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Medical Pluralism and the Maintenance of a Traditional Healing Technique on Lihir, Papua New Guinea

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Papua New Guinea's mining projects in many ways provide the main context for the nation's incorporation into a globalized economy. They are the vehicles for cultural modernization and encounters with the institutions of industrialization. But for the communities on whose land these mines are constructed the changes sometimes seem piecemeal and disappointing. The dramatic changes in standards of living never quite fulfill the dreams that people had when they agreed to the mining lease. Traditional authority structures often collapse as new ways of achieving wealth and status are introduced. Cultural traditions — especially those involving specialist esoteric knowledge — and local languages are often casualties to the processes of modernization, improved access to formal education, and incorporation into the cash economy.

Even when the transformations in health, education, and employment appear to be rapid and extreme, there are many local people who feel that they have not benefited in the ways that they envisaged when the mine was initially proposed. The persistence of aspects of their everyday lives in the face of change does ensure, however, that many of their unique traditions and ceremonies continue to thrive and co-exist with new institutions introduced in the context of mining. Improvements in health services and in the health of the affected communities are among the criteria by which social impact is commonly assessed. While local people usually welcome the provision of hospitals and public health programs, the shift to using biomedicine often means that healing traditions are eroded and traditional knowledge lost in the process. This brief case study describes and illustrates the persistence of an ancient healing procedure, cranial trepanation (or *kuel pas* in the local Lihir language), in the context of major changes in health services in a Papua New Guinea mining community.

In 1995 a large gold mining project was established on Niolam, the largest island in the Lihir Group in New Ireland Province. The leaders of the Lihirian community drove a hard bargain with the government and the Lihir Gold mining company before agreeing to the mine. From a decade of negotiations they produced an Integrated Benefits Package, which included commitment to the improvement of health service provision by both the national government and Lihir Gold. The quality of facilities exceeds those for most rural areas in Papua New Guinea, with higher staff/patient ratios, well-equipped wards and an operating suite as well as a well-stocked pharmacy. The public

health programs include immunization, malaria control, and maternal and child health programs.

Lihirian people have embraced these programs enthusiastically and our research on the social impact of new medical services (Macintyre and Foale, 2004; Macintyre, 2004) reveals that for the majority of Lihirian people a trip to the clinic is the first resort when they feel ill. At the same time, many traditional herbal medications and healing techniques continue to be used in conjunction with biomedical treatment, or when people are dissatisfied with its outcome. The reasons for combining the methods of healing are usually pragmatic as people generally do not see the two systems as incompatible. Some choose to visit a local healer because they have been successfully treated in the past for the same illness; others go because the trip to the clinic will take too long or because they do not have the money to pay for transport. Medical treatment at a hospital or clinic costs relatively little as the services are government-funded, while traditional healers usually require quite substantial payments (in cash, kind, or traditional shell valuables) — a factor that might account for the high number of people choosing to go to a hospital first.

The Lihirian healing tradition has proven remarkably resilient. Biomedical treatments were first introduced by the Catholic missionaries in the 1920s and there has been a hospital on the main island for over half a century. From the period following World War II the government has provided basic medical services, in the form of village Aid Posts. The Lihir Islands are remote from administrative centres and so services have often been under-funded and erratic — a situation that was probably conducive to the persistent use of traditional medicines and healing techniques. Over the years, it seems that hospital and clinic practitioners have not opposed traditional practices and neither have the traditional healers objected to their patients going to the medical services for treatment. This tolerance and acceptance of difference has no doubt contributed to the pluralist approach to medical treatment by Lihirians. Moktel herself is happy to try Western medicine when she is ill and, like her patients, often combines different medicinal regimes. In this situation of mutual tolerance or respect, pluralism has flourished.

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1. Trepanation is from the Greek word meaning "borer or auger." There is evidence that it was practised in Neolithic times in Europe and archaeologists have found trepanned skulls on almost every continent (see Arnott et al 2003). Strictly, trephination means a circular opening made in the skull by an instrument called a trephine which was invented for surgical use in Europe in 1628. The two terms usually are used synonymously. We here use "trepanation" as the Melanesian practice did not entail the use of a specially designed surgical tool.



Figure 1. *Brigid Moktel (left) performing the initial scalp cut of the Kuel Pas procedure on Alois Gramnot. Note the coconut spathe vessel for washing, and catching blood at Alois' feet, and the inner section of a banana trunk that he is resting his head on. The latter is ostensibly to bite on for pain management, but Alois never found the need to use it, remaining perfectly calm throughout the whole procedure. The leaves at bottom right (*Kats *in Lihirian) are for cleaning away blood from the patient's head, and have ritual significance.*

Lihir appears to be one of the few Melanesian cultures where the practice of cranial trepanation (or trephination)[1] continues as a standard form of medical treatment for a range of injuries and illnesses of the head. This involves cutting through the skin and exposing the skull, then scraping away the bone to allow the bad blood to escape — often so that the *dura mater* (the fibrous membrane that covers the brain) is exposed. There is considerable evidence that the practice was widespread across Melanesia at the time of European intrusion and colonization, where it was used most often to relieve pain from head injuries acquired in fighting (Arnott et al., 2003; Crump, 1901; Seligman, 1906). Cranial trepanation is still used in Western medical traditions, where it is sometimes called "burring."

On Lihir it is still common to see people with scars from several operations on their foreheads, although now there is only one woman who is recognized as having the skill to perform the operation safely: Brigid Moktel of Malie. The knowledge and skills required are transmitted within lineages



Figure 2. *Brigid Moktel indicating to observers the small fracture in Alois' skull through which sub-cranial blood was oozing, obviating the need to scrape the bone in this case.*

and at present she, her sister Martha, and her kinsman Michael Tutun work together as healers adept in the art of trepanation. Moktel was taught all elements of the art by her mother's sisters but she believes she lacks true diagnostic skills and relies on Tutun to palpate the skull and determine the place where the incision is to be made. A younger relative of Moktel, Adelaide Bak, has been observing her trepanation work over the years with the aim ultimately of acquiring and using these skills, but as yet has not performed an operation herself. Bak has not been learning Tutun's skill, and he has no other apprentice. As such the procedure is presently in danger of dying out. Moktel has tried to pass on her knowledge and skills to others but she says that they were too squeamish and did not commit themselves. Many of the people we have interviewed have expressed pride in this aspect of their culture, but none wanted to learn how to do it themselves.

Trepanation is used for a range of illnesses and injuries: persistent severe headaches, epilepsy, mental illnesses that have hallucinations or delusory states as symptoms, and fractures (actual or suspected) of the skull.



Figure 3. *This image is taken during one of the twice-daily post-operation cleaning procedures that Brigid Moktel does each day for around three weeks. She removes the leaf that is left in the wound (see Figure 4) then cleans around and inside the wound, using water applied with the frayed stem of a variety of ginger that is a common ornamental around villages.*

Moktel's view, based on over 30 years practice, is that the operation is most efficacious in cases of fracture or very severe bruising of the skull as it relieves the pressure from fluid that accumulates at the site of the injury. This fluid she refers to as "bad blood" and the object of the surgery is to make an opening through which the bad blood can leave the head. According to Lihirian understandings of the body and its functions, blood is the substance that is most implicated in illness. Blood can be affected by blows or falls, where the accumulation of black or "bad blood" is visible in the form of bruising or swelling. It can also be contaminated or "stopped" by the introduction of foreign substances — fragments of stone or wood or other objects.

As a healer, Moktel holds a naturalistic view of illness and injury. She, like most Lihirians, considers that almost all illness ultimately is caused by sorcery, but that the power of the sorcerer is *to cause the misfortune* that makes a person afflicted by a disease or subject to an injury. The disease or injury



Figure 4. *A leaf from a medicinal plant called Bumbrier in Lihir (a species of Psychotria). The leaf, which is left inside the wound, functions to keep the top of the wound open (it may or may not have anti-microbial properties). As the wound heals (from bottom to top – see Figure 5), the leaf will gradually be excluded from the wound.*

can be healed by a person who has no knowledge of sorcery and the healer can in no way ensure that the sorcery that made the person ill might not then be the source of another ailment, or cause another member of the family to become ill. The healer's art is to deal with the bodily manifestation of misfortune, as only people who know anti-sorcery magic can counteract the sorcery that initiated the illness episode. In this way she sees herself working in ways that are analogous to those of a biomedically trained doctor alleviating symptoms and healing.

She does use what Westerners might consider "magic," but what she refers to as "talk," to render her techniques efficacious. Knowledge of the words that must be said at various points during the operation is crucial. If they are not said, or said inaccurately, then it is possible that the procedure will not be effective. The words said during the cutting and scraping process establish a strong bond between herself, the tools she is using and the skull



Figure 5. *A small piece of coconut leaf is used as a gentle scalpel, to keep the upper parts of the wound open, so that it heals from bottom to top – Brigid Moktel explains that this is to prevent the formation of any abscesses as a result of uneven healing. The Bumbrier leaf shown in Figure 4 also assists in this function.*

she is scraping so that the three elements are in unity. As the head is sacred it is considered dangerous to refer to it directly, so the metaphor of a turtle is used. Thus the skull is the carapace, the brain is the soft body beneath and the "strength" of the turtle is invoked to ensure that the person's head and the treatment will be similarly "strong." Knowledge of the exact Lihirian words as well as training in the theory underlying the techniques is acquired during an apprenticeship that may last years. The person must pay his or her

2. In the photographs Moktel is wearing a shell valuable made from *chama pacifica* and decorated with banana seeds that was given as part-payment for her transmission of some of the esoteric knowledge of "talk" to Martha Macintyre.
3. One of the readers for this article expressed concern about "secrecy" and photography. Lihirian people do not have any taboos about images of people, deceased or living. In fact, as they know that we have taken many photographs over the years, they sometimes ask for copies of images of people who have died as mementos. This procedure, like all healing techniques on Lihir, is not secret and is performed openly. We were invited by the patient Alois Gramnot to observe and take pictures and videotape the procedure. Both Gramnot and Moktel requested and received copies of the video and a poster which we made showing the major stages of the operation.



Figure 6. *Rebandaging the wound between cleaning treatments. Note the mix of traditional and modern materials used.*

teacher even though transmission is usually exclusively to kin. Formerly payment was in shell valuables although nowadays money is also accepted.[2] The operation is performed in public[3] so the cutting and scraping techniques are not considered secret knowledge, but nobody would perform them without having the esoteric knowledge, or the "talk" that ensures that they work. The head cutting is done ceremoniously with attention and respect paid to the patient. All tools and plants used are carefully prepared. If the person is an old or politically important man, then the operation takes place in the men's house of his clan. As his head is in a vulnerable state afterwards, it is always covered — traditionally with leaves, but today with both leaves and bandages bought from the local store.

In the case depicted, a 59 year-old man had been experiencing severe headaches. He had attended the hospital and had been prescribed analgesic tablets which he tried but found ineffective. When Moktel cut his head she re-



Figure 7. *Dr Vui Mea stitches a head wound at the new hospital at Lihir.*

vealed a small fracture was oozing a small amount of blood, thus obviating to need for further scraping of the bone. He was an important clan leader or "bigman" and so the cutting of his head required some ceremony. A pig was killed and a small feast held in his honour. Small feasts can also be held if an elderly person recovers from a serious illness that has been treated entirely by biomedical procedures. The social rituals that accompany illness and recovery are incorporated into contemporary responses to health crises regardless of treatment, reflecting the pragmatic way that all health-seeking behaviours are



Figure 8. *The new hospital at Lihir.*

considered.

Medical treatment at the clinic, traditional herbal and surgical remedies, Christian prayer, or consultations with people who know the magic that can counteract sorcery are all part of a treatment continuum and a person who is ill might try each one sequentially. This medical pluralism is common in many parts of contemporary Papua New Guinea (see Frankel, 1986; Lewis, 2000). On Lihir many traditional healing techniques are commonly used — those involving infusions of herbs, bleeding by making small shallow incisions around a swelling or at the site of pain and the application of herbal ointments are performed by men and women who have learned them and paid for the knowledge (see Macintyre, 2003). Some traditional medicines are common knowledge and no specific training is given. Generally the plants used grow around villages so that they are readily accessible. The privileging of biomedicine as the usual first resort is probably due to the fact that the clinic treatments are in many ways consonant with Lihirian ideas about illness and healing and often effective.

As the most common illnesses on Lihir are respiratory tract infections and



Figure 9. *A scene from a recent Island-wide malaria blood-slide survey at Lihir, conducted by staff from the new hospital.*

malaria, both of which are usually cured by drugs available at the clinic, the widespread acceptance of such treatment reflects Lihirian pragmatism about new knowledges, technologies and social practices generally. The Lihirian emphasis on "bad blood" as a cause of illness is one reason why people are willing participants in the clinic's blood-testing programs that are part of a public health strategy aimed at identifying and treating malaria and filariasis as well as eliminating the vectors by draining ponds and using larvicide against the anopheles mosquitoes that carry the diseases.

But the advent of the gold mining project has brought with it a wide range of social and economic changes and Lihirians, who for many years resented government neglect and lack of services, are keen "modernists" in many respects. The direct impact of the mine has wrought major social and economic change. While many aspects of Lihirian culture continue to flourish, the establishment of efficient medical services and the improved access to formal education will probably mean that over time some cultural healing traditions will be abandoned or forgotten. Despite the existence of one protégé, the continuation of this practice on Lihir is by no means assured. In the

meantime, the people of Lihir are able to choose between the most modern medical services available in the country and a range of traditional treatments, including trepanation — one of the most ancient forms of surgery.

References

Arnott, R. S. Finger, and C. Smith
2003 *Trepanation: History, Discovery, Theory.* Lisse, Netherlands: Swets and Zeitlinger,

Crump, J.A.
1901 "Trephining in the South Seas." *Journal of the Royal Anthropological Society,* 31:167-172

Frankel, Stephen
1986 *The Huli Response to Illness.* Cambridge: Cambridge University Press.

Lewis, Gilbert
2000 *A Failure of Treatment.* Oxford: Oxford University Press.

Macintyre, Martha
2003 "Indigenous Healing." Pp. 33-47 in T. Robson, ed., *Complementary Medicine.* Sydney: Allen and Unwin.
2004 "'Thoroughly modern mothers': maternal aspirations and declining mortality on the Lihir islands, Papua New Guinea." *Health Sociology Review: International Journal of Health Sociology: Policy, Promotion and Practice,* 13(1): 43-53.

Macintyre, Martha and S. Foale
2004 "Global Imperatives and Local Desires: Competing Economic and Environmental Interests in Melanesian Communities." Pp. 149-164 in Victoria S. Lockwood, ed., *Globalization and Culture Change in the Pacific Islands.* Upper Saddle River, NJ: Prentice Hall.

Seligman, Charles G.
1906 "Note on a Trephined Skull from New Britain." *Man* 6: 37-38.