTRODUCTION

Local processing adds value to the catch, employs the semi-skilled, and entails the formation of infrastructure. Hence, the family of issues surrounding national development crystallize in local processing. Technology transfer, establishment of a permanent labor force, management and factory training, and the willingness of a foreign partner to commit its resources to national development all come to the fore. A cannery is the major subsidiary industry for adding value through processing, and it has been a controversial and sometimes explosive issue in both the Solomons and Papua New Guinea. A profitable cannery must be viable on more than purely economic grounds. Management must be committed to production targets and labor must be able to sustain productivity at acceptable levels. The implication is that a work force committed to "wage earning" and a transnational corporation committed to "development" are prerequisites for success.

The debate over canning revolves on two separate, though ultimately related, sets of issues. The first is whether the cannery is economically viable. Will it generate the projected revenues and employment and lead to additional infrastructure more effectively than simply investing in cold-storage facilities or brokerage activities? The second set centers on the political and social climate of cannery development. How does the cannery function as a bargaining chip in joint-venture negotiations? How do political and economic uncertainty affect the commitment of the Taiyo Noro Cannery? Will social disruptions resulting from hiring neighborhood women or workers from other ethnic groups have a negative impact on the success of the cannery?

The economic environment in the Solomons or Papua New Guinea would never motivate either Taiyo or Starkist to build a cannery of their own volition, even with offers of tax incentives for canned products. Like all tuna transnationals, their company mandate is to get maximum quantities of raw fish for extant global cannery operations. This does not, however, mean that the transnationals will not eventually erect canneries. Transnationals view these canneries as part of the cost of maintaining access to raw tuna.

It should be made clear that to any investment banker there are sound economic reasons for Taiyo and Starkist to want to avoid any big capital investment. The development plans of Papua New Guinea and the Solomon Islands underscore the need to stimulate foreign investment to further industrialize. They also include the desire to nationalize or control some key primary industries. These objectives collide, however. Investors will not risk capital when the prospects of nationalization are imminent. The issue of canning illustrates what has evolved into the development paradox: the more host countries industrialize and push for further development by threatening nationalization, the more transnationals fixate on short-term returns and undermine long-term development.

#### THE MECHANICS OF CANNING

A brief description of canning operations at the existing Tulagi cannery will identify the jobs, personnel and sequence of operations.

The catcher boats offload their fish around the clock, making the cannery a 24-hour operation. Scales weigh the catch, once carriers have loaded it onto pallets, to assay the fish and potential bonus. Fork lifts then convey the fish to the two 50-t brine tanks where they soak for 10 hours before being transferred to coldstorage. When the canning process is to begin, the fork lift drivers haul the piles of frozen skipjack to water tanks to thaw for 9 hours. At 5 pm the 10-man cooking section starts heading, gutting and cooking the fish. The Japanese manager oversees the preparations for the following morning until he retires at 9 pm. In the morning, amid the deafening din of machine noise, rows of cleaners, young men and teenagers in cotton caps and aprons, stand at the tables removing the bones and dividing the skipjack into quartered loins. The dark blood meat is separated and canned as Solomon Blue, the brand sold at local tradestores. Packers hand-pack the light meat chunks into cans, the conveyer belt taxiing the open-faced tins through sprays of cotton seed and rice oil and salt. The canning machine then clamps down the lid and workmen pile the cans into metal bins and wheel them into the pressure cookers for final sterilization.

#### THE TULAGI OPERATION

The vintage Tulagi cannery has been stamping out cans since mid-1973. With the exception of 1975 when production soared to 2,619 t, processing has hovered between 1,800 and 2,000 t (SI Statistical Yearbook 1979). As the catch capacity rises with the development of a superior fleet—both the Okinawan and STL fleets are gravitating towards the larger, high-technology brine boats—the percentage of the catch canned dwindles proportionately. Where in 1974 about 83% of the skipjack went further than Tulagi, by 1979 STL transshipped 94% of its catch frozen to either Van Camp canneries in American Samoa, Guam, San Diego and Puerto Rico (90%) or to Japan (4%). The bulk of the Tulagi canned skipjack, light meat packed in oil, is destined for the European Economic Community where duty restrictions are minimal given the Solomons' Commonwealth

status. The U.S.A., world's largest consumer of tinned tuna, levies a 35% duty on oil-packed imports. STL distributes Solomon Blue locally, but the several hundred tonnes canned yearly are hardly enough to keep pace with local demand. This has generated significant local resentment, more than an outsider might anticipate, in that nationals as a matter of cultural tradition perceive this as infringement against their natural rights.

The only other processed skipjack has been solely for the Japanese market. The Smoke Factory, as it is called, has been smoking skipjack loins to produce *arabushi*, a staple for soup stock used daily in the Japanese diet. The Smoke Factory employs about 25 national workers under a contracted Okinawan smoke master. The Smoke Factory, consisting of a three-storied smoke house, a steam room, and a packing shed, only smokes about 1,000 t of skipjack annually. Once the fish have been gutted and headed, they are arranged in boxes in the steam room and steamed for 2 to 3 hours. The fish are then laid on racks and smoked for three days, until they metamorphose into "volcanic glass" consistency; the workers, sitting in a circle around the mound of glassy skipjack, scrape the hard loins before sorting them into grades. However, because of poor smoke circulation and frequent breakage, the quality is low.

#### NORO CANNERY

According to a new 10-year agreement between Taiyo and SIG (see Second Joint Venture, p. 55), STL is to build a new cannery at Noro to replace the Tulagi cannery and Smoke Factory. The new accord contains an explicit trade-off: access rights and no export duty on canned fish, at least during the introductory period. Noro has an excellent wharf, a powerhouse and other infrastructure in place.

Noro cannery production is to be pegged to the lower limit of skipjack yields (Table 7) to prevent empty periods when machines stand idle, running up costs and disrupting organization of labor. Taiyo assumes that the current quota of 30,000 tonnes within the main group archipelago, once met, will give way to a 50,000-t limit.

STL's ostensible motive for desiring a cannery is to stabilize business in the long run if not the short term. The debacle of 1978, when STL suffered a US\$4-million loss on the frozen fish market, convinced the Finance Ministry that canning afforded greater market-timing flexibility and security. When canned tuna prices tumble, STL can withhold distribution; when prices rise they can sell.

Feasibility studies, and feasibility studies of previous studies, have been submitted on the Noro cannery. Still, Noro's economic viability remains unclear. Fisheries Department calculations (see Table 6) for projected income were based on standard economic assumptions. Financial projections always leak due to unforeseen problems or unanticipated changes in factor or product markets. This is especially true during development. Financial projections need to be tailored to the social, political and cultural make-up of Noro. The expected rates of labor (Table 8) and capital utilization, for example, are sure to be different, though these figure prominently in the assessment of Noro's costs, earnings and financial performance. In all likelihood, Noro's projected earnings should be heavily discounted. Production statistics and profitability analyses prepared for Tulagi cannery also over-estimated production and resulting revenues.

There are a number of immediate reasons why projections should be made very cautiously. The first is that all the raw materials, with the exception of fish, must be imported. Canning machinery and spare parts come from Japan, as do the labels, tin plate and rice oil. The cottonseed oil comes from Australia, fuel from the U.S.A. and salt from Germany. Thus, a Solomons cannery is extremely vulnerable to increasing transportation charges, rising cost of raw materials (especially fuel and tin plate) and potential trade barriers.

A second reason for caution is that the response of the indigenous work force around Noro is uncertain. Unlike Tulagi, the Noro plan eschews importing workers in any number. The result is that the Malaitians and other ethnic groups currently working at the Tulagi cannery will be excluded. Rather, STL proposes employing local New Georgian women who could commute from Munda and other towns around the Noro base. The idea is to trim housing costs and take advantage of women's

Table 6. Fisheries Department projections for the Noro Cannery.

<b>Producing Capacity</b>				
Fancy	430,560 c/s*	÷ 280 days =	1,538 c/s/day	
Flake	170,770 c/s	÷ 280 days =	610 c/s/day	
Pet Food	55,560 c/s	÷ 280 days =	199 c/s/day	
Totals	656,990 c/s	÷ 280 days =	2,347 c/s/day	

Item	Years		
	1	2	3
<b>Sales</b>	(SI\$ '000)	(SI\$ '000)	(SI\$ '000)
Fancy	9,807	10,150	10,505
Flake	1,782	1,844	1,909
Pet Food	338	350	362
Totals	11,927	12,344	12,776
<b>Costs</b>			
Raw Fish	3,478	3,582	3,690
Materials	5,299	5,457	5,621
Salaries	374	393	413
Expenses	400	402	404
Freezing	391	403	415
Administration	170	178	187
Sub-Total	10,112	10,415	10,730
<b>Selling Expenses</b>			
Warehousing	72	74	76
Taiyo's Commission	528	547	566
Sub-Total	600	621	642
<b>Interest</b>			
Running Capital	119	119	119
Fixed Assets	273	273	273
Sub-Total	392	392	392
Total Cost	11,104	11,428	11,764
Net Profit Before Taxes and Depreciation	823	915	1,012

\*Standard cases.

international reputation for stability, endurance of tedious routines, and willingness to accept low-paying jobs that have no future. The employment of women in industry is an untested practice in the Solomon Islands.

The third reason for caution on cannery projections is that since the composition of the labor force is still up in the air, STL has not hammered out economically-sufficient and politically-acceptable work incentive and training programs. The current assumption is that Noro, a cannery eventually fivefold in size and amidst the urban Munda area, will operate like the Tulagi cannery on its tiny government-owned island in the Central Solomons just 40 km from Honiara.



Table 7. Capacity and projected yields of the Noro cannery.

Product	First stage of Noro cannery	Second stage of Noro cannery
Capacity	4,000 t	10,000 t
Canned tuna, light meat	1,560 t	3,676 t
Canned tuna, dark meat	760 t	1,900 t
Fish meal	400 t	1,000 t
Fish oil	40 t	100 t
Total yield	2,760 t	6,676 t

Table 8. Estimated Noro cannery employment.

Production	SI Nationals		Expatriates	
	First stage	Second stage	First stage	Second stage
Cold storage	17	36	3	3
Fish meal processing	4	8	1	1
Cleaning/canning	68	136	4	4
Can reforming	3	6	2	2
Total production	92	186	10	10
Administration	5	10	8	11
Total employment	97	196	18	21

## WESTERN REGIONALISM

Unlike Tulagi, the Noro cannery is a many-sided political issue. Its existence and future development are inextricably tied to the Western Province's bid for power and the national logic of decentralization. The government desires to sell government shareholding in some current joint ventures in order to reestablish ventures between provinces and private investors. This administrative policy is diametrically opposed to that of the National Democratic Party which favors the present arrangement. In all likelihood the Western Province, seeking independence, will press to acquire the shares of the joint venture if the cannery is successful.

For its part, the SIG desires the cannery not only to forestall price fluctuations but to demonstrate that the nation is coming of age. For the time being, the government considers any and all infrastructure valuable, regardless of its location and individual economic merit. Noro was not only a natural choice, because of its excellent harbor and location, but a social choice: the expatriates in charge of the Fisheries Department and Copra Board were more attracted to the New Georgian peoples whose values and education levels most resemble those of Europeans. In all probability government revenues will decrease moderately because, at least in its early years of operation, the cannery will not turn a profit, yet will consume fish which would have attracted a duty if exported frozen. To compensate for this, the SIG plans to implement a tax once the cannery can bear the overhead. There is little doubt that the tax is far down the road.

One reason the Noro site was approved was that in late 1978, when the issue was in doubt, the Western Province had delayed its celebration of SI independence amid threats of secession. This province had been clamoring for development, though in many respects, particularly education and economy, it was already the most developed province. Income from cash cropping is comparatively high; and Malaitians migrate in to work on private plantations. The development of Noro, not only the cannery but the neighboring copra wharf and related infrastructure, may calm thoughts of secession. But if history is any basis for prediction, the impulse to secede will gain greater momentum with economic progress. The Noro cannery and concurrent development may eventually fund a division of the Solomons. Several leading politicians from the Western Province have expressed such thoughts; a few older leaders have asked for an end to development infrastructure there on grounds that their lives will become too urbanized.

National leaders are divided on whether to encourage joint ventures as a means to development or to use them as the first step towards nationalization. This surfaces as a controversy over the merits of centralized, national ventures versus decentralized, provincial ones. Where the National Democratic Party favored the national commodity trading boards and national government joint ventures, the Alliance Party, elected in 1981, opposes national joint ventures and wishes to atomize national boards. For example, the Copra Board will be "abolished, and its funds distributed to (farmers') associations in proportion to each province's copra production." This swift shift in policy is disconcerting to foreign investors. Indeed, the five-year development plan drafted by the outgoing government's Central Planning Office, and the basis of the World Bank's 1980 economic survey of the Solomons, has been dropped. In the September 4, 1981 issue of the government newspaper, News Drum, the new Prime Minister avered "he would scrap the entire four-volume development plan" because "there was so much rubbish in the plan that no one would dare to read it."

#### TAIYO AND THE NORO CANNERY

Taiyo is certainly capable of bearing the financial burden of the Noro cannery, irrespective of the political divisions. Even if STL does not fair well economically, Taiyo apparently does. In 1978, when STL withstood the resounding loss, Taiyo's commissions, loan interest, advisory fees, service charges, and other sundry gains amounted, according to one inside estimate, to US\$3.3 to 4.0 million. The estimate appears reasonable inasmuch as King (1979) calculates Starkist's profits for 1978, on almost an identical tonnage of fish, to be US\$3.0 to 3.5 million. Whatever the precise figures, it is clearly in Taiyo's interest to preserve the relationship with the SIG on its present terms.

However, the current plan does not call for Taiyo to risk any capital investment. Pointing to Papua New Guinea's Kavieng cannery, where the World Bank will contribute 29% of the initial equity, Taiyo urged the Solomons to finance the cannery through a low-interest development loan or foreign aid. SIG would own the cannery and rent it to STL.

Taiyo has rational economic incentives to inhibit the development of the cannery, assuming that Taiyo's objectives would be to:

1. satisfy SIG's desire for a cannery in order to increase the tuna quota and thus obtain larger quantities of raw skipjack
2. keep capital investment in the Solomons to a minimum to avoid the risks of nationalization
3. allow Noro cannery's initial stage to be sufficiently poor to postpone the next phase of expansion
4. continue buying supplies and services from business associates in return for concessions elsewhere in the world.

Moreover, given the shaky economics of canning in the first place and the uncertainties of the labor force, falling short of production targets may take little effort on Taiyo's part. If the cannery fails to clear production or budgeting targets, the reason for failure will become a question of Taiyo management efficiency versus national work-force efficiency. If STL's experiment in employing commuter women at Noro does not make inroads into the current high rates of transience and low productivity,

then expatriates and development personnel will likely accept worker inefficiency as the cause. High turnover and low productivity are quantifiable, more tangible and easier to accept than errors of omission.

#### CANNERY WORKERS

Work-force productivity is a key cannery issue. If the Tulagi cannery workers are a true indication, Noro will experience persistent transience, despite the shift to commuting female workers. Over Tulagi cannery's seven-year lifespan, just seven of the 120-man work force have remained for at least five years. The average employee lasts less than two years as few men are content with their jobs. Four of the seven who have stayed occupy skilled, well-paid and responsible posts. Two are engineers and two are foremen who benefited from a six-month training course in Japan. The remaining three who stayed on have been induced by special, often contingent, circumstances such as marrying local Gela women, being rewarded with one of the dozen STL married quarters, or coming from tiny atolls where land is short and the potential to cash crop nil. Even those men who have received pay increments make only about SI\$50 a month, or SI\$10 above the monthly company average. From interviews with workers, there is every reason to believe in a correlation between high transience and low wages. Wages are not, however, the only cause and complaint.

Repetitious indoor assembly-line work to the clash of tins and machines is the least attractive to Island men who are accustomed to outdoor labor. Cannery jobs rate as the least desirable in the whole shorebase operation. The youngest and least skilled wind up in the cannery, often marking time until they can switch to another section or saving wages for special purchases. Thus, after the adventure of travelling wears off or enough money has been saved, the cannery men melt away and must be replaced.

Noro plans to circumvent some of the problems by hiring women. Such a program has proven effective in Fiji's PAFCO plant at Levuka. Every two weeks, PAFCO rotates the women they bus in every morning so as to spread the opportunity and relieve the boredom. Historically, industry has found women to be the most faithful and productive cannery workers, and they stand on the assembly lines from Terminal Island, California to American Samoa to the Philippines. The common ideology is that women adapt better to conditions at the canneries because their superior innate patience and tolerance is suited to assembly-line labor. More accurately, women have a more deeply socialized sense of responsibility and duty towards family. Thus, women receive gratification not only from the income earned—a significant social status marker among men—but from meeting family expectations. This tends to be true even though women's incomes typically are supplemental to the family budget.

Noro's experiment with female labor could backfire for the same reasons that it is cost effective. Most of the women employed will likely be living with their families. While this inspires responsibility, eliminates a need to fabricate worker housing, and allows low wages because the women's family subsidizes her living expenses, it also implies that there is little economic incentive to remain on the job in the face of hardship and harassment. So pregnancy, nettling and teasing by male co-workers, boredom and friction with managers could move women to quit as easily as men, especially in the Munda area where people do not subsist on cash. This contrasts markedly with canneries in the United States, Puerto Rico and the Philippines where people need cash to survive. That Fiji succeeded with hiring women is the only true indication that such an innovation might work in the Solomons.

Operations at the Noro cannery will probably be best if STL fits them to indigenous work concepts. Since the company will employ both male and female workers, it should enlist a Melanesian division of labor. It is universal in traditional agriculture and fishing production for men and women to carry out separate tasks. Melanesian male-female work groups are felt to be complementary rather than integrated. Both men and women tend to feel uncomfortable when their jobs overlap, and there is a predisposition to segregate tasks informally when institutional divisions are absent (e.g., male and female nurses in hospitals).

## The Second Joint Venture

On 18 November 1981, one year after our field research was completed and more than a year before the initial joint-venture agreement expired, Taiyo and the SIG ratified a new venture to take effect in 1983. The agreement called for the investment of SI\$8 million over the 10-year life of the venture. A personnel department was created to guide STL's manpower training program. The agreement also established a marketing division of STL, its function being to monitor prices on the world market and oversee Taiyo's distribution system.

In the new venture, the Solomons gained the lion's share of control and ownership. Both parties will own 50% each for the first five years, after which the SIG shareholding is to rise automatically to a controlling 51%, reversing the present division of equity. The SIG also won control of the Board of Directors, as it will hereafter nominate the chairman of the board.

## Conclusions and Recommendations

As a road to national development, Solomon-Taiyo has been successful within narrow limits. It has achieved the government objectives of providing substantial revenues and foreign exchange, and broadening the base of the economy. Today fishing rivals timber and copra as the Solomons most valuable export. STL has also furnished employment for approximately 900 of the unskilled. The joint company has not, however, netted a profit during its first decade, incurring a serious setback in 1978 which forced STL to recapitalize to the extent of \$4 million. Deficits of this magnitude endanger the joint venture.

Nevertheless, the first decade of STL, coupled with the emergence of NFD has signaled the age of industrial fishing economy, once dominated by non-commercial fishermen venturing out in sewn-plank canoes. Over the decade, STL has augmented its annual catch, branched out into longlining for larger tuna and billfish species, produced a steady stream of canned and smoked skipjack, and experimented both with *payao* rafts for eventual purse seining and baitfish holding for export. NFD, in contrast, has earnestly begun to train Islanders, build boats and create a village environment to stimulate growth of a permanent labor force. The second STL joint venture, signed for the next decade, promises increased local processing, training, marketing control and revenues for the Solomons.

An express goal of this study was to provide some idea of the complexity of the joint venture and to identify the different interests and their structure. The problems raised by STL in tandem with NFD are difficult to reduce to manageable size; they resist simplistic interpretation and cannot be resolved from any single standpoint. The social economy of fishing cuts across many levels of organization: village, provincial, national, South Pacific regional and global. Each has distinct degrees of involvement, different levels of awareness of the total picture and separate interests. The Solomons fishing industry itself encompasses an ethnic mix ranging from the various Island peoples to European expatriates, Japanese and Okinawans. The overtones of ethnicity and race are unmistakable, even if shrouded by the convivial front of international business and the official ideology of common goals and cooperation. Industrialization heightens the historical confrontation between traditional and modern ways. Both have definite advantages and wisdoms that meld in the minds of Solomon Islanders. This surfaces in the interplay between national elites and villagers, and perhaps more profoundly in the confusion young men feel over their future. Finally, the interaction in a face-to-face environment magnifies the influence of individual personalities.

Add to this the considerable economic stakes of industrial skipjack fishing and the politics become intense, so intense that the social issues, the real development of human resources, particularly for the workers who are the ostensible beneficiaries, become lost. In the final analysis, an industry flourishes when people willingly work industriously. Ultimately, the successful development program or joint venture is inherently sound: it takes account of external goals and motivations; pos-

sesses an understanding of the social history and culture of the work force; and selects a knowledgeable and sensitive management whose first priority is the development of human resources. Hence, joint ventures and other development projects must attend to the necessities of workers. Managers and planners must be willing to aim for long-term return and be sensitive to the cultural shape of the work force.

For the more than 900 workers at the Tulagi and Noro base facilities and aboard catcher boats this is an era when understanding is never apace with change. Workers, summing up their cultural turbulence, say it is a choice between "custom and civilization." The question is whether workers will do brief labor stints, as men have always done since blackbirding days, and then return to the subsistence economy, porpoise hunting, custom wealth, and kinship relations of the village; or whether they will remain urban workers whose lives pivot on wages, store bought foods, schedules, and "wontok" relations. Of course, the alternatives are not so separate and clear. Relations of economy and kinship rooted in the village are transposed to the urban setting. In turn, cash and "cargo," science and skills, values and interests, aspirations and lifestyles, filter back to the village. Hence, the dynamics of wage labor lie in the interplay between modern and traditional worlds. Herein also lies the workers' goals, motives and commitment to industrial fishing which determine whether development programs—which aim for more than the simple generation of revenues—succeed or flounder.

Below we take up some of the issues we have addressed in the paper and give them an anthropologist's solution, one that views the economics of development and the politics of involvement by international agencies and transnationals through the prism of Solomon Islands culture.

#### SOLOMON-TAIYO LIMITED

The presence of a tuna fishing industry is advancing the Solomons economy. But this advance will remain artificial—that is, dependent on infusions of foreign expertise, technology, and capital—unless there is a corresponding change in the social order. True social development would entail the evolution of a working community which conserves the heritage of indigenous society even as workers learn new skills in new environments.

Currently, workers perceive industrialization not as the dawn of a new social era which transforms their nation, but as an extension of the plantation system. They implicitly recognize that they are only slightly more capable of running STL today than when the joint venture was born. So far, the actions of STL have not helped to promote the kind of evolved social order which would perpetuate economic development and thus allow Solomon Islanders to achieve self-reliance. The primary reason is that rather than capitalizing on the strengths of indigenous organization, particularly the wontok system, STL wages an uphill struggle against it. The general conclusion to be drawn is that industrialization cannot ignite self-sustained national development unless it is accompanied by a coordinated reorganization of the work force, a reorganization which uses the institutions of the existing society.

Below are several recommendations which follow from this conclusion:

1. STL should accept the wontok system as a social reality of Solomon Islands culture, and try to work within its advantages and limitations
2. houses need to be built in the appropriate architectural style—on stilts with verandas, angled roofs, ample windows—and units for married couples and families need to be built
3. the mess system should be revised so that workers are given credits to purchase foods at an STL-run market and store at the shorebase. This would eliminate management's fear of indiscriminately feeding wontoks, and restore the sociality of cooking and sharing meals which exists in the village
4. the government should prohibit the over-the-counter sale of beer, limiting beer sales to restaurants
5. STL should supply more entertainment, especially sports facilities (i.e., gear and fields), for men and their families

6. STL needs better objective on-site financial management to prevent losses such as those suffered in 1978. Steps that might be taken include a purchase of more goods in American dollars (especially oil) and the negotiation of long-term purchase agreements
7. the transfer of technology and manpower training should be put in the hands of an outside agency responsible to the government and rewarded directly in terms of its success in achieving these objectives
8. government members of STL's Board of Directors must take a more active role in the management of the company.

That national development is as much social as economic is sometimes overlooked by development planners. A reason is that the complexities of the social system defy simple interpretation and unqualified answers; they often resist quantification and involve different and shifting perspectives. Yet, the evidence of failed projects and such studies as we have conducted indicate that development must be understood from the perspective of the beneficiaries. The usual "social impact" statements are not enough. Planners must go to the workers' quarters and to their villages; they must interview and observe and build an overall understanding of how the society works.

#### FOREIGN TRADE AND IMPORT SUBSTITUTION

So far the SIG has taken a straightforward view of the relationship between foreign trade and import substitution. Their view is that the development of local industry leads directly to more revenues because the Solomons will be able to import less and export more value-added products. Thus, the local production and processing of fish will generate revenues by selling canned tuna (as opposed to lower-valued frozen) and buying less imported mackerel. The implication is that industrialization, in this case the Noro cannery, will inevitably result in a better foreign reserves position.

However, this goal will not be met, even if the cannery is swiftly completed, without careful government supervision. The Noro cannery may well lead to a deterioration in current balance of payments. The reason is that the Noro cannery could stimulate the importation of Japanese plant equipment, parts and components. That is, the export value of Japanese capital goods and semi-finished products needed to run the cannery could exceed the export value of canned fish to the Solomons. Said differently, even if the Solomons exports more canned fish than it previously imported, the value of imports will rise and erode the trade position. Moreover, the trade restrictions placed on the importation of canned fish to protect STL products will fuel the erosion. A Ministry of Trade and Industry (MITI) White Paper indicated that Japanese overseas manufacturing ventures generate twice the exports they replace (MITI 1975).

A way for the Solomons to begin to avoid this problem is to insist that all the equipment, parts and components used in the Noro cannery be (1) standard materials that are available from more than one supplier and (2) diversified by country. The danger is that dependence on supplies of industrial inputs from Taiyo/Japan will place the Solomons in a worse position than before industrialization. The primary reason is that even a termination of canned fish production would have little effect on the domestic economy. Likely, the Solomons would simply buy tinned fish from another supplier in another country. But imports of cannery materials—cooking bins, thermostats, etc.—cannot be cut back without endangering production. They may also not be easily purchasable from other suppliers. In economic terms, incautious industrialization might reduce the elasticity of the Solomons overall import demand for Japanese goods. If, for example, the Solomons buys the equipment, parts and components solely from a Taiyo source—through companies directly or indirectly affiliated—and cannot obtain alternate supplies, Taiyo can administer the prices for input materials. It could happen that as the Taiyo share in the joint venture diminishes, its control over the Solomons economy will increase.

## BAITFISHING

It is more important to control fishing effort on baitfish resources than to insist on the use of inefficient methods. With this in mind, probably the best long-range policy for the Solomons is gradually to introduce purse seining for tuna. The purse seine could be used in conjunction with *payao* rafts and with regulated mesh size that would net mostly mature skipjack. Replacing half the pole catcher boats would eliminate much of the pressure on the parallel bait fishery.

Given the Solomons intention of expanding the skipjack industry, it is imperative that government economically regulate baitfishing. The price of baitfishing must be sufficiently high to discourage wasteful practices. In the 1980 baitfish negotiations, STL concurred that bait was often wasted and in no small quantities. The reason, simply, is that bait is cheap and the price is calculated in time (nights fishing) rather than amount. Shifting to a price schedule based on bucketfuls or on percentage of value of the skipjack caught (the system used in Papua New Guinea) would both minimize the dangers of disrupting reef ecology and raise additional revenue. It might also help rebuild villagers' confidence in the integrity of STL baitfishing, especially if accompanied by a government program to explain the effects of industrial fishing to villagers.

At the village level, the discord surrounding baitfish royalties would subside if STL distributed the monies along customary guidelines. Instead of direct payment to "reef owners"—by no means a cleanly cut concept—the royalties should circulate in the manner of custom wealth, such as porpoise teeth. Each household would receive an equal share, with an extra payment going to the "owners" or, more accurately, custodians in honor of their status. Such a distribution pattern would be comprehensible to villagers. It would fit their concepts of production and exchange and stem the recent outbreaks of intra-village jealousies and disputes. Should baitfish monies exceed a certain amount per household (\$500 per year would be a good trial figure), the remainder could be set aside as a special trust fund earmarked for community projects. The Provincial Council could tap such revenues for area-wide improvements, such as a transport boat or truck.

Baitfish farming, already proven experimentally by Taiyo in Seghe, Marovo Lagoon, should also be implemented as a private local industry. With the increasing activity of the tuna industry in the South Pacific, the Solomons could also do well in baitfish farming for export. Japanese industry especially is sorely in need of a reliable baitfish supply and the current price is about \$15 per bucket. Export of baitfish was one of Taiyo's main objectives when the company first approached the Solomon Islands. It was the motivation behind the Marovo Lagoon program which still needs to be developed with training and marketing.

## PUBLIC RELATIONS

If the fisheries industry is to develop smoothly and in cooperation with local communities, it is essential that Taiyo, STL, and the SIG educate people in the village and town about the nature of industrial fishing. Specifically, people want to know what STL and NFD are doing, precisely because they exploit a resource that is economically, socially and ritually important to the communities of the Solomons. Education would stem the local fears and misconceptions surrounding the existence of solely Japanese-owned fishing companies.

Currently, local government councils see themselves as up against two problems: to convince the central government to initiate a development project in their area and to have some say in the project's orientation once it is initiated. Traditionally, the Solomon Islands policy works on the principle of consensus. Each individual has a right to have his opinion heard on all issues affecting the community. Given this understanding, the local leaders feel that STL's unilateral decisions on fishing policy breach their rights. Winning an issue in this system is less important than participating in the decision-making process; for participation builds solidarity and defines the issue as a common cause.

Politically, decentralized development through industrial expansion pulls in two directions. On one side, there is a move to strengthen the Provincial Government by giving it control and responsibility over health, education and business affairs. On the other side, the move to create joint ventures and participate in international markets entails agreements between nations (e.g., double taxation laws), global marketing and communication networks, costly information retrieval systems which are effective only when data are centralized, access to overseas development banks and agencies, uniform regulations and laws for fishing operations, surveillance equipment (e.g., boats and planes), and an experienced national agency adept in dealing with foreign investors. These functions are best handled at a state level, thus encouraging the growth of a centralized government and strengthening its hand as against the provinces. The expansion of the Fisheries Department, especially its monopoly on industrial fishing information and expertise, is both example and result of the central complex needed to cope with transnationals. To balance its central power, provincial authorities could serve as liaison between community and industry and be included in decisions affecting their:

- local baitfish assessment and management
- worker welfare and interaction with local populace.

#### MANPOWER TRAINING

In many respects, it is unfair to expect STL managers to be truly responsible both for the profitability of the joint venture and for worker training, a process which demands that the company sacrifice its immediate returns for long-term gains. There are, moreover, reasonable incentives for Taiyo personnel to avoid training Islanders. These incentives are not solely economic, such as fear of displacement through localization, but ethnic as well. The Japanese believe, as a matter of fact, that training Islanders is futile, owing to the Islander's penchant for abandoning his job and his general inability to absorb information from texts. Like much ideology surrounding ethnicity and race, the reasoning is as circular as the emotions are straightforward. In reality, Islanders have always trained one another in intricacies such as porpoise and skipjack hunting, devoting endless days to perfecting skills.

It is essential that a training system be part of the responsibility of the Solomons government. A good alternative is to define the training program apart from the joint venture, thus removing it from the list of negotiable issues. Manpower training should be done by an independent organization, hired by the government for that single purpose. Ideally the program would be coordinated with the HTI Fisheries Training School and would, following the Islanders' traditional methods of teaching, feature hands-on experience and apprenticeship.

On the social side, those selected for training should be sent as a group who would live and learn together, providing psychological support and tempering the loneliness and cultural isolation that have often deflected previous training programs. Organizers could target the program for specific results, accomplished basically through hands-on experience, rather than a set time period for training (e.g., six months).

#### TECHNOLOGY TRANSFER

Technology transfer from Japan to the Solomons has been lackluster: a few elaborate vessels, gifts of the Japanese government/business, and STL's outdated plant infrastructure only suggest the true transfer of appropriate technology. Papua New Guinea and other South Pacific States have had parallel experiences in acquiring technology; and there is now a common, and no doubt accurate, perception that fishing transnationals will not actively introduce technology and training of their own volition. On one hand, a transnational may understand that the SIG's priority, given its needs and limitations, is immediate revenues rather than human development. On the other hand, a transnational recognizes that it has no guarantee to long-term access to the very lucrative waters of the Solomons, and thus the swift transfer of technology—modern equipment and expertise being



one of a transnational's attractive resources—would erode its position at tomorrow's bargaining table. The paradox, here as elsewhere, is that the harder the Solomons pushes for localization, gradually wresting control of the joint venture, threatening Taiyo with the specter of eventual nationalization, the more Taiyo tries to procrastinate on social issues, dragging out technology transfer and manpower training as long as possible.

Japanese managers claim that technology transfer is difficult if not impossible because Islanders are not sufficiently educated. There is no sense teaching Islanders the finer points of refrigeration if they fail to comprehend the basic points of science. Even the FAO refrigeration expert felt the futility of having to struggle with Islanders lacking practical grounding in the appropriate mechanics and science. But this view has less to say about technology transfer per se, than about the close link between manpower training and efficient transfer. Certainly that STL does not recruit from secondary schools and university, and does not offer competitive salaries to those who might wish to come, also impedes transfer. Accordingly, owing to the absence of a concerted education/recruitment program, technology transfer has been rhetorical.

Even this, however, does not mean that all forms of transfer must be put in abeyance. At current educational levels, Islanders can handle baitfish farming and other industries which overlap with traditional knowledge and skills.

To make technology transfer a reality, two things are necessary. First, the government must make a strategic decision to promote human development even if this reduces the total revenues. This entails not only specific training and recruiting programs but social incentives for workers: good housing and other measures which signify concern, cash bonuses for attaining higher levels of expertise, and bringing a public recognition of success. Second, the joint venture must become a three-sided relationship, involving not only the transnational and government (in the person of the Fisheries Department), but also a new semi-government agency made responsible for manpower training, recruitment, housing and living conditions, and other social issues. Note that NFD's success stems from the fact that it is committed to human development and social incentives.

#### NATIONAL FISHERIES DEVELOPMENT

The Solomon Islands government is bent on rapid "decentralized development" and an express aim is to stimulate village cash income and disperse businesses to the provinces. However, as long as the SIG simultaneously continues to court industrial development, whether in fisheries or elsewhere, to generate foreign exchange and new revenues, it will encourage more centralized development. Ironically, STL's failure to mobilize a permanent and reliable work force, although operating for maximum exchange credits, may seem in the best interests of decentralization. This is because STL fails to offer a family/career base essential for building a competent cash labor force in a country where men always have the option of subsistence cultivation.

The national elite may also return to the village despite career and family bases in the city. But their retirement is less inevitable than the poorly paid laborer and more geared to developing village-based businesses with their savings and newfound acumen of loans and entrepreneurship. The return of the elite promotes decentralized development more than the tireless flow of unskilled labor with scant knowledge and savings to draw on. Given the Solomons small-society structure, tightly woven clans with real objectives, the development of a permanent labor force is less realistic and perhaps less desirable than the development of a working community that is semi-permanent though skilled. The Solomons cannot afford the current trend of transient workers who run away after a few years, feeling frustrated and having derived little from the experience other than a sense of inferiority and incompetence. The development of workers into a labor force that can earn better wages, operate with more efficiency and with skills learned on the job, will upgrade the village development when they return home. Exactly where the SIG hopes to have a positive social impact on the village is in the arena of preparing people for full satisfied village lives. Semi-permanent workers can contribute to village development: transient workers cannot.

If the Solomon government officials and planners set the creation of a stable, skilled and energetic work force as a priority then real hope for national development must lie with NFD. As things now stand, the Solomons options are to make major revisions in the structure of STL, revisions in social benefits and training procedures that the second joint venture agreement only suggests, or throw more funds and energies into NFD until it becomes the driving force in fisheries development, or some combination thereof.

To continue to develop as a successful company that has a strong social conscience and performs well economically NFD must profit from its beginning experience. There are at least seven steps that would improve its chances to prosper:

1. a competitive bidding structure must be established so that the price of the fish will reflect its net economic value to local or foreign processors
2. NFD must cut itself off from the politics and concerns of the Fisheries Department, and build its reputation as a business firm that operates on the standard of cost/benefit
3. STL's 25% shareholding must be bought out to prevent conflicts of interest and establish NFD autonomy
4. fuel, food and other supplies must be bought at competitive prices of wholesale distributors to lower costs and so that NFD can establish its own supply network
5. develop the ship building and repairing operations so that NFD becomes a mainstay of the transportation industry in the area
6. continue its current educational and social programs even if progress appears slower than anticipated
7. acquire its own slipways, offloading and storage facilities.

An outstanding and recurrent feature of development projects such as NFD is that a relatively small number of people determine its philosophy, operations, and ultimate success. This is never more true than when a project is in its infancy. The intrinsic merits of a program may well be less crucial than the insights, even-temperedness, and political savvy of its leaders. Minor faults or character are exaggerated in the microcosm of the fieldsite, much as they are in the tight confines of the catcher boat, and a lack of patience, intolerance, homesickness, or haughtiness may damn a good project. Conversely, poorly conceived programs sometimes fly on the strength of inspired leadership. The selection of leaders in the development area is critical, though certainly the selection process, frequently haphazard, belies this importance. If NFD prospers it will be because of strong, even-handed management and direction at the top.

#### FORUM FISHERIES AGENCY

The South Pacific Forum of Independent South Pacific States founded the Forum Fisheries Agency (FFA) because it recognized that both the migratory habits of tuna, and the economic and political conditions of the region, require a coordinated development effort, despite country to country differences in wealth of natural resources and degree of industrialization.

This report can say little about the FFA or its activities. The agency was only established during the latter years of the initial joint venture, 1978 to 1980, and then only on an interim basis. Accordingly, the FFA has had no impact on the trajectory of the first decade of the STL joint venture or on the general course of Solomon Islands fishing policy. Even the 1978 longline agreement was solely a Solomons affair.

As this report has indicated at various points, the Solomons can benefit from a cooperative agency with resource management, training capabilities, surveillance, market price information and negotiation experience. We hope the FFA will fill this role, paying attention to social harmony in an effort to advance the workers' lives.

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