



**Journal of the Linguistic Society of Papua New Guinea**

**Vol. 32 No. 2, 2014**

**Proceedings of LSPNG Conference “Celebrating Tok Pisin & Tok Ples”**

**September 17-19, 2014**

**Madang, PNG**

Proceedings from the combined LSPNG conference and ICTM Study Group on Music and Dance of Oceania symposium

## Mining and language change in the Lihir Islands

Dr Kirsty Gillespie

Research Fellow, Centre for Social Responsibility in Mining

Sustainable Minerals Institute

The University of Queensland, Australia

[k.gillespie@uq.edu.au](mailto:k.gillespie@uq.edu.au)

*Gold mining has taken place on the Lihir Islands in Papua New Guinea (PNG) since 1995. Lihir community leaders argue that mining has had a detrimental effect on their indigenous language due to the in-migration of people from other parts of PNG, who speak the PNG official language of Tok Pisin amongst themselves and Lihir people with whom they live and work. This paper presents some preliminary observations on language change in Lihir by examining in-migration and language practices in the Islands, drawing upon interviews with Lihir people. The paper also engages with Lihir song in order to reflect upon language change and possible modes of preservation.*

### Introduction

The Lihir Group of Islands lie in New Ireland Province, in the far north-east of Papua New Guinea (PNG). The population of approximately 14,000 people speak Lihir, an Austronesian language, and a traditionally oral language, which can be further divided into a number of dialects (approx. 6-8, the exact definition and number is uncertain). Since the mid-1990s the Lihir Islands have hosted one of the world's largest gold mines, currently operated by Newcrest Mining Ltd. Lihir people have been very vocal about the changes that mining has brought to their lives, and one of the most prominent concerns is about the sustainability of their language.

Lihir elders and leaders have argued that mining has had a negative impact on their language due to factors such as in-migration of workers and others who settle in the islands. In particular, it is said that the official PNG language of Tok Pisin is dominating Lihir language use and its transmission and changing the language irrevocably. This has consequences not only for everyday speech, but for other forms of verbal expression, such as Lihir song, an important part of Lihir ritual and the primary form of music-making in the Islands.

Language, as we know, is a dynamic phenomenon which is always subject to change. However, certain circumstances, such as rapid local development triggered by mining, can cause language to change in ways that seem quicker than usual, and this can be destabilising for a population. This paper explores this perceived threat to the Lihir language by looking at the effect that mining has had on Lihir life and how the Lihir language is currently being used, through the framework of ethnolinguistic vitality put forward by Howard Giles and his co-authors in the late 1970s. The paper foregrounds the viewpoints of Lihir people, their descriptions of language change as they see it and their concerns for the future. Finally, the paper

considers the role and function of Lihir song in preserving language. Firstly, however, I would like to give some background to how this research topic came about.

## **Background**

Tok Pisin is considered to be a language of development, and has its roots in industry, due to its being developed by plantation workers of different language groups in the Pacific to communicate amongst each other. Thus, the use of Tok Pisin in mining locations such as Lihir has special significance. The concern on Lihir is not with a new bilingualism (ie. a proficiency in Tok Pisin alongside the Lihir language) but with changes in the Lihir language as it appears to be dominated by Tok Pisin, the influence of which can be seen in such forms as word substitution, and switching between the languages (known as 'code switching'; see Mühlhäusler 1979, also Gillespie 2011). The increasing use of English is also seen to challenge Lihir language.

In 2009, I was involved in a workshop that was conducted around the four inhabited islands in the Lihir Group of Islands, with the aim of documenting the concerns of Lihir people about how they thought that their culture was changing because of the presence of the mine (see Bainton et al. 2011). The discussions during this travelling workshop formed a document known as the Lihir Cultural Heritage Plan (Lihir Cultural Heritage Committee 2009). In this document, four pillars are described that uphold Lihir culture, and one of these pillars is the Lihir language. Concerns about Lihir language cited in the Plan included the following statements:

- 'Lihirian language is changing; it is being mixed with Tok Pisin and English. Children are not learning language skills properly'
- 'There are changes in pronunciation/dialect; orthography; vocabulary; word order'
- 'These changes come through engagement with other cultures, marriages to outsiders, and development'

(Lihir Cultural Heritage Committee 2009: 30)

For several years I have played a support role to the Lihir Cultural Heritage Committee, now a formal Association (see Gillespie 2013). Although I am an ethnomusicologist by background, my current research project, and this paper, is driven by my desire to act upon the concerns of the people with whom I work. I seek to understand these changes and their effects in a systematic way, and to locate the position (and responsibility) of Lihir's mining industry in relation to this change.

## **Lihir language change and mining**

In order to understand Lihir language change and its relationship to mining, I have found Giles et al.'s framework of ethnolinguistic vitality useful as a starting point (1977, cited also in Meyerhoff 2011: 113). This framework allows one to explore the many variables that contribute to the complexities of a language. It considers three strands that affect the vitality of a language: status, demography, and institutional support. While it is useful to consider the three broad factors here in turn, which I will now proceed to do, it is important also to remember that these factors are not discrete, but intertwined, as will become clear.

STATUS	DEMOGRAPHY	INSTITUTIONAL SUPPORT
Economic status	Distribution	Formal/Informal
Social status	- <i>national territory</i>	- <i>mass media</i>
Sociohistorical status	- <i>concentration</i>	- <i>education</i>
Language status	- <i>proportion</i>	- <i>government services</i>
- <i>within</i>	Numbers	- <i>industry</i>
- <i>without</i>	- <i>absolute</i>	- <i>religion</i>
	- <i>birth rate</i>	- <i>culture</i>
	- <i>mixed marriages</i>	
	- <i>immigration</i>	
	- <i>emigration</i>	

Figure 1: The three strands of ethnolinguistic vitality (taken from Giles et al. 1977)

### Status

The Lihir language has a mixed status. On the one hand, Lihir people, simply because of being Lihir, generally enjoy a heightened economic status because of the royalties received through mining. The most powerful group of people on the island, the Lihir Mining Area Landowners Association (LMALA), have the most direct access to funds, and members of that association are all Lihir people and Lihir speakers. Thus, there is a sense that the Lihir language has a high economic and social status: if one was not Lihir (which includes speaking the Lihir language) then one would not have access to such wealth. Prior to mining, however, Lihir people did not enjoy such access to wealth, and considered themselves and their islands to be marginalised, very much a 'las ples'. So the sociohistorical status of the language can be considered to have improved over time. These perceptions are largely shaped by a view from 'without'—that is, how Lihir people consider others see them. From 'within' it is less clear: Lihir people not associated with LMALA have lower economic status (remembering that LMALA, although meant to represent all Lihir people, is comprised of landowners from the 'mining area', a restricted space), but may still hold strong social status due to their adherence to a customary way of life, something still respected within the islands.

### *Demography*

Similarly, there is a mixed picture of vitality in terms of demographics, and it is within this overarching factor that much of the Lihir concern lies. In terms of distribution, the Lihir language is located firmly within the Lihir Island Group of four inhabited islands, and the concentration and proportion of speakers of the language is quite high. As mentioned in the introduction, there are several dialects of the Lihir language spread across these islands. More research needs to be done to understand the boundaries and distribution of these dialects. Some claim that the dialect of the mining area and town, on the largest island known as Niolam, is dominating other dialects found further away. This is seen to be due to the attraction of Lihir speakers to those areas for work and play (Luke Zikinbel, pers. comm., 2 July 2014), but such dialect domination remains to be proven.<sup>1</sup>

With approximately 14,000 speakers, Lihir is not considered a small language group by PNG standards, and has not yet been classified as endangered. While the birth rate does not appear to have changed dramatically, the infant mortality rate has improved enormously since mining was introduced to the islands; this is largely due to improvements in health services. As a consequence, the Lihir population is now double that of the pre-mining era figure of 7,000 people, which is good news for language vitality.

But then we turn to mixed marriages, immigration, and emigration. There is a long history of mixed marriages in Lihir, from the early days of marrying into neighbouring islands and language groups along trade lines (Tabar and Tanga in particular) to the pre-mining plantation activity which brought people from further afield into Lihir for work. Pre-mining, there is a history of Lihir people emigrating to other parts of the country for education and for work, and it was not uncommon for people to meet and marry people from other language groups and start families, where the common language was Tok Pisin. Many of these people would later return to Lihir with the opportunities and wealth that mining promised, bringing their mostly non-Lihir speaking offspring with them. There are examples, however, of non-Lihir partners acquiring the Lihir language after a period of years living in the islands.

The mine on Lihir, currently operated by Newcrest Mining Ltd, is one of the biggest gold mines in the world. Mining activity occurs around the clock, 24 hours a day, 7 days a week; such an operation requires a large workforce. While many local Lihir people are engaged in the mining activities, a large number of outsiders travel in to work on Lihir. Some of these are expatriate workers from Australia and also New Zealand, but many more are Papua New Guineans from other parts of the country who fly in and out of Lihir on a regular basis for years on end. In addition, Lihir has attracted a significant number of migrants who have come looking for work or other opportunities, and it is this demographic who spend the most time in Lihir communities, interacting with locals and forming relationships with them. Thus, they are the group who are the primary concern when it comes to language change. However, when considered alongside the other factors that affect vitality as set out by Giles, the concern is contextualised, and one may even suggest that it manifests as a kind of 'moral panic'.

### *Institutional support*

Perhaps one of the most challenging areas for Lihir language is in the area of institutional support. There is currently no mass media available in the Lihir language. The community newspaper *Lihir i Lamel*, or 'Lihir

---

<sup>1</sup> This can be seen as a status issue; that this dialect has more economic and social status than other dialects, however, one should also note there is a discourse around *kastom* here, and Lihirians from this area are often described as culturally corrupt by speakers of dialects further away from the mine.

Today' has a culture column which occasionally produces articles in the Lihir language, but more often simply presents Lihir language vocabulary embedded in articles that are in either English or Tok Pisin. The existence of the paper is due to mining, as it is produced by Newcrest's media section. All television and radio received in the islands is in either English or Tok Pisin (or a mix of the two), as is the internet, which is now widely used on Lihir through mobile phones, and in the offices of the mining company and Lihir businesses. As English and Tok Pisin are the primary official languages of the nation, these languages are used by government and other service providers.

The education system on Lihir deserves a special mention here. Like the rest of the nation, Lihir experienced educational reforms in support of vernacular education for the early years of schooling, but has begun to switch back to using English due to a general dissatisfaction with the perceived outcomes of this system over time. This has happened irrespective of mining/development, though there is the view that if young Lihir people are to benefit from the mining in their islands through employment, they must become fluent speakers of English. There is one direct consequence of mining on Lihir schools, and this is the establishment of the Lihir International Primary School, operating primarily to educate the children of expatriate families living and working on Lihir. Affluent Lihir people now choose to send their children to the Lihir International Primary School, where the language of instruction is English, further compounding the lack of access to formal vernacular education in the islands.

In the past, children and young people would spend a lot of time in their community, with their elders, learning language and custom alongside them. With the introduction of formal education (around the time of missionisation), school-aged children began to spend whole weekdays away from their homes, which had an effect on the transmission of language and cultural knowledge. This pattern of being away from home during the day continues once children leave school and become employed by the mining company and associated businesses, working long hours in and around the mining town and the mine site. Lihir elders have complained that they are unable to pass on these traditions and fear that their knowledge will die with them. Lihir language is not often spoken in the workplace (only amongst Lihir people in an informal capacity) as English, and to an extent Tok Pisin, is the language of industry, and there is an emphasis on using these languages in the workplace for safety reasons (to make sure important information can be understood by everyone).

The Lihir Cultural Heritage Association, or LKEA (the acronym for the official Tok Pisin name, Lir Kalsarel Eritij Asosiesen), exists as a kind of institutional support for culture; their workings are conducted in the dominant national languages of English and Tok Pisin (ironic considering their role, but fitting considering their structure as a formal association—akin to government and other service providers). LKEA has been largely funded by Newcrest in the past (with a new shift to being funded through LMALA) so in this way mining can be seen, rather ironically, as a benefit to culture.

This brings us to perhaps the most all-pervasive institution in the Lihir islands: the church. Lihir people are predominantly Catholic, a religion which has been present in the islands for over one hundred years. The dominant languages in the Catholic church have also been English and Tok Pisin; today, whole services are conducted in Tok Pisin, though the pastor and congregation are almost always Lihir people. This is largely because of the pedagogy surrounding the church: pastors are trained by non-Lihirians who use one or both of the primary national languages, and the materials they use are also in these languages. While attempts have been made to translate the Bible into Lihir language, most Lihir people have found these attempts unsatisfactory because of the lack of a standard orthography, and tied with this, the diversity of dialects. In

addition, Lihir people have reported that religious concepts of the Bible have not been very well conveyed in Lihir cultural terms (Peter Toelinkanut, pers. comm., 8 July 2014). So the Bible in Tok Pisin remains the key text for Lihirians. There is some interest in increasing the use of Lihir language in the church: as the current Catholic Bishop for New Ireland Province is a Lihir man, it has been suggested that he could play a role promoting the use of his native language in the church, at least in the Lihir islands (Luke Kabariu, pers. comm., 2 July 2014).

While Catholic services and many songs are in Tok Pisin, it is important to recognise the unique convergence of this introduced religion with Lihir ancestral culture, the stronghold of Lihir language use. The Catholic Church permits, even encourages, the incorporation of Lihir culture into its services. Here I turn to Lihir song.

### Lihir language change and song

Lihir people freely compose Christian songs of praise in their own language. At a celebration to mark the re-opening of the Catholic church on Malie Island in the Lihir Island Group in July 2014, songs in Lihir language were sung throughout the ceremony. Most Lihir ancestral songs are typically short texts, around 3-4 lines long, sung over and over again in what can be called cycles, until the associated movements and ritual are complete. Below is the text of the cycle of a song that was composed by people from the island of Niolam and performed by all as they approach the newly opened church.<sup>2</sup>

<i>a parar pet a parar pet</i>	the clear vision the clear vision
<i>sa purek ka le giet (x2)</i>	comes to find us (x2)

<i>sa oo giet, sa purek en giet</i>	it fills us up, it comes to us
<i>ee da ga parar pet te isien</i>	it will be clear

Songs can act as receptacles of language. They may be more immune to change than regular spoken language because of their formulaic nature and repetition in performances. In Lihir there are examples of songs which may either borrow whole unknown languages from elsewhere (through trade) or continue to use language which is no longer intelligible (see Gillespie 2008). This suggests that songs can actually work to preserve language, but more research must be undertaken to understand this possibility.

Newly composed Lihir songs, however, often reflect the ways in which language is used in Lihir today. Some songs show changes in vocabulary, especially the use of Tok Pisin words – this is particularly evident in songs of an improvisory nature, such as the mortuary song genre *tsure*, the text of which is tailored to suit the life of the deceased at the moment that it is performed (see Bainton et al. 2012). While new and improvised songs are not at all uncommon in the Lihir musical landscape, there is a great bank of Lihir ancestral songs that continue to exist and be performed many decades, even a century, after they are first heard. These provide a great resource for the Lihir language.

### Conclusion

There appears to be little existing research that addresses language change and mining directly. Considering the enormous effect that mining has on intangible cultural heritage around the world, and in particular in language diverse regions such as Australia and Melanesia, this is surprising, and also alarming. This paper has

---

<sup>2</sup> As there is as yet no standard orthography for the Lihir language, the text presented here is best considered an estimation.

examined a case study of mining in the Lihir Islands of PNG and its effect on the local language. Such research is timely, considering the current and planned developments (and also planned closures) of mining operations in PNG, and the need to consider the effect of these developments on indigenous peoples. More research should be conducted across the country with this goal in mind.

In Lihir, people have blamed mixed marriages and migration in relation to mining and its effect on Lihir language disproportionately: on closer inspection and discussion with Lihirians, just as much concern is raised about the lack of vernacular language in both education and the church. Therefore, while not insignificant, mining is not the only factor affecting the Lihir language change in the present day. The language continues to be robust in its use across the islands, especially in customary rituals, and in formal songs, even when those songs are in praise of an introduced religion which largely operates in a different language context. These formal songs may even act to preserve Lihir language. Further work must be done to map language change in Lihir in the face of the extraordinary life change the people of the islands have experienced in the last twenty years – and will experience in the circa twenty years of mining that is to come.

### Acknowledgements

The research for this paper and my attendance at the LSPNG conference and the symposium of the ICTM Study Group on Music and Dance of Oceania was funded by a University of Queensland Early Career Researcher Grant. I continue to be indebted to the people of Lihir generally, and to the members of LKEA in particular, for welcoming me to their islands and participating in my research.

### REFERENCES

- Bainton, Nicholas A., Ballard, Chris, Gillespie, Kirsty and Hall, Nicholas. 2011. Stepping Stones across the Lihir Islands: Developing cultural heritage management in the context of a gold mining operation. *International Journal of Cultural Property* 18: 81-110.
- Bainton, Nicholas A., Ballard, Chris and Gillespie, Kirsty. 2012. The end of the beginning? Mining, sacred geographies, memory and performance in Lihir. *The Australian Journal of Anthropology* 23 (1): 22-49.
- Giles, Howard, Richard Y. Bourhis and D.M Taylor. 1977. Towards a theory of language in ethnic group relations. In Howard Giles (ed.) *Language, Ethnicity and Intergroup Relations*. London, New York: Academic Press, 307-348.
- Gillespie, Kirsty. 2008. *Ae Tinil Wen Lihir/ Music of Lihir*. Recordings by Kirsty Gillespie (2008) and Otto Schlaginhausen (1908). Notes by Kirsty Gillespie and Nicholas Bainton. Lihir Gold Limited LHR001. 1 compact disc plus booklet.
- Gillespie, Kirsty. 2011. Breaking the *tikol*?: Code-switching, cassette culture and a Lihirian song form. In Birgit Abels (ed.), *Austronesian Soundscapes: Performing arts in Oceania and South-East Asia*. Amsterdam: University of Amsterdam Press, pp. 193-204.

- Gillespie, Kirsty. 2013. Ethnomusicology and the mining industry: A case study from Lihir, Papua New Guinea. *Musicology Australia* 35 (2): 178-190.
- Lihir Cultural Heritage Committee. 2009. *The Lihir Cultural Heritage Plan: Defining the Lihir Cultural heritage Program*. Lihir: Lihir Cultural Heritage Committee.
- Meyerhoff, Miriam. 2011. *Introducing Sociolinguistics*. 2nd edn. London, New York: Routledge.
- Mühlhäusler, Peter. 1979. Code switching in Papua New Guinea: Local languages versus New Guinea Pidgin, Hiri Motu and English. In S.A Wurm (ed.), *New Guinea and neighbouring areas: A sociolinguistic laboratory*. The Hague: Mouton.