

***Bougainville Copper:
A Case Analysis in International Management***

ABSTRACT

This analysis of Bougainville Copper considers the relationship between the failure of the venture and the company's endeavours to balance its internal operations with its contextual elements. The case findings support claims in the literature concerning the importance of aligning internal and external environments but, contrary to the suggestions of many writers, indicate that MNEs should not make host countries the primary focus of that alignment. The paper argues that the host society, not the host country, is the most influential contextual factor for MNEs, particularly in the developing economies of the Pacific islands where ethnic and local identity take precedence over the abstract notion of nationhood.

INTRODUCTION

The operating context for multinational enterprises (MNEs) located in less developed countries (LDCs) presents many elements that are not typically found in industrialised nations. Due to heterogeneous cultures, a general suspicion of MNEs' motivations and methods, unstable governments and agitation by various groups, MNEs are confronted with a difficult, and sometimes hostile, operating environment (Garland & Farmer, 1990; Gabriel, 1972; Hoogvelt, 1991). The manner in which companies assess and manage the prevailing externalities is critical to the performance of the company and may impact on the development of the host country (Diamonte, Liew & Stevens, 1996).

Bougainville Copper Limited (BCL¹) is an Australian company which established the Panguna mine on Bougainville in Papua New Guinea's (PNG) North Solomons Province. On this undeveloped island, BCL operated one of the world's largest and most successful copper mines for nearly 18 years. In February 1990, the mine closed as a result of a war of secession waged by the Bougainvillean people against PNG. Almost a decade later, the issues that sparked the revolt are unresolved and the mine remains closed.

Due to Bougainville's unique political, physical and cultural characteristics, the Panguna mine has been the focus of considerable public and academic scrutiny. Three areas have been of particular interest: the mine's impact on the natural environment, the economic and political consequences of the mining in PNG, and the social outcomes of industrialisation on the traditional Melanesian population (Amnesty International, 1993; Dorney, 1990; King, 1991; Lafitte, 1990; Momis & Ogan, 1971; West, 1972). A 1974 Harvard case study provides an insight into these matters as they related to the mine's early years² (Cited in Vernon & Wells, 1986). External attention to Bougainville waned in the late 1970s, but the war and abrupt expulsion of BCL renewed global interest in the island.

In an era marked by increasing globalisation (Doz, 1991; Sundaram & Black, 1995) and a growing awareness of the benefits that LDCs can derive from foreign investment (Jones, 1990; Porter, 1990), BCL presents an important example of success and failure

in international business and national development. Despite the company's achievements and disappointments however, little attention has been given to the relationship between BCL and its operating context, and the manner in which this relationship was managed. This study seeks to analyse the management of BCL's internal and external environments, and to determine how the company's particular management approaches contributed to the eventual closure of the Panguna operation.

MANAGING MULTINATIONAL ENTERPRISES IN LESS DEVELOPED COUNTRIES: A REVIEW

Simultaneous with the explosion in international trade and investment over the past 30 years has been an increasing need for managers to understand the foreign business milieu and how elements therein affect strategy formulation and implementation in MNEs (Sundaram & Black, 1995). A significant outcome of management research in this field has been the recognition of MNEs' need to achieve and maintain congruency between their external operating context and the management and organisation of the company (Garland & Farmer, 1990; Prahalad & Doz, 1987). Specifically, MNEs must ensure alignment between their host countries' legal, cultural, economic and political influences (Farmer & Richman, 1965; Phatak, 1997) and their approach to convergence-divergence with the host (Child, 1981; Dowling, Welch & Schuler, 1999; Harbison & Myers, 1959), the philosophies held by their managers (Fatehi, 1996; Negandhi & Prasad, 1971) and organisational culture (Maddox, 1993; Prahalad & Doz, 1987). While these are universal imperatives for MNEs, companies located in LDCs face particular challenges in balancing these dimensions as a result of the extreme cultural heterogeneity within and among LDCs (Arnold, 1988; Brown, 1994; Hoogvelt, 1991) and the varying attitudes of LDC governments towards foreign investment. Thus, effective MNE management in LDCs rests on executives' ability to understand, analyse and manage the unique and dynamic features of the environment.

Each of the four external influences presents contextual impediments to MNE operations in LDCs. The host country's legal system represents the most influential instrument of formal intervention in MNE activities, as management has little option

but to comply. Typical impositions are financial obligations to the state (Austin, 1990; Selassie & Hill, 1998), prescriptive employment conditions (Hibbert, 1997; Mangaliso, 1992), and ambiguous terms regarding the use of natural resources (Brown *et al*, 1993).

Although culturally heterogeneous, LDC societies are generally structured according to ethnic and tribal attachments that tend to fuel political instability and lead to suspicion of foreign people and organisations. As a result, management may anticipate community allegiances to take precedence over national identity and corporate commitment (Casson, 1995; Hofstede, 1995). Similarly, subsistence economies are often based on exchange between closed groups which view material goods as items for immediate use rather than for accumulation. Because such groups focus on aesthetic and spiritual values rather than gathering assets, the economic development offered by MNEs may be in conflict with their culture if it is seen as threatening communal values or disturbing the natural environment (Alkhafaji, 1995; Phatak, 1997). The linguistic heterogeneity of LDCs presents problems for MNEs in the management of employees and in dealing with local authorities because it is not possible for expatriates to master multiple, and often unrelated, languages, and interpreters are rare as few locals speak a second language (Austin, 1990; Baker, 1984; Tung, 1982).

LDCs' generally excessive reliance on primary commodities for the generation of foreign exchange not only degrades the natural environment, but also leaves the country exposed to fluctuations in world markets which ultimately impact on the economic variables which determine corporate performance (Arnold, 1988; Porter, 1990). This is particularly evident in the labour market where dependence on agriculture and mining results in an over-supply of unskilled workers, and a scarcity of skilled workers. Under these conditions, MNEs must either adapt their systems to the local workforce or provide training for indigenous workers (Arnold, 1988; Dowling *et al*, 1999; Porter, 1990). Introducing wages to a subsistence economy divides communities. As jealousies arise from some moving into commercialism and others staying in traditional sectors, political tensions can emerge which may threaten the company (Austin, 1990).

The undeveloped nature of democratic principles in LDCs is responsible for social and political instability as the beliefs, attitudes and values of segments of the population are not reflected in government policy or actions. For MNEs, strategies for managing political risk must be long-sighted and detailed, with a focus on the ideological forces which drive potentially dangerous situations (Gabriel, 1972; Miller, 1992). To meet their objectives of accelerating development and controlling economic institutions, LDC governments tend to have a high participation in business activities. Such regulatory practices constrain the scope and actions of companies by limiting the benefits of competition and enforcing adherence to bureaucratic procedures. While management must adhere to the demands of government, desultory outcomes may be mitigated by understanding the depth of nationalistic sentiment, the philosophies which drive it, and effectively managing the company's relationships with officials (Hutton, 1988; Nath, 1988).

Whereas the alignment of policies and practices with their immediate operating context is a common requirement for all MNEs, the conditions typical of LDCs demand more than the adjustment of a few narrow organisational aspects; the entire internal orientation of the company must be committed to the goal of contextual congruency. The core components of symmetry between MNEs and their LDC hosts are (i) attaining the desired balance of convergence and divergence, (ii) ensuring the philosophies held by key personnel are appropriate to the demands of the external environment, and (iii) developing an internal environment which simultaneously holds global perspectives and local empathy.

As MNEs are the primary reservoirs of the technical and managerial expertise required to advance LDCs from their reliance on primary commodities, their involvement in developing economies is a matter of priority for these countries (Kobrin, 1982; LaPolombara & Blank, 1984; Porter, 1990). In supplying these elements, MNEs act as sources of the dissemination of internationally accepted business and management practices, and thus perpetuate converging approaches to corporate organisation (DiMaggio & Powell, 1983). The LDC operating context however, has many dimensions which conflict with those in industrialised nations, and these preclude the

absolute standardisation of company policies and procedures (Newman & Nollen, 1996). Thus the conventional tenets of management and technology, while providing a degree of global integration, can only serve as a broad framework for individual MNE units. Accounting for the differentiating factors between those units and incorporating them in the functions of the company is vital in LDCs which are typified by the diverse and turbulent characteristics discussed above.

As the fundamental link between the company and society, management must relate to the values and expectations of the LDC social system both within and outside the company. If MNEs are to alleviate the human suffering of their hosts, managers must

define their responsibility as helping to meet community needs. Managers have skills, resources and institutional influence that can be mobilized...to address social needs. Social responsibility and ethical sensitivity are essential... (Austin, 1990: 372).

Management's capacity for social responsiveness is largely a function of the personal perspectives held by individual executives (Negandhi & Prasad, 1971; Srinivas, 1995), and to achieve social goals, MNEs must recognise and develop these perspectives. Although evidence of correlation between managerial social responsiveness and the presence of a particular philosophy is sparse, the high number of expatriate managers who fail in postings to LDCs infers such a relationship (Desatnick, 1978; Tung, 1982).

Of the various dimensions of corporate culture, three require particular attention in managing MNEs in LDCs. Due to the social and economic climate in developing countries, the management of workplace relationships, compensation policies, and workplace diversity requires flexibility and innovation on the part of MNE executives. LDC nationals prefer a hierarchical organisation structure and expect benevolent corporate practices. For management, this translates into a loyal and obedient workforce which sees the company's obligation as extending to individual families and perhaps the wider community (Hofstede, 1995). The Western perception of an equitable internal wage structure may not be applicable in LDCs. For example, MNEs which pay local and expatriate workers equivalent wages for the same work may exacerbate the already uneven income distribution in LDCs. This situation may not be politically and/or

socially acceptable, and therefore management needs to account for the host country's standards and practices in designing compensation systems (Dowling *et al*, 1999; Simpson, 1987).

Child's (1981) observation that cultural and national boundaries do not necessarily correspond is most evident in LDCs. For MNEs aiming to build a collaborative and multicultural workforce, local groups which sustain separatist attitudes towards other communities and/or the national government present a difficult challenge. Frictions caused by ethnic tension within the company may "create disruptions, negatively affect workplace discipline, [and] decrease managerial control" (Austin, 1990: 60). To achieve a climate which gives due consideration to surrounding cultures, Ott (1989) suggests a management intervention process which entails (i) hiring only those who value the company's goals of integration with the host culture, (ii) teaching all employees what is and is not acceptable, (iii) removing members who cannot or will not accept the corporate culture, (iv) rewarding those who demonstrate appropriate behaviours, and (v) modifying the communications system so that it supports the goals of diversity.

BACKGROUND TO THE STUDY

Using various indicators of economic development, PNG may be classified as an LDC³. Due to PNG's economic condition and the influence of historical factors, Australia had been supporting the country with substantial aid programs since the late 1940s. In the 1960s, Australia began to shift the focus of its assistance from direct aid to the promotion of self-sustaining economic growth. This change in policy was motivated, to a large degree, by PNG's gradual move towards independence from Australia's trusteeship. The founding of the Panguna mine was seen by both PNG and Australia as a fundamental ingredient of the country's economic development and its progress to independence.

By the mid 1970s, the Panguna venture had corroborated the logic of establishing MNEs as a central plank of LDC development. PNG's rate of economic growth

increased (Martin, 1974; *Australia's Development Cooperation Program with Papua New Guinea*, 1989; *World Development Report*, 1996) as a result of escalating export income and government revenue, the promotion of employment and human capital development, improvements to infrastructure and the advent of other major resource projects (Griffin, 1990a; Quodling, 1991). These factors, in turn, accelerated PNG's independence. The enthusiasm of BCL and the central governments of PNG and Australia for the giant mine was not universally shared by those most affected by its presence however. The deep resentment felt by many Bougainvilleans about the intrusion of the complex on their land and their lives resulted in a savage war and the failure of the company.

Given the history of PNG and Bougainville and events on the island in 1989–1990, the Panguna venture is a potentially significant model in understanding the political, economic and social ramifications of rapid development in an LDC. However, there is a paucity of research into the management of the mine. Although the company has been widely blamed for the tragedy, there has been little consideration of the manner in which BCL managed the internal and external aspects of its operation and the impact this had on Bougainville's troubles.

The lack of research into BCL's policies and practices is indicative of the vacuum in management inquiry in the region. Despite increasing corporate and academic attention on the Pacific Basin and acknowledgment that the Pacific Islands are an area of expanding international business with a growing MNE presence (Fairbairn & Parry, 1986; Adler *et al*, 1986; Harris & Moran, 1996), little management research has been undertaken in the island communities of Oceania⁴. According to Bailey (1994):

Oceania provides a unique opportunity to examine international management in developing economies within a colorful tapestry of cultural influences in a microscopic environment (63). In the early to mid-1980s some studies were conducted on the role of multinational and indigenous business in the Pacific. However, international management research has been almost nonexistent, although incalculable amounts of monies have been invested by foreign businesses and governments (69–70).

This study was undertaken in response to the increasing need for understanding MNE management in LDCs, particularly within the context of the Pacific islands.

THE RESEARCH QUESTIONS

The central issues investigated during the research process were the degree to which internal and external factors influenced each other in the management of BCL, and whether the company's inability to align these factors contributed to the closure of the mine. These issues were then operationalised as research questions by considering the findings of previous studies (Eisenhardt, 1989) and the parameters required to control the volume of data presented in the case (Miles & Huberman, 1994). The research questions, in turn, defined the research strategies appropriate for this study (Yin, 1994). The research questions identified for this study are:

Research Question 1. To what extent did external factors impact on the internal environment of Bougainville Copper Limited?

Research Question 2. To what extent did internal factors impact on the external environment of Bougainville Copper Limited?

Research Question 3. To what extent did a deficiency in environmental alignment by BCL management contribute to the closure of the Panguna mine?

RESEARCH METHODOLOGY

Walker (1980: 33) defines the case study method of research as an "examination of an instance in action. A study of incidents, events, and information on biography, personality, intentions and values". This method was used because its design flexibility (Hakim, 1987; Stake, 1994) enables researchers to access the complexity and meaning of real-life phenomena in an holistic manner (Goode & Hatte, 1952; Hakim, 1987) and to achieve multiple research purposes through a combination of inductive and deductive processes (Williamson, Karp & Dalphin, 1977; Yin, 1994).

The Bougainville copper case was selected because it provides a rare opportunity to examine the life of a large MNE in its entirety—from inception to closure⁵. Unlike extant operations which are dynamic and constantly evolving, BCL presents a static model which allows the researcher to examine a complete sequence of events in order to understand the challenges encountered by MNEs operating in LDCs. As BCL's experience has no direct contextual or organisational parallels, researching the company precludes a comparative approach (Eisenhardt, 1989) or attempts at replication (Miles & Huberman, 1994), rather it adheres to Yin's (1994: 39) rationale for a single case design where "the case represents an extreme or unique case".

Data were gathered from indirect and direct sources. Indirect material included documented accounts and analyses by Bougainvilleans, BCL employees, economists, historians, anthropologists, sociologists, politicians, journalists and military personnel, as well as company reports and publications. Direct information was collected by in-depth face-to-face interviews with three past BCL executives⁶ whose collective tenure spanned the life of the mine. The small number of respondents did not weaken the research effort, as these people had intimate knowledge of the operation and its setting, and, as Patton (1990: 185) notes "the validity, meaningfulness and insights generated from qualitative research have more to do with the information richness ... than with sample size". Data were categorised according to the constituents of the research questions and analysed using QSR NUD*IST 4 (Non-numerical Unstructured Data Indexing, Searching and Theorizing) software.

The rigour of the research was maintained by careful methodological design and the development of a case-study protocol. Construct and internal validity was achieved by using multiple sources of evidence, establishing chains of evidence, informant reviews of case reports, seeking deficiencies in the data, pattern-matching, triangulation and being alert to researcher effects (Hakim, 1987; Janesick, 1994; Miles & Huberman, 1994; Neck, Godwin & Spencer, 1996; Sowden & Keeves, 1988; Yin, 1994).

THE BOUGAINVILLE COPPER CASE STUDY

Bougainville and its People

North Solomons Province is the easternmost of PNG's 19 provinces, situated some 1,000 kilometres (600 miles) East-Northeast of Port Moresby, the national capital. The province includes Bougainville, Buka, and many small surrounding islands. Culturally and geographically, Bougainville is part of the Solomon Island chain, however it has been politically separated since the late 1800s when an agreement between Britain and Germany divided the Solomons. During World War I (WWI) the Allies captured the area, and in 1921 the German territories were mandated to Australia. Australia's trusteeship was benign, but neglectful. As a result, many Bougainvilleans supported the Japanese when they invaded the island in 1942, but most switched their allegiance after experiencing the brutality of the Japanese forces and thereafter played a vital role in the liberation of the Pacific. In 1946, the United Nations appointed trusteeship of PNG (including Bougainville) to Australia. (Havini, 1990; Oliver, 1991; Wolfers, 1972).

PNG chartered a Legislative Council in 1949, and in 1964 established a House of Assembly. Australia granted self-government in 1973 and independence was proclaimed in 1975. However, throughout the 1950s and 1960s the Bougainvilleans were agitating for freedom from all foreign interference and independence movements gained momentum. When the island was unilaterally assumed into the 'new' PNG, Bougainville seceded and remained politically separate for almost a year. To the Bougainvilleans, PNG was as repugnant as any of the powers which had previously claimed rights over their land (Connell, 1990; Dorney, 1990; Oliver, 1991).

Bougainville's traditional community structure was typified by widely dispersed settlements encompassing 19 language groups which were generally hostile to each other. Tension within individual clans was also common, partially due to an absence of structured authority. Notwithstanding their fragmented society, the Bougainvilleans had a common cultural attachment to the land which precluded private ownership. European governance, missions and trade brought the Bougainvilleans into wider contact with

each other, which resulted in a decline in inter-tribal warfare and an increasing sense of common ethnic identity (Oliver, 1991; Quodling, 1991).

Bougainville Copper Limited

Mining commenced on Bougainville during the New Guinea gold rush after WWI, but was abandoned by the 1940s. In 1960 low-grade copper deposits were discovered, and in 1963 CRA began exploration in the Panguna area. By 1966 the massive potential of the lode was evident, and in 1969 CRA took the decision to proceed. Construction of the mining complex commenced forthwith and the plant was in production by 1972. With an estimated ore body of 900 million tonnes yielding <0.5% copper, the mine had a projected life of about 30 years. As well as the open-cut pit and production facilities, CRA established two towns with attendant social and recreation amenities, and developed an infrastructure which served both the mine and the local population. The cost of the venture at start-up was A\$400 (\$US\$477.2) million (Connell, 1990; Oliver, 1991; Quodling, 1991).

CRA in 1965 offered the PNG government 20 per cent equity in the mine. This was accepted and included in the legislation under which Panguna operated; the *Mining (Bougainville Copper Agreement) Ordinance 1967*. The instigator of this unprecedented offer was Frank Espie, the first Chairman of BCL, who “consistently maintained that what he wanted was an agreement which...would be seen as satisfactory by the first Prime Minister of an independent Papua New Guinea” (Carruthers & Vernon, 1990: 64). Consistent with Espie’s vision, Panguna made a large contribution to PNG’s aspirations to economic and social development. By the end of 1988 (the mine’s last full year of operation), BCL was responsible for 45 per cent of PNG’s export income, 17 per cent of government revenue, and 11 per cent of gross domestic product (Griffin, 1990a). BCL was the country’s largest private employer, directly or indirectly engaging 12,000 people (Griffin, 1990a)⁷. Table 1 details the professional and ethnic distribution of the workforce in 1988 and highlights the company’s adherence to its early commitment to employing the maximum possible number of PNG nationals. BCL’s success in maintaining an 80 per cent local workforce was due to its indigenous

development program which resulted in 400 PNG citizens graduating from university and a further 1,070 completing trade apprenticeships (*Bougainville Update*, 1990).

[Insert Table 1 here]

Apart from employment opportunities, BCL was anxious that people living in the mining leases⁸ should benefit from the venture. A Community Relations Department was established to inform locals of the company's activities, assist with the establishment of businesses, advise on compensation matters, provide information on crops and livestock, and mediate between Bougainvillean and expatriate employees (Carruthers & Vernon, 1990). In concert with the PNG Department of Labour, BCL also sponsored a trade union (Quodling, 1991). With racial harmony a priority, the company forbade "the expression of racial prejudice whether...indigenous or expatriate" (*Bougainville Copper Ltd*, 1974: 14) and its orientation program was designed to acclimatise the locals and foreigners to each other's cultural and social conventions (Robinson, 1969b). Other BCL initiatives included funding the Bougainville Development Corporation (a public company to assist locals in developing commercial enterprises), establishing the Arawa Health Clinic, and founding the Bougainville Copper Foundation which contributed to business, cultural and sporting developments in PNG (Carruthers & Vernon, 1990; Oliver, 1991; Quodling, 1991).

Procedures for compensating the Bougainvilleans for the presence and impact of the mine evolved over time. During the exploration phase, inadequate legislation (< biblio >) and inexperience in dealing hampered negotiations with Melanesian societies. Recognising the deficiencies of Australian law in the context of Bougainvillean land occupancy, the *Mining Ordinance* was amended in 1966 to provide compensation for the loss of access and surface rights, as well as for damage to land, buildings and crops. A warden was appointed to deal with compensation claims, and an occupation fee of 5 per cent of the unimproved value of the land was granted. Despite opposition in the House of Assembly, a local politician secured for the landowners 5 per cent of BCL's

royalty payments. Friction over the distribution and quantum of these payments arose sporadically, resulting in various rounds of consultations, court hearings and the renegotiation of the 1967 *Mining Ordinance*. In time, compensation was extended to include damage to forests and fish reserves, disruption caused by relocating villages, and nuisances caused by the mine (dust, noise, pollution, etc.). Overall, compensation totalled K21 (US\$18) million plus royalties of K3 (US\$2.6) million (Bedford & Mamak, 1977; Carruthers & Vernon, 1990; Connell, 1991; Oliver, 1991; Quodling, 1991).

The Impact of the Panguna Mine

Ore was excavated at an average daily rate of 155,000 tonnes (152,500 tons). Of this, 45 per cent was waste (used as landfill), and the remaining 85,000 tonnes (83,657 tons) was reduced to a copper concentrate slurry. The concentrate was pumped to the port for export and the waste liquid (tailings) was discharged into the Jaba River for carriage to the sea. Eventually measuring 1 kilometre (0.62 miles) in diameter and 600 metres (1,970 feet) deep, the Panguna pit was the world's third largest open cut mine (Dorney, 1990).

The tailings devastated the river. Contrary to early hydrological estimates that 80 per cent of solids would be washed to the sea, only 60 per cent reached the ocean, and

by mid-1971 those naturally clear streams were already silted, aggraded, and widened. By 1988 the flow and spread of the tailings had raised (and thereby widened) stream beds by up to 20 metres [65 feet] in the deepest parts, and had blocked stream flows in many places, creating new swampland while infilling other areas (Oliver, 1991: 137).

Due to the volume of the silt and the heavy metals it contained (Brown, 1974), wildlife and fish abandoned the area and the locals could no longer use the waters for fishing, hunting and swimming (Lafitte, 1990). The clearing of rainforest is thought to have caused further ecological imbalance resulting in crop retardation, the disappearance of wildlife, the advent of fish diseases and changes in the rainfall patterns (Brown, 1974; Dorney, 1990), however this has not been confirmed (Connell, 1991; Dorney, 1990).

Dust and engine emissions led to air pollution which was hitherto unknown (Connell, 1990).

Bougainville experienced rapid population growth following the advent of the mine. Estimated at 45,000 in the 1800s, the population rose to 72,000 in 1966 (Scott, 1973) and had reached 108,000 by 1980. This is widely attributed to the migration of PNG nationals seeking work at Panguna, but better health care and changing customs regarding birth spacing were also significant factors (Oliver, 1991; Quodling, 1991). The attendant urbanisation placed pressure on inhabitable and arable land, led to increased crime and alcohol abuse (Connell, 1990), and generated problems associated with unemployment and underemployment (Oliver, 1991).

Bougainville's subsistence economy gave way to a semi-commercial system with enclaves of the population reliant on employment, consumption, investment, and the notions of private ownership. This created a dual economy consisting of those with money (from employment, enterprise and compensation) and those in the traditional sector (the majority of islanders) that had no commercial affiliation. Those with money became alienated from their spiritual attachment to the land. Classes developed in the traditionally egalitarian culture, and with this came various frictions and jealousies (Oliver, 1991).

Racial tensions flared. Material wealth and the advent of roads enabled contact between the previously isolated communities and inter-tribal fighting increased (Quodling, 1991). More significant was the antagonism between the Bougainvilleans and the PNG immigrants. This friction has been ascribed to several sources: skin colour (Robinson, 1969a), Bougainvillean belief that PNG people are inferior (Oliver, 1991), a lack of female companionship for PNG men on the island (Mamak & Bedford, 1974) and the ascendancy of PNG workers in BCL ranks (Oliver, 1991). Relationships between the white population and both the PNG and Bougainvillean people were generally harmonious (Robinson, 1969b, Oliver, 1991), however this deteriorated in the months preceding the revolt (Personal communication, 1998).

The Bougainville Civil War

Prior to WWII, the Bougainvilleans grudgingly accepted foreign governance, but their experience with the Japanese seemed to forge a psychological readjustment to their perception of themselves and outsiders (Oliver, 1973). This growing awareness of commonality not only fostered a diminishing sense of belonging to Australia or the evolving PNG, but also gave rise to the realisation that their powerlessness could be overcome by organising the wider community into political and commercial activities. Thus numerous movements arose between the 1950s and 1970s (Griffin, 1990b; Mamak & Bedford, 1974; May, 1990; Oliver, 1991). One such movement was the Panguna Landowners Association (PLA) which was formed in 1979 as a forum in which landowners and elders from the mining leases could discuss issues of common concern (Dorney, 1990; Oliver, 1991). Once the PLA had established government recognition and credibility from its constituents, it became the prime entity for negotiating with BCL.

In time, the fragmentation characteristic of Bougainvillean society overtook the PLA and it split into two factions (Dorney, 1990). The 'new' PLA, headed by Pepetua Serero and Francis Ona, was not recognised by BCL or the government, but was supported by the Provincial Premier and the locally powerful Roman Catholic Church. In 1988, the new PLA lodged a series of demands on BCL which included, *inter alia*, compensation of K10 (US\$11.6) billion and the granting of PNG's equity to the landowners. When BCL did not respond, in May 1988 the new PLA blocked the road to the mine, forcing the government to broker a truce. In November, a report into the ecological impact of the mine was released, the contents of which did not satisfy Ona. He announced on national radio that

...he and his associates had no confidence in BCL or in the national government; that [the report] had wrongly exonerated BCL; and that in the absence of other measures to protect the lives and welfare of the Bougainvilleans, the New PLA had decided to close the mine (Cited in Oliver, 1991: 208).

After a series of arson attacks on the mine, on 1 December a pylon carrying electricity to the processing plant was destroyed by explosives. Ona and his Bougainville

Revolutionary Army (BRA) claimed responsibility. Power was restored three days later but another pylon was destroyed immediately. BCL suspended operations and sought government protection of its personnel and property; PNG subsequently installed 400 police in the area. The mine re-opened on 11 December. Ona then issued fresh demands:

- that Bougainville Copper Limited pay the K10,000 million compensation demanded by the landowners, *and* immediately shut down its operations;
- that PNG adopt a new economic order (because he stated, the country's economic base was controlled by the white Mafia); and
- that North Solomons Province break away from PNG unless the new economic order is adopted (Oliver, 1991: 213).

The rejection of Ona's ultimatum spawned renewed attacks on the mine and savage responses by the police. Peace proposals in May 1989 only aggravated the violence and, unable to assure its workers' safety, BCL suspended operations. In June, 600 non-core workers were retrenched and PNG declared a state of emergency. Government forces restored a fragile peace and the mine re-opened on 5 September, but within hours another pylon had been destroyed. Further attempts to negotiate a settlement proved fruitless. In November BCL placed the mine under a maintenance program and dismissed 2,000 employees. In February 1990, the last 300 personnel were evacuated and the mine was closed (Callick, 1989; Howarth, 1989; Quodling, 1991; Woodley, 1989; Young, 1989).

When hostilities commenced in November 1988, the militants' focus was the mine, its activities and compensation, but by April 1989 it was evident that secession was the central issue. Ona declared the Republic of Bougainville an autonomous nation on 17 May 1990 with himself as President. PNG and the world community consistently refused to acknowledge Bougainville's independence and the war continued throughout the ensuing decade despite several attempts by a number of neutral countries to secure peace. Settlement was reached in April 1998, but the stance of PNG and the rebels on the secession issue remains basically unaltered (ABC TV⁹, 1998). The human cost of the war is difficult to determine. Amnesty International (1993) estimates that, by May

1991, 1,500 had died as a result of fighting and a further 3,000 had perished from malnutrition and preventable diseases as a result of PNG's embargo on the island. The *Green Left Weekly* (1998) suggests that the death toll has risen to 15,000 Bougainvilleans and 1,000 PNG soldiers as at the end of 1998.

ANALYSIS OF THE CASE

This section of the paper examines the influence of internal and external environmental factors on the operation and closure of the Panguna copper mine. The case data were analysed in two parts. The first part concerns the impact which the two environments had on each other, and answers research questions 1 and 2. The second part explores the efforts which BCL made to achieve congruency between its operation and its surroundings, and considers the degree to which its inability to balance these factors contributed to the closure of the mine. This part answers research question 3.

Research Question 1

A number of immutable external factors were significant in the manner in which BCL operated the Panguna mine. Unlike manufacturers and service providers which base their processual and locational decisions on factors within their control, the resource sector does not have the advantage of choice. Mining companies are forced to locate their operations at the source of the natural reserves they seek. BCL therefore, did not select Bougainville as a site for its mine, rather the mineral deposits at Panguna made the region a potential mine site. By default, BCL's decision to mine the Panguna resource exposed the company to many pre-existing factors which dictated the manner in which it operated. Chief among these were the nature of the mining process, the geography of the island, and the political and social climate of PNG and Bougainville. Each is examined in turn.

Because open-cut mining involves shifting large amounts of earth from one location to another, it damages the natural environment and disrupts the lives of those in the immediate area. Aware of this, BCL management attempted to minimise the impact of

both by using a minimal amount of land and encouraging those living in the vicinity to relocate. Although generally successful in these endeavours, various problems arose. Due to inaccurate hydrological estimates, tailings spread over a large area and thus land damage was more widespread than anticipated. Bougainville's geography also militated against optimal tailings disposal. While settlement dams were the preferred option, the island's seismic activity precluded their construction and with river dumping the only choice, the west-flowing stream was selected because its swampy coastal flats were uninhabitable. Because some Bougainvilleans residing in the leases refused to move elsewhere, their lifestyle was impaired and the company was subjected to considerable cost.

Whereas PNG welcomed the Panguna mine as a conduit to national development, not all Bougainvilleans agreed. With views ranging from ambivalence to open contempt, many resented the physical, social and ecological intrusion of the mine. The contrast of perspectives held by PNG and the Bougainvilleans was the company's most significant contextual feature, as it effectively meant that the mine had two hosts with which to deal. In political and legal terms, authority over the mine rested with PNG as the host country. In practical terms however, the Bougainvilleans constituted the host society and, as history revealed, ultimate power over the operation rested with them.

The Bougainvilleans' suspicion of the mine was a reflection of their collective psyche. The islanders have an ingrained sense of insularity which originates from a combination of factors including geographic isolation, an enduring enmity towards outsiders resulting from the political manipulation and subsequent neglect by foreign powers, and a sense of being a race apart (Oliver, 1991). In the period after WWII, the coalescence of these influences gave rise to various organisations which politicised Bougainville's ethnic and historical idiosyncrasies into a concerted effort for independence. Notwithstanding their common desire for political separatism, the Bougainvilleans remain fragmented; each of the hundreds of communities has peculiar social arrangements and its own sense of identity which often leads to inter-tribal hostilities. Thus BCL's management was confronted by a diverse and confusing cultural setting.

Management responded to the external environment by attempting to pattern its policies and practices in accordance with national and local needs. Consistently maintaining that the mine should benefit all PNG, BCL volunteered 20 per cent of its stock to the government, followed the letter of the law, maximised indigenous employment supplemented with extensive training programs, and established various philanthropic institutions. In supporting the Bougainvilleans, the company provided health, social and recreational facilities, assisted with housing, designed the mine's infrastructure to meet the needs of both the local population and the mine, and backed the landowners in their push for greater returns from the PNG government. In taking such a divergent approach to its internal operations, BCL was far ahead of its contemporaries. This concept was not driven by commercial necessity alone. It was largely based on a corporate culture established by a visionary founder, and continued by subsequent senior managers who shared his ideals for a company which would assist in the development of an emerging nation.

The first research question concerned the extent to which external factors impacted on BCL's internal environment. The study has revealed that the surrounding milieu had an extreme influence on the Panguna operation. In physical terms, the positioning of the mine and the character of its processes were a direct result of the region's natural features. In organisational terms, BCL took exceptional measures to attune its operation to the many intangible, and often conflicting, qualities which were present on Bougainville. Thus, there is clear evidence in this case that the setting of an MNE has a profound effect on the manner in which it configures its human, physical and organisational elements.

Research Question 2

The most visible impact of the mine was its resultant ecological damage which, although restricted to specific areas, was substantial and permanent. Public reaction to this was mixed; whereas some locals expressed concern about the physical environment, Western observers were generally more vocal and critical of the mine and its management.

BCL's employment policies had a detrimental effect on the local communities. Whilst the intention of providing work for all PNG citizens satisfied Western notions of equity, it was not acceptable to the islanders. The company's efforts in developing harmonious inter-racial relationships among its personnel were remarkably successful in integrating blacks and whites, but were unable to diminish the palpable antipathy between the Bougainvilleans and the PNG mainlanders. Beyond the ethnic tensions within BCL's workforce was the locals' resentment of those PNG men who had migrated to the island seeking work at the mine. Many of those who did not gain employment elected to remain, and the Bougainvilleans blamed them for various social problems which were emerging.

The Bougainvilleans interpreted BCL's compliance with PNG's demands as an indication of neglect of their concerns about the lack of negotiation regarding land access and usage, and compensation matters. These matters were regulated by the national government which refused to consult with the landowning community. Management tried to convince Port Moresby that this situation was potentially dangerous, but to no avail. The compensation issue was particularly contentious. Not only did the injection of money into a subsistence economy divide a previously egalitarian society, but its distribution among entitled landowners was inequitable due to the government's formulae upon which it was calculated. BCL also encouraged the government to return more mine-generated revenue to the island, but with little success. PNG's refusal forced the company to spend increasing amounts on local health, education, law enforcement, etc. which only served to strengthen Port Moresby's argument that the island of Bougainville was better served than most of the highland areas of the PNG mainland. This, in turn, further aggravated the locals.

Adherence to the law and commercial logic when the mine was attacked served to inflame discontent among those Bougainvilleans who were seeking change. BCL's response to the destruction of the pylons was to restore the damage, continue production, and request PNG to maintain order. It seems a more appropriate reaction would have been to abandon production and commence dialogue with all concerned parties.

In response to the second research question regarding the extent to which internal factors impacted on the external environment, the study has revealed that, apart from the mine's physical impact which was stark and immediate, BCL's effects on its surroundings were subtle and slow in their development, but nonetheless detrimental. Policies and activities which were designed to either maintain the *status quo* or bring about positive changes gradually exposed in-grained resentment and hostilities which would, in time, plunge the island into war. Evidence from the Bougainville case suggests that the presence of a dominant MNE in an undeveloped society has a substantial impact on many environmental factors, irrespective of its intentions and operating approaches.

Research Question 3

The research in this case study indicates that BCL was ahead of its time in its recognition of the need to balance the requirements of management and organisation with prevailing variables in the external environment. However, in their quest for contextual congruity, the mine's managers were misdirected. Relying on the Western tradition of respect for formal authority and in its ambitions to be a good corporate citizen, BCL designed its policies and practices to suit the host country (i.e. PNG), rather than focusing its operation on the host society (i.e. the people of Bougainville).

Management was aware that its acquiescence to a number of government demands was unacceptable to the Bougainvilleans, and persistently requested change to the relevant legislation. This pursuit of reform was tepid however. BCL did not use the potential of its economic power to pressure Port Moresby for amendments. As a past executive noted:

we did not thump the table hard enough in terms of insisting that the government provide the Bougainvilleans with a bigger slice of the action, or that they sit down with the Bougainvilleans and renegotiate the agreement between themselves so they satisfied the Bougainvilleans on what should happen (Personal communication, 1998).

The focus of Research Question 3 was the extent to which a deficiency in environmental alignment by BCL management contributed to the closure of the Panguna mine. The evidence discloses that BCL was not deficient in its understanding and pursuit of environmental alignment; in fact the company was an industry leader of its time. It was however, deficient in *focussing* its alignment. The authors argue that BCL contributed to the demise of its own operation by trying to satisfy the needs of the wrong party. It was the Bougainvilleans who had sacrificed much of their land and tradition for the Panguna mine, yet it was PNG, a country with which they felt no affiliation, which reaped the bulk of the benefits. BCL's managers were aware of, and sympathetic to, this situation, yet their endeavours to change it were inadequate. This response was not born of arrogance or a lack of empathy; it resulted from a managerial mindset which perpetuated the notion that the Panguna mine should advantage PNG as a whole. Although the research has determined that BCL managers did contribute substantially to the mine's failure, their pursuit of environmental alignment was sound: BCL management erred when it applied appropriate theory to the wrong subject.

CONCLUSIONS

For all companies, sustaining contextual congruency is vital to organisational performance. For those operating in LDCs, such congruency may be critical for survival. In particular, MNEs must align their convergence–divergence balance, managerial mind-sets and corporate culture with the elements inherent in the LDC milieu. This study has attempted to investigate the extent to which an Australian mining company, BCL, was successful in its attempts to realise environmental congruency in its operations on Bougainville, an island province of PNG. The cultural, legal, political and economic influences of PNG and Bougainville were found to have a significant effect on each of the three organisational elements considered. Similarly, BCL's policies and practices were identified as having a substantial, yet gradual, impact on the company's surroundings. The study determined that BCL, by adhering to the conventions presented in the literature, attained a high degree of environmental congruency with its host country.

The failure of the company after 17 years of operation may be explained by the inappropriate focus of that congruency. In striking a balance between its operations and the requirements of the host country, BCL eventually alienated its host society. The company's actions, because they were aimed largely at satisfying the demands of PNG, were construed by the locals as neglectful of Bougainvillean wants and needs. The conclusions which emerge from this study of the Bougainville copper project are two-dimensional. The findings support the core concepts of scholars such as Garland & Farmer (1990), Farmer & Richman (1965) and Phatak (1997) who reason that MNEs must align their operations with the fundamental characteristics of the host environment. However, the research has also highlighted the diversity which may be present in that environment. Whereas the host country is widely ascribed as the *primary* determinant of environmental influences (Prahalad & Doz, 1987; Robock & Simmonds, 1989), this assumes a legal, cultural, economic and political homogeneity within national borders which may not exist, particularly in LDCs (Arnold, 1988; Hoogvelt, 1991).

In view of the increasing MNE presence in Oceania, the member states' level of development and the diversity of the countless communities living therein (Bailey, 1994; Fairbairn & Parry, 1986), the authors contend that "host country" is too broad a variable in MNEs' environmental considerations. In this region, where the division of nationality and ethnic identity is most pronounced, a more finite level of contextual analysis needs to be undertaken. It is suggested that internal-external congruency for MNEs operating in the LDCs of the Pacific turns on management's ability to understand and satisfy the host society rather than focusing solely on the prescriptions and needs of the host country.

NOTES

- ¹ Although the subject company is referred to as BCL in this paper, it underwent various changes to its name and ownership structure in its early years. Conzinc-Riotinto of Australia (CRA) initiated mineral exploration on Bougainville, subsequently registering Bougainville Mining Ltd. (BML) and Bougainville Copper Pty. Ltd. (BCP). PNG took up 20.2% interest in BCP in 1970 and in 1971 BML made a public issue. A reorganisation eliminated BML from the ownership structure in 1973 and BCP was formed as a public company named Bougainville Copper Limited (BCL) (Vernon & Wells, 1986).
- ² The case was prepared with the collaboration of Professor Louis T. Wells who, in 1973, was commissioned by the PNG government to investigate the terms of the 1967 agreement between the State and BCL. Refer Harvard Business School case 9-174-104.
- ³ In the 1960s PNG was experiencing high population growth, technological and regional dualism, low literacy rates, deficient sanitary and health facilities, inadequate infrastructures and political instability (*Survey of Major Western Pacific Economies*, 1984; *Australia's Development Cooperation Program with Papua New Guinea*, 1989; *Third World Economic Handbook*, 1989). Contemporary data shows that economic progress remains slow; PNG is a 'lower-middle' LDC with per capita GNP at A\$1,722 (US\$1,266) and is still overly reliant on resource exports (*World Development Report*, 1996).
- ⁴ Oceania is the collective name for most of the 30,000 islands of the Pacific. Oceania is divided, by ethnic category, into Polynesia (French Polynesia, American Samoa, Cook Islands, Easter Island, Western Samoa, and Tonga); Micronesia (those islands located between Hawaii and the Philippines); and Melanesia (PNG, Solomon Islands, New Caledonia, Vanuatu and Fiji). Australia, New Zealand, and the islands of Indonesia, the Philippines and Japan are not considered part of Oceania.
- ⁵ BCL remains a registered company and its shares are still traded on the stock exchange, but it does not engage in any commercial activities and is thus considered 'closed' for the purposes of this research.
- ⁶ Given the sensitive nature of the subject matter, the researchers agreed that the identity of the informants would not be disclosed.
- ⁷ Quodling (1991) reports that in December, 1988, BCL had 3,560 employees on its payroll.
- ⁸ Of Bougainville-Buka's total area of 9,025 square kilometres (3,484 square miles), the leases covered 150 square kilometres (60 square miles); 1.6 per cent of the landmass (Moulik, 1977).
- ⁹ The Australian Broadcasting Corporation; Australia's government-funded national radio and television service.

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TABLE 1
Participation of PNG Nationals in the
Panguna Mine Workforce in 1988

	<i>Non-national</i>	<i>National</i>	<i>Localisation</i>
<i>Management & Professional</i>	180	250	42%
<i>Sub-management & Sub-professional</i>	573	6	99%
<i>Supervisory & Skilled</i>	787	350	69%
<i>Semi-skilled</i>	1,320	4	>99%
<i>Unskilled</i>	90		100%
<i>Total</i>	2,950	610	80%

Source:

Oliver, D.L. 1991. *Black Islanders. A Personal Perspective of Bougainville 1937–1991*. South Yarra: Hyland House: 150.