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In search of island treasures: Language documentation in the Pacific

Alexandre François
LaTTiCe, CNRS–ENS–Sorbonne nouvelle
Australian National University

The Pacific region is home to about 1,500 languages, with a strong concentration of linguistic diversity in Melanesia. The turn towards documentary linguistics, initiated in the 1980s and theorized by N. Himmelmann, has encouraged linguists to prepare, archive and distribute large corpora of audio and video recordings in a broad array of Pacific languages, many of which are endangered. The strength of language documentation is to entail the mutual exchange of skills and knowledge between linguists and speaker communities. Their members can access archived resources, or create their own. Importantly, they can also appropriate the outcome of these documentary efforts to promote literacy within their school systems, and to consolidate or revitalize their heritage languages against the increasing pressure of dominant tongues. While providing an overview of the general progress made in the documentation of Pacific languages in the last twenty years, this paper also reports on my own experience with documenting and promoting languages in Island Melanesia since 1997.

1. Approaching language documentation in the Pacific This paper reflects on twenty years of linguistic documentation in the Pacific. After an overview of the region's rich linguistic ecology (§1), I will survey the progress made so far in documenting and archiving valuable recordings from the region (§2). Crucial to the success of language documentation is also its relevance to speaker communities in their strive to preserve and revive their own languages (§3).

1.1 Overview of Pacific languages The Pacific region is home to about 20% of the world's languages (Simons & Fennig 2018), and hosts a great number of different language

families. In terms of human and linguistic geography, the term *Pacific* commonly refers to the set of inhabited islands located within the Pacific Ocean, south of the 30° N parallel. Depending on the context, the term may also include the Philippines and Indonesia—usually considered part of SE Asia—as well as Australia; but these areas are covered by other chapters in this volume (see Arka & Sawaki (2018) for SE Asia; Singer (2018) for Australia in this volume). The present chapter will thus identify the Pacific (Figure 1) as the vast area defined by the three subregions of Melanesia, Micronesia and Polynesia.¹

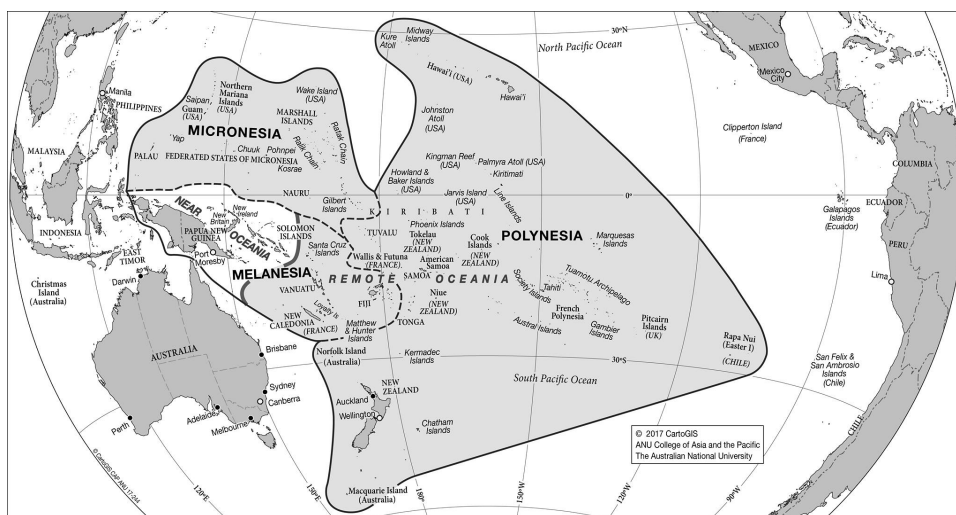


Figure 1: A map of the Pacific region, showing the subdivision into Melanesia, Micronesia, Polynesia; and the archaeological divide between Near Oceania (white) and Remote Oceania (gray) [© ANU College of Asia and the Pacific, CartoGIS, 2017]

The names for these three subregions were first introduced by Dumont d’Urville in 1831, and do not reflect accurately the populations’ prehistory (Green 1991, Tcherkézoff 2009). More recently, Pawley & Green (1973) proposed to divide the same region based on archaeological criteria, into two areas:

- *Near Oceania* (consisting of the island of New Guinea and most of the Solomon Islands) was first settled by *Homo sapiens* more than 50,000 years ago;
- *Remote Oceania* (the rest of the Pacific—see grayed area in Figure 1) was only settled during the last 4,000 years.

As Map 1 shows, the boundary between Near and Remote Oceanic splits apart the area traditionally labelled as “Melanesia” (Green 1991).

The two areas also differ in their linguistic make-up. The more recently settled Remote Oceania features only one family, namely Austronesian—more exactly, the *Oceanic* branch of the Austronesian phylum. As for Near Oceania, it is home to about 80 genealogically unrelated language families and isolates,² making it the world’s genealogically most

¹Map provided by CartoGIS Services, ANU College of Asia and the Pacific, The Australian National University.

²“The Papuasphere [...] contains, by the current count, 862 languages comprising 43 distinct families and 37 isolates.” (Palmer 2018:6).

diverse area. These various families are collectively referred to using the umbrella term *Papuan*, to which one must add a more recent layer of Austronesian migrations.

Table 1 shows the unequal distribution of indigenous languages across the different subregions of the Pacific.³ Micronesia and Polynesia, which were settled relatively recently, show lower linguistic diversity, with only about 60 languages together for such a vast area. By contrast, the region of Melanesia shows considerable diversity with a sheer total of 1419 languages—whether Austronesian (557) or non-Austronesian (862).

Area	Language family	# languages
MELANESIA, Near Oceania (New Guinea, Solomon Islands)	“Papuan” (≈80 families)	862
MELANESIA, Near Oceania (New Guinea, Solomon Islands)	Austronesian	345
MELANESIA, Remote Oceania (eastern Solomon Island, Vanuatu, New Caledonia, Fiji)	Austronesian (Oceanic)	212
POLYNESIA	=	38
MICRONESIA	=	21
Pacific region		1478

Table 1: Distribution of languages across the different subregions of the Pacific

1.2 Language density and vitality According to Simons & Fennig (2018),⁴ Pacific languages, considered as a whole, show an average of 5,271 speakers per language, with a median value of 980. These figures are the lowest of all continents: they can be compared, respectively, with the world’s average of 1 million speakers per language, with a median value of 7000.

One can in fact observe extreme discrepancies in language density between different areas of the Pacific (Pawley 1981, 2007). On one extreme, the language with most speakers is Sāmoan, with 413,000 speakers (*Ethnologue*). On the other extreme, the average size of a language community in Vanuatu at the beginning of the 20th century—at a time when the archipelago went through a demographic bottleneck—was “as low as 565 speakers per language” (François et al. 2015: 9). This goes to show the drastic gap in the language ecology across different parts of the Pacific—as “Melanesian diversity” (Dutton 1995, Unseth & Landweer 2012) contrasts so strongly with “Polynesian homogeneity” (Pawley 1981).

The diversity of Papuan languages may arguably be explained by the considerable time depth of human settlement in Near Oceania, and a long history of migrations and language evolution. But what is perhaps more striking is that even the Austronesian-speaking populations, which have had less than four millennia of *in situ* development, achieved

³Numbers are taken or inferred from the database Glottolog 3.2 (Hammarström et al. 2018). Usual disclaimers apply when counting languages. Also, note that “38” is the number of languages belonging to the Polynesian branch of Oceanic languages: only about half of these are spoken within the *Polynesian triangle* (the area labelled ‘Polynesia’ on Figure 1), while the remainder, known as *Polynesian outliers*, lie geographically in Micronesia or Melanesia.

⁴See <https://www.ethnologue.com/statistics>.

a similar rate of language density. Vanuatu, for example, was first settled 3,100 years ago by speakers of Proto Oceanic (Bedford & Spriggs 2008); and in that relatively short time-span, the archipelago's small population (currently 0.3 million) managed to diversify into 138 distinct languages—making it the country with the world's highest linguistic density *per capita* (François et al. 2015).

1.3 Different landscapes, different strategies This overview of the varying linguistic landscapes found across the Pacific (§1.1) entails quite different approaches when it comes to language documentation.

The languages with larger speaker populations numbering over 100,000, such as those found in major Polynesian centers (Sāmoan, Tongan, Māori, Tahitian, etc.) are certainly threatened in the long term due to the pressure of colonial languages—French, English—and of globalizing trends; but for the immediate future, they can be deemed safe from immediate endangerment. Because these languages have already been the object of grammatical or lexical descriptions, the work of linguists is rather to document the various styles and registers of these languages—whether that be technical vocabulary, verbal art, poetry (e.g. Meyer 2013 for Tahitian)—or the internal dynamics of their variation (Love 1979, Duranti 1997 for Sāmoan).

The situation is different with the many languages of Melanesia, or indeed with the demographically smaller languages of Micronesia or Polynesia. About half of Pacific languages are spoken by populations below the threshold of 1,000 speakers, which makes them more vulnerable to the risk of language shift and loss. In view of the sheer number and diversity of smaller languages of the Pacific, the urgent task is often for linguists to describe and document the linguistic practices of these speech communities while the languages are still vital. The last two decades have seen considerable effort in that direction; and while a lot remains to be done in the region, it is already possible to report on various successful endeavors in the domain of language documentation in the Pacific. The next sections will illustrate some of these efforts, and outline ways in which they can be appropriated by language communities.

2. Fieldwork archives

2.1 From description to documentation A few decades ago, the work of missionaries and pioneer linguists typically consisted in collecting basic data in the form of wordlists (e.g. Leenhardt 1946 for New Caledonia, Tryon 1976 for Vanuatu) or grammar sketches (e.g. Codrington 1885, Ray 1926 for Melanesian languages). Apart from translations of the Scriptures, it was rare to collect or publish texts, or other samples of connected speech.

The tide turned when linguists understood that their role was to record languages in the way they were actually spoken. Rather than eliciting wordlists or translating grammarians' sentences, language describers began conscientiously collecting high-quality data. This involves recording spontaneous speech in various forms: narratives, procedural texts and explanations, personal memories, conversations. That important evolution had already begun in the 1970s—as witnessed, for example, by the volumes of stories collected in various languages of Melanesia (e.g. Ozanne-Rivierre 1975–79; Paton 1979; Bensa & Rivierre 1982; Facey 1988) and Polynesia (e.g. Frimigacci et al. 1995). In the same spirit, researchers and engineers at Paris-based CNRS–LaCiTO created the first online

audio archive in endangered languages, as early as 1996 (Jacobson, Michailovsky & Lowe 2001), bringing together valuable fieldwork recordings with their text annotations.⁵

Himmelman's explicit proposal for *language documentation* (Himmelman 1998) thus came at a timely point in the evolution of researchers' practices. Rather than giving value to the sole results of linguistic analysis in the form of academic papers, grammars or dictionaries, the focus was shifting towards the quality and availability of actual samples of spontaneous speech in the various languages under study.

The rationale for the new focus on high-quality linguistic data was manifold. The insistence on gathering spontaneous speech serves an aesthetic criterion—the wish to pay tribute to the world's intangible linguistic heritage—but also a scientific one. If linguistic description and typology are meant to be an empirical science, it is not sufficient to translate pre-hashed questionnaire sentences derived from a linguist's theoretical model; instead, it is essential that the object of our scrutiny exists in the form of an observable corpus, independent of any aprioristic prejudice on what sort of structures we should expect to find.

2.2 Language archives Pacific languages are well represented in a number of online archives. The OLAC *Language Resource Catalog*⁶ lists several collections featuring Pacific resources. Some of these archives, like *Rosetta* or *SIL-LCA*, include simple wordlists, grammar sketches, or translated sections of the Scriptures. Only some of the archives here mentioned pertain to documentary linguistics strictly speaking, in the sense of linguistic corpora based on naturalistic speech. The form usually taken by these language resources is as audio or video recordings, of varying length, typically ranging between 1 and 20 minutes each. These media are archived either as raw sound recordings, or as sound enriched with text annotations: transcription and free translation—with the additional possibility of interlinear glossing.

Table 2 lists the number of audio recordings⁷ featured in the catalog of the world's four main language archives dealing with the Pacific: PARADISEC (Thieberger & Barwick 2012); DOBES and other databases hosted by the MPI (Brugman et al. 2002, Wittenburg et al. 2002); CNRS–LaCiTO's *Pangloss Collection*⁸ (Jacobson et al. 2001; Michailovsky et al. 2014); and University of Hawai'i's *Kaipuleohone* (Albarillo & Thieberger 2009; Berez 2013). I only list resources in indigenous languages of the Pacific, including pidgins and creoles, to the exclusion of colonial languages.

Recordings from Pacific languages are more or less prominent in each archive. For example, the 3039 Pacific audio samples found in the MPI Language Archive correspond to a mere 5 percent of their entire catalog of recordings. By contrast, Pacific languages

⁵LaCiTO's online archive, which was later named the *Pangloss Collection* (Michailovsky et al. 2014), was initially developed by Boyd Michailovsky, Martine Mazaudon and John Lowe, and later expanded by Michel Jacobson. Pangloss is the largest collection within the CoCoON repository—see fn.8.

⁶OLAC Language Resource Catalog: <http://dla.library.upenn.edu/dla/olac/>. Note that ELAR, the *Endangered Languages Archive* developed at SOAS (Nathan 2010), is not featured under OLAC, and is thus unfortunately absent from the present statistics; yet that archive contains 36 archival deposits from the Pacific. Particularly noteworthy is Mike Franjeh's collection on Northern Ambrym languages (Franjeh 2018), which earned DELAMAN's Franz Boas 2019 award for best online multimedia documentary collection.

⁷This corresponds to the type 'Sound' among the categories proposed by the *Dublin Core Metadata Initiative* used by OLAC. Similar statistics could be carried out with video (DCMI 'MovingImage'), yet in this paper I will restrict myself to audio resources, for the sake of brevity and consistency.

⁸In the OLAC catalog, the *Pangloss Collection* appears under the name "CoCoON" (*Collections de Corpus Oraux Numériques*), a compilation of several audio archives hosted by CNRS' Huma-num infrastructure. LaCiTO's Pangloss is the largest collection within CoCoON, and the only one dealing with Pacific languages.

Archive	Institution	# Audio in catalog	# Audio from Pacific	% Catalog
PARADISEC	U Melbourne, ANU, U Sydney; CoEDL	9748	4458	46 %
DOBES, MPI-PL, Language collections	MPI for Psycholinguistics (Nijmegen)	66721	3039	5 %
<i>Pangloss Collection</i>	CNRS–LaCiTO	3302	1422	43 %
<i>Kaipuleohone</i>	U Hawai‘i	2571	804	31 %

Table 2: Language archives displaying audio resources in indigenous Pacific languages

are proportionally better represented in PARADISEC (which has *Pacific* in its very name) and in the *Pangloss Collection*.

Archives differ in their precise geographical coverage. As Table 3 shows, languages of Papua New Guinea (whether Papuan or Austronesian) are well represented in PARADISEC and MPI-DOBES. Those of Vanuatu are mostly found in PARADISEC and Pangloss. Pangloss is also the place to go for languages of New Caledonia. Kaipuleohone’s strong spots are PNG and Micronesia.

	PARADISEC	MPI- DOBES	Pangloss	Kaipu- leohone	Total
Melanesia: Pidgins & creoles	147	25	13	2	187
PNG, Solomons: <i>Papuan</i>	1953	1806	–	126	3885
PNG: <i>Austronesian</i>	861	686	–	354	1901
Solomons: <i>Austronesian</i>	459	178	93	33	763
Vanuatu	874	113	869	–	1856
New Caledonia	27	–	404	3	434
Fiji	88	–	–	50	138
Micronesian	17	–	–	212	229
Polynesian	32	231	43	24	330
TOTAL	4458	3039	1422	804	9723

Table 3: Number of media resources for each archive, organized by geographic and linguistic area

2.3 A sample of individual corpora Table 4 lists the ten richest audio corpora—judging by the number of media resources—for individual languages of the Pacific. The four main archives (cf. Table 2) are represented, as well as the four main countries making up Melanesia.

Among these online corpora, those hosted by the MPI, Kaipuleohone or Paradisec, are difficult to access as they require special authorization, even for consultation. The most readily accessible resources are those of the *Pangloss Collection*, which makes it easier to

Language	Family	Country	Linguist	Archive	# audio
<i>Yeli Dnye</i>	(Papuan)	PNG	S. Levinson	MPI	722
<i>Mwotlap</i>	Oceanic	Vanuatu	A. François	Pangloss	504
<i>Savosavo</i>	(Papuan)	Solomons	C. Wegener	MPI	462
<i>Saliba</i>	Oceanic	PNG	A. Margetts	MPI	423
<i>Bebeli</i>	Oceanic	PNG	H. Sato	Kaipuleohone	356
<i>Titan</i>	Oceanic	PNG	T. Schwartz	PARADISEC	327
<i>South West Bay</i>	Oceanic	Vanuatu	L. Dimock	PARADISEC	302
<i>Blablanga</i>	Oceanic	Solomons	R. Voica	PARADISEC	292
<i>Teop</i>	Oceanic	PNG	U. Mosel	MPI	234
<i>Cèmuhî</i>	Oceanic	New Caledonia	JC Rivierre	Pangloss	231

Table 4: The ten richest audio corpora for individual languages from the Pacific (source: OLAC)

find out about statistics. I will give a brief overview of the Cèmuhî and Mwotlap corpora available there.

Cèmuhî, a tonal language of New Caledonia, is represented on Pangloss by 231 audio resources, recorded in the field between 1965 and 1979 by the late Jean-Claude Rivierre.⁹ Each entry is a wav file, digitized from legacy reel-to-reel tapes. Most recordings feature traditional narratives, whether myths or folktales (see Rivierre & Ozanne-Rivierre 1980, Bensa & Rivierre 1982). Among these 231 audio entries, 56 are accompanied by text annotations, consisting of a transcription, a free translation, and glosses—see Figure 2.

Mwotlap, a language of the Banks Islands (north Vanuatu), is featured in 504 audio recordings, which I collected between 1997 and 2011. With about 52 hours in total, the Mwotlap corpus forms about half of the recordings I have archived on Pangloss. Altogether, these consist of 962 resources, totalling 104 hours of sound,¹⁰ in twenty-three different languages: four Oceanic languages of the Solomon Islands (Lovono, Tanema, Teanu, Tikopia), eighteen Oceanic languages of Vanuatu (Araki, Dorig, Hiw, Koro, Lakon, Lehali, Lemerig, Lo-Toga, Löyöp, Mota, Mwerlap, Mwesen, Mwotlap, Nume, Olat, Vera'a, Volow, Vurës), and one creole (Bislama).

My archives on Pangloss take the form of sound files with metadata, downloadable under a Creative Commons licence (see fn.11). About 105 resources (including 38 for Mwotlap) are accompanied by time-aligned transcriptions and other text annotations, similar to Figure 2 above.

About one third of the archived resources are musical performances of various sorts, from dances to sung poetry: these formed the basis of a discographic publication together with the ethnomusicologist Monika Stern (François & Stern 2013). The remaining two thirds (69%) represent connected speech—mostly folk narratives (389 stories), but also procedural explanations, conversation, elicitation. A selection of narratives was the

⁹Besides Cèmuhî, Rivierre has also archived recordings in three other Kanak languages: Paicî, Numèè and Bwato—see <http://tiny.cc/Rivierre-archives>.

¹⁰Link: <http://tiny.cc/Francois-archives>.

The screenshot shows the 'Pangloss Collection' website interface. At the top, there are logos for CNRS, LaCiTO, CoCoOn, Huma-Num, EFL, and ANR. Below the logos is a navigation bar with 'The Pangloss Collection', 'Corpus access', 'Dictionaries', 'Submit resources', and 'Help'. A search bar is on the right. The main content area displays three entries:

S16 [audio icon] **kā mē ē tēbwō jē-da ēni hwà ō ē-jè kàapo hě té-kō cilè pā-li nàhì- dāame kā mē ē nie opé kā ē āli- ē-jè iké ne pwō- li wīnāado**
 et quand elle est assise ci-en haut ici dans maison elle qui celle-ci Kaapo alors que en train de veiller sur le-déf. petit de-
 dāame kā mē ē nie opé kā ē āli- ē-jè iké ne pwō- li wīnāado
 chef et quand elle regarde en bas par ici et elle voit- celle-ci iké au dessus de- les déf. vivres
 Kaapo est dans la case en train de s'occuper du petit et, de chez elle, aperçoit iké sur le tas de vivres.

S17 [audio icon] **kā ē tēmèhì-èng**
 kā ē tēmèhì-èng
 et elle reconnaît-elle
 Elle reconnaît sa soeur,

S18 [audio icon] **kā ē cē tēbwō mwo ō ē-jè kā ē tēē é**
 kā ē cē tēbwō mwo ō ē-jè kā ē tēē é
 et elle .. est assise ..dès lors elle qui celle-ci et elle reste à pleurer
 fond en larmes et n'arrête pas de sangloter.

Figure 2: Screenshot of the Cémuhi corpus: The traditional story “Les écailles de poisson de Tiwécaalè” is presented in a time-aligned transcription, with translation and glossing (Jean-Claude Rivierre, LaCiTO–CNRS; story by Bernadette Tyèn).

source of several booklets I created towards the consolidation of vernacular literacy in various speaker communities (§3.5).

3. Community outreach Language documentation not only involves the work of linguists, but also favors initiatives by speaker communities towards the preservation and revitalization of their heritage languages.

3.1 Enhancing access to the resources The audio or video resources made by linguists can be highly valued by the community of speakers. These documents preserve the memory of specific individuals, storytellers or singers or personalities who can now be remembered by their relatives, descendants and countrymen. The recordings also encapsulate cultural knowledge, folk traditions, oral history, important narratives and artistic forms that deserve to be passed on to the next generations. Finally, they also capture the various shapes taken by a living language, whether in the form of dialogues, stories, or verbal art; obviously, this linguistic testimony is all the more precious when the language is threatened with extinction within a few decades or years. For all these reasons, the current speakers of the language, or their descendants to come, constitute a key audience for our documentary work (Turin et al. 2013).

One aspect to be developed in the near future is the ease with which community members can access our archives, even when they are not technically savvy, or familiar with linguists' circles. Archives on a particular language should turn up in public search engine results, and at least the catalog of resources be easily and intuitively searchable. Most archives require the end user to create an account, and often to ask for permission to access specific resources: while this may be necessary in some cases, this is often a *de facto* obstacle to many community members who would like to casually listen to their heritage language without having to go through the intimidating process of an official request. In this sense, a fully public option certainly has its advantages.

LaCiTO's Pangloss Collection (or its sister CoCoON: see fn.8) is the only online archive that seems to fill those requirements at the moment: even if its interface could still be made more appealing to a lay audience, at least it is intuitive enough that anyone can easily navigate it, retrieve some resources, and listen to them right away—since they are all provided in Open access¹¹ and require no authorization.

One important advantage of this easy access is the possibility to share specific recordings with community members, e.g. via social media. In the last years 2014-2017, I created Facebook pages for the communities speaking respectively the languages of Araki, Mwotlap, Hiw (Vanuatu) and Teanu (Solomon Islands). Besides promoting the use of vernacular languages in writing (§3.5), each page also gives us the opportunity to share links to individual archived fieldwork recordings. Occasionally, I can send the link to a resource as a reply to a member's specific request—whether they're looking for a particular story, or an old song, or a sample of their grandfather's voice. The possibility to access recordings so readily was always warmly welcomed by group members. This is a simple and efficient way to return the fruit of our research to the younger members of the communities, in a way meaningful to them.

3.2 Searching across corpora and archives Documentary resources on Pacific languages are currently distributed across different archives, each with its own interface, principles, technical options. A certain level of inter-operability across archives has already been achieved through the common adoption of the standards of *Dublin Core Metadata Initiative*, and the shared connection with the OLAC initiative (Simons & Bird 2003). This has made it possible to cross-search several archives at once based on geographical or linguistic criteria, and navigate from one multimedia repository to another, across institutional boundaries.

However, at the moment this cross-integration among archives remains limited, and would benefit from being enhanced. Suppose an anthropologist, or a Pacific islander, would like to scan all existing archives from a certain region of the Pacific, say for stories containing the terms “canoe”, or “shark”, or “magic” (either in the title, or in the text's English translation). At the moment, many individual repositories lack a search function or a concordance tool, which is definitely a gap to fill. A community member, or a scholar, may wish to search one or several text corpora for a certain word form or gloss—a simple endeavor that is often still impossible. Such a search engine could also make it possible to look for an important placename, or to retrieve a valuable story which had ceased to be transmitted. The title proposed in the metadata—often the only searchable segment—is not always sufficient. Ideally, the tools for navigating or interrogating corpora would be pooled together (technology permitting) across different archives.

¹¹ The default license at Pangloss is CC BY-NC-ND 3.0 (Attribution, Non-commercial, No Derivatives). Recordings that are sensitive for cultural or social reasons are not displayed publicly on Pangloss.

3.3 Repatriating recordings Like in most places of the world (Pearce & Rice 2013), the internet in the Pacific is nowadays less and less accessed through computers, and more frequently through mobile interfaces; this may well inform our practices in terms of designing our tools in the future. Yet in spite of fast improvements, in many rural areas of the Pacific internet access still remains costly and unreliable, so much that offline solutions are still welcome for the diffusion of knowledge.

In 2011, I thus chose to repatriate all my field recordings to speaker communities in the form of a local digital copy—first, to the Vanuatu Cultural Centre in Port Vila; and secondly, to a newly created *Torres-Banks cultural centre* on the island of Motalava (François 2012; Michailovsky et al. 2014: 131). Vanuatu’s Alliance Française helped maintain this cultural centre, funded a laptop, and provided technical training to local curators.

Admittedly, searching through a thousand audio recordings in 23 languages, from many locations, with so many genres and contributors, would constitute a challenge for the local users, most of whom had never used a computer. For that reason, I designed an intuitive way to search through the archives. I exploited the possibilities offered by free media players such as iTunes or Winamp, then available on local interfaces. Each archived recording was converted from wav into an mp3 file. The latter was then enriched with id3 metadata, which were automatically imported from Dublin Core descriptors as already stored in the Pangloss archive: e.g. the name of the speaker or storyteller became the “ARTIST”, the place of recording was mapped onto the “GROUPING” tag, and so on. Each recording was associated with a photograph—generally, a portrait of the speaker—which took the place of an album’s artwork. The result was an enticing multimedia digital library featuring hundreds of recordings, that could be explored either through pictures, or through a multifaceted search involving: *language; title; name of speaker or musician; date of recording; location; genre; duration* (François 2012).¹² This local search interface was welcomed by the community members, who were able to search through the collection in many ways, and retrieve recordings of their interest on the computer—whether samples of speech or music. They would then download these recordings from the public media library to their mobile phones used as offline mp3 devices, and distribute them to their friends and families. This proved a successful way to share digital resources amongst the community, even in an offline context.

Back in 2011, I found it technically difficult to replicate the same rich search interface using online tools. However, given the current spread of the internet, and the latest developments of mobile applications, it should now become easier to come up with user-friendly search tools so as to distribute the fruit of our documentary work to non-academic users through mobile-based devices.

3.4 Community-driven documentation We just saw how communities can benefit from the efforts of language documentation carried out by linguists, through increased access to valuable recordings. Interestingly, these results can also inspire the speakers themselves to pursue the work of documentation on their own language.

While the description of a language’s grammar or lexicon requires solid academic training in the domain of linguistics, the documentation of linguistic practices is a different sort of endeavour, whose crucial ingredients include: familiarity with the language to be documented, and ability to transcribe it; acquaintance with the cultural universe attached

¹²The video at <https://youtu.be/hZGm0CLzxU8> demonstrates the potential of that interface.

to it; understanding of what is at stake in language endangerment and documentation; personal motivation. When these conditions are present, native speakers are often in a good position to bring about language documentation themselves. They can then set out to record the language under its various manifestations—whether traditional narratives, procedural texts, conversations—using audio or video technologies (Carew et al. 2015, Bettinson & Bird 2017).

Recent technological developments have made access easier to decent-quality microphones, including through the use of commercial smartphones. Some apps have been developed for the creation of dictionaries—such as *Ma! Iwaidja* for the Iwaidja language of northern Australia, or *Ma! BenaBena*, with respect to a Papuan language of Papua New Guinea (Birch 2013). Their interface allows crowdsourcing, and the enrichment of lexical data by the community members themselves (Carew et al. 2015: 314).

Another tool tailored for community-driven documentation is the Android app “Aikuma” (Bird et al. 2013; Bettinson & Bird 2017), itself superseded by *LIG-Aikuma* (Blachon et al. 2016). This user-friendly application allows native speakers to enrich an existing recording, or a newly-created one, using vocal annotation, such as slow-speech “respeaking” or translation. The interface is designed to be used intuitively by community members even if they are not literate. The software was first used with speakers of Usarufa in Papua New Guinea, a language where *aikuma* means “meeting place”.¹³

More recently, *Aikuma* has also become the name of a collaborative project, with the aim to promote the celebration of indigenous languages through oral performances of storytelling and verbal art. The project has been active online: <https://twitter.com/AikumaProject>.

3.5 Language learning and revitalization Among the many positive outcomes of language documentation projects, is their possible usefulness for language revitalization and language learning.

Through collaborative workshops and initiatives, web-based projects and team efforts, an increasing number of activities are taking place across the Pacific—like elsewhere in the world—that promote the use of vernacular languages in speaking and in writing. One could cite the cases of Māori *kōhanga reo* or “language nests” in New Zealand (Benton 1989, King 2001); of *pūnana leo* for Hawaiian (Warner 2001); or similar attempts in French territories, whether French Polynesia (Paia 2014) or New Caledonia (Moyse-Faurie 2012, Vernaudon 2015)... These revitalization projects are only tangentially related to documentary linguistics per se (see Penfield & Tucker 2011), but they participate in a general push to increase the exposure of younger generations to their legacy languages in the variety of their manifestations. In some cases, efforts in language learning and revitalization are directly linked to the enterprise of linguistic documentation, and with the recording of spontaneous speech from fluent speakers.

Indeed, the high-quality samples of fluent speech, such as the audio and video resources found in archives, deserve to be exploited for their teaching potential. The target audience may be outsiders wishing to learn a new language; or members of the language community—whether speakers or semi-speakers themselves—wishing to access valuable recordings in their heritage languages. Complete beginners would first need to have access to teaching materials; but once they’ve acquired enough fluency to understand

¹³See <http://www.aikuma.org/faq.html>

simple stories, then the audio or video recordings—especially if enriched with annotations and glosses—are of considerable help to increase their linguistic competence.

Accessing the audio or video recordings has a great learning potential, especially for learners who wish to maintain fluency in their heritage language, by hearing high-quality storytelling from their elders. But another way in which language documentation can be used in a teaching context, is by developing skills in literacy, whether in regular schools or in community-led learning groups.

While many possible examples could be cited, I will briefly report on my personal experience in Melanesia. The majority of the 23 languages on which I carried out language documentation in Vanuatu and the Solomons (§2.3) lacked any stable orthography when I began working on them. One of my roles, as a linguist, has been to sort out the phonology of each language (François 2011a: 194), and design a set of spelling conventions, which I then discuss with community members during public meetings. Once a system has been agreed upon, I can start sharing the transcriptions of my field recordings with speakers. In many cases, this exchange proves a pivotal moment for the community, whose oral language is finally endowed with an “official” orthography.

The next stage is to create teaching materials to make sure community members can master the spelling system that was agreed upon. The effort required for this learning depends a lot on the difficulty of the language’s phonology—particularly, its vowel inventory. Because Teanu, the main language of Vanikoro (François 2009), has only five vowels /i e a o u/—the same as those in the Roman script—its speakers master the orthography very fast. But it takes more time, and more exposure to written materials, in order to transcribe consistently such languages as Hiw with its nine vowels /i ɪ e ə a ɯ o ɔ/; or Lemerig with eleven /i ɪ ε æ a œ ø ɸ ɔ ʊ u/.

Over the years, I have produced a number of booklets for literacy education. All volumes are also available on my homepage in digital format (François 2015)—a total of 21 books so far, of two different kinds. Ten books took the form of a basic alphabet primer, exemplifying each grapheme with a selection of words and phrases, with rich homemade illustrations. The remaining eleven volumes are story books, and constitute readers for a more advanced level of literacy. Their list is provided in Table 5.

Apart from one reader whose text I wrote in Mwotlap with the help of Edgar Howard (François & Howard 2000), all volumes showcase a selection of traditional narratives in each language, taken from my corpus of transcribed stories. Their length ranges from 36 to 78 pages each. They are monolingual, as they aim to encourage literacy in the vernacular language, as opposed to the country’s dominant languages of education (French, English or Bislama) which are often people’s default choices when it comes to writing. Figures 3 and 4 illustrate one page from two of those story books.

The literacy materials in question were initially self-published and self-funded by my family. In 2006, the Vanuatu bureau of Alliance Française added their support to six of these volumes, by funding the printing of 300 copies, as well as their shipping to different local schools in the Banks group; we renewed our collaboration again in 2015, with respect to four books destined to the communities of the Torres islands. Since then, I have heard numerous reports that these literacy materials have been successfully perused in various schools of the Torres-Banks province of Vanuatu—whether this was an initiative of the local teacher, or an application of the country’s recent pledges to develop vernacular literacy programs in early school years (Vanuatu Ministry of Education 2012).

Language	Area	Year	Book title	Contents
Araki	Espiritu Santo	2008	<i>Sorosoro māran Raki</i>	Stories in Araki (south Santo)
Dorig	Gaua, Banks	2011	<i>O susrig ble mraw vata Dōrig</i>	Stories in Dorig
Hiw	Torres Is.	2015	<i>Ne vegevage fōssē 'n Mefavtit</i>	The legend of the hero Megravtit
Lemerig	Vanua Lava, Banks	2006	<i>Nvāv 'ām 'a Lēmērig</i>	Stories in Lemerig
Lakon	Gaua, Banks	2011	<i>Suusuu pule maraw avan Lakon</i>	Stories in Lakon
Lo-Toga	Torres Is.	2015	<i>Ne vegevage sē te Lō mi ne Toge</i>	Stories from Lo and Toga islands
Mwesen	Vanua Lava, Banks	2004	<i>O olñevu ta turmō ta Mēsēn</i>	Stories in Mwesen
Mwotlap	Banks	2003	<i>Tog tog i van en</i>	'Once upon a time': Stories in Mwotlap
Mwotlap	Banks	2000	<i>Bulsal, dam galsi me lēklek</i>	'Follow me, my friend': Language reader
Olrat	Gaua, Banks	2011	<i>Ususraa pule maraw men Ōlrat</i>	Stories in Olrat
Teanu +	Temotu, Solomon Is	2012	<i>Liatevo iepiene nē piene akapa</i>	Stories in the three languages of Vanikoro: Teanu, Lovono, Tanema

Table 5: Text materials produced by the author based on his documentary work, aimed at literacy development and language revitalization

Now that the internet has reached speaker communities (since 2010 in the capital, since 2017 in some rural areas), I have witnessed increased use of vernacular languages in writing—whether in mailing lists, in texting, or on Facebook (§3.1). For some languages that used to show inconsistent attempts at transcription, it appears that younger contributors now show more consistency in their spelling. Some explained to me how they learned to write their own language using the literacy materials I produced, which gave them more confidence when writing their own legacy language.

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Ba kê nemyös so kê mas wuh köyö, namyös nonon so kê so niwuh köyö.

Kê magal köyö van so köyö vanvan nen e tō köyö mitiy, wa tō kê nivan hōw, tō wuh matmat köyö mi naqyēn.

Tō— kê nihatig hag nen tō— mahag van; kê net van so “Ohoo! Yoge gōh et mitimiy te!” Kê menyē van, menyē van, tateh.

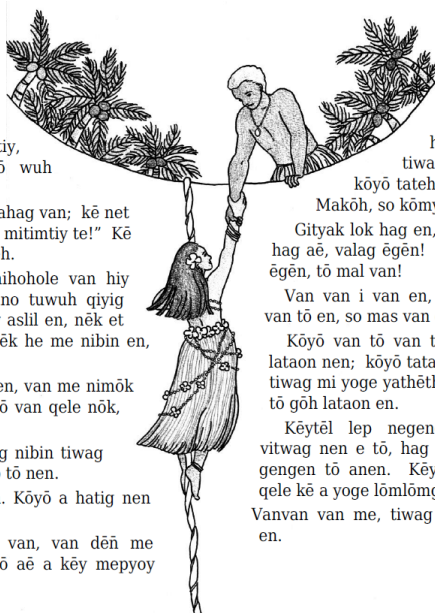
Mālmal nonon Wētamat en nihohole van hiy nōlōmgep e wo “Imam mino tuwuh qiyig dōyō. Ba nēk valag hiy yow aslil en, nēk et van nibin lol tō anen, ba nēk he me nibin en, ba lep me noel.”

Kê nilep nibin tiwag mi noel nen, van me nimōk veteg köyō van, vēshēt köyō van qele nōk, köyō hohole!

“Hatig tō, dō van!” Mōk veteg nibin tiwag mi noel tō köyō hohole noyō tō nen.

Mahē nognog meyen me ēgēn. Köyō a hatig nen tō, lep namtehal tō a— van.

Köyō van van van van va— van, van dēn me lemtehal a nagayga dam tō aē a key mepyoy tēqēl tō kê aē en.



Wētamat yōnteg a so “Ooh! Vētmahē kê nimyen ēagōh!”, so kê nivan wuh vege köyō a köyō nēh en. Kê nivan hōw me qele kê, nibin tiwag mi noel hohole tō nen, köyō tateh. “Aah! Kōmyō so gal no? Makōh, so kōmyō ave?!”

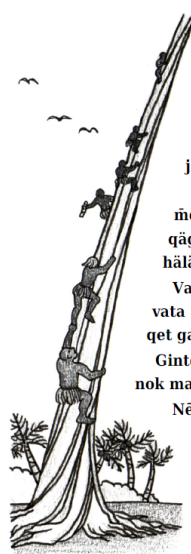
Gityak lok hag en, lep nohos nonon, yow kal hag aē, valag ēgēn! Yoge mal dam ketket alge ēgēn, tō mal van!

Van van i van en, nēdēmdēm noyō so köyō van tō en, so mas van dēn a lataon.

Köyō van tō van tō va— van, van dēn hōw lataon nen; köyō tatal kēkēl laptō, imam nonon tiwag mi yoge yathēthēn en, mal van me, tō hag tō gōh lataon en.

Kēytēl lep negengen nagaytēl den nisto vitwag nen e tō, hag tō aslil lefranda nan nen, gengen tō anen. Kēytēl gengen en, so et van qele kê a yoge lōmlōmgep en nivanvan van me! Vanvan van me, tiwag mi mālmāl non Wētamat en.

Figure 3: A page from a story book in Mwotlap, Motalava I., Vanuatu (François 2003)



Wōrō ēn hag va— van, naw tē 'āt avōh, wōrō tē rākās.

Rākās mongēē wāl-wāl neñ, Qat gēn tē mākā to sala nē ga to' jen nē.

Nē 'n hālāqāg tīgāh mērē heg, Tañro tē hālāqāg kēl talvōn um, nē tē hālāqāg talvōn.

Va—van, we tē wāhā kere vata nagē Tañro neñ mēn too qet ga tutun we nē tē ginteg.

Ginteg hōw neñ, tutuan pah nok makē raños.

Nē tē row vēgēn hag, nē gēn tē luwluw gēn ek, sa “Mok raños! Na ga marēs nēk a rēg! Nēk a vutgi!”

We raños neñ tē rēg, tē vutgi ajew.

Gēē tē vēgēn suu-

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Suusuu pule maraw avan Lakon

suu. Tañro tē vēgēn suusuu gēē ma.

Gēē 'n vēgēn vēgēn va—n, Qat sa: “Mok raños! Nēk rēg, nēk vutgi lēh hag!”

Raños neñtē vutgi sa tē vutgi kakarānkē vata hag, hag neñ to lē pōlō.

Gēē 'n jēn hag neñ, sa “Ha'ēh! Mok raños! Nēk et kaōl!”

We 'n raños neñ tē kaōl.

Kaōl kaōl kaōl va—van, jēn hōw lē vanō neñ, nē tē hālāqāg jen, tutuan tē hālāqāg, nē tē gih lekteg uhli raños neñ.

Tañro neñ nē 'n kakal ma, va rigtāg we nē tē ukāg raños, raños tē 'āqā wutā i Qasval.



Storian long lanwis blong Lakon

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Figure 4: A page from a story book in Lakon – Gaua I., Vanuatu (François 2011b)

4. Conclusion: A mutual benefit for linguists and communities The movement of documentary linguistics, as it emerged in the 1990s and was theorized by Himmelmann (1998), has meant a leap forward in the quality standards of the primary data serving as the basis for language description and analysis. In the Pacific region, this progress has endowed numerous endangered languages with rich corpora of naturalistic speech, in the form of audio and video recordings, with the frequent addition of text annotations. Future years should increase the mutual integration of language documentation and description, so as to reinforce the accountability of linguistic analyses based on solid empirical data.

Yet the relevance of language documentation goes beyond providing empirical material for the linguist. By focusing on naturalistic speech in different social contexts, the archives produced by the documentary enterprise have major potential for a broad array of audiences—anthropologists and historians, experts of oral literature and ethnomusicologists, language teachers and learners. Most importantly, the endeavor of documentary linguistics is proving of high relevance to members of Pacific speaker communities, whether their wish is to hear the voices of their elders, to create and peruse literacy materials in their legacy languages, or to hand over their linguistic and cultural knowledge to the upcoming generations.

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Alexandre François
alexandre.francois@ens.fr

 orcid.org/0000-0003-1947-0806