

Global Imperatives and Local Desires: Competing Economic and Environmental Interests in Melanesian Communities.^a

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Since the 1970s, people in Melanesian countries have been beguiled by the prospect of economic development that would enable them to participate in a world market economic system and so allow them to progress, to improve their standards of living and to take their places as independent nations in a modern world. The forms of participation available to them and those encouraged by international capital entailed the extraction of natural resources – minerals, timber and fish. In these enterprises, the ‘developers’ provided the capital and the Melanesians provided the resources and sometimes the cheap labor. These projects were also viewed as ways of supporting emergent independent national governments through equity agreements, taxes and royalties. ‘Development’ referred to both the economic and the political processes facilitated by resource extraction by multinational corporations.

Globalization, like ‘development,’ is a loose term that describes or theorizes the processes whereby economic activities in these small islands are constituted within a broad financial and political landscape that is shaped by the distant, ‘developed’ nations and their linked corporations. It encompasses the financial, economic and political policies and practices of this imagined entity – the ‘global economy’ – and incorporates the communication made possible through electronic media. But ‘globalization’ also includes the emergence of ‘global culture’ and the dissemination of knowledge, ideas and desires. As with the economic imperatives, the cultural forces originate predominantly in

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advanced industrial societies and they include ideas that attempt to subvert the environmental destruction that has so often accompanied ‘development’. As Camilleri (1997:13) demonstrates, the flow of information and networking has also lead to the emergence of an ideal ‘global civil society’ focused upon reconstructing and imagining world politics and covering such issues as the environment, human rights and the rights of indigenous minorities. So we here explore the idea of globalization as an economic phenomenon that includes the promotion of consumerism, and as the influence of environmentalism as a cultural ideology.

The term ‘development’ still has currency throughout these Pacific nations and for those who live in remote rural communities, it retains its promise of material wealth, improved services and links to the world beyond. Working in Papua New Guinea and The Solomon Islands, we constantly encounter villagers who want ‘development’ and reproach their governments for failure to deliver its promised bounty. For them, development originates in the world beyond and comes when white men arrive to negotiate access to their land, their fishing grounds, their forests and their minerals. Our discussion is based on our work in village communities in Papua New Guinea and the Solomon Islands over the period from 1995 to 2001.

In this paper we shall examine the ways that people in the Melanesian communities where we have worked¹ engage with global issues in their desire for economic development. The agents of change are multinational companies whose interests are concentrated on the extraction of primary resources – minerals and timber. They are located in a global economy and the values of their products are established in world markets for primary products. Their interests and aims are contested by international

Pacific Islands. V. Lockwood. Upper Saddle River, New Jersey: Pearson Prentice Hall: 149-164.

environmentalists who, like the shareholders, live in countries remote from those Melanesian communities whose resources are exploited in the interest of ‘economic development.’ We therefore examine the responses to, and utilization of, environmentalist concepts by the Melanesians with whom we have worked. These are the Lihirian people from New Ireland Province in Papua New Guinea where a large mining project is located, and people from the Western Province of the Solomon Islands where the World Wide Fund for Nature (WWF) has operated a “Community Resource Conservation and Development” project for the last five years.

How ‘Globalized’ is Melanesia?

The economies of Papua New Guinea (PNG) and the Solomon Islands are mostly spoken of as being ‘in crisis.’ The countries are relatively rich in natural resources that are valued by industrialized nations: minerals, forests and fish. Exploitation of these resources has depended on foreign investors: Australian, S.E. Asian and multinational companies; and foreign aid projects, mainly from Australia and the World Bank (World Bank:1995). The problems of economic and environmental sustainability hang over all major economic activities in the region (Hunt:1998). The forces of globalization at present appear to be mainly negative – forests are destroyed, minerals are extracted and fish stocks depleted – with local people and the system of government not ‘advancing’ in the ways they envisaged. The nominally democratic governments are unstable, dominated by self-interested and often corrupt politicians. Accountability, transparency, and assertion of the rule of law have been lacking in the governance of both nations.

The prolonged civil war in Bougainville in PNG during the 1980s and 1990s (May and Spriggs:1990) and the ethnic tensions between people from Malaita and Guadalcanal in the Solomons during 2000 have taken heavy tolls - economically, socially and with respect to national stability. These conflicts must be seen as symptomatic of the uneven distribution of wealth, the failure of governments to protect the economic interests of their constituents, and the fragility of institutions that protect the rights of citizens. Both countries face problems of rising crime that discourage investment from outside and engender fear and disunity within the countries.

While the gold, timber and tuna gleaned from Melanesia do indeed find their way onto world markets, the flow of goods, ideas and investments is not multidirectional. The impact of international money markets has been devastating on local currencies and at the local level this is experienced as constantly rising prices for basic items such as rice, fuel and even soap. News of events in these countries filters into world view occasionally, but mostly when there is a natural disaster such as the Aitape tsunami (see the chapter by Welsch in this volume) or a social disaster such as the fighting and looting in Honiara. The eating and drinking habits of industrialized nations have enormous and visible impact on the daily lives of Melanesians – beer brewing is by far the most profitable local industry, Coca-Cola is sold from roadside carts, and instant noodles can now be purchased in village trade-stores. Popular music reflects the influence of American culture and even the disc jockeys affect the accents of Australians imitating Americans. In Melanesia the claims of global ‘exchange’ sound thin as the situation on the ground looks and sounds much the same as old-fashioned cultural imperialism.

Is Melanesia on the Global Network?

The cultural dimensions of globalization are based on technological as well as economic foundations. One of the more notable benefits of globalization commonly lauded by its exponents is the increased interconnectedness of the planet by modern telecommunications wizardry, and the enormously increased access to information that this brings. Email and the Internet are probably the most conspicuous positive achievements of the globalization phenomenon. But, in common with most of the developing world, Melanesia has been excluded from the benefits of these advances in telecommunications. While it is possible, when working as a consultant to a mining company, or as a manager of an environmental NGO project, to be in regular email and telephone contact with people all over the world, this access is unavailable to most Melanesian people. In remote areas, only those who work for foreign companies or NGOs are likely to have a telephone. The crises that have beset the governments of Papua New Guinea and the Solomon Islands over the past decade mean that often government departments are unable to pay telephone bills and so have services disconnected. Maintenance of telecommunication systems is erratic. Repeater stations (in some areas the only concrete, visible, government 'service') in remote locations have been subjected to damage by vandalism by disgruntled 'landowners' or rural people who resent being excluded from the benefits of these technologies. Cyclones, volcanic eruptions and other natural disasters wreak havoc that is costly to repair. In short, telecommunication is expensive and unreliable in Melanesia.

Computer technology is similarly subject to problems that are not easy to fix quickly. There is a shortage of trained personnel to sort out technical problems, electricity supplies

are not constant, and maintenance often requires sending machines to Australia or New Zealand or waiting for spare parts to be air-freighted at considerable cost. While the wonders of computer technology and the ‘shrinking of the globe’ are touted in advanced industrial societies, in Melanesia communications remain a major problem. As Ward has demonstrated, the world is not shrinking evenly (Ward 1999). The cost of a three-minute telephone call from Australia or New Zealand to Europe or the United States in 2000 is a fraction of the amount charged in 1990, whereas the cost to Melanesian countries has hardly been reduced. The distances between the rich Pacific Rim countries may have ‘shrunk’ but in many ways Melanesians have become more remote – and dependent on the foreigners who are there ‘developing’ the economy or providing aid. In the Solomon Islands by May 2001, the only government departments accessible by telephone were those funded by Australian aid projects.

Many expatriate employers and government departments bemoan the ‘abuse’ of telecommunications by local employees. They claim often that disconnections occur because phone bills are impossible to budget for – because people use them for personal calls. One of the main reasons for this is that ordinary people cannot afford the cost of a telephone connection at home, so that keeping in touch with kin is managed by those who are employed phoning each other at their place of employment. Working in places where phones and emails are available, it is clear that Melanesians embrace new technologies enthusiastically and would welcome the opportunities to be part of a ‘smaller world,’ but at present the technology is too expensive.

The large companies selling equipment are all based in advanced industrial nations and the profits made from computerization go back to these economies. Computers might

give the illusion of ‘breaking down boundaries’ – but they are in fact more indicative of the gulf between the rich nations (where middle class people have them as personal possessions at home) and the poor (where the majority of people do not even have reticulated electricity).

There is a dearth of qualified Melanesian people who can operate, service and manage computer systems and inadequate educational facilities to provide them. Most are trained in the context of employment by foreign companies, NGOs and aid-funded training within government departments. Telecommunication in Melanesia remains the province of expatriates. It is an area of dependency on foreign funding that is in some ways hidden. Enthusiasm for the possibilities of computer-based education, commerce and communication in underdeveloped nations rests almost exclusively on the capacities of the technology and barely takes account of the economic incapacity of those nations (Toland n.d.; Goldstein and O’Connor n.d.). The government education departments cannot ensure primary education for all children, much less the tertiary education of the computer-literate. The infrastructure costs of telecommunication and computerization are immense in countries where all stock has to be imported, where communities are spread out over hundreds of islands and where installation and maintenance present far greater practical difficulties than in advanced industrial nations. The fantasy of computer technology and telecommunications as a ‘democratizing’ force in undeveloped countries rests on ignorance of the extent to which all current telecommunication facilities, training and use are dependent on foreign funding.

Travel and Transport

Air travel, freight services and other forms of communication are beyond the means of the majority of Melanesians. Those who travel internationally are usually people who are employed by foreign companies, funded by aid or other non-government organizations, or politicians. Internal travel is expensive and wages are low² so that even people who are employed in towns find it hard to make their annual trip home to their villages. A most telling effect of the high cost of air travel within Papua New Guinea is the fact that rural people increasingly find themselves unable to pay the cost of freighting a body home for burial when a relative dies in town. In 2000 there were pleas from the Port Moresby Hospital mortuary for relatives to remove their dead, as over two hundred bodies were awaiting collection. In most instances the village relatives had requested that the hospital allow them time to find the money, but had then been unable to do so. All Melanesian cultures emphasize the burial of kin on clan land, and many people fear the consequences of not performing proper mortuary rites for the dead. Being unable to pay for a body to be sent home is perhaps the most poignant symbol of the relative poverty of rural people, in a country where the urban drift of employment seekers keeps rising.

The Desire for Development

When gold was initially discovered on Lihir in Papua New Guinea in the 1980s, the local people were satisfied that it would prove the means whereby they would at last have 'development'. Lihir is a relatively isolated island group to the north of New Ireland, and, apart from a coconut plantation on the main island run by an expatriate family, had experienced very little economic development prior to the gold mine. The pre-mining

population of around 6000 people mostly subsisted upon yams grown by swidden farming, and pigs, and did a small amount of fishing. Social life for most Lihirians was (and still is) very much focused around the traditional funerary feast cycle, or “Karot”. People typically spent a large proportion of their time preparing for and participating in these feasts, which were also a venue for competitive land transactions. Access to education, modern medicines, and transport was very low on Lihir prior to the mining project. Although the island was accessible by air, it had no road, and very few locally owned motor vessels capable of inter-island travel. The incidence of Malaria was high, many women were chronically anaemic, and a large proportion of them died in child-birth.

In spite of their enthusiasm for the mining project, the Lihirians drove a hard bargain and the landowners did not allow the project to begin until 1995, by which time they had negotiated an Integrated Benefits Package (IBP) that gave them 50% of a 2% royalty rate (far higher than any previous landowner group had received) and 30% of the national Special Support Grant to the provincial authority. The IBP also provided funds for a Village Development Scheme to be managed by Local Level Government which provides one million kina (one kina = US\$0.39 at the time of writing) each year for the construction of water supplies, houses and other amenities in villages. The Lihir Leasing agreement is significantly more responsive to local desires for direct benefit than those in other areas:

It features a more holistic approach to compensation issues than precedents established at large mines. There are a mix of one-off and continuing payments

for a wide range of issues, a significant equity share, the bulk of the royalties paid, and a range of infrastructure developments. The Lihir regime is now the benchmark within Papua New Guinea for such arrangements (Banks 1998:62).

However these agreements were forged with relatively little input from the national government, and the lack of state control over such negotiations warrants some comment here. Critics of globalization have interpreted the move to a global system as a progression from the 'economic development' policies of the immediate post World War II period during which international agreements were made covering trade and investment backed by the International Monetary Fund. This provided the '...vehicle for the institutional stabilization under US hegemony of the world capitalist economy'(McMichael 1998:100). McMichael argues that capitalist development encouraged and supported nation-building so that national economic growth could be managed via macroeconomic policy. Globalization then represents the subsumption of national autonomy and an undermining of the capacities of nations to direct their own financial affairs. Large institutions such as the World Bank and the International Monetary Fund or foreign aid donor nations determine policies that were formerly 'national'. It assumes that the period from 1945 onwards was marked by a gradual strengthening of the state and the advancement of economic and human development through bureaucratically defined policies and controls.

While this might hold for some nation states, in practice the situation in Melanesian states has been marked by the weakness of the nation state (Dauvergne 1997a) and in recent years, its failure to implement 'structural adjustments' (see for example, with respect to forestry, Dubash and Filer 2000) or to comply with the conditions imposed by

these global institutions. Nonetheless, they have had to float their currencies, and the prices that are set for commodities in the world market affect every aspect of their economies.

The power of the 'landowner' communities in resource development negotiations in Papua New Guinea illustrates the way that in Melanesia the process of 'globalization' can in fact be one where the state has a relatively impotent role. But the Lihirian landowners' demands are not made in respect to their understandings of the value of gold or their nation's economy. In a survey of 120 major landowners in the Special Mining Lease area undertaken in 1998, during which time there were demands for 'dividends' and 'increased equity,' only two could define these concepts and most simply said that they wanted 'more benefits' from the mine. Some understood that the low price of gold would affect profitability, but they viewed the fact that the mine continued to pay wages as an indication that it 'must be making money.'

The understanding of the global economy that Lihirians (and many other Melanesians) have is partial. In meetings concerning their perceptions about the lack of anticipated cash benefits, some men explained that they wanted large sums of money in order to invest it in businesses. The ideas of capital and investment are understood only in broad terms. But they perceive the difference between themselves and foreigners in terms of a structural disadvantage that is explained in a variety of ways. For some, the wealth of expatriate businessmen and their capacity to invest in Papua New Guinea is attributed to 'secret knowledge' that historically has been denied them on racial grounds. These views form part of so-called 'cargo cults' and have been written about by many anthropologists (Lawrence 1964; Worsley 1968; Trompf 1991). There was a cargo cult on Lihir in the

1970s and some older people remain convinced that the mine is effectively the fulfillment of their prophecies. But most young people are skeptical of ‘cargo cults’ while still adhering to what is called (usually disparagingly, and by white expatriates) a ‘cargo cult mentality.’ This is used to imply that Melanesians expect ‘something for nothing’ from foreign investors. In some instances it is the expectation that capital (especially in the form of equipment, see below on the portable sawmilling) will be provided by a foreign donor without any conditions and will become personal property. Sometimes it is simply a vague idea that any white person has privileged access to money and so might be persuaded to give some of it away.

Loans from foreign governments and various forms of infrastructural aid feed into a range of misconceptions about capital and investment. In 1999 and 2000, when a series of pyramid schemes were set up, hundreds of Papua New Guineans and Solomon Islanders lost millions of kina in schemes that promised returns of up to 100% in the first few months. Even the ombudsman (the government officer appointed to investigate individual complaints against public authorities), several members of parliament, and highly educated businessmen were apparently convinced that their money would ‘multiply.’ It is hardly surprising then, that some of the Lihirian villagers who had been given several thousand kina as compensation ‘invested’ it in one such scheme, *U-Vistrac*, and were baffled when they lost everything. Interviews with them revealed that they believed that the money literally ‘multiplied’ by magically reproducing itself in bank vaults.

Arguments about free trade and global market forces are not only inaccessible to the majority of Melanesians, they are concerned with abstractions that would have little

meaning to them anyway. This is a reflection of both the lack of secondary education and the lack of business opportunities available to local people.

In the case of the Lihir gold-mining project, the constant demands by landowners for ‘compensation’ are based on two understandings of their rights. First, they assert that the resource is theirs and they are not being adequately paid for it. Second, they argue that the initial agreements for the mining lease merely gave access to the minerals, establishing a relationship with the mining company that is renegotiable at any point. Given the misunderstandings that prevail about ‘the gold price’ and the apparent belief that the company has access to inexhaustible supplies of cash that it is withholding from Lihirians, it is difficult to see them as equally informed participants in any aspect of a globalized economic system. In view of the fact that Melanesians do not generally understand the mechanisms whereby their economy is even drawn into the ‘global’ sphere, much less have any control over its direction, it is hardly surprising that “The wealthiest countries and powerful transnational corporations have disproportionately captured the benefits of globalisation” (Australian Council For Overseas Aid 2001:116).

Lihirians do not believe that the PNG state owns minerals (see Ballard 1997). Many local people consider that they own the gold and that is why they can threaten to close the mine. The relationship that they see themselves in is one where the mining company pays what is effectively ‘rent’ for the pit and for all land affected by the presence of the mine – the housing for expatriate employees, the camp site, the plant site, the roads and the township built on formerly alienated land. The term ‘compensation’ covers all payments received and incorporates such things in the Integrated Benefits Package as

electrification, water supplies, the hospital and the houses constructed as part of the Village Development Scheme.

Environmental issues played a part in landowner demands – but the inspiration at this early stage did not come from Western environmentalism. Rather, people were acquainted with the impacts of pollution at the Bougainville and Ok Tedi mines and knew that the claims for environmental damage or destruction were another means of gaining compensation. During the first five years, all claims around environmental issues were directed at extracting payments of compensation. The regular payments for inconvenience and discomfort caused by dust, noise and disturbance constituted a form of income. The main interest was in increasing the amounts of money paid or finding new forms of environmental degradation that might become the subject of compensation. Even the few Lihirians who have a more scientific understanding of the potential dangers of pollution and environmental destruction have concentrated on recompense rather than conservation or rehabilitation.

The lack of concern has been made clear in the context of several compensation claims presented by people from the relocated villages close to the mine. In the initial agreements, the mine agreed to revegetate the cleared area around the plant site so as to provide a buffer zone, shielding the village from dust, noise and light emanating from the plant. At the end of the construction phase, when claims were made to increase and extend the payments for these forms of pollution, some of the villagers pointed out that the trees had not yet been planted. The company agreed to fulfill its obligations and to pay compensation until the trees were mature – by which time the roads would be tar-sealed and dust would be minimized. The villagers then argued against revegetation as

they did not want to lose the source of income. That some of the leaders acted in bad faith on this matter is undeniable, as the demands for compensation for ‘light pollution’ (which took the form of a lighter night sky) were accompanied by insistence on the provision of street lighting.

Much of Lihirian education on environmental issues has come from the mining company as there has been no environmentalist NGO presence on Lihir. The mining company produced a video showing the system of tailings disposal which was shown in villages. A local woman provided narration in Tok Pisin and members of the environmental and community relations staff answered questions. Villagers observe the regular monitoring of sediment in rivers and offshore and they are acutely aware of increased silt run-off into streams, associated with clearing. The mining company and the local government officers from the Office of Environment and Conservation conduct regular information meetings in villages, during which people are given information and the opportunity to air their concerns. But even in this context peoples’ interest appears to be stimulated primarily by the prospect of compensation, so that when sessions are purely educative there is less interest.

Local and Global Understandings of Environmental Impact

The environmental destruction from the mining projects in Bougainville and Ok Tedi has been extensive and the costs of reparation have proven very expensive for the companies involved. Mining companies have paid millions of dollars in compensation for damage caused by tailings disposal into the rivers and sea. The ecological damage in both places means that real rehabilitation of the affected areas is unlikely, and ordinary human exploitation of riverine resources is now unsustainable and the traditional uses of some

areas are no longer possible. Many Papua New Guineans, especially those in mining areas, are aware of the potential for environmental damage and familiar with the large sums of compensation money paid to people whose rivers have been polluted. Their knowledge of other forms of pollution and environmental degradation derives mainly from radio and newspaper reports. In areas where people have some cash income, radios are a prestigious consumer item and people listen to news broadcasts. One effect of globalization is that the international news reports, which are delivered in minute 'bites,' do not explain or elaborate, but attach names to phenomena so that people become broadly familiar with terms such as 'pollution' and 'acid rain.' Many people interviewed during the drought of 1997 named the 'El Niño effect' as a cause. Only those few who were employed in the mining company's environmental department were able to explain these concepts and the others who attempted often held bizarre views as to their meaning. But they were all aware of the monetary values of legal claims and of amounts paid.

In Papua New Guinea and other Melanesian countries, unlike industrialized countries in the 'globalized' community, there are few public libraries and those that exist have few books that can be consulted on environmental issues. The only bookshops that deal in scientific books are located in universities in urban areas. Imported books are exorbitantly expensive. The national university libraries are under-resourced. Ordinary people cannot surf the Web for information about pollution or acid rain, and even if they could, they usually lack the educational background to grasp scientific explanations. It is far easier to obtain fundamentalist Christian booklets that decry evolutionary theory than it is to find out the meaning of 'biodiversity.'

Villagers see compensation for environmental destruction as the main means of increasing their claims for compensation. This attitude compromises attempts to explain ecological processes or to develop a consciousness of environmental destruction as something that should be avoided. Five years after the opening of the mine, knowledge of environmental issues is sought and valued mainly as part of a strategy for gaining more income from the mine. As the government Office of Environment and Conservation is inadequately funded, the officer on Lihir is unable to implement the education programs that could enable people to make informed decisions about environmental problems. The mining company environment and community relations sections are then left with the tasks of educating and informing people – an unsatisfactory situation which allows Lihirian suspicions to flourish.

The situation on Lihir is complicated and paradoxical. While the external, international pressures – forces of a globalized environmental movement – on the mining industry have ensured that large international companies monitor and attempt to contain environmental impact, the internal, national pressures are virtually non-existent and even when they exist, are ineffectual. Lihirans, and indeed rural people throughout Melanesia, are as suspicious of environmentalists as they are of industrialists, but for different reasons.

All of the environmental organizations within Melanesia are dependent on international organizations for funding. Their aims, and the conceptualizations that they work with, are derived from Western European scientific understandings of the environment. Most oppose mining projects and favor small-scale forms of economic development. Lihirian people dismiss these ideas of sustainable development as part of a

conspiracy to deny them access to the wealth they desire. They are well aware that a multi-national company mining gold makes many times more money than a locally organized agricultural project. They recognize that having a mine enables them to establish links with the world beyond and provides services and infrastructure that would not be supplied by their government. They see their interests as best served by supporting mining and attempting to increase the benefits by demanding a greater proportion of the profits. Claims for environmental damage are one of their main levers in the struggle for an increased share. There have been a number of instances in recent years where these contradictory elements have come into play. An illustrative case is the infestation of the island by Giant African Snails (GAS).

Giant African Snails are an introduced, extremely destructive pest in Papua New Guinea. Before the mining project there were no Giant African Snails on Lihir, although they were endemic on the large, neighboring island of New Ireland. Outbreaks occurred in three places on Lihir in 1998 associated with the development of local trade with New Ireland. Some came on local boats with vegetables that were brought across by villagers. Another infestation occurred in a village when some timber was brought over and a third in the area around the mining camp mess, probably brought in on imported vegetables.

At first, because the infestations were localized, the environmental section of the mining company responded with a concerted (and extremely expensive) attack. Chemical baits (in areas near the mining camp where they posed no danger to pigs or dogs), collection of all snails, and the clearing and burning of vegetation (to create breaks so that the snails were confined for easier detection) were employed successfully. Months passed without any further outbreak. At the same time an information campaign was waged

involving the government agricultural officers and the Conservation and Environment department scientist, as well as company employees. They distributed brochures produced by the environment section and conducted information sessions with men and women in every village. Colored posters and warnings in Tok Pisin and Lihirian were displayed in all villages.

The government scientist produced a paper for the Local Level Government councillors informing them of the dangers in the following terms:

“The snail can act as a vector of human disease such as **eosinophilic** meningitis which is caused by the rat lungworm parasite, **Angiostrongylus cantonensis**. However, this creature can cause major socio-economic and environmental related problems within communities [as it causes] defoliation and stress on plants.”

“Because of the GAS aggressive attack on vegetables such as “Aibika”, corn, sweet potatoes, nutrition uptake by the local communities will be severely affected. Malnutrition may occur if there is a reduction in the nutrient uptake within communities. And this, as mentioned would pose tremendous socio-economic impact on the Lihir community. The snail if crushed and left out in the open can have a very unpleasant odour which is not acceptable to humans.”

(Giant African Snail (GAS) Infestation Management Plan for Lihir Group. January, 1999, S. Keu).

The government scientist designed a quarantine and inspection program and requested funds for continued publicity to ensure that local people were diligent in detecting and ensuring the destruction of snails. No funds were designated. In this

campaign, as in other areas, people, especially politicians, decided that the issue was one that could be dealt with by the mining company.

The responses of villagers provide an interesting case study of the ways that Lihirians think about environmental hazards. From interviews conducted as part of the independent social monitoring program later in 1999, it was clear that the information campaign had been successful. People were well informed. Of over 100 people interviewed, 90% recognized the picture of the snail and could explain its dangers to food crops. All were familiar with its voracious eating habits and over 80% mentioned two features that had been emphasized – that it multiplied very quickly and that to ensure that it was destroyed all snails and eggs should be burned and breaks in vegetation should be made to prevent the spread. About 20 people mentioned that they had seen the destruction caused by snails on New Ireland.

In spite of the high levels of awareness, villagers inside the Special Mining Lease area said that they would not carry out any of the proposed measures as they were ‘too much work’ and that they wanted compensation from the mine. Many of the villagers outside the mining lease area conceded that they would have to do the clearing and searching themselves, but most considered that the alarm was ‘exaggerated.’ About 75% believed that the mine should eradicate the snails and compensate people if garden crops were affected. Although most admitted that the snails were unwittingly brought in by Lihirians themselves, or islanders bringing vegetables to sell on Lihir, they reasoned that ‘before the mine we did not get vegetables from other places’ and as the trade in vegetables occurred in the context of the new economic situation, the mining company should be responsible.

The prevention and quarantine measures necessary to eradicate the pest and prevent further outbreaks were the province of government. The mining company has no authority over agricultural officers and has no rights to inspect or cordon land or set up quarantine inspections. No funds were allotted. The government Conservation and Environment officer, who was very alarmed at the infestations, decided that the only way he could have any effect was to work with the members of the mining company environmental section. Over the two years following there have been further infestations in different villages. In some places local people deal with them in the ways that they learned from the information campaigns, but responses are erratic or desultory and the snails are gaining ground.

The reactions to the Giant African Snail outbreaks reveal much about local understandings of environmental damage. Many people are resigned to the fact that the snails will eventually be endemic on Lihir as they are elsewhere. Some even contend that, “It doesn’t matter now because we have the mine and we can buy our food.” There is certainly no collective alarm or view of the problem as a potential disaster for the ‘community.’ The outrage and distress that is invoked in environmentalist discourse, reflected in the government scientist’s reports and requests to government, is born of a different view of dangers and possible preventative measures. He is a Papua New Guinean with a university degree in environmental science. Lihirians are skeptical of scientific forecasts and disinclined to engage in activities that they consider futile.

But the fact that the presence of the pest might constitute grounds for monetary compensation should not be underestimated. The only Lihirians to become vehement about the risks the snail posed to sustainable subsistence gardening were those who were

demanding compensation. The willingness of people to consign all eradication activities to the company cannot be viewed only as an expression of their cynicism about the government. It exposes a willingness to relinquish responsibility because they believe that the mining company has an obligation to Lihirians that encompasses many of the roles of the state. It is also a pragmatic reaction based on their observation that the mining company does work to rehabilitate environmental damage. As one Lihirian man expressed it: “The mine have money to do these things and we do not. If I work hard finding snails all I get is tired. They have the money to pay people to do this work. They should pay.”

The view of ‘environmental damage’ as primarily a means of getting money is expressed in a variety of ways (see Macintyre and Foale n.d.). For example, when several pigs died mysteriously in a village close to the mine, the government veterinary surgeon was called to do an autopsy. All villagers were invited to attend and those who were seeking compensation did so eagerly. As he dissected and examined internal organs, providing explanation of their condition to his audience, it became clear that the pigs had died from malnutrition, probably associated with parasite infestation. There were no signs of toxicity or disease. The people concerned were disappointed with these results and uninterested in dealing with the causes of the parasite problem. Many left before the autopsy was finished.

How Green?

Lihirians, like many other Melanesians desirous of development, are phlegmatic about much of the environmental degradation entailed. Perhaps this can be attributed to

the fact that for centuries they lived in a fairly unstable environment where environmental destruction from cyclones, droughts and other natural disasters occurred, but things grew back again. The population densities of the islands were very low. Clearing for gardens was confined to lower areas and fallow periods were over ten years. As many other anthropologists have observed, most people in Melanesia do not think of their resources as finite (Van Helden 1998:242). But the rapidly expanding population of Lihir, even without a mine, presents a threat to subsistence sustainability employing traditional agricultural methods. Soil degradation associated with shortened fallows is recognized, but as with the pig deaths, such recognition would obviate the possibility of compensation claims and require that people change their system of agriculture. With low population densities, swidden systems were not destructive and ideas of conservation were unnecessary. Now, as gardens are cleared at higher levels, on steeper gradients, erosion occurs, faunal habitats are vanishing and the lack of a conservational ethos is becoming perilous.

The large number of motor vehicles on the island means that rubber from discarded tires can be used to make sling shots. Whereas before rubber was scarce, the abundance now allows every boy to make a sling shot for killing birds. Already the number of birds around villages is diminishing. While some villagers observe this depletion, none who were interviewed considered this to be a problem and some men were hostile at the suggestion that boys should be discouraged from wanton killing. They regarded the activity as 'traditional.' Killing small animals with sling shots was a way that Lihirian men learned to hunt. People are aware that hunting with more efficient, modern weapons has already obliterated some species of birds and marsupials on Lihir. Several old men

reported that tree kangaroos were hunted to extinction when men acquired guns during the 1950s. Others observed that two varieties of cuscus (*Phalanger* spp.) that had been plentiful in their youth were no longer found on the island. While people did express regret at the loss of these animals from their diet, none appealed to any idea approximating a concern about maintaining biodiversity.

On Lihir, there is ample evidence that people comprehend the nature of environmental degradation, but that they see this as their main lever for obtaining further cash from the mining company in the form of monetary compensation. Spokesmen from the affected communities even begin negotiations by claiming damages and a continuing payment for inconvenience rather than a cessation of the degradation or pollution. They do not make claims against businesses whom they see as lacking the capacity or will to pay. Thus, when businesses owned by local people dispose of oil and other dangerous wastes into streams, killing fish and plants, they do not demand compensation from them, nor do they insist that the companies clean up. Rather they argue that as such adverse effects are indirectly caused by the presence of the mine, then the mining company should both compensate and restore the damage. Even when they appear angry about an environmental problem, they demand money rather than rehabilitation.

Timber Extraction in the Solomon Islands

For people who are living on small islands, where development opportunities are negligible, selling off their timber often appears to be a golden opportunity. The idea of becoming instantly 'rich' is far more attractive than the alternatives of gradual, minimalist and self-managed projects. Blandishments and promises of roads or school

buildings that logging companies offer along with the immediate cash payments, mean that voices of dissent – from those who foresee the long term disadvantages and unsustainability of resource extraction – are silenced.

The weakness of the state sector in regulating the developers and the eagerness for instant cash, regardless of the long term environment implications, mean that the main restraints are those that are self-imposed by the large multinational corporations who are sensitive to the arguments of environmentalists based in the industrialized nations. As Colin Filer has observed, in these circumstances:

‘... we should be less inclined to represent the multinational companies as unscrupulous and dirty beasts, and think of them instead as tame elephants performing in a circus without a ringmaster or wild elephants consuming the resources of a national park whose gamekeepers are all ivory hunters in disguise.’
(Filer 1998:174).

But if multinational mining companies are constrained now by environmental lobbying in their countries of origin, logging companies are not, and the environmental impact of logging in the Solomon Islands is already devastating.

Local Responses to Over-Harvesting of Timber

At least half of the Solomon Islands national government’s export revenue currently comes from logging. However for most of the 1990’s, timber has been harvested at rates well beyond what anyone regards as sustainable. AUSAID³ forestry experts predicted in early 2000 that the average rate of timber extraction in Solomon Islands is such that the

commercially available timber resource would be exhausted in approximately ten years. In the Western Province the remaining resource will be exhausted in just four years.

The AUSAID forestry policy reform project that calculated these predictions was suspended as a result of the militia coup in June 2000. Despite the impending economic disaster predicted by the governor of the Central Bank, and the departure or bankruptcy of many businesses in Solomon Islands as a result of the breakdown of law and order since the coup, logging appears to be continuing unabated. Log ships are still a common sight around the port of Gizo in the Western Province and at log ponds in many rural areas, and the number of new logging proposals reported each month remains high. Despite a drastic drop in tourism since June 2000, the Gizo Hotel has been able to stay in business primarily on sales of beer, a significant proportion of which is to landowners spending logging royalties.

While many people recognize the implications of such predictions, logging contracts continue to be signed, and timber continues to be harvested at unsustainable rates. Subversion of government-level attempts to rein in the number of operations and the harvesting rate of industrial logging appears to have been the norm in both PNG and Solomon Islands (Forests Monitor 1996; Dauvergne 1997a, b). A recent enquiry to the Finance Department of the Central Government revealed that the logging export revenue records for the Western Province since September last year (2000) have “disappeared.” Despite widespread local acknowledgement of the plausibility of the gloomy predictions made by forestry experts, the pressure to log areas that are still forested is intense, and increasing. Landowners still seem to be desperate for a taste of consumerism, in any of its multitudinous forms, and appear to be willing to gamble their resources, and in some

cases food security (Oliver, in press) to get it. Oliver describes in some detail the case of Viru Harbour on southeastern New Georgia Island (in Western Province), where severe social and economic consequences have accompanied environmental impacts in the aftermath of logging. Viru Harbour has the dubious honor of being one of the first places in the Solomon Islands where food security has also been compromised by logging, with people having to pay for vehicular transport to get access to gardens they previously could walk to. This has placed significant handicaps on a subsistence workforce (mostly women) that has little or no access to the cash generated by the logging projects.

There is some evidence that women, as a group, are more critical of environmental destruction and actually oppose logging developments, but they are not included in negotiations and their opinions are rarely canvassed. Their opposition rests mostly on the fact that they are rarely beneficiaries of payments and that the flush of money is usually spent on beer and items that men consider prestigious, such as boat engines, trucks or ostentatious clothing. Their subsistence work is also increased as men gain employment and disparage agricultural labor as ‘backward.’

Convincing people to forego “free money” for a sustainable alternative (such as ecoforestry) that involves considerable labor, and often some risk, for a lower return is a difficult case to argue, as Filer points out for PNG:

“The basic problem here, which is both a political and an economic problem, is to persuade villagers to forsake a form of “economic dependency”, in which they receive a substantial economic windfall without having to lift a finger, and opt instead for a form of ‘self-reliance’ which will eventually yield to them a higher income in return for substantial labour input. Fighting loggers on this terrain is not an easy business.” (1997:75)

Frustration at the lack of sustainable yet lucrative (and easy) alternatives to logging is not infrequently directed at NGOs charged with finding community-based “solutions” to this dilemma. The frustration is compounded by the fact that the environmental rationale for seeking an alternative to logging is based on logic which is both long term and draws on complex ecological arguments. Moreover, it is expounded by foreigners who, in the eyes of villagers, are not only already fabulously wealthy, but typically come from countries that have already logged most of their forests. In this context, schemes for ‘eco-tourism’ which cater to the needs of foreign travelers, who want only to walk around in an ‘untouched tropical paradise’ and appreciate its biodiversity, are viewed with some suspicion. The simplicity of village life that attracts jaded Europeans (see Silverman's chapter in this volume) is precisely what drives discontented Melanesian youth into towns in search of work, money and the excitement of urban existence.

The most common complaint about the Solomon Islands WWF Community Resource Conservation and Development (CRCDD) Project from the landowners with whom it has worked (referred to as “partner communities”), was that the project officers spent too much time and effort on “awareness” work, and not enough on assisting with alternative, income-generating developments. People are not interested in the conservation message if it is not accompanied by the real promise of an alternative development, preferably one that provides similar levels of cash to those offered by large companies, in the short term. The government also regularly makes this demand when engaging in debates with NGOs over the sustainability of large-scale resource extraction projects. The urgency that people feel for immediate cash frequently overrides all arguments about sustainability and long-term profitability.

Many of the strategies employed by both partner communities and the project's field officers (who are often members of those communities) comprise a form of "playing along" with the conservation agenda, which in the case of the WWF project comprised a set of stages including "awareness," "resource planning," and "development." This sequence of activities was most often effectively interpreted as a series of hoops, through which one had to jump in order to get at the reward, i.e. the development. When the "game" failed to deliver the final stage, or "payoff," of the sequence, which was usually anticipated to be a boat, sawmill, sewing machines, house, or other such expensive capital assets to the community, its members inevitably voiced their annoyance very clearly to the project managers.

So despite the appearance, often supported by very colorful and convincing rhetoric, of landowners "buying" the conservation agenda, in reality they very rarely do. The experience of the WWF CRCO Project indicates quite clearly that most of their engagements with conservation NGOs are based on attempts to sequester some kind of substantial material or financial benefit from the relationship. This point is made nowhere more clearly than in meetings with WWF staff in which landowners have attempted to extort the project into delivering the "cargo" (sawmill, boat, whatever) by threatening to invite the loggers in if they don't (the so-called "gate-keeping" strategy that Filer (1996) writes about for PNG).

Similarly, when the project recently expressed interest in assisting landowners to improve fishery management in a chain of islands that are claimed by a number of different clans, the initiative only sparked arguments over ownership, and will probably have to be abandoned. Since the proposed work for the area only involved strategies to

conserve turtles, and improve fishery management, and thus yields, of artisanal invertebrate and fish stocks - something that would ultimately benefit existing users of the area (through long-term sustained income from fishing, as opposed to an immediate cash windfall) - the response is perplexing. This case further highlights the ambivalence landowners have towards concepts of environmental sustainability, and husbanding of resources. It is possible that the landowners assumed that the work would culminate in the development of a tourist resort (WWF previously assisted with development of an eco-resort in the same area), ownership of which would obviously spark conflict.

Whether or not Melanesian landowners understand or believe the environmental rationale for eschewing logging, many are still driven by short-term economic goals. These are underpinned by the desire to participate in the global economy: to consume imported goods, to improve their standard of living, and to enjoy the way of life that they observe only foreign ‘developers’, aid advisors, and expatriates working for NGOs can maintain. Sadly, this is indeed a recipe for disaster in the medium to long term, as the environmental costs of logging and poor resource management accumulate, and the majority of local income is rapidly used up on consumer goods imported or manufactured by foreign companies.

Conclusion

Economic globalization is manifest in Melanesia in the processes whereby the natural resources of these independent nations are exploited by foreign, multinational companies whose primary commitment is to their shareholders. The commitment to development and the payments to governments and local people are part of the ‘trickle

down' effect that world capitalism is supposed to generate. For the outsiders, that commitment rests on the need for timber, minerals and fish, not on any altruistic desire for global economic equity. But as many of the opponents of economic globalization have pointed out, the fundamental asymmetries remain and the wealth accumulates in the industrialized nations while the people in undeveloped nations remain poor. At the same time, the global culture communicates and stimulates desires for consumer goods and ways of life that can only be fulfilled if people have the incomes of those who live in technologically advanced, urban industrialized societies.

From the perspective of Melanesia, the cultural values of environmentalism must be seen also as foreign and introduced rather than shared and global. They are in part the legacy of centuries of environmental destruction in Europe and America, which has generated the wealth that enables urban middle-class people to build and furnish their homes with rainforest timbers, dine on imported fish, manufacture their machines and adorn their persons with the minerals from 'developing' countries. But just as these people became aware of the environmental impacts of industrialization long after their forests were gone and their waters polluted, so the desires of Melanesians for the goods that money can buy take precedence over the concerns for the natural environment that may be destroyed in the process of gaining them. It is unlikely however that in Melanesia the same level of resource over-exploitation, with its accompanying ecological damage and loss of biodiversity, will bring about the affluence and equality to which Melanesian people presently aspire.

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² In the Solomon Islands a tertiary-educated technical specialist working for a well-funded NGO can expect to earn around US\$6000 per annum. Government wages for the same qualifications / experience are considerably lower than this. Rural people rarely earn more than US\$600 per annum, unless they are receiving logging or mining royalties.

³ AUSAID is the Australian Federal Government's international development assistance agency.