# The Naasioi Otomaung Alphabet of Bougainville

## A Preliminary Sketch From Afar

Piers Kelly

Abstract. The Naasioi Otomaung alphabet first came to light during the Bougainville Crisis of 1988-1998. Created by the Naasioi-speaking leader of a politicoreligious movement in Kieta district, its emergence follows the pattern of numerous other scripts of Asia and the Pacific that have developed in recent times in the context of anti-colonial confrontations (Kelly, 2016; 2018a). This paper provides the first ever public report on the form, structure and context of the script, early efforts at documentation, and its prospects for future development. The script exhibits a formal influence from cursivised Roman while its inventory of letters presents as a cypher for the English alphabet, including letters such as  $\langle x \rangle$  and  $\langle z \rangle$  that are not present in standard Naasioi orthographies (Hurd and Hurd, 1966). From the perspective of its users, however, the alphabet is designed to universally encode any language: the word otomaung is in fact a neologism roughly meaning 'able to express anything'. The term is also polysemous, variously denoting the letter <A>, as well as the religious community in which the alphabet was created. The forms of the letters, meanwhile, are said to have been inspired by ceremonial scarring, a practice that is now rare. Reproducing these forms in writing is thus seen as an act of cultural preservation by other means. Although at one time the script became part of a local school curriculum, literacy is now limited to a small number of individuals. Systematic documentation and description of Naasioi Otomaung has suffered various setbacks, from political disruptions to the COVID-19 pandemic. As a result, most of the documentation to date has been carried out by post, email, and social media correspondence. Despite the obvious limitations and inefficiencies of these channels, 'virtual' fieldwork has been unexpectedly productive, resulting in an accurate record of the script, preliminary information about its historical and ethnographic circumstances and the development of a new font. With Bougainville's recent advances towards political independence, the Otomaung Naasioi alphabet may soon rise to greater prominence.

In this paper I partially describe the Naasioi Otomaung, a recently devised script of the Autonomous Region of Bougainville, Papua New Guinea. In broad terms I outline its formal and typological features as

Department of Archaeology, Classics and History Rm 308, C02 Building University of New England, Armidale NSW 2351, Australia E-mail: pkelly26@une.edu.au

well as its history and ethnographic context. On account of local political disruptions and the COVID-19 pandemic, face-to-face fieldwork in the Naasioi-speaking region of Bougainville has not yet been feasible. Nonetheless, with the aid of mobile phone calls, email and especially social media I have recorded foundational information on the history, ethnographic context, formal properties, structure and uses of this new script. Thus, in addition to providing primary documentation and description, this paper is intended to demonstrate that digitally mediated fieldwork can produce surprisingly rich results. In turn, it is my hope that this preliminary work on the Naasioi Otomaung alphabet will serve as a secure basis for future ethnography based on face-to-face participant observation in the field.

#### Motivation

Primary writing systems, and their derivatives, have always been a major focus of attention for palaeographers and grapholinguists. The analysis of these systems has generated insight into the origins and evolution of writing, permitted the diachronic reconstruction of script lineages, and set the parameters for establishing grapholinguistic typologies. Secondary scripts that have been deliberately devised in recent times have received less attention, perhaps because they do not seem to offer any imposing insights into the nature of writing. I have argued, however, that there is much to learn from secondary scripts, especially those that have been invented within small-scale, non-state societies in the context of recent colonial contact (Kelly, 2018a,b). The Cherokee and Vai scripts are well-known examples of this phenomenon but many others have also been documented and analysed.

Like all good objects of anthropological enquiry secondary scripts are self-evidently diverse while having surprising features in common. This diversity-universality axis can be approached in a straightforward grapholinguistic mode that attempts to describe and compare formal and systemic characteristics. However, by adopting wider perspective afforded by the anthropology of literacy paradigm, we can also attend critically to the historical determinants and political contexts of these scripts, as well as the various functions that they serve, and the cultural meanings that their users ascribe to them.

My research to date has focused on West Africa and Southeast Asia, two regions in which a bewildering array of new scripts have been invented within non-state societies over the past two centuries. Certain scripts such as the N'ko script of the Côte d'Ivoire and the Kayah Li script of Thailand-Myanmar have large communities of contemporary users. Others such as the Bagam script of Cameroon and the Sulit Air script of Indonesia are known from only a few fragmentary manuscripts. Others still, including Pa Chay script of Vietnam and Pahawh Khmu'

script of Laos have no surviving inscriptions and are recalled only in oral histories. Individual inventors in these two regions continue to develop secondary scripts, while every year scholars unearth more that have been overlooked in informal archives. Needless to say, the documentation of secondary scripts is far from complete.

Despite the growth of anthropological scholarship in this arena, with the important work of Cécile Guillaume-Pey, Konrad Tuchscherer, Carmen Brandt and others, I have often encountered resistance to their study. In conversation, some colleagues have expressed the view that they are not 'real' scripts, and that there are endangered scripts and languages that deserve more documentary attention from researchers. Others have pointed out that recent secondary scripts are rarely successful, especially if success is measured by the extent of the diffusion of the script and its transmission over multiple generations. Another objection is that the scripts themselves are often structurally cumbersome and that they simply add a distraction to the more important goals of orthography development for minority languages, and ultimately literacy in these languages.

On the whole, these objections are premised on utilitarian concerns and on implicit hierarchies of value where the relevant parameters of interest are the age of the scripts, their degree of 'naturalness' or 'authenticity', and their structural efficiency vis-à-vis the languages they are intended to represent. If such values and concerns are universally held, then we can register these objections as perfectly legitimate. However, numerous studies of literacy ideologies, of which Brian Street's contribution (Street, 1984) is most well recognised, demonstrate that such values are very much culturally and historically positioned and require ethnographic explanation in their own right.

From my perspective, new scripts deserve grapholinguistic and anthropological attention for the additional reason that they offer a rare insight into the diversity of human symbolic culture. At the same time, they can help us perceive what is *un*diverse about the way we do things with graphic codes in terms of both the 'obvious' and non-obvious solutions and processes that we often converge upon to address common problems. Moreover, small-scale or non-state societies are ideal sites for investigating written practice on the basis of the fact that they represent locations where writing, of any kind, has been a relatively recent introduction. Consequently, normative literacy attitudes have not yet had a chance to become hegemonic in the same way that they have in the West, where it is no longer possible to participate fully in society unless you are literate.

## Diversity and Universality of Secondary Scripts

Three brief examples suffice to provide a glimpse into the diversity of new scripts. The Bamum script of Cameroon (developed between 1896

and 1910) includes a semantic determinative for distinguishing homophones (Dugast and Jeffreys, 1950). The homophonous lexeme that is marked with the determinative is the one with the meaning that seen to carry more prestige (Fig. 1).

```
le tambour, fom AX ...... les ruines, fom X
l'antilope, qgap AX ...... la semaine, qgap X
le sang, nsi A ...... garde, sii 4
la case de réception, pu A ..... le paquet, pu? A etc...
```

FIGURE 1. Homophonous terms in the Bamum language distinguished in writing with a semantic determinative (Dugast and Jeffreys, 1950, p. 7)

The Western Apache script was designed as a prompt for the recitation of prayers and it includes signs designed to specify the correct ritual gestures that accompany the speech (Fig. 2). These so-called kinetic signs are generated as compounds of the speech signs meaning that it requires deep insider knowledge to be able to read and reproduce the script.

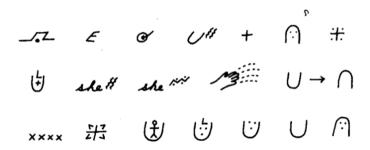


FIGURE 2. Western Apache script (Basso and Anderson, 1977, p. 232)

Finally, the Sayaboury script of Laos includes signs for signalling vocal noises such as chanting and calling animals (Fig. 3).

These three examples draw attention to the fact that culturally specific, non-phonographic and even non-linguistic information can be encoded in graphic form, a fact which presupposes that in order to learn and use the script effectively one must also be a competent participant in that society. These examples are not provided merely to draw attention to interesting or quirky outliers. Rather, they are sharp illustrations of the fact that writing of any kind is culturally loaded, and that it

44	YY	kh	UU	けけ	hh	
ല	XX	##	京东	in	ത്ത	
66	MM	77	rr	RR	88	

FIGURE 3. Sample of the Sayaboury script (Smalley and Wimuttikosol, 1998, p. 115)

is never a neutral or autonomous mechanism for representing language (Bartlett, Lopéz, Vasudevan, and Warriner, 2011). It is by stepping outside of our own literacy context we can acquire a better appreciation for the inherent relativity of scripts.

Having made the case for relativism it is also possible to make productive generalisations about the ways that secondary writing systems emerge and evolve. New scripts, especially those invented by non-literates, seem to exhibit high visual complexity or iconicity, have no contrast in reverse or rotated images, and to become compressed over multiple transmissions. They are also often morpheme-centric with a preference for representing syllables and consonants as opposed to individual vowels, and to make use of rebuses and semantic determinatives. More research is needed in order to ascertain their convergent techniques for modelling language, and the extent to which their dynamics may coincide with those of primary scripts.

## The Linguistic Context of the Naasioi Otomaung Alphabet

A very recent secondary script that has not yet been formally documented is the Naasioi Otomaung alphabet from the island Bougainville. I was first told of the existence of this alphabet by the Bougainvillean linguist Ruth Spriggs, but have never had the opportunity to investigate it in person. The COVID-19 pandemic has been the most formidable obstacle to research, but it also had the effect of liberating me from any expectation—and guilt—that face-to-face fieldwork was at all possible. My preliminary documentation, offered here, is the result of mobile phone calls, social media interactions and generous work performed at my direction by intermediaries already on the ground including missionaries and linguists.

Despite its small geographic size, Bougainville is very linguistically and culturally diverse. The coastal languages marked with a star on the map below are Austronesian and the mostly inland languages marked in

grey are Papuan. This is a contrast that still reflects the earlier colonisation of Bougainville by Austronesians some three thousand years ago.

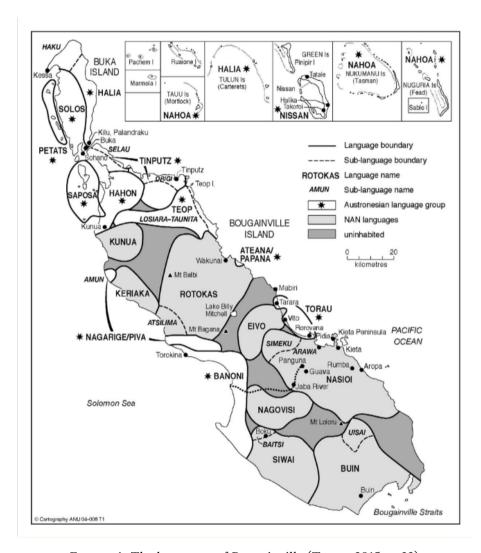


FIGURE 4. The languages of Bougainville (Tryon, 2015, p. 32)

Rotokas, a Papuan language of Bougainville spoken by an estimated 4,320 people, is famous for having what is claimed to be the smallest sound inventory in the world, with only 11 contrastive phonemes. The efficiency of the Rotokas sound system has even inspired the invention

of a so-called 'polysyllabary' on the part of linguist Sheldon Ebbeler (Ebbeler, 2014), though this has not been adopted by Rotokas speakers. Meanwhile, the Naasioi language, spoken further south, has about 20,000 speakers and has an inventory of 19 phonemes. It was a speaker of Naasioi who was responsible for creating the Naasioi Otomaung alphabet described in this paper. A representation of the Naasioi phoneme inventory alongside the Naasioi Otomaung alphabetic signs that are assigned to its sounds, is provided in Fig. 5 below.

	TT'-1			Back	ı	
	High		6	u u: 🍼		
Mid		e e: <b>9</b>		o o: 🂆		
	Low	a a:	9			
	Bilab	ial	Coronal	Velar		Glottal
Voiceless stop	<sub>p</sub> S	t	4	<sub>k</sub> L	3	
Voiced stop	ь —	) d	9			
Nasal	<sub>т</sub> О	n	1	,16		

FIGURE 5. The phoneme inventory of Naasioi with Naasioi Otomaung letters

As the above chart indicates the Naasioi Otomaung script does not distinguish vowel contrasts, and the engma sound is rendered with a digraph. Of further interest is the fact that there is no glottal sign despite the relatively high functional load of glottal stops in Naasioi.

These curiosities can be explained with reference to the historical context of the system. The Naasioi Otomaung alphabet was created by a man known as Chief Peter Karatapi who is also credited with the founding of the Otomaung cultural movement, from which the alphabet emerged. The alphabet enjoys popularity among Naasioi speakers living on the Siang river, but only a few profess any literacy in the system. I know of only three fully literate individuals by name: Chief Peter Karatapi, his daughter Maryanne Karatapi and Steven Tamiung. There are probably many more who are partially literate in it. There are not any taboos or restrictions against learning or disseminating the script,

and it's users are hoping to promote a greater role for it in a future independent Bougainville.

#### Form and Function

Naasioi Otomaung is a straightforward cypher script for the Roman alphabet. I characterise the difference between an ordinary writing system and a cypher script, in the following way: a writing system is designed to model aspects of linguistic structure, usually phonological, of a language or languages. A cypher script, meanwhile, models another writing system. In other words, it is a graphic representation but at one remove and could be thought of as a form of radical typographic differentiation. Cypher scripts can have different functions and motivations. Broadly, they can be used to make a writing system readable in another modality, for example in Morse code. Equally they can be used as a kind of graphic encryption or disguise, or they can be designed to do the political work of projecting an ethnolinguistic contrast.

In Naasioi Otomaung there are three typographic 'registers' that coincide with uppercase, lowercase and a third ornamental register which is perhaps like bold. The tabulation in Fig. 7 below has been provided by Steven Tamiung.

The signs lavelled as 'Handwriting Economy,' are repeated to the bottom of the grid.

Fig. 8 is my own reorganisation of this chart. What Fig. 8 illustrates is that Naasioi Otomaung models the 26 letters of the English Roman alphabet, and includes letter signs for sounds like x and z that aren't even attested in standard orthographies of Naasioi. Among other things, this is because Naasioi Otomaung is also used for writing English and Tok Pisin. The table also reveals that, to generate the ornamental register, the writer takes a lowercase sign then adds a superscript feature in the form of a horizontal bar and series of five dots, sometimes rendered as small vertical lines, then an ornamentation on top that has no linguistic or semantic content, as shown in Fig. 9 below.

What is also evident from Figure 8 is that Naasioi Otomaung is not just a Roman cypher at the level of an alphabetic system, but there is also a Roman influence in the morphology of the script. There is stereotyping in its consistent slant and the use of ascenders. The letters indexOtomaungOtomaung k (<k>) and 7 (<n>) are distinguished on the basis of their orientation, like a <b> and <d> contrast, but other letters appear to be distinguished by means of very subtle graphic elements. It is also clear that the recitation order, which is the English recitation order, has influenced the design, meaning that letters that are adjacent in the recitation sequence are often graphically similar and are



FIGURE 6. Chief Peter Karatapi at the 2019 Bougainvillean referendum. Image: Steven Tamiung



FIGURE 7. Tabulation of the three registers of of Naasioi Otomaung

	Upper	Lower	Ornamental		Upper	Lower	Ornamental	ı —	Upper	Lower	Ornamental
A	P	9	9	J	2	2	- I	S	Ÿ	4	<del>y</del>
В	$\wedge$	7	₩ ₩	K	1	1	$\frac{\Omega}{L}$	Т	4	A	
С	$\wedge$		<u> </u>	L	1	1	<u>×</u>	U	9#	\$	<u>~</u>
D	2	9	<u>(i)</u>	M	N	of		V	<u>م</u>	6	
Е	4	2	<u>//</u>	N		1	9	W	$\mathcal{V}$		<u>(-)</u>
F	4	2	<b>)</b>	O	$\triangleleft$	<b>y</b>	<u>**</u>	X	<b>\$</b>	0	$\odot$
G	7	7	<u></u>	P	5	S	2	Y	3	3	<u>(-).</u> 3
Н	Y	6	<u>)</u>	Q	5	5	5	Z	7	7	<u>&lt;-&gt;</u>
I	7	6	<u>Q</u>	R	5	3	¥ 3				

FIGURE 8. Table of Naasioi Otomaung signs

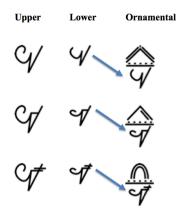


FIGURE 9. Rule for generating signs in the ornamental register

distinguished by means of one very small visual contrast. This situation brings about challenges for legibility. No substantial manuscripts or inscriptions in Naasioi Otomaung have been made available to me, however the following example sentence was produced by Maryanne Karatapi using upper and lowercase letters, and has been interlinearised (1) by Jason Brown:

(1) Mosi kuaparamang.

9745 L4959594975.

Mosi kua-p-a-ra-mang

Dog run-3-refl.sg.prs.prg

'The dog is running'

Just before this paper went to press, Steven Tamiung sent a chart of Naasioi Otomaung numerals, shown in Fig. 10 below.

More analysis of numerals is needed though it is interesting to note the similarity with the Hindu-Arabic numeral system in signs for 0 and 1, and the apparent use of tally marks in the signs for 2 3, 5, 6, 7 and 8. The core forms of 1, 4, and 6 are also recycled in subsequent numerals, a process also observed in the numeral system of a new script invented by a nativist movement of the Philippines (Kelly, 2016).

## Historical Background

Naasioi Otomaung was created at the very epicentre of what has come to be known as the Bougainville Crisis (1988–1998), a ten-year violent conflict that can be characterised as both a struggle for political independence from Papua New Guinea and a struggle for political unity within



FIGURE 10. Naasioi Otomaung numeral set

Bougainville itself. The island has experienced successive waves of colonisation. From the 1880s it was an imperial possession of Germany, and after WWI it became, along with Papua New Guinea, a colonial possession of Australia. During WWII it was occupied by Japan and America, and was eventually returned to Australia in 1946. Naasioi-based movements opposing Australian rule began in the 1960s and shortly after, the controversial Panguna copper mine was established by a subsidiary of Rio Tinto in Naasioi country in defiance of local opposition. The mine caused devastating environmental damage and exacerbated existing secessionist agitation throughout the 1970s. It was in 1975 that Papua New Guinea was granted independence from Australia, meaning that the new PNG government took over the administration of Bougainville and supervision of its mine.

The Panguna mine continued operation throughout this period and by 1988 there was outright war. The principal military actors in this conflict were the Bougainville Revolutionary Army or BRA and the PNG defence force. Hostilities did not come to an end until 1998 and a peace agreement was eventually signed in 2001. In late 2019, the PNG government held a non-binding referendum, in which the overwhelming majority of voters opted for full independence.

Although my characterisation of events is a reduction of highly complex situation with many variables, a decisive aspect of the war was the long-term blockade that the Papua New Guinea government placed on Bougainville from 1990 to 1994. In this time no people or goods were permitted to enter or leave the island in a strategy that was intended to weaken the BRA and force its surrender. The blockade pro-

duced enormous hardship, but it also became a catalyst for extraordinary innovation to ensure survival and self-sufficiency. Among other initiatives, local communities repurposed abandoned mine equipment to create home-made hydroelectric power plants, and produced their own biodiesel from coconuts to keep vehicles running. These technological innovations and initiatives reinforced the idea that Bougainville was quite capable of autonomy and that genuine independence was within reach. Memories of the blockade are an important historical reference point for Bougainvilleans today, especially in the context of the COVID-19 pandemic (Fig. 11).



FIGURE 11. Facebook status update from Dickson Marcelline Karatapi, 6 June 2020

Before and during the conflict Naasioi people were known to join various new cultural, religious and political movements, of which the Bougainville Revolutionary Army was just one example. Across the island, competing micronationalist movements emerged that replicated all the structures of nation states, sometimes with banks, police forces and civil administrations including parliaments. The Otomaung cultural organisation that produced the Naasioi Otomaung alphabet, was a nativist movement concerned with cultural revitalisation. Its agenda was to restore, preserve and promote indigenous cultural forms including rites, songs, ceremonies and dances.

The Otomaung movement continues to be led by its founder, Chief Peter Karatapi, whose ambitions once included the establishment of a culturally authentic and independent education system for Naasioi speakers. His indigenous schools replicated traditional subject areas of the PNG education system but replaced the content with native alternatives: Naasioi language was taught instead of English, traditional religion replaced Catholicism, while literacy instruction took place in the Naasioi Otomaung alphabet. At that time, Karatapi referred to the alphabet as *Me'ekamui Kepia*, with the ascribed meaning of 'Bougainvillian alphabet'. The choice of the term *Me'ekamui* (which can be translated as 'holy island' or 'sacred place') points to a likely influence from his associate Damien Dameng, the founder of a radical secessionist organisa-

tion known as *Me'ekamui Onoring Pontoku*, roughly meaning "government of the guardians of the sacred land" (Regan, 2002). Dameng rejected all foreign influences and the three precepts of his movement were that "Western education belongs to the bad spirits; Western health belongs to the dogs; and Western religion belongs to immature kids" (Roka, 2014). In the 1990s, Dameng's movement became part of the ideological inspiration for the Bougainville Revolutionary Army under its leader Francis Ona (Hermkens, 2013). It has even been argued that Francis Ona adopted Dameng's program in order to shore up waning political support.

The Otomaung cultural movement, Me'ekamui Onoring Pontoku, and the Bougainville Revolutionary Army all coexisted in central Bougainville during the conflict and they probably had overlapping memberships to a degree, but towards the end of the fighting, the BRA denounced Otomaung as a cult and began persecuting its members until a peace was established between the two groups in June of 1997 (James Tanis, pers. comm.). The overtly pacifist philosophy of the Otomaung movement was no doubt fundamentally at odds with the recruitment aims of the BRA.

Members of the Otomaung movement were later invited to perform at the signing of the Bougainville Peace Agreement on 30 August 2001.

## Literacy Practice, Uses and Meanings

During the Bougainville Crisis (1988–1998), the Naasioi Otomaung script was used in designs on clothing and the missionary linguists Conrad and Phyllis Hurd recall seeing it embroidered into a dancing cape. For a short while it entered Peter Karatapi's alternative school curriculum in Kieta district where it was taught up until third grade. I do not presently have a clear view of how the script is actually used today, beyond inscriptions on objects including t-shirts (Fig. 12), fans (Fig. 13) and political banners (Fig. 14). It is also used for the informal teaching of those who want to learn it, as well as in demonstrations to outsiders like me. However there are three distinct aspirational uses for the script that I have identified from my direct and indirect discussions with practitioners who promote it as a universal writing system, as a mechanism for preserving cultural knowledge, and as a visible embodiment of indigenous cultural values.

### Universal Writing System

The word Otomaung, discussed further below, is a neologism with the ascribed meaning of 'able to express anything'. Consistent with this



FIGURE 12. A Naasioi Otomaung inscription on a t-shirt. Image: Steven Tamiung

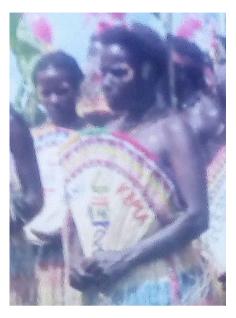


FIGURE 13. Inscription in Naasioi Otomaung woven into a fan held by a Naasioi performer in Buka, 2001. Image: Steven Tamiung.



FIGURE 14. Naasioi Otomaung peace banner. From left to right: Pionu Pantadera, Nekenung Butung, Cecilia Nenominu, Alice Piokanu and Theresa Bangsingona.

meaning the Naasioi Otomaung script is promoted as a kind of utopian universal system for representing all the languages of Bougainville, including English. In fact the writing system itself was simply one innovation in a micronationalist package of replacement or parallel systems that include an indigenous currency, an indigenous lunar calendar and the promotion of Naasioi as a national auxiliary language to unite Bougainville. I have not had access to information about the lunar calendar or currency but it bears pointing out that another movement, still active in southern Bougainville has created its own micronation with patrolled borders and which does in fact have a separate currency (Cox, 2013).

#### Preservation of Cultural Knowledge

A second aspirational use of the Naasioi Otomaung script, according to Peter Karatapi, is to record and preserve information of cultural value including songs, dances and stories. The chart in Figure 15 below, for example, is apparently representing a musical stave, with each note of an octave marked in the rows. More research is needed to explain how the chart is to be interpreted musically, and why the ornamental sign for <m> is repeated within the stave.

Beyond this one example I'm not personally aware of the existence of a manuscript tradition that is in fact recording traditional knowledge. But whether or not such an archive exists, the script itself is seen to index indigenous culture in its form.

#### The Embodiment of Indigenous Values

This leads directly to the third aspiration for the script: that it is capable of embodying indigenous cultural values in its graphic morphology.

Before World War II, Bougainvilleans of various language groups were known to engage in practices of ceremonial body scarring or cicatrisation. Steven Tamiung, told me that oldest daughter in a Naasioi family usually underwent ceremonial scarring on her thighs at first menstruation but this was no longer performed. For the promoters of the Naasioi Otomaung alphabet, the script is seen to represent these onceprevalent sacred designs. The ethnographic record, though sparse, indicates that cicatrisation was not limited to women and continued to practiced well after the war among the Naasioi as well as other groups (Emanuel and Biddulph, 1969). Few analyses of cicatrisation on Bougainville have ever been published. The earliest known to me is the brief account of Naasioi scarring provided by Ernst Frizzi-München (1914). More detailed is the ethnography of Beatrice Blackwood (1935), centering on Kurtatchi village in the Tinputz-speaking region of Bougainville.

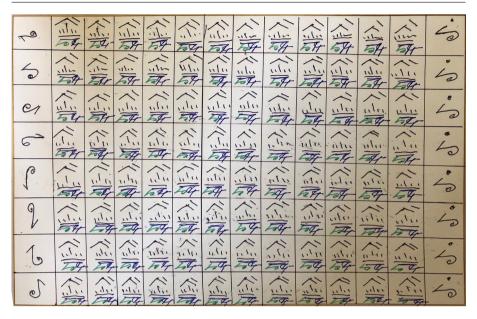


FIGURE 15. Musical stave rendered in Naasioi Otomaung

Figures 16 and 17 below are derived from these works. I have traced the cicatrisation patterns in turquoise in order to increase their visibility.

These patterns impressionistically display stylistic similarities with certain signs in the Naasioi Otomaung ornamental register, specifically in the arrangements of geometric lines and dots (Fig. 18). Here I do not wish to make any strong claim that the Naasioi Otomaung script is iconic of ceremonial scarring or that it demonstrates a direct cultural continuity with these practices. Nonetheless this is a value expressed by users of the script.

Another way in which Otomaung embodies cultural values is in the recitation names of individual letters of the alphabet some of which are supposed to be derived from the Lord's Prayer in Naasioi, and they each index a particular value.

The letter <A>, for example is named *otomaung*, and it gives its name to both the alphabet and the movement. We can see this word in the first line of the Lord's Prayer in the two translations of it that have been made available to me in Naasioi:

Niuma da otomaung pangningko, miring dakanaa mmeka'angta angpinang pangningkong pi'na.

Niuma paning-koo otomaung, dakaang miring meeka'antavari otoaing.

'Our father in heaven, hallowed be your name'

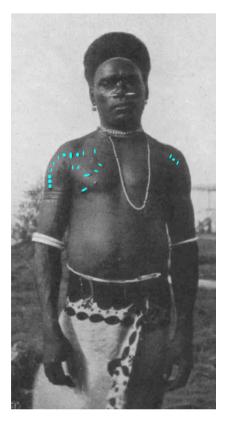


FIGURE 16. Traditional Naasioi scarring pattern (Frizzi-München, 1914, p. 44)

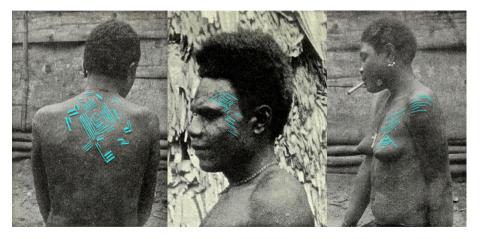


FIGURE 17. Scarring patterns in Kurtatchi village (Blackwood, 1935, p. 430)

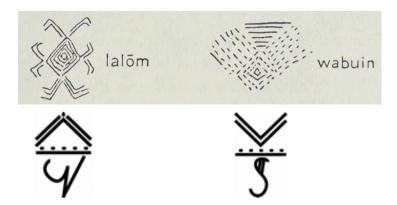


FIGURE 18. Two standard Kurtatchi patterns identified and sketched by Blackwood (1935, p. 431), above. Below them are the ornamental signs for <s> (left) and <r> (right).

The letter <br/>b> is named *miru* and this too is supposed to be a derivation from the Lord's Prayer, but the closest I can discover is *miring*, above.

Meanwhile, the final four letters are:

W = Siouma

X = Nari

Y = Kapoo

Z = Tampara

Together they form the sentence 'Siouma Nari Kapoo Tampara' which Tamiung describes as an expression of peace in Naasioi. I haven't been able to interlinearise this in Naasioi, but Tamiung has provided the following pragmatic gloss "1. come to the roundtable discussion to solve problems; 2. do not take law in your own hands; 3. Solve differences in words rather then actions."

Just before this paper went to press, Tamiung sent me a chart of Naasioi Otomaung signs with associated meanings (Fig. 19). These signs are not part of the alphabetic set and could thus be provisionally analysed as logographs.

Tamiung explained that the values encoded in these signs were taught as the 'twelve principles' that students were required to learn as part of religious studies in traditional school system established by Peter Karatapi.



FIGURE 19. Naasioi Otomaung logographs

#### Summary

The Naasioi Otomaung alphabet was created by cultural leader Chief Peter Karatapi in the context of the Bougainville Crisis (1988–1998). The script was devised as part of broader cultural package within in a project of political and cultural autonomy. Its three utopian goals are to serve as a universal script for Bougainville, to be a method for recording and preserving cultural knowledge, and to embody indigenous cultural values.

The system itself is a cypher for the Roman alphabet, and includes a digital numeral system and a set of at least 12 logographs. Individual alphabetic letters are also invested with semantic values in some contexts. In practice it has been taught in a traditional and autonomous school system, and has been used for inscriptions on objects including traditional fans, dancing capes, T-shirts and banners. Many more questions need to be addressed regarding its history and meaning, the extent of literacy in the script and its prospects for the future. In the meantime, I hope that this paper has revealed the value of distance fieldwork, and demonstrated just how much information can be assembled from afar when travel is not feasible.

#### Acknowledgments

Distance fieldwork is simply not possible without generous cooperation from a whole team of helpers. I owe the largest debt to Steven Tamiung with whom I have communicated from the beginning. I have also been indirectly assisted by Peter Karatapi and Maryanne Karatapi. Other helpers in Bougainville were Kiwi linguists Jason Brown and Keith Montgomery. Brown asked questions on my behalf and elicited examples. In Australia I was supported by Ruth Spriggs, James Tanis, Nick Bainton, Gordon Peake and Masa Onishi. In other places I received input from Piet Lincoln, René van den Berg, Conrad Hurd and Phyliss Hurd. Julia Bespamyatnykh (Jena, Germany) did the original tracing of Naasioi Otomaung letters and Siva Kalyan (Canberra, Australia) has now developed an Otomaung font¹.

#### References

- Bartlett, Lesley et al. (2011). "The anthropology of literacy." In: *A companion to the anthropology of education*. Ed. by Bradley A. Levinson and Mica Pollock. John Wiley & Sons, pp. 154–176.
- Basso, Keith H. and Ned Anderson (1977). "A western Apache writing system: The symbols of Silas John." In: *Sociocultural Dimensions of Language Change*. Elsevier, pp. 227–252.
- Blackwood, Beatrice (1935). Both sides of Buka passage: An ethnographic study of social, sexual, and economic questions in the North-Western Solomon Islands. Oxford: Clarendon Press.
- Cox, John (2013). "The magic of money and the magic of the state: Fast money schemes in Papua New Guinea." In: *Oceania* 3, pp. 175–191.
- Dugast, Idelette and M.David W. Jeffreys (1950). L'écriture des Bamum: Sa naissance, son évolution, sa valeur phonétique, son utilisation. Vol. 4. Populations. Paris: Mémoires de l'Institut Français d'Afrique Noire.
- Ebbeler, Sheldon (2014). "Uriovakiro: a polysyllabary for Rotokas." https://www.omniglot.com/pdfs/uriovakiro.pdf.
- Emanuel, Irvin and John Biddulph (1969). "Pediatric field survey of the Nasioi and Kwaio of the Solomon Islands." In: *Journal of Tropical Pediatrics* 15.2, pp. 55–69.
- Frizzi-München, Ernst (1914). Ein Beitrag zur Ethnologie von Bougainville und Buka, mit spezieller Berücksichtung der Nasioi. Leipzig & Berlin: B. G. Teubner.
- Hermkens, Anna-Karina (2013). "Like Moses who led is people to the Promised Land: Nation and state-building in Bougainville." In: *Oceania* 3, pp. 192–207.

<sup>1.</sup> https://bravenewwords.info/ottomaung-font-project/

Hurd, Conrad and Phyllis Hurd (1966). *Nasioi language course*. Port Moresby: Summer Institute of Linguistics.

- Kelly, Piers (2016). "Introducing the Eskaya writing system: A complex Messianic script from the southern Philippines." In: *The Australian Journal of Linguistics* 36.1, pp. 131–163.
- ———— (2018a). "The art of not being legible: Invented writing systems as technologies of resistance in mainland Southeast Asia." In: *Terrain* 70, pp. 1–24.
- ———— (2018b). "The invention, transmission and evolution of writing: Insights from the new scripts of West Africa." In: *Paths into script formation in the ancient Mediterranean*. Ed. by Silvia Ferrara and Miguel Valério. Rome: Studi Micenei ed Egeo Anatolici, pp. 189–209.
- Regan, Anthony J. (2002). "Bougainville: Beyond survival." In: *Cultural Survival Quarterly* 3, pp. 20–24.
- Roka, Leonard Fong (2014). "The legacy of Damien Dameng, the father of Meekamui." PNG Attitude, https://www.pngattitude.com/2014/03/the-legacy-of-damien-dameng-the-father-of-meekamui.html. (Visited on 26 May 2020).
- Smalley, William A. and Nina Wimuttikosol (1998). "Another Hmong Messianic script and its texts." In: Written Language & Literacy 1.1, pp. 103-128.
- Street, Brian (1984). *Literacy in theory and practice*. Cambridge: Cambridge University Press.
- Tryon, Darrell (2015). "The languages of Bougainville." In: *Bougainville before the conflict*. Ed. by Anthony J. Regan and Helga M. Griffin. Canberra: ANU Press, pp. 31–46.