



The End of the Beginning? Mining, sacred geographies, memory and performance in Lihir

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This article explores the critical ways in which the relationship between landscape and memory is mediated by performance—through song, dance, ritual and the movements of the living and the dead. In the Lihir group of islands, in Papua New Guinea, these acts of memorialisation are rehearsed on a remarkable stage, an involuted cosmography or sacred geography in which the cosmological point of origin, the sacred rock of Ailaya, is also the ultimate destination for all human and spirit forms. Spirit beings are held to have emerged from the Ailaya, spreading across the island group, their tracks charting the links amongst distant clan members and the networks of alliance between trading partners. It is to the Ailaya that the spirits of deceased Lihirians must return, following preparatory mortuary rites and sung along a route that recalls the spirit connections. This teleological process is mapped through an account of the performance of relationships between people and land, to which an additional layer of complexity is added by the presence of a giant gold mine, in which the Ailaya is again the central feature.

INTRODUCTION

What we call a beginning is often the end
And to make an end is to make a beginning.
The end is where we start from.
T.S. Eliot, Little Gidding, in *Four Quartets*.

There is now a considerable body of literature on the relationship between people and landscape throughout Melanesia and for the communities in the interior of Papua New Guinea (PNG) in particular. However, there has been surprisingly little research on the sacred geographies of island Melanesia, particularly as these extend beyond the narrow, localised confines of conventional ethnographic enquiry.¹ From elsewhere in PNG and beyond, numerous fine-grained ethnographic accounts provide details on the narratives of specific places, the perceptions and experiences of place, inscriptive processes, mythopoesis, the nature of names and naming practices, and the relationship between ontology, cosmology and the physical environment.² Recent research has also addressed the ways in which culture is reproduced through bodily inscription and reading of the landscape. Ties to land are often enacted and

inculcated through a variety of performative actions, including poetry, song, dance and ritual—practices that are affirmed throughout PNG.

Contemporary aspirations for development often entail a radical reappraisal of both internal social relations and understandings about land as a resource and as the literal and figurative ground for a system of belief. Change in a community's relationship with the land thus emerges as a useful starting point for understanding wider cultural processes. These transformations in the significance of the landscape are frequently marked by contest over the meaning of sacred sites and their position in broader cosmographies or sacred geographies.³

In this article, we explore a highly distinctive island cosmography—a 'moral topography'—made all the more remarkable by the contentious and transformative presence of a large-scale gold mine. Our broad purpose in this article, and in the research project for which this serves as a prologue, is to understand the intersection between cosmography, memory and performance within the rapidly changing context of mining operations in the Lihir Islands of PNG. We take our cue from the pair of volumes edited by Alan Rumsey and James Weiner—*Emplaced Myth* (2001) and *Mining and Indigenous Lifeworlds* (2004)—which call for greater understanding of the knowledge systems and the culturally distinctive epistemological and discursive processes of Melanesian societies unfolding within such transformative milieus.

As a way of comprehending this cosmography, we explore the ritual process associated with the journey of the soul to the afterlife via a portal known as the Ailaya, which is located at the centre of the Lihir group of islands. This portal is not just the entry point for human souls, but also the site for both the beginning and the end of the spiritual and human worlds as these are understood in Lihirian cosmology. Given the Ailaya's central location within the mining project, a contingent topic is the relationship between notions of place and themes of loss and transformation. As Weiner (2004: 10) appositely asks, what happens when it is not just people who die, but the sacred places themselves? In this context, our further aim is to understand how sacred geographies and cultural and social praxis can be mutually constitutive. More specifically, what is the relationship between this grounded cosmology and Lihirian responses to externally imposed change? Effectively, Lihirian cosmology provides a framework for interpreting and responding to change, whilst the more arcane cosmological details and contemporary social, economic and political processes appear to find resonance in each other.

COSMOGONY, COSMOLOGY AND COSMOGRAPHY IN LIHIR

The Lihir group of islands is located off the east coast of New Ireland in PNG's Bismarck Archipelago, with the ethnographically better known island groups of Tabar and Tanga to its west and east, respectively.⁴ The Lihir group is composed of five inhabited islands: the main volcanic island of Aniolum or 'the big place' and, in order of distance, the low coralline islets of Sinambiet and Mando and the three

larger raised coral platform islands of Malie, Masahet and Mahur, collectively known as *Ihot*, or ‘stone place’.

In Lihirian conception, the distribution of the islands reflects a particular cosmogonic event—an original eruption of the central caldera on the main island of Aniolum, throwing out the islands of Malie and Sinambiet. Malie was formerly known as Ebangli, meaning ‘thrown out just now’; the name was later corrupted to E Mangli and then Malie. Similarly, Masahet was known as Maslalenie, which means ‘the sea has dropped out’, leaving the island standing tall. The last island in the group, Mahur, was called Mungoh, meaning ‘it has just come out of the sea’.

At the apex of this eruptive cosmography, reflecting its pivotal role in Lihir cosmology, is the rock pinnacle known to all Lihirians as the Ailaya,⁵ which rises out of the centre of the caldera on the shore of Louise Harbour (Figs 1,2). Properly understood, the Ailaya is a portal to the land of the dead for all Lihirians from across the group of islands. The name Ailaya can be translated as ‘the cave of spirits’. The spirits of deceased Lihirians enter this land of the dead, known as *Rondende*, through a central marine passage at the base of the Ailaya, assisted by the spirits of relatives already resident there.

On a regional or Pacific scale, the Ailaya is an exceptional site. Many communities in the Pacific subscribe to notions of lands of the dead, but for the most part these are abstract spaces, usually entered via the sea, and located either on outer islands, underground or beyond the horizon.⁶ The physical presence at Lihir of a portal to the underworld is exceptional and doubtless reflects the unique form of the Ailaya and its setting within an active volcanic landscape. More unusual still is the inward-focused cosmography of Lihir, in which the Ailaya serves as both the geographical pivot and the point of temporal initiation and closure. Cosmogonic myths that establish similar cosmologies exist elsewhere in Melanesia, perhaps most notably in Jadran Mimica’s (1988: 75) account of the Iqwaye autogeneal figure of Omalyce, whose primordial rupture initiates the flow of universal life whilst also introducing the finality of death. Similarly, Mary Ayres describes the Moorehead River cosmology as being based upon an elaborate ‘system of places’ with a single origin place for all Moorehead people (Ayres in Rumsey 2001: 27–28). However, few cosmologies are mapped out across the landscape in this way.

Lihirian sacred geography is largely comprised of a network of *tandal* or spirit sites (Tok Pisin: *ples masalai*), each site being associated with a named *tandal* spirit. *Tandal* are held to have emerged originally from the Ailaya site complex, before fanning out across the Lihir Islands and taking up residence at their respective sites across the islands. To the extent that there is an explicit Lihirian eschatology, it is couched in terms of an ultimate, centripetal return of the *tandal* to the Ailaya, in a reversal of the original centrifugal event.

Our understanding of the essential form of the Lihirian universe was further elaborated during a conversation with Thomas Kut from Mahur Island in March 2009, whom we estimate to have been born in about 1900; certainly, he was a centenarian by the time of his death in August 2009 (Lihir i Lamel 2009). Kut

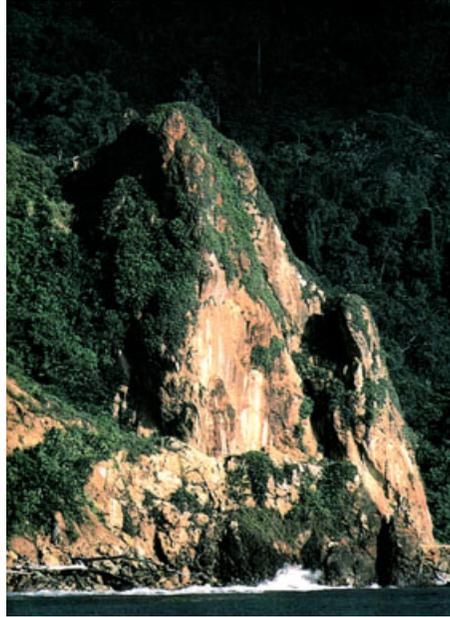


Figure 2 The Ailaya rock viewed from the eastern side, circa 1990 (photo courtesy of LGL archives).

area where this sacred complex is located. Whilst current dialects use the name Ladolam, the place was formally called Tadalafil, which refers to an immense (*lam*) spiritual being (*tandal*). The Ailaya, as Tumgiet, is thus the *giet*, or origin, of the primary *tandal* for all Lihirians.

Throughout Lihir, *tandal* are the most frequently encountered spiritual beings. They are simultaneously singular and plural and are both incorporeal and manifest in different physical forms. They inhabit prominent physical features such as rocks, trees, reefs and streams and can transform themselves into animate beings, such as sharks, pythons, dolphins, whales and even humans, or strange lights and sounds. They are glossed as ‘the strength of the ground’, invoking the belief that *tandal* generate a form of invisible moral shield around the islands, which protects them from negative external forces. Big men are morally required to maintain a close rapport with their *tandal*, to ensure that the bonds amongst *tandal* remain sufficiently strong to guard against the intrusion of socially negative forces.⁸

Tandal are still an important source of power, to be invoked and communicated with in a number of ways, such as through revelatory dreams, assistance with hunting and fishing, or feasting and exchange or through direct requests for safe and speedy sea travel. *Tandal* are central to the identity and unity of individual clans but, as for many Lihirian kin relationships, statements about them tend to be elicited rather than volunteered. Despite this close affiliation, *tandal* retain a strong degree of autonomy; they are never fully known in terms of their intentions and

activities; and they are never controlled by human agency. Effectively, a *tandal* exists as an entity unto itself. They are known to fight with other *tandal* and people will sometimes point out the marks or ‘scars’ inflicted in these battles and still visible on the physical manifestations of *tandal*, such as rocks, reefs or trees. Like their human counterparts, *tandal* are known to have children and kin, men’s houses and cooking sites, and recognisable paths of travel. The symbiotic relationship between people and *tandal* is reflected in their conjoint movement and migration across the landscape and between the islands, which extends to the neighbouring islands of Tanga and Tabar and mainland New Ireland.

Tandal assume a fundamental role in the origin stories of Lihir’s matrilineal clans. Some Lihirians regard *tandal* sites as markers of the original or most ancient settlements of the clans with which they are associated. In many clan accounts a common female ancestress is mythically traced to a clan *tandal*. However, Lihirians do not collectively subscribe to a coherent narrative for the origins of the different clan groups or their respective relationships. These reflect the combination of geographical distance between groups, fragmented ancestral knowledge and shallow genealogical reckoning, usually no more than two or three generations in depth. The total effect of this spatial distribution of knowledge, which accompanies the knowledge of places, is a series of linked myths, continued from one clan group to another, across different locations.

Whilst *tandal* are located across the landscape, linking different clan groups to specific territories, it would seem that all clans are traced back ultimately to the Ailaya and its complex of associated sites. For it was here that the original cosmogonic event took place and where *tandal* first originated, later providing the mythic scene for the primordial division into totemic moieties—Tumbawinlam and Tumbawinmalkok, or Big Pisin and Smol Pisin, which are associated with the sea-eagle and the brahminy kite, respectively. The Ailaya rock is surrounded by a dense cluster of *tandal* sites identified with different Lihirian clans; these sites are scattered across the reefs and beaches and the nearby bush land around Louise Harbour. The representation of multiple Lihirian clans in such close proximity is unusual in Lihir; more often, broader areas are identified exclusively with particular clan groups and their *tandal* are manifest in various forms across the local landscape, presumably reflecting historical patterns of migration and settlement.

Formerly, there was a smaller rock pinnacle adjacent to the Ailaya rock, known either as Tuen kanut, or as Ai tuan tamberan (Fig. 3). Details of the Ailaya and Tuen kanut were first recorded by the German ethnologist Otto Schlaginhaufen during his circumnavigation of Lihir in 1908–09 as part of the Deutsche Marine Expedition:

Across the Dolam creek, which flows into the depths of the bay, I reached a slender pinnacle of red stone, which looks towards the heavens with a prominent point and has a ghostly appearance in the twilight. The natives call it *Ai tuan tamberan*, which means something like ‘ghost’s leg’ or ‘devil’s bone’. Immediately afterwards I had to

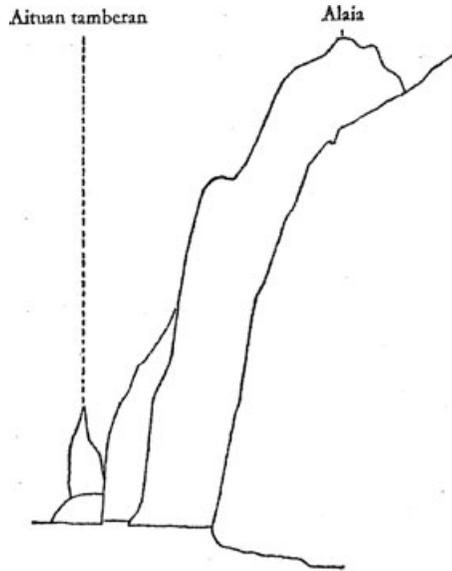


Fig. 6 Blick vom Westrand der Bucht Landolam gegen die Felsen «Ai tuan tamberan» und «Alaia».

Figure 3 “View from the western side of Ladolam Bay towards the rocks ‘Ai tuan tamberan’ and ‘Alaia’”. Sketch by Otto Schlaginhaufen, 1908–1909. (Schlaginhaufen 1959: 124).

conquer another, far higher peak, named Alaia, with a steep climb up and down, and we then continued along the beach over the waterways Akam and Atumgaok to Dununsoso Creek, whose warm water comes from the hot spring Kabit. (Schlaginhaufen 1959: 124; translated by Hilary Howes, 2009)

It is possible that the name Ai tuan tamberan originated through past links between Lihir and Southern New Ireland and New Britain where the *tambaran* cult was historically strong. Schlaginhaufen was assisted by a ‘policeman’ born in Lihir and a Lihirian man named Anap, both of whom spoke Pidgin English. The generic term *tambaran*, widely used in New Britain and New Ireland to connote ‘ancestral ghosts’,⁹ was then probably applied to the sites associated with their Lihirian *tandal* counterparts. The translation of the name Ai tuan tamberan as ‘ghost’s leg’ points to the meaning inherent in the Lihirian name Tuen kanut. Deceased people are referred to as *kanut*, whilst images of deceased seen by the living are described as *tonuan*. It is believed that when people from the main island of Aniolum die, they leave their ‘body’ or ‘bones’ at the Tuen kanut before their souls enter into the Ailaya.

The Tuen kanut site is also identified with a major *tandal* spirit known as Kokotz. At the simplest level, Kokotz is identified with the Tinetalgo clan and reveals itself as a large snake close to the Ailaya. Beyond this, the details become more specific and often contradictory depending upon clan affiliation, residence and knowledge of mythico-cosmological history. Whilst some people have suggested

that Kokotz resides in the actual Ailaya rock, it is more generally held that Kokotz can manifest itself into various forms, including snakes, sharks and large lizards and that it resides at different sites around the Ailaya, including Tuen kanut. Opinions also vary as to whether these particular sites were previously special only to the Tinetalgo clan, or whether these totemic spirit animals were in some way conceptualised as guardians of the rock on behalf of all Lihirians.

Kokotz is also known to emerge from various caves and sinkholes across the Lihir Islands which are linked by subterranean and submarine passages. In this sense, the wider population may assert a possible connection with Kokotz. This is reinforced by the meaning of the name, which some interpret as 'to spread out like tree roots', or to 'go around Lihir'. Some senior men also recognise Kokotz as an originary *tandal* from which all other *tandal* were created before fanning out across the islands. This certainly resonates with the meaning of the name Tadalām ('big *tandal*') earlier applied to the Ailaya area. However, it remains unclear whether Kokotz has been conflated with Tumgiet, or whether Kokotz is an original creation of Tumgiet. Nevertheless, the collective significance of this area for all Lihirians is clearly signalled. The Ailaya complex ultimately presents a publicly known cosmology, the local, grounded details of which are known by only a few, and sometimes contested, whilst the broader fundamental themes are more widely understood across the group of islands.

MINING, POLITICS AND ICONOCLASM

Throughout the colonial era and in the years following independence in 1975, Lihirians remained marginal to regional economic development, relying upon subsistence agriculture and sporadic copra sales. The Catholic Church established itself on Aniolam in 1902, followed by the Methodists in the early 1930s, and together these institutions assumed fundamental roles in Lihir society and provided the main link to the outside world. In the mid-1980s, mining exploration got underway across the island of Aniolam. After a series of feasibility studies and prolonged negotiations between Lihirian landowners, the State and the Lihir Management Company (LMC, a subsidiary of Rio Tinto), an Integrated Benefits Package (IBP) was signed in 1995 and mining activity commenced. In 2005, the Rio Tinto agreement ceased and Lihir Gold Limited (LGL) assumed ownership and management of the project. Current estimates indicate that mining will continue until at least 2040. Lihir society has been profoundly altered through economic, political and social shifts associated with the rapid transition to industrialisation and the unequal distribution of the costs and benefits arising from the project which favour lease area landowners (Bainton 2010).

During the late colonial period and in the years preceding the mine, many Lihirians were involved in sociopolitical movements that foretold a radical inversion of the existing order (Bainton 2008). The dramatic changes associated with the construction and initial production phases of mining were widely interpreted as the

fulfilment of earlier prophesy. White miners were accommodated within existing cosmologies in which the return of deceased relatives heralded the arrival of a ‘new heaven and new earth’. Lihirians are not alone in imagining such millenarian transformations. However, unlike other desiring Melanesians, Lihirians have largely witnessed the realisation of these dreams, although events have seldom unfolded according to their expectations.

It comes as little surprise, then, that the original rock chips sampled from the Ailaya precipitated both mineral development and the transformation of the Lihirian lifeworld. During the exploration period, some Lihirians were afraid that drilling in the Louise caldera would damage or kill *tandal* spirits, which in turn would cause the return of deceased ancestors—presumably those who had already entered the afterlife through the Ailaya—and instigate the new millennium (Colin Filer, personal communication, 2010). From an early stage, therefore, the Ailaya has served as a focal point for different cosmological beliefs variously structured around the ramifications of resource development.

The Ailaya rock now sits at the heart of the mining area and its orebody, for which it acts effectively as a cap (Fig. 4). The Ailaya has thus far been largely preserved through an agreement between Lihirian landowners and the company (and as a result the ore in the immediate vicinity has not been mined), but the surrounding sacred sites, including the Tuen kanut, have long since been demolished or covered over by stockpiled ore under agreement with certain landowners. The Ailaya itself has experienced several disfiguring events, including the excavation of benches into its crest to facilitate early test-drilling and the development of the first coastal road along its sea front, also largely under agreement with landowners. Little effort has been made to remove industrial rubbish left near the rock or to address the visual impact from rerouted hot water courses. Cut-off from the sea by a widening corridor of rubble and overburden supporting a series of vehicle access roads and



Figure 4 The Ailaya rock (centre right) and the mine pit, 2008 (photo courtesy of LGL archives).

pipelines, the Ailaya is a somewhat forlorn remnant of its former shape, a silent island in a churning sea of mining activity.

In several respects, the cosmological significance of the Ailaya is now overshadowed by the intense political battles surrounding mining and development. From a contemporary Lihirian perspective, ‘politics’—as an ideology and a domain for meaningful action—is now largely conceptualised as the struggle for access and control over mine-related benefits between lease area and nonlease area landowners and between Lihirian contracting companies. Consequently, tradition is now regularly harnessed as a resource in the political and economic struggles which Lihirians wage against one another, the mining company, and the State (Otto & Pedersen 2005). The Ailaya site complex has become thoroughly politicised precisely because of its shared cosmological importance to all Lihirians, competing claims over the custodianship of the site and related cosmological knowledge (and the resultant perceived unequal distribution of compensation money for damage to the area), and the opposing interests of Lihirians, company management and the State.

As mining negotiations began, most Lihirian leaders insisted on the importance of the Ailaya for all Lihirians and pressed for its preservation. For the purposes of compliance, access, compensation, payment of monthly royalties and other benefits to Lihirian lease area landowners, the 1304-hectare area covered by the Special Mining Lease (SML) was divided into a series of ‘blocks’. These blocks, identified by specific local names, notionally correspond to parcels of land held under subclan custodianship. For instance, the Ailaya site nestles within a 34-hectare area named Lumanahan (‘hand of the pandanus’) and is designated for mining purposes as ‘Block 12’. The Lumanahan area is ‘owned’ by the Likienba subclan of the Tinetalgo clan by virtue of their claims to custodial connection to the sites and land surrounding the Ailaya. Macintyre and Foale have noted that the Ailaya is perhaps the only place in Lihir that might once have been genuinely regarded as common property (2007: 53). Likienba subclan and Tinetalgo clan members have not publically claimed that they ‘own’ the actual Ailaya but, through their custodial claims to the area, they have gained control over all compensation and royalty payments arising from mining activity in Block 12. These rights to, and claims on, payments and other benefits streams under mining agreements are repeated in the other one hundred and eleven blocks in the SML.

At various times, before and after the onset of mining, numerous claims and counter claims to the custodial ownership of ground within the SML have been made. Discussions over custodial areas (blocks) involving the mining company and lease area representatives typically concern access for the purpose of test drilling, excavation and dewatering, all of which have occurred throughout the SML, including Block 12, since the 1980s. There was intense debate during 2006 between and within the Lihir local level government, clan and subclan leaders and the company over the boundary of the Ailaya within Block 12. The matter was resolved amicably through a process brokered by the national Department of Mining. As an outcome, a commemorative plaque marking the establishment of the boundary agreement

was erected at the top of the Ailaya, and Likienba now have responsibility to maintain the upkeep of the boundary of the Ailaya through a service agreement funded by the company. However, as noted earlier, the Ailaya generally appears poorly maintained, and it is likely that some of the wider Lihirian dissatisfaction surrounding the Ailaya is related to perceptions of the Likienba subclan as 'bad' or even 'greedy' custodians.

In the original IBP agreement, K50,000 was given by the mining company to Tinetalgo clan in compensation for some of the damage to the Ailaya. Importantly, in these initial negotiations, the Ailaya was bundled together with various other sacred sites in the vicinity, a condition generally accepted by senior landowners at the time. Negotiations over the construction of the road also provided Tinetalgo leaders with the opportunity to promote their claim as the custodians of the Ailaya site on behalf of all Lihirians. Tinetalgo clan leaders used this money to host a large feast in 1996, partly to mollify the *tandal* spirits disturbed by mining and to address any ill feelings about damage to the rock. This event was not attended or substantially supported by other Lihirians, and for many, the custodial issues surrounding the Ailaya remain unresolved. Many Lihirians have since removed themselves from debate surrounding the Ailaya, largely as an expression of the depth of their feeling about this issue.

Surprisingly, the Ailaya and adjacent sites do not appear to have been a prominent feature of public discourse during the early mining years.¹⁰ Whilst narratives and ritual performance foreground the centrality of the Ailaya, the objectification (and commodification) of this landscape has demanded more explicit statements. It is likely that the earlier silence reflected an initial shock at the commencement of mining operations and a strategy of withdrawal following the politicisation of this landscape. Some people were clearly preoccupied with the material manifestations of their millenarian beliefs. Ironically, certain elderly men with the most detailed knowledge of the traditional afterlife and the Ailaya largely regard this knowledge as redundant because, as good Christians, they know that their souls will travel up to Heaven now and not into the ground as before. Belief in God and the Holy Spirit has largely displaced the efficacy of *tandal* spirits and has prepared people to abandon these sites to achieve development (Telban & Vávrovà 2010). Others have successfully reconciled their traditional and Christian beliefs, interpreting the Ailaya as a portal to Heaven set in place by God.

The IBP agreement had provisions for the establishment of an Ailaya Restoration Committee, with key representatives from the company, the landowners association and the Department of Mines. The committee's name was later changed to the Ailaya Preservation Committee, when its members agreed unanimously that the rock could no longer be restored to its original form. However, the crude division of Lihir society according to connection to land within the SML has also produced a situation in which the broader community tends to regard mine-related issues as 'lease landowner' affairs. The combination of internal politics and community reluctance to engage with and acknowledge this committee, owing in part to the high

representation of Tinetalgo members, has largely precluded any meaningful action and the committee is now defunct.

In the aftermath of the initial shock, people have taken stock of the social and physical changes in Lihir, and many have directed their attention back to the Ailaya. Although knowledge of the Ailaya remains highly localised, at the public level Lihirians now express more consistent views. During our involvement in a Lihir-wide cultural heritage workshop in 2009 (Bainton *et al.* 2011), we were struck by the emergence of a heightened consensus over the fundamental aspects and structural significance of the Ailaya and commonly held concerns over its future. In many ways, a more singular perspective has been concretised as a result of shared frustrations with the mine.

The renewed attention directed to the Ailaya cannot be separated from the politics of mining. However, we find that different groups emphasise the value of the Ailaya in different ways. Certain lease area landowners have utilised the Ailaya for political purposes or to establish rights, status and privileges. Younger generations tend to stress its importance in terms of the growing discourse of cultural heritage management and the link between Lihirian identity and continuity with the past. In contrast, older generations assert the need to maintain traditional beliefs and rituals which they regard as crucial for the adequate completion of mortuary ritual, but also to legitimate their social world and to justify the institutional order to younger generations.¹¹

The Ailaya has also been harnessed as a symbol of Lihirian identity by different Lihirian organisations. The Lihirian political elite responsible for the development and implementation of the revised IBP agreement, the Lihir Sustainable Development Plan (LSDP 2007) (Bainton 2010), has adopted the Ailaya as the centrepiece of its logo. Similarly, the Lihir Cultural Heritage Association has also designed a logo around the Ailaya, symbolising the centrality of the Ailaya to Lihirian cultural heritage (Fig. 5). In 2009, the Lihir local level government raised a petition to place a cross at the top of the Ailaya, which would thereby deliberately merge Christian and traditional Lihirian beliefs, emphasise its spiritual meaning and secure the Ailaya for future generations. More contentiously, in 2008, the Tinetalgo clan investment group placed a carved image of the Ailaya and the Kokotz *tandal* on the front of their new business centre in the local township of Londolovit, thereby splicing economic and cultural antagonisms to legitimate their claim over mineral wealth (Fig. 6). During the opening ceremony for this new building, Tinetalgo members also paraded a six foot high papier-mâché model of the Ailaya as part of their dance performance. Whilst few Lihirians dispute the direct identification between Kokotz and Tinetalgo, many have taken umbrage at what appears to be an explicitly public claim over the Ailaya, which is somewhat compounded by disputes surrounding the distribution of wealth generated out of Block 12 in which the Ailaya sits.

National interests also come into play in relation to the status of the Ailaya as a cultural heritage site. The Ailaya was placed on the National Site Register



Figure 5 Lihir Cultural Heritage Association logo, with the Ailaya rock as backdrop.

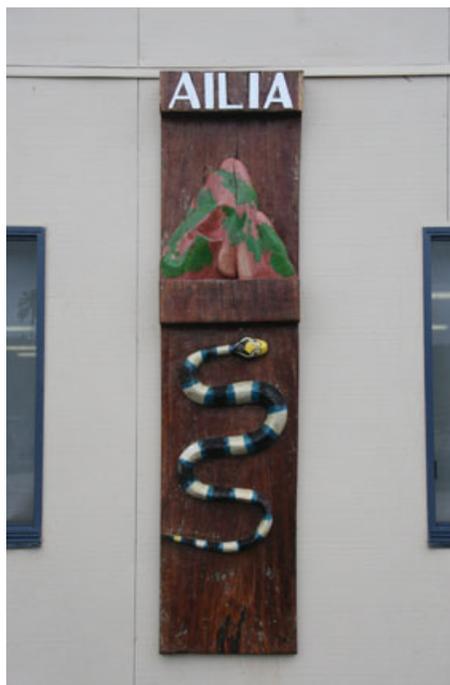


Figure 6 Carved image of the Ailaya rock and Kokotz snake on the Tinetalgo Business Centre (photo N. Bainton).

maintained by the National Museum of PNG in 1987 when initial archaeological assessments were conducted as part of the environmental baseline study for the mine, though registration provides only limited legal protection. In 2007, the

Department of Environment and Conservation belatedly undertook to register the Ailaya. However, this initiative was stalled by local politics, partly due to landowner reluctance to grant the State any control over this site, which has become a crucial point of leverage in negotiations with the company.

What emerges from this context is a resounding silence on the Ailaya from all sides. Although mine management have discussed the possibility of mining the Ailaya, the company has not publically commented on the issue of the Ailaya or its economic value, and mine closure plans in the public domain clearly identify the Ailaya as a feature of the postmining landscape. The company's silence has arisen partly out of fear that any sort of coherent public discourse on the future of the Ailaya may disrupt current operations or place limits on proposed project expansions and partly from the difficulty of establishing an adequate public forum in the current context. Broader Lihirian silence is closely related to local custodial battles and a particular expression of agency through a tactics of withdrawal which deliberately stifles public debate whilst keeping the issue alive and unresolved. In this way, a historical combination and convergence of tensions, politics, risks and cultural responses have rendered the Ailaya a sleeping giant of an issue.

PERFORMING MEMORY, PLACE AND MOVEMENT

In spite of these changes to the ways in which the landscape is valued and conceptualised, Lihirian cosmology is continually confirmed and reinscribed upon the landscape through elaborate mortuary rituals that direct the souls of the deceased towards the afterlife and compellingly recall their lives in spatial and relational terms. In the following sections, we consider the ways in which the relationships between memory, landscape and cosmology are mediated by performance, and how these relationships are simultaneously reaffirmed and restructured when the sacred topography is altered or destroyed through mining.

Lihirian mortuary rituals have retained much of their traditional structure, which is based on the series of ceremonial feasts and activities that 'finish the dead'.¹² Village-level political economy continues to revolve around a system of delayed reciprocal exchange of pigs, shell money, garden produce, dance performances and, more recently, cash and commodities made available through resource development. As clan groups host various feasts and exchanges, collectively glossed as *karot*, which mark significant moments in the life-cycles of their clan members, the fundamental tenets of Lihirian sociality are continually reproduced (Bainton 2010).

Deceased clan members are generally buried within the yard surrounding their matrilineal men's house and occasionally in community cemeteries. In the precolonial era, Lihirians practised various secondary burial rites that involved storing the skull, and in some cases the body, for future ceremonial use (Peltier 2006). During the initial mortuary rites that honour deceased male leaders, and in some cases

senior women, the deceased are decorated with red clay and shell valuables and seated within the confines of their men's houses in preparation for burial. Clan members gather in the men's houses and *rangen* songs are sung throughout the night. These songs commonly address quotidian activities and needs and are aimed at stimulating the growth of pigs and the fertility and productivity of the garden, calming the sea to travel well, attracting a partner or garnering wealth. Once these songs, which belong to the deceased, are publically revealed they are no longer efficacious and may be used by other people. On the southwestern side of Aniolum, clan leaders may throw a piece of fire wood outside the men's house to symbolise this extinction of efficacy.

The ultimate purpose of this ritual is to farewell the deceased and assist them in their journey to the afterlife. On Aniolum, it is understood that the soul of the deceased walks across the island or along the coast to the Ailaya, resting upon the Tuen kanut before reaching its final destination, *Rondende*, before sunrise. On the outer islands of Malie, Masahet and Mahur, the spirit of the deceased must first journey across the sea to reach Aniolum where the Ailaya is located. This journey is symbolised by seating the deceased in a special canoe called a *konkonla*, which is placed within their men's house.

Rangen songs are also sung throughout the evening, building towards the climactic moment just before the break of dawn, when the soul of the deceased is sung into the afterlife. The final ritual song, known as *tsure*, describes the journey of the soul across the islands and along the coastline to the Ailaya. The deceased is imagined to be journeying in a canoe from his or her own hamlet, past the settlements of his or her former trading partners and relatives and down to the Ailaya. Place names are recited throughout the song, indicating various points in the journey. Some elderly Lihirians suggested that, in former times, an effigy, or perhaps even the actual body of the deceased, was seated on a raft and launched into the sea at this point; however, these accounts may conflate ritual processes with previously common forms of sea burial.

Senior men formerly living in the Louise caldera say that it was once possible to see these spirit canoes making their way across the harbour to the entry point. The entrance to the Ailaya is a small cave by the water's edge, which is said to glow with a reddish colour as the deceased passes into it. The hair and body of the deceased, which are painted in red ochre (*tol*), are believed to rub against the inside of the cave as the corpse makes its entry, leaving streaks of red along the lintel of the cave entrance. When the deceased reaches the Ailaya, he or she is finally welcomed and assisted into the afterlife by friends and relatives already present within *Rondende*. In the past, strange noises could be heard at this time (most likely from volcanic steam vents) signalling their transition to the afterlife.

This journey to the afterlife is mapped out across the islands and the mining landscape in the following *tsure* song recorded at the *rangen* mortuary ritual staged for a senior leader, John Yaspot of Malie Island, in 2009:

Conch shell blows to open the song	
<i>Ee na ee na</i>	Ee na ee na
<i>O Yaspot temun deinege</i>	There goes Yaspot leaving us
Chorus	Chorus
<i>Tulien na Rondende</i>	Going into Rondende
<i>Rondende, eee Rondende</i>	Rondende, eee Rondende
<i>Ee na ee na</i>	Ee na ee na
<i>Gelena tsurlhi Yaspot</i>	We are pushing off the canoe with Yaspot
Chorus	Chorus
<i>Ee na, ee na</i>	Ee na ee na
<i>A makil dile dide tsurlhi Yaspot</i>	All the people want to push off the canoe with Yaspot
Chorus	Chorus
<i>Ee na ee na</i>	Ee na ee na
<i>Tutum</i>	Tutum [a male relative]
<i>Dul dekane wa na tulien na Mdeto</i>	Take you now into Mdeto
Chorus	Chorus
<i>Ee na ee na</i>	Ee na ee na
<i>Die de tsial me wa tu la basis ki wa me</i>	They will take you down to your passage at
<i>Sumkuen</i>	Sumkuen
Chorus	Chorus
<i>Ee na ee na</i>	Ee na ee na
<i>Die lalin e ni natu di sa sulutan e wam</i>	All your children have washed your clothes
Chorus	Chorus
<i>Ee na ee na</i>	Ee na ee na
<i>Die sa swe katne wa</i>	They are letting you go
Chorus	Chorus
<i>Ee na ee na</i>	Ee na ee na
<i>E Silul die swe katne wa yan de matan Mdeto</i>	Silul [eldest son] will push you off towards the front of Mdeto
Chorus	Chorus
<i>Ee na ee na</i>	Ee na ee na
<i>Enung gesa tel katne wa ila kan a bulis</i>	Father in law we are leaving you on top of the entry point
Chorus	Chorus
<i>Ee na ee na</i>	Ee na ee na
<i>Yaspot o sa loitan Lakatoyhie</i>	Yaspot you are turning into Lakatoyhie
Chorus	Chorus
<i>Ee na ee na</i>	Ee na ee na
<i>Sindu sa osre wa</i>	Sindu is asking you, cousin where are you going now?
<i>Sindu saweng osre wa pelkong toyhie e wa?</i>	
Chorus	Chorus
<i>Ee na ee na</i>	Ee na ee na
<i>Sai nor itan a kulien nai nana wos</i>	Your skin is decorated in red clay
<i>Gene tsik die se wawalil newa</i>	Your children are waving goodbye to you

Chorus	Chorus
<i>Ee na ee na</i>	Ee na ee na
<i>Yaspot sa kop osre wa?</i>	Yaspot [his son] is asking where are you going?
Chorus	Chorus
<i>Ee na ee na</i>	Ee na ee na
<i>Trongba e osre wa Laitokaka?</i>	His namesake is asking have you gone to Laitokaka?
Chorus	Chorus
<i>Ee na ee na</i>	Ee na ee na
<i>Trongpalum um e kop osre e wa o sakaka an toe?</i>	Trongpalum is asking where are you going?
Chorus	Chorus
<i>Ee na ee na</i>	Ee na ee na
<i>A medentikan en Kapit die birlwa</i>	The old men of Kapit are pulling you out [of the canoe]
Chorus	Chorus
<i>Ee na ee na</i>	Ee na ee na
<i>A pornadie lan die sagare wa ka die sa brusliwa la blo</i>	All the women over there see you and release you to go inside the men's house
Chorus	Chorus
<i>Ee na ee na</i>	Ee na ee na
<i>O Pilai san gare wa le bil kele wande yak wan kale yo lai Lila [sic, Ailaya]</i>	Pilai [previously deceased] sees you [and says], come and find me inside the Ailaya
Chorus	Chorus
<i>Ee na ee na</i>	Ee na ee na
<i>Yaspot osa retoeni apako tulakan apukwan</i>	Yaspot pull the canoe up on the beach
Chorus	Chorus
<i>Ee na, Ee na</i>	Ee na ee na
<i>O lewa tsing tulumat kanut e Sidur ni timiel e wa nestan a kar</i>	You want to go up on this grave Sindur will hold you back and you will wait for the car
Chorus	Chorus
<i>Ee na, ee na</i>	Ee na ee na
<i>Eee amatan amatkanut de sa kilie ko worwor nie</i>	The entrance to the grave has been destroyed and now you are looking for it
Chorus	Chorus
<i>Ee na ee na</i>	Ee na ee na
<i>Yaspot osa las tula matkanut</i>	Yaspot you go inside the grave
Chorus	Chorus

Presented in its entirety, this is a typical example of the *tsure* ritual song form. Led by an established male singer, the *tsure* is essentially a 'call and response', or antiphony, engaging two different vocal groups: the soloist, and the wider community. The soloist is responsible for evoking both the deceased's relationships with

people and place, and for the details of the landscape through which the deceased is passing. Over the course of the song, he plots the entire journey of the deceased, from the initial launching of the canoe to the point where the deceased enters the Ailaya and is greeted by deceased friends and ancestors. The soloist's calls are always punctuated by an initial standard expression *ee na ee na*, which effectively asks the question, *is it true?* What follows alternates between a description of the point along the journey reached by the deceased, and a representation of dialogue with key figures (often relatives and friends, both living and dead) as the deceased moves between specific places. This dialogue takes the form of questions to the deceased, asking where he or she is going. Such questioning is typical of lament genres in PNG (Schieffelin 1976, Feld 1982, Weiner 1991 and Gillespie 2010) and can function both as an expression of the singer's grief (Hemer 2010) and to elicit an emotional response from the audience. But, unlike many lament forms in PNG, these questions are not rhetorical, as an answer is immediately provided.

In some examples, the soloist sings the response of the deceased to the questions—'I am on my way to the Ailaya'—thereby communicating to the audience that he or she has died. More often though, as is the case here, the answers to the questions appear in the response sung in unison by the men and women assembled at the ceremony, who sing together that the deceased is 'Going into *Rondende*' (the afterlife). This line of response does not have an explicit grammatical subject identifying who it is that is said to be going. Whilst the soloist's lines (though not the general melodic structure) will vary to a great degree with each different performance and are essentially improvised, the lines of response are standard for all *tsure*, enabling many more people to participate. The repetition of this response serves to bring the deceased closer and closer to the Ailaya, until he or she finally reaches the afterlife. Like the persistent questioning, the infallible chorus response works to excite emotion amongst the audience. Here, memories of place and of relatives—indeed of events—are not just inscribed in song, but actively reinscribed through singing.

Recital of the names of places passed along the journey serves as a mnemonic string for the historical associations of the deceased. This ordered succession of place names (and people) resembles what James Fox (1997) calls 'topogeny': discursively recreating the life of the deceased in temporal and spatial terms. The emotional and memorial power of these songs resides in the placenames which summon forth a wide range of associations. Thus, as Feld (1996: 107) describes for the Bosavi of interior New Guinea, 'memories ... are magnetised to those names, making place a fused locus of time and space'.¹³ Moreover, the description of this journey conjoins temporal motion with spatial projection, reinscribing the past in the present across the landscape, creating 'biography as itinerary' (Feld 1996: 113). It is through such processes that history and culture coalesce and render places meaningful, emphasising the relational qualities of the landscape, and prompting our comprehension of landscape as cultural process and the more phenomenological understanding of place as *event* (Casey 1996).

PERFORMING CHANGE

The physical changes experienced through the social and landscape transformations associated with large-scale mining are powerfully revealed through these ritual songs. References to the dangers implied in the crossing of a busy haul road, and the desperate searching for the entry point, which has been covered over by stock-pile and rubbish, foreground future threats and the ways in which mining has deeply penetrated the Lihirian lifeworld. Where once people had a relatively straightforward passage by sea on their journey to the afterlife, they must now negotiate and traverse the changes brought about by the mine. These changes were strongly reinforced in another *tsure* ritual song recorded on Masahet Island in 2009 during the *rangen* mortuary ritual for Petrus Konang:

(Extract from *tsure* sung for Konang, Masahet 2009)

<i>Ee na ee na</i>	<i>Ee na ee na</i>
<i>Konang sa stip tu muo ka sa kietz orot Kapit</i>	Konang has moved along to Kapit and Lesie
<i>Lesie dul ne Tokpalum dul sangere dul sa kup</i>	and Tokpalum have seen him and they ask
<i>osre nie dul e Konang wande kayie monie?</i>	Konang where are you going now?
Chorus	Chorus
<i>Tulien na Rondende</i>	Going into Rondende
<i>Rondende, eee Rondende</i>	Rondende, eee Rondende
<i>Ee na ee na</i>	<i>Ee na ee na</i>
<i>Konang sat sip tu muo tu Laitokaka sa keitz</i>	Konang has moved on to Laitokaka and is
<i>baban a Nasie</i>	sitting at Nasie
Chorus	Chorus
<i>Ee na ee na</i>	<i>Ee na ee na</i>
<i>Konang sangere keke pulik te nonde purek a</i>	Konang has seen that very soon it will be
<i>siat te i min</i>	daylight
Chorus	Chorus
<i>Ee na ee na</i>	<i>Ee na ee na</i>
<i>Konang sat sip tu Pikgira pulik te nonde</i>	Konang has moved over to Pikgira and very
<i>purek</i>	soon he is going to arrive
Chorus	Chorus
<i>Ee na ee na</i>	<i>Ee na ee na</i>
<i>Konang san puek sa buer ka sa gerger nam</i>	Konang has arrived but he is lost and he is
<i>den toto keke am den toto kapte mie</i>	looking where to come ashore and does not
	know where to come ashore
Chorus	Chorus
<i>Ee na ee na</i>	<i>Ee na ee na</i>
<i>Konang sa seng tsial ka sa borbor em da</i>	Konang has walked over and is trying to find
<i>matkanut</i>	his way into the place of the dead
Chorus	Chorus
<i>Ee na ee na</i>	<i>Ee na ee na</i>
<i>Konang sa to ka sa ka talakes na ie kasa</i>	Konang is carrying his canoe over to the
<i>tsieng to bouk</i>	edge of the shore

Chorus	Chorus
<i>Ee na ee na</i>	Ee na ee na
<i>Konang sa tu te mem ban a nes ka sa ger katiptan a nes</i>	Konang is now standing at the side of the road and is now looking across the road
Chorus	Chorus
<i>Ee na ee na</i>	Ee na ee na
<i>Konang sa tu te ka sa ger te e le a samang ter i mon?</i>	Konang is standing there and looking and wondering what is this in front of me?
Chorus	Chorus
<i>Ee na ee na</i>	Ee na ee na
<i>Konang sa yes kiptie ka sa laktip ka sa am sina bam isien ka sa los tu la matkanut</i>	Konang has now stopped looking and has crossed the road and has entered into the place of the dead
Chorus	Chorus
<i>Ee na ee na</i>	Ee na ee na
<i>Konang sa los ken i turuan di sagare ka die sa ngat isien ka de la a puets si wa os a ka er sina anio ki giet</i>	Konang has entered and his friends have seen him and saying to him thank you for coming here and leaving our world behind
Chorus	Chorus
<i>Ee na ee na</i>	Ee na ee na
<i>Konang a puet si wa ge sa i kes wa i lien a liom ki wa ka ye te i mon a na sie wande muel yon i te i mon anio te i mo ki wa.</i>	Konang thank you we have brought you here in your house and this is now your place and you will dwell here as this is your place.

Some Lihirians have criticised the inclusion of landscape alterations and novel challenges confronted by the deceased in *tsure* ritual songs, insisting that the description of the journey to the Ailaya must be recited in traditional form following the original landscape and place names. However, the incorporation of the physical (and social) changes to the landscape into the ritual process is consistent with *tsure* form; the journey of the soul is described as people imagine it within historical time and space. These criticisms essentially reflect a more general tension between a discourse of custom that demands ‘pure’ traditional performances, and the adaptations that keep custom relevant in a contemporary context. Ultimately, these narratives about travelling across the broken landscape are an explicit commentary on the disruption that mining has brought to Lihirian sociality. The excision of ground through mining cuts to the very foundations of Lihirian relatedness, or what Roy Wagner (1998) has termed human focality. The Ailaya complex now embodies the broader social and political divisions in Lihir, marking a point of convergence for contrasting epistemologies of place and landscape.

In the event, *tsure* ritual songs are not simply ‘texts’ about the life of the deceased. These lyrical manifestations reflect a certain experiential dimension of landedness. In other words, a sense of being is constituted through the performance of place. Moreover, through the *tsure* ritual process the cosmos is reconstituted and

reinscribed upon the landscape. But these sentiments of place are immediately brought into sharp relief when the deceased confronts the devastated minescape on his or her journey to the afterlife. It is only at this moment, when the opposite of intimacy is revealed, a process identified by Weiner as '*topothanatia*: the death, withdrawal, effacement, or covering over of places' (2001: 234), that we can fully appreciate the profundity for Lihirians of changes to the Ailaya and the death of the surrounding landscape. Only when we follow this journey can we really contemplate the existential consequences for Lihirians that might arise from the total destruction of the Ailaya.

Ultimately, *tsure* laments are no longer solely about the loss of relatives through death, but also about the loss of land. These ritual performances serve to encode a spatial historicity or sense of the past on Lihir—celebrating the temporal span of the life of the deceased in spatial terms, whilst detailing the unfolding changes upon the landscape and Lihirian society. The fear expressed by some Lihirians that Tinetalgo clan members may secretly strike a deal to mine the Ailaya for their own gain (even if this is unfounded) also points to an entirely novel, if not totally inconceivable proposition for some Lihirians about the future of the cosmos. For questions about the loss of this particular part of the sacred landscape are simultaneously questions about the fate of their ancestors and those who are yet to die, together with the spiritual foundations that create a sense of spatial immediacy.

CONCLUSION

One by-product of the dialectical relationship between people and *tandal* is the tracing of meaning and intimacy across the wider Lihirian landscape. As *tandal* spirits demarcate places along matrilineal clan lines, local identities, movement and the minutiae of daily life are closely interwoven with the symbolic ordering of space. This process is more readily observable at particular localities around Lihir, but the relationship between the broader inward-focused cosmography and social praxis is less immediately obvious. Further work remains to be done to better understand Lihirian linguistic axes of spatial differentiation—how the processes of deixis are manifest as forms of spatial poesis. However, we hope to have demonstrated that the elaboration of this involuted cosmography is historically embedded in social processes and, more pointedly, in the ways in which Lihirians have responded to externally imposed change.

It comes as little surprise to many Lihirians that the irreversible transformation of their cultural lifeworld has resulted from the exploitation of this sacred complex. Whilst some publically relate negative change to the immorality of capitalism (and the sorts of inequalities peculiar to resource development), which is ideologically contrasted with customary ways, other Lihirians offer an alternative critique. Some allude to the potentially apocalyptic consequences of disrespect and abuse of a landscape redolent with spiritual forces and the history of their ancestors, and of

the Ailaya specifically, as the fundamental site of transformation, where the world was made and continues to be remade. However, as Weiner (2004: 11) reminds us, we need to recognise such critiques as an attempt to re-inscribe ancestral agency through the medium of mythico-cosmological predictions, which in themselves are also events in the world, reactions to contemporary pressures, power imbalances and external intrusions.

Such forms of mythopoesis are rendered more intelligible through comparison with the everyday experience of place. Whilst major alterations to the landscape are felt most conspicuously through changes to mourning rituals, in more mundane contexts the loss or 'death' of places, particularly *tandal* sites, is often registered upon the body. In 2010, young and old men from the Masnahuo subclan living within the Kapit district noted the presence of sores, sickness and deformities on their bodies, held to result from disturbances to and destruction of their *tandal* sites. Similar place-related bodily effects have been noted elsewhere throughout Lihir since the inception of mining activities, signalling the intimate identification between people and place, and the symbiotic relationship between clan members and their *tandal*. Within the mine-impacted areas, for both individuals and communities, senses and experiences of place are now doubly characterised by notions of absence and deterioration.

Despite the defacing and realignment of the landscape, and the resulting socio-political division, the basic structures of spatial relations have remained substantially unmodified. Instead of directing Lihirian interests outwards, these changes have largely intensified the focus back inwards. Previous links through marriage and exchange to settlements of the Louise caldera area have since assumed a vastly inflated significance as primary avenues for accessing the wealth now produced from this ground. Whilst the wider Ladolam area has always been culturally important and senior men from the surrounding villages played vital roles as custodians of these sites, this does not appear to have furnished the nearby communities of Putput, Kapit and Londolovit with any particular political or economic influence. It is likely that the volcanic hot springs, sulphuric stench and poorer soils rendered this area less hospitable and more marginal than most of the other parts of Lihir. However, the advent of mining has inverted the social topography of the islands. Social relations have been reconfigured as these communities have become the epicentre of development and now wield unprecedented political and economic power. If interests in this area were once primarily cultural, they have since been eclipsed by new economic imperatives. The earlier religious-economic equilibrium is now permanently destabilised as the political, religious and economic aspects of this landscape are split apart and the management of cultural heritage is increasingly corporatised.

Few Lihirians are willing to speculate in any detail on the ramifications of the destruction of the Ailaya. It could be that such an event is simply beyond the capacity of imagination. Some have speculated that such an occurrence could create cataclysmic consequences, ranging from a complete entropic decline to

outright moral decay. There is a form of mythopoesis at play here as existential concerns are formulated through mythico-cosmologies. But, for the most part, these questions are now overwhelmed by the contemporary challenges of political pressure and imbalance related to the distribution of mine-derived wealth, which constantly threaten to unravel the very fabric of Lihirian society and bring mining operations to a halt. For the vast majority of the population, daily life has been thoroughly reoriented around the political and economic exigencies of resource development.

Arguably the world has now come to Lihir, confirming earlier cosmological predictions about Lihir as the axis of the universe. From this perspective, it might be argued that if mining has facilitated the (partial) arrival of the new millennium, then it is also possible that the 'return' to the Ailaya has already taken place. Mining has pulled upon all relationship forms, drawing everything back to the Ailaya. Thus, it may be that the physical site has already served its cosmological purpose, and that it is the mine which now serves as the focal point for the Lihirian universe, in a fundamental reorientation and restructuring of the future. Whilst some mine managers, and perhaps the local political elite, may find it advantageous to embrace such a view, it seems unlikely that many other Lihirians would recognise or accept this view *in toto*. People will continue to die, and obligations to the deceased will remain. The destruction of this sacred landscape will surely render the discharge of these obligations more difficult in the future. For this is not an abstract universal journey to the afterlife, or a spatiotemporally delinked formulaic description. Nor has the Lihirian afterlife been entirely replaced by Christian theological reckonings on the departure of the soul, or the classic Cartesian separation of the material and the spiritual. Rather, the cosmological realm remains inextricably connected with—indeed dependent upon—an inhabited, material landscape that is imbued with historical, cultural and relational qualities.

If we are to avoid the sort of political economic analysis that leads to a depressing historical teleology in which all that is sacred is to be rendered profane or, perhaps more appropriately for Lihir, simply reduced to waste, then we need a more subtle understanding of these shifts that might account for particular adaptations. One exit route from this Occidental quagmire is mapped in Robert Hertz's 1907 seminal essay on death, in which he demonstrates a close correlation between the fate of the soul and the decay of the corpse. More recently his insights have been considered in relation to the material changes to mortuary ritual, where the adaptation of funerary rituals reflects changes in ideas about death, and vice versa (Venbrux 2007). In thinking about Lihir, this insight can be further extended to encompass questions about the landscape. As we have seen, changes to the landscape have been reflected in the adaptation of ritual practice; rituals have been reworked and reframed to make sense of new challenges and dislocations. New ontological relationships to the landscape are likely to give rise to new ideas about death, or even a reformulation of the existential order. The significance of the Ailaya is not in question, but its fate, especially as this is directed by Lihirians

remains uncertain. The Ailaya may yet prove unnecessary in the final journey of Lihirians to the afterlife, marking the beginning of the end-point for traditional Lihirian cosmology, and the end of its beginning.

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NOTES

- 1 Although see Wagner (1986) and Eves (1997).
- 2 See Schieffelin (1976), Feld (1982), Moyle (1983), Weiner (1991), Stokes (1994), Hirsch and O'Hanlon (1995), Feld and Basso (1996), Stürzenhofecker (1998), Tamisari (1998), Vanclay *et al.* (2008) and Gillespie (2010).
- 3 See Kahn (1990), Keen (1993), Ballard (1994), Tonkinson (1997), Jorgensen (1998), Weiner (1999), Impey (2002), Stewart and Strathern (2002), Halvaksz (2003), Roseman (2003), Wassman (2003) and Moretti (2007).
- 4 See Foster (1995) who also provides a thorough overview of the early ethnographic work by F. L. S. Bell on Tanga. See Groves (1934–35), Fergie (1985) and Gunn (1987) for ethnographic accounts of Tabar social and ritual life.
- 5 The Ailaya has been known by various spellings, including Alaya, Alaia, Ilaia, and Ailaia. This partly reflects the presence of six dialects in Lihir, and the absence of a standard orthography. The spelling employed here reflects the wishes of the Lihir Cultural Heritage Association (see Bainton *et al.* 2011).

- 6 For examples from New Ireland and Milne Bay, see Bell (1936: 330), Malinowski (1961: 72), Clay (1986: 50) and Kramer-Bannow (2008: 195). For examples from the PNG Highlands, see Ballard (1998: 70), Wagner (1972: 111–112) and Weiner (1991: 4).
- 7 In other instances Tumgiet refers to forefathers and more recently to Christian notions of God, reflecting a more general process of religious syncretism.
- 8 However, the changes brought to Lihir society through rapid industrialisation have led to a proliferation of leadership types, meaning that many modern male leaders do not fulfil traditional moral obligations.
- 9 Mihalic (1971) lists the term *tambaran* as originating from the Gazelle Peninsula, New Britain. *Tambaran* is generally used to refer to ancestral ghosts, secret systems of ancestor worship, or wooden masks and bullroarers used in *tambaran* cults. See Gardi (1960) and Lattas (1989, 1992).
- 10 Colin Filer, John Burton and Martha Macintyre, who were engaged as anthropologists in Lihir, have noted to us that the Ailaya received much less attention during the early stage of the project, particularly in comparison to recent years.
- 11 The substantial corpus of anthropological analysis concerning sacred sites and mining in the Australian context provides a useful point of comparison. See, in particular, Berndt (1982), Keen (1993), Merlan (2004) and Trigger and Robinson (2004).
- 12 For ethnographic accounts of similar mortuary cycles in New Ireland see Powdermaker (1971), Clay (1986), Foster (1995), Wagner (1986) and Eves (1998).
- 13 Michael Wood (2004) provides a similar account for the neighbouring Kamula, where ceremonial songs comprised of place names manifest the presence of the deceased in ways that emphasise their absence and creates grief.

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