Selected Proceedings from the Tenth Conference On Oceanic Linguistics (COOL10)

Special issue editors: Brenda H. Boerger and Paul Unger
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Preface to this Special Issue

COOL10 in the context of previous conferences

The Solomon Islands National Museum and the Solomon Islands Translation Advisory Group (SITAG) cosponsored the 10th Conference On Oceanic Linguistics (COOL10) in Honiara, Solomon Islands on July 10-15, 2017. COOL has met throughout the Pacific, but this is the first time it has been held in the Solomon Islands. COOL01 in 1993 was at USP, in Port Vila, Vanuatu. COOL has also met in Fiji, New Caledonia, and Niue. COOL08 was in New Zealand and COOL09 in Australia, so participants at COOL09 expressed strong opinions that COOL10 should be held in a country where the majority of languages spoken there are from the Oceanic language family. Therefore, the Solomon Islands was chosen to be the venue for COOL10.

SITAG has collaborated with the National Museum twice previously on language-related projects in 2008 and 2012, so this event is a continuation of an on-going relationship through our shared desire to contribute to language and culture vitality in the Solomon Islands. As part of that effort, Thursday afternoon was dedicated to the “Solomon Islands Consortium for Language Development,” a gathering of community members and leaders in government, education, and non-governmental organizations who are interested in supporting language development in the country.

Papers in this volume

The nine papers in this volume are representative of the forty papers presented at the conference. In addition to general papers on Oceanic languages, the conference invited papers for two special sessions—one on ethnobotany and another on ethnoarts. These two foci were in conjunction with the plenary lectures on Monday and Friday. Will McClatchey’s opening plenary lecture was, “Finding Reciprocal Value in Language for Botanists and Linguists.” It was immediately followed by an ethnobotany workshop co-led by him and Myknee Q. Sirikolo, Jr., Director of the Solomon Islands Herbarium and Botanical Gardens. The closing plenary by Alexandre François was, “Words from Our Ancestors: The Art of Sung Poetry in Northern Vanuatu.” It built on momentum from the Sa’a community’s music and dance performances presented at the conference dinner the previous evening.

Five papers relate to descriptive linguistics of languages in Oceania—two from Solomon Islands languages and three from Vanuatu languages. From the Solomon Islands, Brenda Boerger’s paper discusses the “Marked Use of Personal Directionals in Natugu [ntu] Narrative Texts,” claiming that Natugu personal directionals can be used in narrative discourse to shift from a narrator perspective to a main character perspective. This main character perspective occurs at the peak of the narrative. These findings demonstrate that accurate description of directionals in a language must examine their functions at the discourse level, not just in individual sentences.

The second descriptive paper dealing with a Solomon Islands language is Paul Unger’s “Reduced Duplication in Doku [lgr]: Geminate Consonants and Stressed Vowel Syncope in Southeast Solomonic.” He identifies the element which native speakers call “heavy” sounds as being word-initial geminate consonants. These include consonants from the classes of voiced and voiceless stops, voiced and voiceless fricatives, and nasals. Doku geminates give the language a unique place in the Southeast Solomonic language family, in that—based on available descriptions—it is the only language with geminate consonants (word initial or otherwise). In the larger Oceanic context it appears to be the only language in which there is stressed vowel syncope in disyllabic roots that results in single syllable, monomoraic forms. This is counter to Blust’s 2007 argument for restorative disyllabism.

The other three descriptive papers are about languages of Vanuatu. Ana Krajinović presents, “Comparative Study of Conditional Clauses in Nafsan [erk].” This corpus-based study demonstrates that while conditional clauses frequently require a subordinating conditional marker in the protasis, in Nafsan conditional clauses are structurally identical to two juxtaposed clauses. Thieberger (2006) identifies \( -f \) and \( =f\)la as conditional and possibility markers, respectively. She posits that the structures with \( -f \) and \( =f\)la are in fact juxtaposed clauses, not subordinated structures, and that the conditional reading is
pragmatically conditioned rather than grammatically determined. Naifan also makes use of a discourse marker wel ‘thus/like’ (Thieberger 2006) to mark the protasis of conditionals, and this strategy seems to be canonically specialized to express conditionals. The two Naifan strategies are compared with those of other Oceanic languages.

Manfred Krifka discusses, “Honorific and Affiliative Uses of Dual and Paucal Number in Daakie [ptv].” He presents various uses of dual and paucal number forms in Daakie, in particular, the use of dual nominals to address and refer to one’s relatives who stand in a taboo relationship to the speaker. This is compared to the few other languages for which this use of dual is reported. He also presents the use of the paucal forms as referring to a small group of persons or entities, but also to potentially larger groups that the speaker affiliates with. He argues that the honorific dual is motivated by similar considerations as the honorific plural, and that the affiliative paucal is motivated by similar considerations as the emotive use of diminutives. This makes researchers aware of underreported functions of number features and encourages increased description and analysis of them.

The third descriptive paper about a language of Vanuatu is by Tsutomo (Tom) Sato, entitled, “The Durational Ratios of Short and Long Segments in Mele [mxe] and their Linguistic Functions.” His paper clarifies the durational ratios (DR) of short and long segments in Mele (Imere), a Polynesian Outlier. Not only short and long vowels, but also short and long consonants function to show grammatical distinctions, as well as semantic contrasts. The DR of short to long vowels in Mele is identified as 1.125, which is second lowest when compared with those of six non-Polynesian languages. Comparisons are also made with other Polynesian languages based on fieldwork on Tuvaluan and Hawaiian, including distinctions for singular and plural, plus active and passive. Sato suggests that long and short contrast may be phasing out in Mele, or that pitch intensity may also play a role in differentiating long and short segments.

We turn now to the two papers in this collection having an ethnoarts focus—one related to music and poetry and the other related to an indigenous craft. Stephanie Geneix-Rabault and Suzie Bearune engage us with, “Eralo! Sing! The Example of Waueng in Nengone [nen].” (Mare Island, New Caledonia).” Toward an ethnomusico-linguistic approach, the paper’s focus is an analysis of the waueng, a genre of oral literature in Nengone, one of the Kanak languages spoken by Mare and Tiga people of New Caledonia. The waueng is a vocal song performed by young men, and its themes are generally love verse. This oral genre has not been well documented in the literature (Ammann, 1997(a) and (b); and Aufray, 2000), in comparison to other traditional knowledge, such as lullabies, histories, declamations, songs, instrumental music, or dances. Thus, their work is a contribution to the knowledge of an oral genre that is not much described or known. The paper gives the readers context by presenting Nengone and its oral literature, then describes the waueng genre in detail, including its linguistic and musical characteristics, nature, and function. Finally, the musico-linguistic analysis of some of waueng’s songs reveal how these performances transgress linguistic and musical norms, as well as sometimes subverting social boundaries and hierarchical systems.

The second ethnoarts paper is a collaborative effort between Kim Beebe Wells and Selwyn Baloq. They discuss “Santa Cruz Island Banana Fiber Weaving and its Endangered Natqgu [ntu] Technical Vocabulary.” Banana fiber weaving neared extinction when younger men of the weaving clan on Santa Cruz gave it up in favor of embracing Western modernity. But co-author Baloq relearned and revived the craft to keep it from becoming extinct. Fieldwork on the island, in the eastern part of the Solomon Islands, captured craftsman-level weaving vocabulary which was added to the Natqgu lexicon. This supports findings that outside interest in the language and culture of people may also increase their self-image. The immediate implication is that one must not only sample broadly in eliciting vocabulary of endangered languages, even when eliciting by semantic domains, but one must also elicit more deeply to capture a language's cultural richness, as shown by the weaving terms presented here.

The final two papers in the collection relate to ethnobotany. Four co-authors, Brenda Boerger, Alexander Boerger, Leonard Menrlwz, and Myknee Q. Sirikolo, Jr., collaborate on their paper, “On Integrating Ethnobotany with Field Linguistics.” They report on Natqgu [ntu] fieldwork in the Solomon Islands in 2015 and make suggestions for continued collaborative, interdisciplinary, language-related fieldwork. They discuss the value of ethnobotany, showing how it was integrated with other research goals. The specific phases of ethnobotanical activities are itemized and then the successes and shortcomings are noted. They conclude that ethnobotany adds a valuable component to field linguistics.
and suggest that it be considered best practice to incorporate it and similar interdisciplinary efforts in documentary linguistic fieldwork.

The other ethnobotany paper is by Paul Geraghty, entitled, “The Cape Gooseberry and its Many Fijian and Pacific Names.” He takes readers on a journey to explore Physalis peruviana/angulata (Solanaceae), known in English as the “wild cape gooseberry.” His research shows it was probably introduced into the Pacific from South America in the early 19th century—though possibly much earlier. He traces its introduction and spread around the Pacific and particularly in Fiji, including the uses to which it has been put, and the many names it has acquired. Two unexpected observations come from the Fiji research. First, the plant now has more different names than any other plant taxon, native or introduced, including names existing through borrowing, compounding, and semantic extension. Second, most of the names coined in Fiji refer to a characteristic of the plant that is never found in standard botanical descriptions, revealing the traditional ecological knowledge (TEK) of those who coined the terms.

Respectfully,
Brenda H. Boerger and Paul Unger
COOL10 Special issue editors
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Abstract

In Natügu (Natqgu) [ntu] personal directionals can be used in narrative discourse to shift from a narrator perspective to a main character perspective. The latter is marked in relation to the narrator perspective. This paper shows how the sustained use of the main character perspective occurs at the peak of a narrative, “George Meya is Shot with an Arrow.” These findings illustrate one aspect of the range of practice in good Natqgu storytelling and show that accurate description of directionals in a language must examine their functions at the discourse level, and not just in isolated, individual sentences. This also demonstrates the importance of collecting multiple genres during fieldwork.
Abbreviations

1 first person
2 second person
1 + 2 first person and second person
3 third person
A transitive agent, i.e., agent-like argument of canonical transitive verb
APPL applicative
AUG augmented (replaces plural in minimal-augmented system)
CAUS causative
COM comitative
COMPL completive
COND conditional
CONJ conjunction
DAT dative base
DETR detransitivizer
DEIC deictic
DET determinant
DISTR distributive
DUR durative
EXCL exclamation
GDIR geometric directional
INCH incohative
INTS intensifier
IPFV imperfective
IRR irrealis
LOC locative
MIN minimal (replaces ‘singular’ in minimal-augmented system)
NEG negation, negative
NR nominalizer/nominalization
O patient-like (object) argument of canonical transitive verb
ODIR other directional
PASS passive
PCLF possessive classifier
PDIR personal directional
PFV perfective
PL plural
PN proper name
PREP preposition
RL realis
S single argument of canonical intransitive verb
SEQ sequential
SUBR subordinator
SPEC specifier
TR transitiivizer

Note: Appendix A contains a table with person and number suffixes for Natügu.
1 Introduction

This article\(^\text{1}\) briefly reviews Natqgu (Natqgu [ntu]) directionals, leading to a description of the use of personal directionals in narrative discourse, including a marked use at narrative peak. I show that these results have implications for both analysis and fieldwork, in that descriptive work must examine the functions of particles in sequential discourse and that particular genres may reveal differing insights, making it important to collect multiple genres during fieldwork.

While Natqgu is the international spelling for the language having the ISO 639-3 code [ntu], for the remainder of this article, I use the newer community orthography, which has the symbols in Table 1 for its five vowels in addition to a, e, i, o, and u. Nasalization is marked with a straight quote following the nasalized vowel.

<table>
<thead>
<tr>
<th>Old</th>
<th>New</th>
<th>IPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>o</td>
<td>r</td>
<td>ɞ</td>
</tr>
<tr>
<td>ü</td>
<td>q</td>
<td>u</td>
</tr>
<tr>
<td>ö</td>
<td>r</td>
<td>ø</td>
</tr>
<tr>
<td>ä</td>
<td>x</td>
<td>æ</td>
</tr>
<tr>
<td>ë</td>
<td>z</td>
<td>ø</td>
</tr>
</tbody>
</table>

New orthography and symbols used in Natqgu are listed in Table 1 for its five vowels in addition to a, e, i, o, and u. Nasalization is marked with a straight quote following the nasalized vowel.

Natqgu is an Oceanic language, belonging to the Reefs-Santa Cruz subgroup of the Temotu family (Ross and Naess 2007). It is spoken along Graciosa Bay and on the northern and western coastal areas of Santa Cruz Island, Solomon Islands. Its directionals bear a functional and distributional resemblance to those found in another Oceanic language, Mwotlap, of Northern Vanuatu (François 2003:412–414). These parallels are particularly interesting since Natqgu and Mwotlap are from different branches of the Oceanic family tree: Natqgu is from the Proto-Temotu branch and Mwotlap is from the Proto Eastern Oceanic Branch. These parallels can be explained one of three ways: 1) the merger and loss described happened before the two branches split; 2) they were independent developments in each of the language families; or 3) this pattern of directionals is an areal phenomenon covering northern Vanuatu and Temotu Province of the Solomon Islands. Confirmation depends on obtaining comparative data from other relevant languages, however that is not the focus of this paper.

Synchronically Natqgu directionals are bound, verbal suffixes, while diachronically scholars often describe directionals as being derived from verbs in serial verb constructions (SVCs). In that view, then, such bound directional morphemes are seen as one of the three possible results of grammaticalization of directional verbs in Oceanic languages (Ross 2004:311). I assume such an analysis for Natqgu in which directional suffixes are the result of nuclear-layer verb serialization (Naess and Boerger 2008:186). In fact, Ross (2004:301) also discusses how some of the deictic verbs came to have directional functions and makes the observations recorded in Table 2, where Natqgu forms have been added.

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\(^1\) This article is a revision of an earlier presentation (Boerger 2010), cited in Margetts (2015), and includes introductory material from Lober and Boerger (2009). I am grateful to Andrew Van Andel (2010) and Ryan Harty (2017) who used texts I provided to produce term papers on Natqgu narrative discourse in courses at Trinity Western University in Canada. Susan F. Schmerling commented on earlier versions. Further thanks are due to Anna Margetts for extensive and constructive comments on this version, which improved focus and clarity, and to Paul Unger for comments on the final text. All remaining errors or misinterpretations are mine.
Table 2. Proto-Oceanic verbs, their directional functions, compared to Natqgu

<table>
<thead>
<tr>
<th>POC</th>
<th>as verb</th>
<th>as directional</th>
<th>Natqgu</th>
</tr>
</thead>
<tbody>
<tr>
<td>*mai, *ma</td>
<td>'come'</td>
<td>'towards speaker'</td>
<td>-mq 'hither'</td>
</tr>
<tr>
<td>*watu, *ua</td>
<td>'go towards addressee (= go:2)'</td>
<td>'towards addressee'</td>
<td>-bz 'thither'</td>
</tr>
<tr>
<td>*pano, *pa</td>
<td>'go away'</td>
<td>'away from speaker'</td>
<td>merged</td>
</tr>
<tr>
<td>*lako, *la</td>
<td>'go (to) (= go:3)'</td>
<td>'away from speaker'</td>
<td>lost</td>
</tr>
</tbody>
</table>

Based on both semantics and surface phonological resemblance, I hypothesize that the Proto-Oceanic (POc) verb *mai 'come' is the source for Natqgu -mq 'hither', and that -bz comes from either *watu 'go towards addressee' or *pano 'go away', which appear to have merged in Natqgu. Finally, POc *lako 'go (to)' has been lost in Natqgu, so that there are two Natqgu directionals representing what were presumably four distinctions in POc. Other Oceanic languages undoubtedly have different histories of the development of directionals from POc.

In the set of "other" directionals, there is a Natqgu form –sz 'away from', but it does not seem phonetically similar enough to either *pano or *lako to have either of these as a source. Nor does it fill the same slot as the personal directionals and can co-occur with them. Similarly, in the set of geometric directionals, -px 'out' could possibly relate to *pano, but it also does not fill the personal directional slot on Natqgu verbs and co-occurs with them.

In section 2 of the paper I present an overview of the Natqgu directionals, with a more detailed look at the functions of the personal directionals. Section 3 introduces the reader to concepts in narrative discourse analysis, with an English example. Then, section 4 covers the use of personal directionals at narrative peak in Natqgu, with a full, interlinearized story examined in detail. Section 5 is the conclusion, where I summarize the salient points about the importance of studying linguistic features in context and the importance of collecting multiple genres during fieldwork.

2 Natqgu directional

Natqgu has twelve directionals, which are listed in table 3. I divide these into three categories based on semantics and distribution in the verb word:

- personal directionals used for hither/thither, abbreviated PDIR, and the focus of this article,
- geometric used for in/out and up/down, abbreviated GDIR, and
- other used to refer to six further directionals, abbreviated ODIR.

Table 3. Natqgu directionals

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Directional type</th>
<th>Old orthog</th>
<th>New orthog</th>
<th>English gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Pdir</td>
<td>personal</td>
<td>-mū</td>
<td>-mq</td>
<td>hither</td>
</tr>
<tr>
<td>b.</td>
<td></td>
<td>-bē</td>
<td>-bz</td>
<td>thither</td>
</tr>
<tr>
<td>c. Gdir</td>
<td>geometric</td>
<td>-tō</td>
<td>-tr</td>
<td>in</td>
</tr>
<tr>
<td>d.</td>
<td></td>
<td>-pā</td>
<td>-px</td>
<td>out</td>
</tr>
<tr>
<td>e.</td>
<td></td>
<td>-lē</td>
<td>-lz</td>
<td>up</td>
</tr>
<tr>
<td>f.</td>
<td></td>
<td>-o</td>
<td>-o</td>
<td>down</td>
</tr>
<tr>
<td>g. Odir</td>
<td>other</td>
<td>-ki</td>
<td>-ki</td>
<td>path</td>
</tr>
<tr>
<td>h.</td>
<td></td>
<td>-ba</td>
<td>-ba</td>
<td>reverse</td>
</tr>
<tr>
<td>i.</td>
<td></td>
<td>-ā</td>
<td>-c</td>
<td>across</td>
</tr>
<tr>
<td>j.</td>
<td></td>
<td>-sē</td>
<td>-sz</td>
<td>away from</td>
</tr>
<tr>
<td>k.</td>
<td></td>
<td>-lvē</td>
<td>-lvz</td>
<td>towards</td>
</tr>
<tr>
<td>l.</td>
<td></td>
<td>-plā</td>
<td>-plx</td>
<td>through</td>
</tr>
</tbody>
</table>
The four geometric directionals (c–f) have a container perspective yielding the meanings ‘in/out’, and a vertical axis perspective yielding the meanings ‘up/down’. There are some interesting idiosyncrasies when these co-occur with personal directionals, parallel to what Næss (2018) describes for another Reefs-Santa Cruz language, Äiwoo [nfl]. When they occur as the only directional though, the use and semantics of the geometric directionals are straightforward, both at the micro level regarding smaller objects close at hand, or at the macro level regarding geographic formations including the island and the sea.

For example, it makes sense that opposites cannot both occur on a single verb, since one does not go ‘up’ and ‘down’ simultaneously. But what is interesting in Natqgu is that even though the geometric directionals represent four semantic distinctions—two each on the vertical and horizontal axes—only one geometric directional can occur on a single verb. That is, while it is grammatical in my dialect of English to say, “Come down out of the tree,” in Natqgu one must choose either, “Come out of the tree,” or “Come down from the tree.” The latter is preferred since there is actual downward motion involved. “Come out of the tree,” could be used in situations where the coming out did not also involve movement downward. This constraint regarding the two axes and the position of these directionals on the verb is what led me to formulate the “geometric directional” category which encompasses the horizontal and vertical axis directionals.

The “other” directionals (g–l) do not occur in semantic pairs or counterparts. In that category, the word for ‘vomit,’ ngqba, is particularly evocative, being composed of ‘eat’ and the ‘reverse’ directional.

The syntactic position of the three categories of directional is strictly defined. Natqgu allows only one of each type of directional—in the order: other, geometric, and personal—to occur on a single verb, as illustrated by example (1).

\[(1) \quad \text{bz-ki-tr-mq = le} \quad \text{Sidni} \]
\[
\text{die-ODIR.path-GDIR.in-PDIR.hither = 3MIN] Sydney} \\
\text{‘S/he died along over in Sydney.’} \\
\text{JC genealogy 018.19}
\]

The nature of personal directionals (table 3, a and b) will be discussed in the following sections.

2.1 Personal directionals: hither/thither and deictic center

Like in many Oceanic languages, the personal directionals have a number of functions and play an important role in Natqgu narrative discourse, making them the focus of the rest of the article. The personal directionals function to orient the discourse relative to the deictic center. The DEICTIC CENTER is the location(s) or set of points which anchor or focus a discourse. So, the personal directionals in Natqgu are -mq ‘hither’ which generally means ‘towards deictic center’ and -bz ‘thither’ which generally means ‘toward somewhere other than deictic center.’ One can tell where the speaker’s or writer’s deictic center is by how s/he uses the personal directionals. That is, in conversation, the center is speaker oriented and revolves around each speaker in turn, including when and where speakers are located. In a narrative, as shown in detail later, the deictic center can track with either the storyteller or the main character or both in turn. The examples below illustrate these concepts. The personal directionals are in a bold font.

\[(2) \quad \text{Nc tabao kc tq-lu-nge-o-mq = le bu} \text{e’ kc} \]
\[
\text{tree papaya DEIC RL-spear-hole-GDIR.down-PDIR.hither = 3MIN corner DEIC} \\
\text{‘The papaya tree poked a hole in the corner [of the house].’} \\
\text{Kite narrative 012.23}
\]

In example (2), a gust of wind had previously knocked the branch onto the house. It was the single boys inside the house who saw that the tree had poked a hole in the corner of the house; thus, the

\[2\] The texts used in this analysis are from fieldwork conducted by Boerger on Santa Cruz Island, as outlined in Appendix B.
direction (down-hither) that the tree is poking in (2) is toward the single boys inside the house where the deictic center is located.

Consider example (3) in which the verb *obq* ‘look’ is intransitive. Earlier in the story the subject of this sentence had felt something entangled in his legs. In (3) *-bz* shows that he looked towards something for a specific purpose, as opposed to just looking around. Here, the Solomon Islands Pijin parallel would be, *Hemi luk go*.

(3) \[
\begin{align*}
\text{Obq-} & \quad \text{bz} = \emptyset \quad x \quad \text{lrpz} \quad \text{sc} \quad \text{olman} \quad \text{Mebqn}. \\
\text{Look-PDir.thither} & = 3 \text{MIN} \quad \text{CONJ} \quad \text{clothing} \quad \text{PCLF} \quad \text{old.man} \quad \text{PN}
\end{align*}
\]

‘He looked and it was old man Mebunr’s clothing.’

Nikaio narrative 001.10

The same verb *obq* ‘look’ also occurs in example (4), as well as two instances of the personal directional -*bz* ‘thither’. The first -*bz* occurs with *obq* ‘look’ and establishes the orientation as being away from the main character who is sitting in his canoe. That is, the orientation is ‘towards elsewhere’. Metalo is looking at the escaped fishing kite that was flying away with the fish dangling from its line. This sets up the second instance of -*bz*, glossed ‘there’, illustrating that once the basic orientation of the deictic center has been established, the directionality indicated by ‘thither’ can merely mean ‘elsewhere’.

(4) \[
\begin{align*}
\text{Sc} & \quad \text{tq-pwx-nqblq-lz} = \text{pe} \quad \text{Metalo} \\
\text{PFV} & \quad \text{RL-look-follow-GDir.up-INCH} \quad \text{Metalo}
\end{align*}
\]

\[
\begin{align*}
\text{nz-vz-lz-kr} & = \text{de}, \quad \text{obq-bz} = \emptyset \quad \text{nc-boi} \\
\text{NR-go-GDir.up-PCLF} & = 3 \text{MIN} \quad \text{look-PDir.thither} = 3 \text{MIN} \quad \text{needlefish}
\end{align*}
\]

\[
\begin{align*}
\text{kc} & \quad \text{ma} \quad \text{topwz} \quad \text{do-ne-lz} = \text{pe-ksz-bz}. \\
\text{DEIC} & \quad \text{SPEC} \quad \text{small} \quad \text{hang-Distr-GDir.up} = \text{INCH-also-PDir.thither}
\end{align*}
\]

‘Then Metalo looked up following its [the kite’s] going up and looked at that small needlefish also dangling around up there.’

Kite narrative 012.06

With verbs of transfer, when physical objects are moved, the *hither/thither* meaning of the affixes can be understood as ‘to’ and ‘from’ or as in Solomon Islands Pijin, *kam* and *go*. By means of the personal directionals, then, Natqgu encodes a range of semantic relationships depending on the class of verb with which they co-occur, such as recipient, beneficiary, goal, and addressee, among others. Some of these functions are illustrated below.

### 2.2 Personal directionals encode presence of recipient

The directional *-mq* ‘hither’ and *-bz* ‘thither’ can encode the presence of the semantic role of recipient. A personal directional is mandatory to indicate presence of a recipient or beneficiary and co-occurs with either a dative pronoun having the base *ba-* , as in examples (5) and (6) below, or an oblique which states the recipient. The ditransitive\(^3\) verb *ka* ‘give’ is used to illustrate directionals which encode recipient:

(5) \[
\begin{align*}
\text{Sa} & \quad \text{na-} \quad \text{ka-bz} = \text{le} \quad \text{ba} = \text{mu}. \\
\text{IPFV} & \quad \text{IRR-give-PDir.thither} = 3 \text{MIN} \quad \text{DAT} = 2 \text{AUG}
\end{align*}
\]

‘He will give (it) to you-pl.’

\(^3\) Also relevant, but again, not the focus here, are discussions of three participant events, such as given in Margetts (2007).
In (5), -bz ‘thither’ is used with ba = mu ‘to = 2AUG’ while -mq ‘hither’ in (6) is used with ba = nge ‘to = 1MIN.’ This illustrates -bz signaling that the recipient is non-speaker, while the use of -mq indicates that the recipient is the speaker or a group to which the speaker belongs. The word order for ditransitives with both direct and indirect objects present allows syntactically simple objects in either order in relation to each other, such that the recipient and theme could occur in the order theme-recipient in sentences like (6). However, when one object is significantly more complex than the other, there is a general preference for the syntactically complex object—usually containing new information—to be stated last, at the right margin. So in Natqgu, the directional does not replace the expression of an object but co-occurs with it.

It should further be noted that the presence of directionals means that when the theme argument (object) is not present one can infer the presence and nature of a certain type of participant in the event. For example, the theme (object) is unstated in (7), but the presence of the personal directional -mq ‘hither’ means the recipient knows that there is something that he, the agent, will give to the speaker or a group the speaker belongs to. Similarly, the recipient may also be implicit, such that sentence (7) is syntactically well formed. However, ka ‘give’ requires a directional for any active verbal 4 usage, such that sentence (8) is ungrammatical.

2.3 Personal directionals encode presence of goal

The directionals -mq ‘hither’ and -bz ‘thither’ also function to encode the presence of a goal, defined as the final destination of a verb of transfer like ‘get’ and ‘take’ in (9) and (10). As with ka ‘give’, the presence of the directional indicates the presence of the goal, whether it is represented in the sentence or merely implied. This use is illustrated in the next two examples, which are both from the same story. Compare the use of -bz ‘thither’ in (9) and the lack of either of the personal directionals in (10).

(7) Sa na-ka-mq = le
   IPFV IRR-give-PDIR.hither = 3MIN
   ‘He’ll give [something] [to speaker/speaker’s group (me, us)].’

(8) *Sa na-ka = le
   IPFV IRR-give = 3MIN
   ‘He’ll give.’

4 In passives, generics, or nominalized forms of “giving” in a general sense, a personal directional is not required.
In the triggerfish story, prior to example (9), the fish bites the boy’s finger and he cries. It is
assumed that in the process he dropped the fish, because in (9) the verb oti-bz ‘get’ shows he has to go or
reach away from his present position (i.e., the deictic center) in order to get it. The second ‘thither’ in (9)
occurs with the verb tapu ‘split’ and signals that he split the fish’s head on something, that is, the goal. In
(10), the verb twz ‘take’ occurs without -bz because the personal directionals do not license locatives.
This allows us to understand in (10) that the boy is going home, rather than coming home. The narrator of
this story does not orient himself in the story but tells it from the unmarked perspective outside the story
(i.e., the omniscient narrator perspective).

2.4 Personal directionals in speech events

The personal directionals, -mq ‘hither’ and -bz ‘thither’ are also used to indicate the directionality of a
speech event. Furthermore, a speech event verb plus directional can also be used to introduce direct or
indirect quotes. In such sentences, there is no physical movement of an object or person. Rather, the
directionals indicate who is speaking along with the speaker’s group and who is being addressed,
whether or not that includes the addressee. These are illustrated by examples (11) through (13).

(11)  R-pi-tx-lz-bz poi mz lrkr kx,
DETR-say-INTS-GDIR.up-PDIR.thither pig PREP rat SUBR
“Awi kx etu, mzle = nge.”
thanks SUBR big brother = 1MIN
‘The pig said to the rat up [in the tree], “Thanks very much, my brother.”’
Rat and pig narrative 006.09

(12)  ‘Na-o dq kxxz mrkc Neboi
IRR-go.for a medium LOC PN
na-pi-mq = le ba = gu kxmu drka’ lc...
IRR-say-PDIR.hither = 3MIN DAT = 1 + 2AUG why demon DEIC
‘Go get a medium from Neboi to tell us why this demon…’
Kite narrative 012.17

(13)  R-pi = le na-ya-ne = ngg Mztq.
DETR-say = 3MIN IRR.3AUG-paddle-along = 3AUG PN
‘He wanted for them to paddle to Mztq.’
Nikaio narrative 001.04

In sentence (11) the pig speaks toward the non-deictic center, which is not toward himself, as
indicated by -bz ‘thither’ on the verb pi ‘say’. This sets up the direct quote which follows it. In (12) -mq
‘hither’ includes the speaker and his friends at the deictic center, which is also encoded in ba = gu ‘to us’.
The inclusion of bagu is optional, since the directional gives some indication of the audience. However, it
does clarify that the speaker includes his hearers as part of the audience, rather than himself alone, and
it gives it a sense of being more emphatic to include it.

These contrast with (13), which also uses the verb pi ‘say’. In (13), there is neither a personal
directional nor the subordinator kx to introduce a direct quote. Here, rpile ‘he says’ together with the
irrealis mood on ya ‘paddle’ marks the action as potential, giving the idiomatic meaning, ‘want,’ as in the
sentence gloss. Not all sentences with pi ‘say’, then, are necessarily speech events. Note also, that in
sentence 15 of the story in section 4.2.4, the verb pi ‘say’ occurs as a speech event, but without personal
directionals, when the protagonist exclaims aloud, but there is no particular audience.


3 The structure of narratives

Before looking at the Natqgu narrative “George Meya is Shot with an Arrow” in detail, it will be helpful to set the stage by discussing the structure of narratives along with some definitions. All the plotline points in table 3, except evaluation, are normally thought of as occurring in a simple narrative (Longacre 1996; see also Dooley and Levinsohn 2001, Longacre and Hwang 2012). The concept of evaluation is discussed and defined by Labov (1972:366; see table 3). Polanyi (1989:14) notes that evaluation is not fixed, but happens at multiple places in a text, as is confirmed by the Natqgu text discussed below. The remaining definitions in table 3 are my own, gleaned initially from literature courses in secondary and tertiary education, as well as later reading in linguistic discourse. To help readers process these concepts, I include a third column in table 4, showing how the main events of the folktale “Little Red Riding Hood” can be broken down into the established plotline points. It should be noted that there can (and stylistically even should) be variation and blurring in plotline points and ordering, such that a novel of any complexity would have multiple storylines, starting and stopping and being interwoven. Then, if well written, all the novel’s plotlines are resolved in intermittent or final denouements and/or its conclusion.

### Table 4. Plotline definitions with example

<table>
<thead>
<tr>
<th>Plotline</th>
<th>Working definitions</th>
<th>Little Red Riding Hood</th>
</tr>
</thead>
<tbody>
<tr>
<td>Setting</td>
<td>The setting is the place and time of the story, normally established in the opening scene, orienting us to what is to follow.</td>
<td>Introduces Little Red Riding Hood, her plan to visit her grandmother, and her mother’s instructions not to dawdle.</td>
</tr>
<tr>
<td>Inciting incident</td>
<td>The inciting incident is the event that leads up to the protagonist encountering an obstacle which needs to be overcome.</td>
<td>But she delays, meets stranger (wolf), and tells him she is going to her grandmother’s house nearby.</td>
</tr>
<tr>
<td>Developing conflict</td>
<td>The developing conflict event occurs when there is a complicating action, creating an obstacle for the protagonist.</td>
<td>Wolf runs to grandmother’s, deceives grandmother, gobbles her up, dresses in her nightgown, and then interacts with the girl when she arrives.</td>
</tr>
<tr>
<td>Climax</td>
<td>The climax is the high point or peak of a story, where tension is highest as the protagonist comes into direct opposition with the obstacle.</td>
<td>Girl: “My, what big teeth you have.” Wolf: “All the better to eat you with.” Girl runs away, “Help! Wolf!” Woodsman to the rescue.</td>
</tr>
<tr>
<td>Denouement</td>
<td>The denouement is the aftermath; tension decreases, and a resolution pulls together or explains the various plot lines.</td>
<td>Woodsman catches wolf, makes him spit out the living Grandma, then knocks out wolf and takes him away. [Story could end here]</td>
</tr>
<tr>
<td>(Evaluation)</td>
<td>The optional and unfixed evaluation relates to, “the means used by the narrator to indicate the point of the narrative” (Labov 1972:366).</td>
<td>Little Red Riding Hood learns her lesson: Don’t talk to strangers or dawdle in forest!</td>
</tr>
<tr>
<td>Conclusion</td>
<td>The conclusion has low tension, and tells what the characters did next. In some fairy tales, this is the sequence: “And they lived happily ever after. The end.”</td>
<td>Little Red Riding Hood and her grandmother have a nice chat over lunch.</td>
</tr>
</tbody>
</table>

The climax or narrative peak is important because it is the exciting part of the story. But how do authors convey that excitement? Longacre (1985, 1996) has observed that the climax is a “zone of turbulence” where a number of atypical features occur to make it different from the text in the rest of the story. Some of the features he identified are: atypical participant reference, a concentration of direct
speech, shortness of sentences or clauses, parallel syntactic constructions, subject and object occurring in non-canonical positions, and a concentration of characters.

Note how many of these occur in the “Little Red Riding Hood” story. First, there is a concentration of direct speech between the wolf and the girl. There are also short sentences which follow parallel constructions—“My, what big X you have, Grandma!” “All the better to X’ you with, my dear.” And finally, there is a sustained concentration of characters. Previously the girl’s and her mother’s encounter is brief; the girl and the wolf meeting in the woods is brief. But here at the climax, there is an extended conversation and the woodman enters at the last moment. That makes four peak features present in “Little Red Riding Hood.”

In the Natqgu text below, the primary consideration is the atypical participant reference as signaled by the personal directionals. However, other features of peak with regard to the Natqgu climaxes are mentioned briefly, since they help confirm that the climax passages have been accurately identified. Margetts (2015) references both Longacre’s and Labov’s work on person shift at narrative peak in her article on that topic. She notes that person shift has been less covered in the literature than other attributes of peak. Then she goes on to demonstrate how, at the narrative peak, some languages shift to a person and/or number and/or definiteness which is higher on animacy and specificity hierarchies than the preceding and following text. In her discussion, she views the Natqgu shift described below as being within “the range of peak-marking strategies that involve shifts in person indexes” (Margetts 2015:769–771).

## 4 Personal directional shift to encode narrative peak in Natqgu

So what does this personal directional shift look like for Natqgu narratives? While personal directionals in narratives reflect the omniscient narrator stance in their unmarked use, they can also be used more markedly to place the main character at the deictic center. This means that in Natqgu narratives, the deictic center can be moved so that the storyteller is no longer telling the story in relation to himself, but rather in relation to the main character. In fact, the deictic center can switch—even in the middle of a sentence—between the omniscient narrator and the main character perspectives, as indicated by the personal directionals in sentence 19 in the discussion below.

### 4.1 George Meya story overview

This kind of shift—from omniscient to main character perspective—happens in the story “George Meya is Shot with an Arrow.” The narrator uses personal directionals to shift back and forth between telling the story as one of George’s friends waiting back in the village (such that -mq means ‘toward speaker’) and then also as if he had been with George in the bush (such that -mq means ‘toward George’ as the main character). The plot structure for the story is laid out in table 5, with summary statements in the last column.

<table>
<thead>
<tr>
<th>Sentences</th>
<th>Section</th>
<th>Primary narrative</th>
<th>In the bush</th>
</tr>
</thead>
<tbody>
<tr>
<td>1–3</td>
<td>A</td>
<td>Setting</td>
<td>George goes to the bush to work on his house.</td>
</tr>
<tr>
<td>4–6</td>
<td>B</td>
<td>Inciting incident</td>
<td>George runs out of vine for roofing and goes into the bush to get more.</td>
</tr>
<tr>
<td>7–10</td>
<td>C</td>
<td>Developing conflict with Evaluation</td>
<td>He returns and resumes working on the house without realizing his wife has left her bush garden and gone home. ‘I think a wildman saw him.’</td>
</tr>
<tr>
<td>11</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12–19a</td>
<td>D</td>
<td>Climax</td>
<td>Wildman shoots George with an arrow. George pulls out the arrow and shouts for his wife.</td>
</tr>
<tr>
<td>19b–24</td>
<td>E</td>
<td>Denouement</td>
<td>Not finding his wife, he runs back to the village, and asks for soap to bathe.</td>
</tr>
</tbody>
</table>
As outlined in table 5, the George Meya story is comprised of 39 sentences. The main narrative in sentences 1–27 is divided into six sections. The mini-narrative, which acts as a conclusion to the main narrative, also has six sections, in sentences 25–39. This double-narrative structure is represented visually by Figure 1, showing the lead up to the main climax in the first part, followed by the less prominent peak of the second climax in the mini-narrative. The letters separated with slashes show two things. The first one, F/a, shows that the first instance of F serves as both the initial part of the conclusion to the primary narrative, as well as the setting for the mini-narrative. The second one, e/f shows that the denouement and conclusion to the mini-narrative are merged into one section. Finally, F’ represents the last part of the conclusion to the main narrative and the story as a whole. So, even in this rather short and simple story the plots of the two narratives are interwoven.

<table>
<thead>
<tr>
<th>Sentence Range</th>
<th>Directional</th>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>25–27</td>
<td>F/a</td>
<td>Conclusion begins</td>
<td>And then he told them what had happened, and about how the arrow had penetrated his buttocks.</td>
</tr>
<tr>
<td>28–29</td>
<td>b</td>
<td>Inciting incident</td>
<td>Afterward, George’s family goes to find traditional medicine.</td>
</tr>
<tr>
<td>30</td>
<td>c</td>
<td>Developing conflict</td>
<td>But the man they went to did not have any.</td>
</tr>
<tr>
<td>31–33</td>
<td>d</td>
<td>Climax</td>
<td>So they call the Anglican priest who prays and puts holy water on the wound and he was healed.</td>
</tr>
<tr>
<td>34–35</td>
<td>e/f</td>
<td>Denouement and conclusion</td>
<td>And George is still healed to this very day.</td>
</tr>
</tbody>
</table>
| 36–39          | F’          | Conclusion to main narrative, with two Evaluations | ‘I think if blood hadn’t come out when he pulled out the arrow, then I think the wound probably would have become infected.’  
‘I think that’s all I want to tell you about…’ The end. |

Figure 1. Visual plot outline for “George Meya is Shot with an Arrow.”

### 4.2 George Meya story details

Having given an overview of the George Meya story, the focus now is on the details. I explore the plotline elements in turn, taking particular note of the use of personal directionals throughout. The personal directionals and other features referred to in the discussion continue to be indicated in bold fonts to make them easier to locate.
The setting occurs in sentences 1–3 and establishes George Meya as the main character who is working on his house in the bush. The inciting incident happens in sentences 4–6 when George runs out of vine and has to go deeper into the bush to find more. Developing conflict arises in sentences 7–11 when it becomes clear that George does not know he is in danger.

In all three of these sections leading up to the climax—A, B, and C—the narrator tells the story from his own perspective. Thus, in these three sections, -mq means ‘toward speaker/narrator’, who was back in their home village when this happened and -bz means ‘elsewhere than narrator’.

The only personal directional in A “setting” and B “inciting incident” is in sentence 6, where George comes out of the bush. Since the place he was working was closer to the narrator than where he went to find more vine, this directional makes sense in relation to the narrator. Similarly, there are five further occurrences of -mq in section C “developing conflict,” all but one of which have the narrator as deictic center. Several of these sentences talk about George’s wife having come (not gone) home before him. The one which does not is sentence 9, where the narrator reports on what George was thinking; the thought is told from George’s perspective, with George as the deictic center.

Sentence 11 is the final sentence of section C. It contains the first evaluation statement which, like the other evaluations in this story, includes the phrase “I think” (highlighted). By this statement the narrator inserts himself, so it is clearly his point of view and not George’s. Furthermore, the information in sentence 11 is critical to the plot because it contains the main indicator of the developing conflict—that a wild man must have seen George.

### 4.2.1 A. Setting: 01–03

01 Kzdq mzli George Me-ya sc tq vz =pe =∅ peto.
  DET time George male-paddle PCV RL go =INCH =3MIN S bush

02 kx vz =de kc ma peto sc tq wz -ti =pe =le kc ma
  SUBR go =3MINO DEIC SPEC bush PFW RL make -APPL =INCH =3MINA DEIC house

03 X ma kc sc tq krlx -lz =pe =le.
  CONJ and house DEIC PFV RL shingle -GDIR.up =INCH =3MINA

One time George Meya went to the bush. When he had gone to the bush, then he built a house. And that house, he then shingled it.

### 4.2.2 B. Inciting incident: 04–06

04 Kx krlx -lz =pe =le kc nqvi sc =de kx
  SUBR shingle -GDIR.up =INCH =3MINA DEIC vine PCLF =3MIN SUBR

  krlx -lz -ngr =de ma yrkr =pe =∅.
  shingle -GDIR.up -APPL =3MINA house finish =INCH =3MINS

05 X sc tq vz -tr =pe =∅ peto rtangr mou nqvi kzble.
  CONJ and PFV RL go -GDIR.in =INCH =3MIN S bush search for again vine different
While he was shingling, that vine of his that he was shingling the house with ran out. And then he went into the bush searching for more vine. He went deeper into the bush, then returned back out (after he found some vine).

4.2.3 C. Developing conflict: 07–11

While he got back he didn’t see his wife. His wife had already come back home first. In his thinking though, he thought that she was still down there where she had been and she was digging pana [in her garden]. But not anymore; she had already come back home first. So when he started to tie shingles on the house again, I think a wild man [killer] saw George.

4.2.4 D. Climax: 12–19a

After parts A, B, and C being told in some variety of narrator voice, the main climax in sentences 12-19a is reached, identified in part by its immediate shift in how -mq ‘hither’ is used. Whereas up to this point the deictic center has been the narrator and his and George’s shared home village, now there is a shift of deictic center onto George, such that -mq means ‘toward George,’ the protagonist. The storyteller uses -mq ‘hither’ for the direction of the shooting of the arrow, saying “Then he shot toward (me/us).” The sentence cannot mean, “Then he shot at him,” which would require the personal directional -bz ‘thither’. In Solomon Islands Pijin we would say, “Waelman hemi sut kam.”
This makes George the deictic center and creates an effect as if a film director had positioned the camera behind the main character and over his shoulder, so that the audience perceives events from his perspective. These five occurrences of -mq at the climax all have George as the deictic center. The two occurrences of -bz ‘away from deictic center’ relate to the arrow having been shot into George’s buttocks. In both instances, -bz would be used whether from George’s point of view or the narrator’s.

By using -mq in this way, the narrator shows that his sympathies are with the husband, as opposed to the wildman. Margetts (2015:760) relates this means of identifying the protagonist to Lakoff’s (1974:347) concept of emotional deixis, where demonstrative particles are used in marked ways to reflect a speaker’s emotional reaction, rather than in their unmarked functions of location in relation to space, time, or discourse.

As noted above, this shifting of the deictic center to the main character correlates with finding atypical participant reference at narrative peak (Longacre 1985). Several other features combine to confirm this as the expected zone of turbulence at the climax. Found here is the first example of direct speech when the protagonist talks to himself. Sentences 14 and 15 show three short clauses having parallel structures. Then in sentences 13 and 19, the subject and object are not in canonical positions. This gives a total of four features of turbulence at the climax of the main narrative.

The denouement in sentences 19b–24 of the main narrative is clear because the narrator stands back and observes. He eases tension by slowing the flow of events and making a shift away from George as the deictic center and back to himself and their home village. In fact, sentence 19 is transitional and I split it.

4.2.5  E. Denouement: 19b–24

The denouement in sentences 19b–24 of the main narrative is clear because the narrator stands back and observes. He eases tension by slowing the flow of events and making a shift away from George as the deictic center and back to himself and their home village. In fact, sentence 19 is transitional and I split it.
analytically between the climax and denouement. That’s because it has two instances of -mq ‘hither’: one with George as deictic center—his wife did not respond-*hither* to him; and one with the home village as deictic center—his wife had preceded-*hither* her husband back home. The denouement contains four -mq and four -bz personal directionals, all with a village/narrator orientation. In fact, all the personal directionals for the rest of the story—including the mini-narrative—resume having the village, where the narrator is located, as deictic center, creating a sustained reorientation. This in itself is evidence that the shift in how personal directionals were used at the main peak was indeed atypical.

19b *murde olvz ngr* = *de rtwyz = pe kai -mq* = ∅ *dxi.*
   because woman PCLF = 3MIN lead = INCH first -PDIR.hither = 3minS home

20 Sc *tq- ngrlr* = *pe kz -mq* = ∅.
   PFV RL- hurry = INCH also -PDIR.hither = 3MINS

21 *Ngrlr -mq* = ∅ *dxi sc tq- vea -ti = pe -bz* = *le = ngq mz*
   hurry -PDIR.hither = 3MINS home PFV RL- ask -TR = INCH -PDIR.thither = 3MINA = 3AUGO PREP

   *doa ne = de -ngq kx, "?Myx lxe = mu?"
child PCLF = 3MIN -PL SUBR where mother = 2AUG

22 *Ns- r- pi -bz* = *lr kx,*
   3AUGA- DETR- say -PDIR.thither = 3AUGA SUBR

   "*Lxe = gr vz pnz'- -mq* = ∅ ma.
mother = 1AUG go COMPL -PDIR.hither = 3MINS house

23 *R- pi -bz* = *le, "Oti -bz* = *amu sop na- kipo = pe = x."
   DETR- say -PDIR.thither = 3MINA get -PDIR.thither = 2AUG soap IRR- bathe = INCH = 1MIN

24 *Ns- oti -bz* = *lr sop, sc tq- kipo = pe = ∅.
   3AUGA- get -PDIR.thither = 3AUGA soap PFV RL- bathe = INCH = 3MINS

because his wife had first come home ahead of him. Then he hurried back too. He hurried home
then he asked his children, "Where’s your mother?" They said, "Our mother came back to the house
a long time ago." He said, "You get me some soap for me to bathe." They got soap, and
he bathed.

**4.2.6 ** F(a). Conclusion and setting for mini-narrative: 25–27

Interestingly, as noted above, section F, the conclusion of the main story, is composed of a mini-
narrative, and sentences 25–27 serve as both the preliminary conclusion to the main narrative, as well as
the setting for the concluding mini-narrative, shifting the scene from the bush to the village. After a high
frequency of directional particles in the main narrative, their frequency decreases significantly in
sections a, b, and c of the mini-narrative. The personal directionals that do occur include three instances
of -bz ‘thither’, but none of -mq ‘hither’.

25 *X sc tq- pi -ate = le mz nibr nz- kipo -kr = de.*
   CONJ.and PFV RL- say -SEQ = 3MINA PREP behind NR- bathe -PCLF = 3MINA

26 *x sc tq- pi = pe = le kx nz- pnz.*
   CONJ.and PFV RL- say = INCH = 3MINA SUBR pass- shoot
And then he discussed it later, after his bathing. He said that he had been shot. The arrow from it had been standing right there in his buttocks.

4.2.7 F(b). Inciting incident: 28–29

And then he told it to his wife and to his children. And then in their going they searched for medicine that would be applied to that place according to our custom.

4.2.8 F(c). Developing conflict: 30

Then the man they went to for it [custom medicine] didn't have any more, it was like that medicine was all gone.

4.2.9 F(d). Climax: 31–33

The developing conflict of the preceding section relates to there being no traditional medicine available to treat the arrow wound. At the climax of the mini-narrative the family resorts to calling the local Anglican priest. It ends with the happy result after prayer and holy water being applied that the sore heals properly and permanently. The two features of peak in this mini-narrative are less overt and less numerous than in the main narrative, which is also evidence that it is not the main narrative. While there is not a shift in the use of personal directionals to move the deictic center, a peak feature here are several short and somewhat parallel clauses in sentence 32: he came, he prayed, he put holy water. And, unlike the earlier main peak, here we see another feature of peak, a concentration of characters: George, his family, some implicit villagers like the narrator, and the Anglican priest. Sentence 33 represents the height of the climax: The priest put holy water on him and he was healed.
But afterward they got Father George Thomas Kcpe [Anglican priest]. And then he came, and then he prayed for (him) and he put (on him) some holy water that had been blessed. He put it right there and from that he was healed.

4.2.10 F(e). Denouement and conclusion to mini-narrative: 34–35

But afterward they got Father George Thomas Kcpe [Anglican priest]. And then he came, and then he prayed for (him) and he put (on him) some holy water that had been blessed. He put it right there and from that he was healed.
When he first pulled out that arrow, blood came out with it. I think if the blood had not come out, then I think this would have harmed him from the blood [Ed. not coming out, leading to an infection].

And I think that's all, I wanted to tell you about how George was shot, where the wild man shot (him) there in the bush. Yes, that's it.

In the combined denouement and conclusion to the mini-narrative in sentences 34 and 35, it is revealed that George remains well and the sore healed properly. Sentence 34 is similar to a “happily ever after” statement. The directional particles continue to be used in an unmarked manner.

Sentences 36–39 provide a conclusion to the primary narrative and to the combined narratives as a whole. This is composed of two paragraphs or thought groupings. Sentences 36 and 37 are composed entirely of another evaluative statement with two occurrences of “I think,” as seen previously in sentence 11. The statements are used to insert two things the narrator did not know, but was hypothesizing about. Furthermore, both statements are crucial to understanding the sequence and significance of the events.

Lastly, sentences 38 and 39 are the final conclusion to the full narrative, including another “I think” statement in which the narrator addresses the audience. He closes with the Natqgu equivalent to “The End.”

5 Conclusion

As shown above, Natqgu personal directionals in narratives may be used in a more marked way at the peak to change point-of-view and align the hearer with the main character. This is not a dedicated construction used exclusively to mark peak in Natqgu narratives, because this versatility is available more widely in the language. Therefore, it is not parallel to what Margetts (2015:798) finds regarding second-for-third person shift in Saliba-Logea [sbe], which is a dedicated device for narrative peak.

Even though it is not a dedicated discourse device, I propose that speakers who do opt to use this strategy at narrative peak, as well as speakers who use other similarly marked rhetorical devices, will be considered better storytellers than those who do not. Anecdotal evidence supporting this has been observed by colleagues who conduct storytelling workshops in minority languages.5 They report that in storytelling workshops speakers routinely refine their oral narratives when given the opportunity. The procedure used has five or six speakers telling a first-person story they have prepared with advance notice. The group then listens to each other and chooses the story they think represents the best selection. The person who told the selected story then tells it again while it is recorded. The speaker and the group listen to the story and suggest revisions, as s/he tells it over and over again, until all are satisfied with the final version of the story as being one they are happy to have represent storytelling in their language. My hypothesis from this is that the changes speakers are making in these revisions are the addition of and adjustment of rhetorical devices of the language, a claim which remains to be studied in detail.

This current study shows that one narrative peak device of Natqgu involves a marked use of personal directionals. I have shown previously (Van den Berg and Boerger 2011) how procedural texts were critical in revealing the presence of a passive in Natqgu. Together, these two articles underline the importance of collecting multiple discourse genres during fieldwork and of analyzing several of each genre for comparison. Such breadth and depth allow for the discovery of features characteristic of specific genres, as well as for comparisons within and between genres. Another implication is that in our grammatical analyses it is essential to go beyond the sentence level and to include discourse level, in order to be able to make reasonable hypotheses and insightful descriptions of the targeted syntactic features under investigation.

———

5 Jim and Janet Stahl, personal communication.
# Appendix A: Helps for Processing Natqgu Example Sentences

Table 6. Natqgu pronouns

<table>
<thead>
<tr>
<th>Minimal</th>
<th>Primary Set I</th>
<th>Secondary Set II</th>
<th>Free direct object pronouns</th>
<th>Free indirect object pronouns</th>
<th>Possessive pronominal enclitics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>=ä</td>
<td>=nge</td>
<td>ni = nge</td>
<td>ba = nge</td>
<td>=nge</td>
</tr>
<tr>
<td>1 + 2</td>
<td>=ki</td>
<td>=gi</td>
<td>ni = gi</td>
<td>ba = gi</td>
<td>=gi</td>
</tr>
<tr>
<td>2</td>
<td>=ü</td>
<td>=m(ü)</td>
<td>ni = m(ü)</td>
<td>ba = m(ü)</td>
<td>=m(ü)</td>
</tr>
<tr>
<td>3</td>
<td>=le (A,O)</td>
<td>=de</td>
<td>ni = de</td>
<td>ba = de</td>
<td>=de</td>
</tr>
<tr>
<td></td>
<td>=Ø (S)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Augmented</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>=kr</td>
<td>=gr</td>
<td>ni = gr</td>
<td>ba = gr</td>
<td>=gr</td>
</tr>
<tr>
<td>1 + 2</td>
<td>=ku</td>
<td>=gu</td>
<td>ni = gu</td>
<td>ba = gu</td>
<td>=gu</td>
</tr>
<tr>
<td>2</td>
<td>=amu</td>
<td>=mu</td>
<td>ni = mu</td>
<td>ba = mu</td>
<td>=mu</td>
</tr>
<tr>
<td>3</td>
<td>nz-... = lr (A)</td>
<td>nz-... = dr</td>
<td>ni = dr</td>
<td>ba = dr</td>
<td>=dr</td>
</tr>
</tbody>
</table>
Appendix B: Metadata for Linguistic Examples

Berez-Kroeker et al, in “Reproducible research in linguistics: A position statement on data citation and attribution in our field,” discuss the need to make metadata in texts cited in linguistic papers explicit and accessible (Berez-Kroeker et al. 2017). Appendix B is an attempt to address some of the points in that article in the interest of data transparency.

B.1 Corpus and file level metadata: File naming key

The current file naming practice for text files is:
ISO-type-number-year-genre-fieldworker initials-speaker###.extension

B.2 Files cited in this paper

The main story cited in this paper is: ntu-oral-010-1990-narr-bhb-004
That is, it is the tenth text in the Natqgu corpus and was collected (and/or edited) by the author in 1990. It is an oral text of the narrative genre. The language consultant has been assigned the number 004.

The other texts consulted for individual illustrative sentences are:

ntu-oral-001-1990-narr-bhb-014
ntu-prim-003-2004-narr-bhb-016
ntu-prim-006-2004-narr-bhb-nzlu
ntu-writ-011-2004-narr-bhb-007
ntu-writ-012-1990-narr-bhb-007
ntu-oral-014-1990-proc-bhb-002
ntu-oral-018-1990-gen-bhb-013

The abbreviations for the text types included are:
oral oral
writ written
prim written primer story

The abbreviations for the genres included are:
narr narrative
proc procedural
gen genealogy

B.3 Current storage location

The files are currently stored on the linguist’s computer and two external hard drives, as well as in the cloud.

Corpus level collection information

The corpus was primarily collected between 1988 and 2006, with additions in 2008, 2015, and 2017 to date. The linguist serving as responsible party is Brenda H. Boerger (brenda_boerger@sil.org).
Dan and Brenda Boerger served as advisors to the Natqgu Language Project from 1988–2008. They worked with speakers based primarily from their home in Bznwz, but also at workshop settings and through informal conversations and consultations in the national capital, Honiara. They were assisted by two young men to collect stories and historical accounts. The data was primarily collected along Graciosa Bay, Santa Cruz Island, Temotu Province, Solomon Islands, South Pacific.

B.4 Informed consent received?

The Natqgu data set was primarily collected before documented informed consent was established as best practice. All of the speakers/authors who contributed to the corpus did so willingly and with an implicit trust that the data would be handled honestly and in their best interests. All but one of the speakers referenced in this paper are now deceased. The author has an on-going relationship with the community.

B.5 Access protocol

No access protocol for the Natqgu corpus has yet been established. It is premature until the corpus is archived. However, the author’s intention is to make it as widely available as possible.
References


Reduced Reduplication in Doku [lgr]: Geminate Consonants and Stressed Vowel Syncope in Southeast Solomonic

Paul Unger

Abstract

Doku [lgr] speakers produce what they describe as “heavy” sounds. A study of reduplication in the language reveals that these are the result of vowel syncope in CV~ reduplicants. While reduced reduplication of this type is not uncommon in Oceanic languages, Doku is the only language in the Southeast Solomonic subgroup that shows evidence of the phenomenon. As interesting as this is, perhaps more interesting is the fact that reduced reduplication creates a favourable environment for stressed vowel syncope in Doku. Interaction with papers by Blevins (2005, 2008, 2009) and Blust (2007) on the subject does not lead to a satisfying solution to this “unnatural and extremely rare” (Blevins 2008:16) behaviour. As such, the case of Doku stressed vowel syncope in environments of reduced reduplication deserves consideration in any further study of the matter.
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Abbreviations

C   consonant
dir  directional
IMP  imperative
k.o.  kind of
LOC  locative
N    noun
NEG  negative
PAN  Proto-Austronesian
PMP  Proto-Malayo-Polynesian
POC  Proto-Oceanic
PS   possessive
RDP  reduplication
SG   singular
V    vowel
1 Introduction

Doku6 [lgr] speakers from all dialects (of which there are four) and from a range of demographics (female and male, youth and elder) produce what they describe as “heavy” sounds. While it is not known when it started, Doku people have been producing “heavy” sounds since at least 1953, as a recording by WWII hero Jacob Vouza (1953) demonstrates.7 We became aware of this phenomenon early on in our fieldwork, but it was a Doku dialect survey (Unger and Yue 2011) that provided the data for the present analysis of word-initial geminate consonants in the language.

It was of a “heavy” /t/ sound that one Doku speaker said (in SI Pijin), “Olsem tang hemi pas lelebet long bihæn long tit bifoa yu saonem wod ia,” that is, “It’s like the tongue is a little bit stuck behind the teeth before you sound the word.” For example, a Doku speaker would describe the sound quality of mmala ttupa in (1) as “heavy” when compared to the normally weighted mala tupa:

(1)  

<table>
<thead>
<tr>
<th>normal</th>
<th>&quot;heavy&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>mala tupa</td>
<td>mmala ttupa</td>
</tr>
<tr>
<td>‘naked nut’</td>
<td>‘lightweight [for] jumping’</td>
</tr>
</tbody>
</table>

The potential of a significant semantic difference between a normal and a “heavy” utterance makes it important to get this right.8

In a process similar to numerous other Oceanic languages (Blust 2013:228), Doku’s geminate consonants are the result of vowel syncope in CV~ reduplicant prefixes (i.e., CV~ → C~). However, unlike most other Oceanic languages with geminate consonants, those in Doku do not appear in any environment other than word initial. Doku consonants of a variety of types—voiced and voiceless stops, voiced and voiceless fricatives, and nasals—are all subject to gemination. As for vowels, those of all heights—high, mid, and low—are subject to syncope. Based on available data, Doku’s geminate consonants appear to be unique in the Southeast Solomonic (SES) subgroup, but even more unique is the apparent stressed vowel syncope in disyllabic words. This seems to be an innovation not just in Oceanic, but on an even wider scale.

This paper is organised as follows: Since the phenomena that this paper deals with happen in the context of reduplication, I begin in §2 with a brief overview of reduplication in Doku. In §3 I explore the nature of word initial geminates in Doku that result from vowel syncope in CV~ reduplicants. Since there doesn’t seem to be a name for this particular process in the literature, I refer to anti-antigemination of this type as “reduced reduplication” (RR). I close this section with the observation that the existence of geminate consonants gives Doku a conspicuous place in the Southeast Solomonic subgroup. While the evidence of a language change underway is interesting in its own right, of equal interest are some of the typological oddities that the data present, which I discuss in §4. Of particular note is stressed vowel syncope in disyllabic words that results in single syllable forms. This is counter to both Blust’s (2007:10) argument for restorative disyllabism, and also to Blevins’ (2008:16) assertion that stressed vowel syncope is “unnatural.” Since the reduplicated form of the directly possessed local noun ta is one of the most frequent targets of stressed vowel syncope in Doku, I discuss the word’s history and current status in the language in §4.2. In §4.3 I briefly distill a discussion that played out between Juliette Blevins (2005, 2008, 2009) and Robert Blust (2007) about the nature of geminate consonants in Austronesian ~

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6 In much of the previous literature the name of the language is Lengo. This is the name in the Ethnologue (http://www.ethnologue.com/language/lgr), and Glottolog (http://glottolog.org/resource/languoid/id/leng1259) as well. However, I use the name “Doku,” as it is the language community’s preferred autonym.

7 This is the earliest recording of Doku that we are aware of. In the first 90 seconds of the recording Vouza says, for example, /tuŋgu/ (0:04.5), /soko/ (0:22.8), /pposo/ (0:45.5), and /ŋŋata/ (1:21.7), indicating that it is not a rare phenomenon in his speech. The earliest Doku document we have seen in print—the Catholic Shorter catechism of 1917—does not show any orthographic evidence of geminate consonants.

8 Example (1) comes from a time when my wife was watching volleyball on the sidelines with some Doku ladies. They said of one of the players, “E mmala tupa” ‘He’s light for jumping’. When she, as a good language learner, parroted back “E mala tupa,” the ladies fell to the ground laughing, as she had just called the player a ‘naked nut’!
Oceanic languages, particularly the apparent deletion of stressed vowels. And finally, after considering the explanations that Blevins advances, I suggest in §4.4 that, while stressed vowel syncope may be unnatural, given the other typological norms that Doku disregards in the context of reduplication, perhaps it is not entirely unexpected.

2 Doku reduplication

Doku is rich in reduplication, as well as innovative. As is commonly found in the Oceanic context, Doku speakers use reduplication to derive nouns from verbs and verbs from nouns, as well as to add aspectual (e.g., durative, iterative) or augmentative (quantity [e.g., size, number] or quality [e.g., intensity, emphasis]) meaning. What is less common is Doku’s word medial and word final partial reduplication, both of which are rare in Oceanic.

There are a variety of patterns of reduplication in Doku: full, partial, and reduced. Example (2) presents samples of full reduplication:

(2) /ɣu/ ‘shout’ → /ɣu.ɣu/ ‘shout loudly, intensely’
/^ga.ru/ ‘peel a fruit’ → /^ga.ru~^ga.ru/ ‘kind of skin disease’
/ˀu.ŋa-ði/ ‘shade something’ → /ˀu.ŋa~u.ŋa/ ‘shadow’

Stems with CV, V.CV, and CV.CV syllables reduplicate fully; CV.CV.CV stems do not. The examples demonstrate the reduplicative function of derivation as well as adding augmentive meaning.

Examples of partial reduplication are given in (3):

(3) a. /mu.su/ ‘kiss’ → /mu~mu.su/ ‘suck; gulp’
/^du.a.ra/ ‘pour’ → /^du~^du.a.ra/ ‘overflowing’
/a.la/ ‘v. lead’ → /a.l~a.la/ ‘marching’
/ta.ve/ ‘flow; downstream (dir.); flood’ → /tae~ta.ve/ ‘current’

b. /ða.ɣa.ta/ ‘something is bad’ → /ða~ɣa~ɣa.ta/ ‘something is very bad’
/pi.li.u/ ‘a bird turns an egg in the nest’ → /pi~li~li.u/ ‘someone turns one eighty, about face’

c. /ta.va/ ‘hawk; sail with the wind’ → /ta.va~va/ ‘a bird soars, flares to land’
/va.ðu/ ‘give birth to’ → /va.ðu~ðu/ ‘be in labour’

Partial reduplication is found in all possible positions: the examples in (3a) show word initial partial reduplication, those in (3b) word medial, and word final examples are in (3c). Reduplicants are of the type: CV, V.C, and CVV. And again, derivations and the addition of aspectual and augmentive meanings are evident.

Finally, examples of reduced reduplication are shown in (4):

(4) /pa.ra/ ‘hot; bamboo pitcher’ → /p~pa.ra/ ‘very hot; accuse’
/ka~kau/ ‘crab; poke w/ a stick’ → /k~kau/ ‘crab; poke w/ a stick’; cf. /kau/ ‘dog’

As reduced reduplication is the focus of this paper, it will be discussed in the next section. However, before moving to that discussion, some of the other patterns deserve further comment.

Like reduced reduplication in (4), one of the patterns of partial reduplication in (3a) also features vowel syncope, that is: /a.la/ → /a.ˀl~a.la/ (‘V.CV → V.’) (see Blevins 2005 for an excellent analysis); but most examples of consonant syncope are fossilized in the Doku lexicon; for example,

9 The suffix /-ði/ is an instance of the short transitive suffix -Ci.
baubathu ‘promise’, ghuihuri ‘k.o. banana’, koekobe ‘defend’, vuivuni ‘start’, for which there are no corresponding un-reduplicated CV.CV stems.10

Word medial reduplication, as shown in (3b), is not common in Oceanic.11 While it isn’t highly productive in Doku, there are a few quality words that have what looks like word medial reduplication, for example:

(5) /madau/ ‘something is clean’  →  /ma~da~dau/ ‘something is very clean’
/manihi/ ‘something is sweet’12  →  /ma~ni~nilu/ ‘something is very sweet’
/matibu/ ‘someone looks good, attractive’  →  /ma~ti~tibu/ ‘healthy life’
/tangasa/ ‘someone smashes food’  →  /ta~nga~ngasa/ ‘smashing (continuous)’

It could be argued that these were reduplicated before the stative verb derivative prefixes ma- and ta- (reflexes of POC *ma- and *ta-; see Evans and Ross 2001) were added. While this is a possibility, the prefixes ma- and ta- are no longer productive in Doku, and all statives that might have been derived this way appear to be fossilised in the lexicon; that is, there are no corresponding words without the ma- / ta-prefix. The examples in (3b), however, demonstrate unambiguous word medial reduplication; both thagata ‘bad’ ( > POC *saqat ‘bad’) and piliu ‘a bird turns an egg in the nest’ ( > PMP *biliŋ ‘turn, revolve’) reflect monomorphemic words.

According to Blust, word final reduplication is not common in Oceanic, either. Concerning the larger family of Austronesian he (2013:429) observes that, “Although historical examples are visible in derivations... suffixal syllable reduplication is rare both diachronically and synchronically. Known cases include [examples] from Chamorro and Yapese of western Micronesia, Manam of northeast New Guinea, and Sye of southern Vanuatu.” Of these, Manam and Sye are Oceanic. Based on the samples in (3c), Doku should be added to that short list.

While SES languages show a fair amount of diversity in reduplication patterns, according to the available data, none of them practise word medial or word final reduplication. In this respect—and with respect to reduced reduplication—Doku is innovative in the subgroup.

3 Reduced reduplication

The examples in (1) and (4) above show the “heavy” sounds in Doku, that is, geminate consonants that are the result of vowel syncope in word initial partial reduplicants of the CV~ type. The nature of these will now be discussed further.

The data for the current section come from a Doku dialect survey (Unger and Yue 2011). Participants were asked to repeat each of the 216 items in the word list three times. In some instances, the results were unexpected. Not only did we find geminate consonants, but they were always in free variation with singleton counterparts.

The dialect survey data used in this paper—that presented in figure 1 and table 2—come from four different participants. While some of their survey samples followed the pattern found in figure 1 (that is, a leading geminate token followed by two singleton ones), other patterns were ‘geminate – geminate – singleton’, ‘singleton – geminate – singleton’, and ‘singleton – geminate – geminate’. Not once was the pattern uniformly ‘geminate – geminate – geminate’. This free variation is interpreted as evidence of a language change in process, that is to say, a change in language practise that has not yet arrived at a point of stasis.

---

10 The word kobe ‘area, territory, zone (e.g., a garden) marked by a boundary vovota’ is a possible exception. One could extend the semantic range to ‘defense’.
11 The only other Oceanic languages that I’ve been able to find with evidence of word medial reduplication are Bali-Vitu, Maleu, and Paamese (Ross 1998:111–112), as well as Tokelau (Hovdhaugen et al. 1989:115). Of the wider Austronesian family Blust (2013:428) observes that, “Reduplicative infixes, like infixes in general, are rarer than prefixes or suffixes.”
12 Possibly from PAN *(ma-)ŋilu ‘painful, as of teeth on edge from eating something very sour’?

A corollary of this free variation is that it is difficult to pin down any kind of motivation for reduced reduplication. The occurrence of singleton and geminate utterances is unpredictable; it is not confined to a particular context nor have we found it to have a set syntactic or semantic function—in fact, many times there is no semantic difference. Further research at this point is required, though given that this appears to be a change in process, it may take a while for reliable results to become evident.

The free variation between /ttoka/ and /totoka/ is clearly seen in figure 1, which shows the three tokens—geminate – singleton – singleton—from a 50-something male’s response to the dialect survey item ‘to cut’.

![Figure 1. Closure duration for /tt/](image)

The closure duration preceding the first token—that is, the gap between /e/ and /ttoka/—is 216 ms, as shown by the highlighted area in figure 1. This is significantly longer than the closure duration preceding the second and third tokens, even though they are all consecutive responses to the same dialect survey cue. Measurements of the closure durations for the four /t/s in the second and third tokens are given in table 1:

<table>
<thead>
<tr>
<th>Table 1. Closure duration times for /t/</th>
</tr>
</thead>
<tbody>
<tr>
<td>segment</td>
</tr>
<tr>
<td>duration (ms)</td>
</tr>
</tbody>
</table>

The mean duration of /t/(1,2,3,4) is 63 ms, which gives a ratio of /tt/ to mean /t/(1,2,3,4) of 3.43:1. Given Ladefoged and Maddieson’s (1996:92) criteria of 1.5 to 3 times the closure duration of geminates to singletons in careful speech, it is appropriate to distinguish between singleton and geminate /t/s in a speech sample such as the one shown in figure 1.

The dialect survey provided samples for geminate consonants of the classes of voiced and voiceless stops, nasals, and voiced and voiceless fricatives. Again, these were all in free variation, with two of the three tokens provided being either singleton or geminate. The samples are shown in table 2:

<table>
<thead>
<tr>
<th>Table 2. Geminate / singleton tokens in free variation</th>
</tr>
</thead>
<tbody>
<tr>
<td>/mmbi.ði/ /mmbi.ði/ /mmbi.ði/ ‘it is cold’</td>
</tr>
<tr>
<td>/pa<del>pa.ra/ /pa</del>pa.ra/ /pa~pa.ra/ ‘it is hot’</td>
</tr>
<tr>
<td>/kku.°bu/ /kku.°bu/ /kku.°bu/ ‘it is short’</td>
</tr>
<tr>
<td>/ma~mao.ne/ /mao.ne/ /mao.ne/ ‘sand’</td>
</tr>
<tr>
<td>/ŋŋa.ta/ /ŋŋa.ta/ /ŋŋa.ta/ ‘it is strong’</td>
</tr>
<tr>
<td>/sSi.ºgi/ /sSi.ºgi/ /sSi.ºgi/ ‘it is dry’</td>
</tr>
<tr>
<td>/vva.na/ /vva.na/ /vva.na/ ‘he shoots’</td>
</tr>
</tbody>
</table>

---

Blevins (2009:36) observes that, “Short unstressed vowels are the canonical targets of syncope because, generally, unstressed vowels are shorter than stressed vowels, and short unstressed vowels are shorter than long unstressed
The measurements made for the sample in figure 1 were also made for the closure durations and ratios between singleton and geminate consonants of the dialect survey recordings represented in table 2. The results are given in table 3:

<table>
<thead>
<tr>
<th>Geminate</th>
<th>Singleton</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>/mb/</td>
<td>295</td>
<td>142</td>
</tr>
<tr>
<td>/p/</td>
<td>305</td>
<td>113</td>
</tr>
<tr>
<td>/k/</td>
<td>288</td>
<td>115</td>
</tr>
<tr>
<td>/ŋ/</td>
<td>252</td>
<td>99</td>
</tr>
<tr>
<td>/s/</td>
<td>341</td>
<td>116</td>
</tr>
<tr>
<td>/v/</td>
<td>153</td>
<td>85</td>
</tr>
</tbody>
</table>

The ratios for the closure duration of all of these consonants are within the range that Ladefoged and Maddieson suggest, and attest to the existence of geminate consonants in Doku. They appear only in the context of reduced reduplication, that is, as the result of vowel syncope in CV~ reduplicants.

Doku speakers “reduce” the reduplicants of mono- and disyllabic words. The syllable patterns in (6) represent the reduced reduplication process and show—from left to right—the form of the unreduplicated stem, the reduplicated form, and that which remains after a vowel has syncopepd:

(6)

<table>
<thead>
<tr>
<th>Stem</th>
<th>Reduplication</th>
<th>Vowel syncope</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. ˈCV(V).CV</td>
<td>CV~ˈCV(V).CV</td>
<td>ˈCØ~CV(V).CV</td>
</tr>
<tr>
<td>b. ˈCV(V)</td>
<td>ˈCV~CV(V)</td>
<td>ˈCØ~CV(V)</td>
</tr>
</tbody>
</table>

As might be expected, “reduced” syllables affect stress patterns. Reduced reduplication necessitates a couple of stress realignments since stress in Doku is generally on penultimate syllables.14 First, when reduplication happens, stress is assigned following the general pattern; that is, it remains on—or moves to, in the case of single syllable stems—the penultimate syllable as required. This move is shown in the reduplication column of (6b). Second, as the vowel syncope column of (6a) indicates, when the vowel of a CV~ reduplicant of a disyllabic stem is syncopated, stress is reassigned to incorporate the geminate consonant (this is not required in [6b]). This shift of stress to the syllable with geminate consonants surely contributes to the Doku speakers’ impression that these sounds are “heavy.”

The emergence of geminate consonants puts Doku in select company among Solomon Islands languages, and gives it a conspicuous place in the Southeast Solomonic subgroup of Oceanic languages. Of the seventy one living indigenous languages that the Ethnologue (2018) lists for Solomon Islands, there are only four with descriptions or dictionaries that mention them having geminate consonants.15 Two of these are Western Oceanic languages:

---


15 According to Blust (2013:231) the evidence for Pileni (Vaeakau-Taumako [piv]) is inconclusive. Næss and Hovdhaugen (2011:37) report what they call “emphatic aspiration” of which they say, “Another possible source of aspiration is the deletion of the vowel of a reduplicated syllable, resulting in geminate consonants, which subsequently become aspirated single consonants.”
• Babatana ([iba]; Tryon and Hackman 1983:77,89) on Choiseul, and
• Kokota ([kkk]; Palmer 2009:54-57) on Isabel;

and two are Polynesian languages:
• Bellonese ([mnv] but not Rennellese; Elbert 1988:17) south of Guadalcanal, and
• Sikaiana ([sky]; Donner 2012) east of Malaita.\(^\text{16}\)

Based on available descriptions for SES languages, Doku is the only one of the 26 languages that comprise the subgroup that has geminate consonants.\(^\text{17}\)

Doku also seems to be in select company in terms of where geminates appear in words. Blust (2013:228) observes of Oceanic languages with geminates that, “Most of these languages have geminates both initially and medially,... [h]owever, Sa’ban of northern Sarawak and Iban of southwest Sarawak are typologically unusual in having geminate consonants only word-initially (Blust 2007b).” Doku also has geminate consonants only in word initial position. This unusual typological behaviour proves significant to the discussion in §4.4.

Having provided evidence for geminate consonants which results from reduced reduplication in Doku, the only SES language to have them, I will now discuss the stressed vowel syncope that reduced reduplication gives rise to.

4 Stressed vowel syncope

While documenting the unique instance of geminate consonants in Southeast Solomonic is interesting, of equal interest is the deletion of stressed vowels in reduced reduplication. In a number of papers in the noughties, a discussion played out between Juliette Blevins (2005, 2008, 2009) and Robert Blust (2007) concerning the nature of geminate consonants in Austronesian ~ Oceanic languages, particularly the apparent deletion of stressed vowels in Mussau. Doku also appears to delete stressed vowels, and since—as Blevins (2008:16) puts it succinctly—this is “unnatural,” the Doku data need to be considered in light of their discussion.

4.1 The data: /ˈte.te/ > /tte/

There are few single syllable content words in the Doku lexicon, and there are fewer still that provide a congenial context for reduced reduplication; that is to say, not all words reduplicate, let alone all single syllable ones. One single syllable word that frequently reduplicates and reduces, however, is the locative noun ta-.

---

\(^\text{16}\) Blust (2013:229) reports that 93 Austronesian languages have geminate consonants, including four which he lists for the Solomon “geographical zone.” In his (2013:231) discussion, however, he lists Bellona, Takku, Pileni, Sengga, Lōmaumbi, and Avasō. Of the latter three, it should be noted that Tryon and Hackman (Blust’s source) list them as dialects of the language that they refer to as “Central-East Choiseul” (1983:20). The *Ethnologue* and *Glottolog* also both group Sengga, Lōmaumbi, and Avasō as dialects of Babatana. Of Takku, it should be noted that it is politically part of Papua New Guinea, not Solomon Islands. Interestingly, Blust includes neither Kokota (Western Oceanic; Palmer 2009:56) nor Sikaiana (Polynesian; Donner 2012) in his discussion, both of which are described as having geminates.

\(^\text{17}\) While it is beyond the scope of the present paper, the question of the origin of Doku’s geminates is intriguing. There is significant physical distance between Doku and the other four Solomon languages with geminate consonants, which makes the idea of contact induced influence unlikely. There is also a fair bit of distance to travel up the language family tree—to Central-Eastern Oceanic for the Polynesian languages, and all the way up to Oceanic for the Western Oceanic ones—before shared branches with Doku are found. Further, I have not found any suggestion that geminates are a feature of Proto-Oceanic. These factors make a genetic link rather unlikely as well.
Figure 2 shows a sample of the word /ˈtte/ (< /ˈte.te/):\(^{18}\)

![Waveform and transcription](image)

Figure 2. Stressed vowel syncope.

The sentence represented in figure 2 is analysed as:

(7) ko mo mai mo i ttagu ko dea i tte
    k-o mo mai mo i ta~ta-gu k-o dea i ta~ta-a
    IMP-2SG NEG come NEG LOC RDP~N.LOC-PS.1SG IMP-2SG go LOC RDP~N.LOC-PS.3SG
    ‘you don’t come to me [to sort out your problem]—you go to him’

Note that in (7) both instances of ta- ‘N.LOC’—ttagu and tte—have gone through the reduced reduplication process of vowel syncope. According to Blevins (2005:522), vowel loss between identical consonants in Austronesian languages “is restricted to the unstressed vowel of the CV- reduplicant prefix.” While this adequately addresses reduplicated disyllabic stems like Doku /ˈtta.ŋgu/ (< /tta~ˈta.ŋgu/), this claim is difficult to maintain when the vowel of a CV- reduplicant is stressed, as is the CV- reduplicant of the single syllable stem in the word /ˈte~te/.

The Doku word tte ‘RDP~N.LOC-PS.3SG’ found in (7) is morphologically complex; it has undergone: reduplication, a stress shift, direct possession, vowel raising, vowel harmony, and vowel syncope—in that order. As background, it is important to know that Doku has a vowel raising process which occurs when the 3SG possessive suffix -a is joined to a stem ending in /a/—the resulting /aa/ raises to an /e/. This vowel raising process triggers a vowel harmony process when applicable, such that any /a/ to the left is also raised, unless interrupted by a vowel other than /a/. Rules representing these processes are given in (8):

(8)  Doku vowel raising and harmony
    1) aa → e / _a# + -a ‘ps.3sg’
    2) a → e / _Ce

The examples in (9) demonstrate how these rules apply:

(9) tina ‘mother’ + -a ‘ps.3SG’ → tine ‘his mother’
    tama ‘father’ + -a ‘ps.3SG’ → teme ‘her father’
    ghalagha ‘up.coast’ + -a ‘ps.3SG’ → gheleghe ‘its up.coast side’
    kabula ‘thigh’ + -a ‘ps.3SG’ → kabule ‘his thigh’ [not kebule]

\(^{18}\) The closure duration for /tt/ here of 204 ms (highlighted) is quite similar to the 216 ms shown for /tt/ in figure 1.
Of these examples, note *gheleghe* in particular. It belongs to the class of locative nouns that are directly possessed.

As discussed in 4.2, *ta-* is a locative noun which means that it is also directly possessed; and since it ends in /a/, it is subject to the vowel raising process. When *ta-* is reduplicated, the vowel harmony process also becomes applicable. Recall from the reduplication patterns shown in (6) that when a monosyllabic stem is reduplicated, stress is reassigned to follow the predominant penultimate pattern, that is: ‘CV(V) → CV~CV(V).’ Putting this all together with the stem *ta-* looks like (10):

\[
\begin{array}{l}
\text{ˈta- + RDP} & \rightarrow \text{ˈta-ˈta-} \\
\text{ta~ˈta- + stress shift} & \rightarrow \text{ˈta~ˈta-} \\
\text{ˈta~ˈta- + -a ‘PS.3SG’} & \rightarrow \text{ˈta~ˈta-a} \\
\text{ˈta~ˈta-a + vowel raising + harmony} & \rightarrow \text{ˈte~ˈte} \\
\text{ˈte~ˈte + RR} & \rightarrow \text{ˈtØ~ˈte} \\
\text{ˈtØ~ˈte} & \rightarrow \text{ˈtte.}
\end{array}
\]

When the reduplicant is reduced as in the word *tte ‘RDP~N.LOC-PS.3SG’*, the deletion of a stressed vowel is unexpected.

### 4.2 The ‘locative noun’ *ta-*

Since a form of *ta-* figures in the discussion of Doku stressed vowel syncope, it is worth taking some time to place it historically as well as in Doku currently.

The reconstruction of POC *ta-*, which Doku *ta-* reflects, has been adjusted over the years. Following Pawley (1973), Ross (1988:104) initially reconstructed it for Proto-Oceanic as the ‘preposition *ta-* ‘locative, possessive’.” A few pages later he proposed that some scant evidence “implies that POC *ta-* was originally some sort of semantically bleached inalienable locative noun” (1988:117). The evidence in question is the co-occurrence of the locative *i* and *ta-* plus possessive pronominal suffixes in Mussau (where *i* ‘locative’ is reflected as *e*) and in Gela. Though Ross acknowledged that his data for Gela were limited, the Doku data are plentiful: as in (7) above, *i* and *ta-* regularly—though, admittedly, not always—co-occur (pace Ross 2007:284), with *ta-* behaving very much like the inalienable locative nouns to which Ross compares it.20

Later Ross referred to *ta-* as an “inalienably possessed dummy noun” (2004:185), perhaps indicating a strengthening of his view that *ta-* is nominal in nature. Further evidence of a possible strengthening is that just down the page Ross called the POC “preposition” *ta-* anomalous: "...anomalous’ because it was apparently the only preposition to take a possessor suffix agreeing with its governee noun phrase.” Most recently, Ross, Pawley, and Osmond (2007:232) describe *ta-* as follows: “If such a noun was used in an adjunct construction it was preceded by the sequence *i* ta- … In this construction *ta-* was a monovalent semantically empty noun. In most Oceanic languages where this latter construction is reflected, however, *i* has dropped out, leaving *ta-* as a preposition.”21

Lynch, Ross, and Crowley (2002:79) summarize that, “These facts suggest that originally *ta-* was neither a regular preposition nor a regular possessive classifier, and there is evidence that it was in fact a directly possessed local noun... That is, *ta-* was itself preceded by a preposition, *i* ‘locative’, and was therefore a directly possessed noun, as the possessor suffix implies... Deletion of *i* led to the

---

19 Ross (1988:105) also reconstructs the reduplicated form *tata-, “used when no noun phrase follows.”

20 According to Tryon and Hackman (1983:468), Doku is more closely related to Gela—at 60.1%—than any of the Guadalcanal languages. The *Ethnologue* (2018) lists Doku and Gela as the only two languages in the “Gela” branch of Southeast Solomonic.

21 Ross (2004:187) makes the distinction between “meaning-imparting constructions” in relation to *i* and *i* ta- examples, calling the former “local constructions” and the latter “adjunct constructions.” The use of *ta-* in a locative phrase added the meaning ‘identity not taken for granted’, therefore needing to be specified. While *ta-* may have been semantically empty lexically, as part of a construction it contributed significant meaning.
reinterpretation of *ta- as a preposition in early Oceanic.” Presumably, retention of i would not lead to the reinterpretation of ta- as a preposition, and it would remain a directly possessed local noun. Since Doku regularly retains i ‘locative’ in the context of ta-, I continue to analyse ta- as a noun.

4.3 The discussion between Blevins and Blust

Blevins and Blust began their work on Austronesian syncope together but, as Blevins (2009:33, n. 1) puts it, “the work split seamlessly into two distinct studies.” In Blust’s (2007:10) “brief but fairly comprehensive survey of known cases” of anti-antigemination in Austronesian languages, he identifies three Oceanic languages that appear to delete stressed vowels: Takuu, Totoli, and Mussau. Apart from resorting to the ad hoc solutions he advances (something he is not keen on doing), Blust (2007:31) sees no way to avoid the conclusion that these three languages delete stressed vowels.

Blevins (2008) offers a variety of analyses of the Mussau data in an attempt to avoid the same conclusion, some phonological and some analogical. She begins with the suggestion that some words had historical final copy vowels that required a lexicalisation of antepenultimate stress, rather than the more common penultimate pattern. This means that what look like syncopated stressed vowels actually are not. For other words she posits that monosyllabic CV stems actually triplicate in a two-stage historical process, though the stress remains on the original stem (i.e., the final syllable). Again, this is different from the expected penultimate pattern, and means that what look like syncopated stressed vowels are not. And finally, she advances the theory that other apparent instances of stressed vowel deletion are explainable by analogy to “a productive pattern of reduplication in Mussau [that adds a] prefix CV- to historically CV-initial forms which have undergone syncope... On the basis of these forms, other words with apparent CV- reduplicative prefixes could be reformed as prefixes to geminate-initial bases” (2008:11). In this analogical explanation as well, a conclusion that allows stressed vowel syncope is avoided. This enables Blevins to reaffirm her position that, “Syncope of unstressed vowels is natural and common, while syncope of stressed vowels is unnatural and extremely rare” (2008:16).

4.4 The challenge of the Doku data

On the basis of existing data, Blevins’ analyses don’t apply to single syllable Doku words that undergo the reduced reduplication process. In the first instance, antepenultimate stress requires a three syllable stem. The Doku stem in question—*tete*—is only two syllables before vowel syncope, and there is no indication that it was any more than that historically (see §4.2).

The second analysis—that of triplication of a stressed monosyllable and a corresponding retention of syllable final stress—also doesn’t hold for the Doku data. While the single syllable stem /ˈte/ has primary stress, when it reduplicates the stress is reassigned to the penultimate syllable as /ˈte.te/ (see [6b]). In addition, there is no evidence that Doku ta- triplicates.

The final analysis—analogy—also fails to account for stressed vowel syncope in Doku. As noted in §3, Doku is one of very few “typologically unusual” Oceanic languages with only word initial geminate consonants. There is only one source of geminate consonants in Doku—reduced reduplication; there is no historical or present context of geminate consonants in the language that could serve as an analogy to help explain stressed vowel syncope in Doku.

5 Conclusion

The Southeast Solomonic subgroup of Oceanic languages has been described as, “a seemingly very conservative innovation-defined subgroup, and its conservatism makes it valuable for Oceanic comparative studies” (Lynch, Ross, and Crowley 2002:110). It is notable, then, that the contexts of reduplication and reduced reduplication in Doku provide for some innovative behaviours within the subgroup, let alone Oceanic as a whole. In terms of reduplication, Doku has word medial and word final reduplication—both typological rarities in Oceanic. The Doku process of reduced reduplication also stands out in that it is the only instance of vowel syncope that affects CV~ reduplicants in Southeast
Solomonic. In addition, it is one of very few Oceanic languages that has geminate consonants only in word initial position. And, finally, it is perhaps the only language in Oceanic in which the process of reduced reduplication can lead to the deletion of a stressed vowel. If, as Blust (2007:4,27) observes, anti-antigemination is rare outside of Austronesian, and if, as Blevins (2008:16) asserts, syncope of stressed vowels is extremely rare, then Doku is in limited company indeed.

Blevins (2008:17) concludes her paper saying, “Will further cases of phonetically unmotivated sound change hold up to intense scrutiny? By pooling accumulated knowledge of phonetic explanation and attested sound change, we may one day be able to answer this question.” While I cannot say with absolute certainty that there isn’t a historical explanation for the Doku data, based on that which is available, Doku presents an instance of stressed vowel syncope that warrants further consideration.
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Comparative Study of Conditional Clauses in Nafsan [erk]

Ana Krajinović

Abstract

In this paper I offer an analysis of conditional clauses in Nafsan (South Efate [erk]) in a comparative Oceanic perspective. By using the data from the corpus of Nafsan (Thieberger 1995–2018), and more recent fieldwork data (Krajinović 2017), I reanalyze and complete certain aspects of the description of conditional clauses in Nafsan by Thieberger (2006). I describe the attested morphosyntactic and semantic types of conditional clauses, by focusing on the conditional and TMA markers, and combinations thereof, available in conditional clauses. I also report on the newly discovered counterfactual marker mer. Conditional clauses in Nafsan can be marked by conditional and potential markers f and fla, or the canonically conditional expression i=f-wel kin (Thieberger 2006). I argue that the former can be analyzed as paratactic conditionals and the latter as subordinate conditionals. Finally, I compare these findings to similar strategies found in other Oceanic languages.
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Abbreviations

1 first person
2 second person
3 third person
AUX auxiliary
BEN benefactive
BI Bislama loan
CF counterfactual
COMP complementizer
COMPL completive
COND conditional
DP direct possession
DU dual
EXCL exclusive
INCL inclusive
IRR irrealis
NEG1 first marker of discontinuous negation
NEG2 second marker of discontinuous negation
OBJ object
PL plural
POSS possessive
POT potential
PRF perfect
PRO proclitic
PROG progressive
PSP prospective
REAL realis
REL relative
SBJ subject
SG singular
TR transitive
V epenthetic vowel preceding suffixes of direct possession
1 Introduction

Nafsan [erk], also known as South Efate, is an Oceanic language of Vanuatu, classified as belonging to the Central Vanuatu linkage by Lynch et al. (2011:112). Nafsan is spoken by 5,000–6,000 people in the outskirts of Port Vila, in the villages of Erakor, Eratap, and Pango (see the map, page 43). The data for my analysis of Nafsan come from its published grammar (Thieberger 2006), the corpus collected by Nick Thieberger in Erakor and Eratap and archived in PARADISEC (see Thieberger 1995–2018), and my fieldwork data collected in Erakor and archived in PARADISEC (Krajinović 2017).

Grammatical systems of Oceanic languages are, among other features, famous for their word-class flexibility (e.g., van Lier 2016), polyfunctionality and optionality of functional words (e.g., Bril 2007; Lichtenberk 2016a), and rich combinatorics of tense, mood, and aspect (TMA) marking (e.g., Palmer 2007; Lynch et al. 2011; Bril 2016). Nafsan also shares many of these features with other Oceanic languages, and conditional clauses are a particularly good example of this. The expression of conditionality can take up many different structural forms and combinations of TMA markers. It can be expressed by simple or more complex structures, and by optional or obligatory markers. This diversity of types of conditional clauses in Nafsan makes it an important case study within a broader Oceanic perspective. In this paper I show that conditional clauses in Nafsan display many characteristics typical for conditional clauses in Oceanic languages. Some of these characteristics are:

- several morphosyntactic structures can express conditionals
- optionality of certain markers
- realis and irrealis are both possible in the protasis
- paratactic conditionals
- a discourse marker meaning ‘thus/like’ used for introducing conditional clauses

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22 I wish to thank my supervisors for comments on earlier versions of this paper. This work has been funded by the German Research Foundation DFG (“A corpus-based contrastive study of tense, aspect, modality and polarity (TAMP) in Austronesian languages of Melanesia (MelaTAMP)” with project number 273640553,) and the ARC Centre of Excellence for the Dynamics of Language (Australia).

23 All the examples that have a reference to their item number are from the corpus by Thieberger (2018) and all the examples from my fieldwork (Krajinović 2017) have the recording reference starting by AK1, as it stands in PARADISEC, and the time stamp of the example.
Following the analysis of conditional clauses in Thieberger (2006), I expand on his description of conditional markers $f$, $fla$, and $i=f-wel$. Based on the corpus (Thieberger 1995–2018) and my fieldwork data (Krajinović 2017), I revisit the possible combinations of $f$ and $fla$ with TMA markers, and with the counterfactual marker $mer$ not previously reported by Thieberger (2006). I also argue that the core meaning of $f$ and $fla$ is the marking of possibility, which means they structurally form juxtaposed clauses that receive a conditional interpretation pragmatically. In contrast to $f$ and $fla$, I analyze the expression $i=f-wel$ as introducing subordinate conditional clauses.

This paper is organized as follows. In section 2 I describe the basic structural properties of the verbal complex and conditionals in Nafsan. In section 3 I describe the extent of possible TMA combinations in the protases (3.1) and apodoses (3.2) of conditional clauses, including a brief discussion on negation in section 3.2. In section 4 I argue for an analysis of conditionals with $f$ and $fla$ as paratactic conditionals (i.e., juxtaposed clauses), and for a subordinate analysis of $i=f-wel$ conditionals. In section 5 I offer a conclusion.

2 Grammatical properties of verbs and conditional clauses

2.1 Verbal complex

Grammatical elements with TMA values in Oceanic languages can occupy different morphosyntactic positions, typically preceding the verb. The set of morphosyntactic slots for different verbal markers and the verb itself is frequently referred to as verbal complex in Oceanic languages. The verbal complex

usually includes a marker with the person and number reference of the subject and other TMA or polarity markers. The subject markers and/or the TMA markers are often morphosyntactically dependent as either prefixes or proclitics. In Nafsan the subject agreement markers are proclitics, also called subject proclitics, which attach to any following word: a TMA marker, an auxiliary verb, a benefactive phrase, or the verb (Thieberger 2006). Table 1 shows the ordering of these elements in the Nafsan predicate. Each category is exemplified with a given functional word in the second row. Subject proclitics (SBJ.PRO in table 1) are portmanteau morphemes that carry TMA values and they are also the only obligatory marking of the verb (Thieberger 2006:149). The position of a given element in the verbal complex is fixed relative to the other elements.

Table 1 differs slightly from the schema of the verbal complex offered in Thieberger (2006:243) in that it gives more detail on the ordering of the TMA markers. While the categories called TMA25 (tense, mood, aspect) and NEG (negation) occupy different slots here, in Thieberger (2006:243) they both occupy the first slot of the verbal complex and AUX (auxiliary) occupies the second slot. However, example (1) shows that the first element ta of the discontinuous negation ta...mau has to follow the aspectual marker fo, thus showing they are in different slots. The postverbal marker su is also labeled completive here instead of “perfective” (Thieberger 2006:243).

Table 1. The verbal complex in Nafsan adapted from Thieberger (2006:243)

<table>
<thead>
<tr>
<th>SBJ.PRO</th>
<th>TMA</th>
<th>NEG1</th>
<th>AUX</th>
<th>BEN</th>
<th>Verb = OBJ</th>
<th>COMPL</th>
<th>NEG2</th>
</tr>
</thead>
<tbody>
<tr>
<td>i=(3SG_REAL),...</td>
<td>fo (PSP_IRR),...</td>
<td>ta(p)</td>
<td>to (PROG),...</td>
<td>ga (3SG),...</td>
<td>su</td>
<td>mau</td>
<td></td>
</tr>
</tbody>
</table>

(1)  $\tilde{p}a = mai \quad \tilde{p}a = fo \quad ta \quad lek \quad kineu \quad mau$

2SG.IRR = come 2SG.IRR = PSP.IRR  NEG1 see 1SG NEG2

‘You come, but you won’t see me.’ (079.064)

As shown in table 1, the verbal complex in Nafsan consists of obligatory subject proclitics which are cliticized to the first following element, that is, TMA markers, auxiliary verbs, or the main verb. Thieberger (2006:150) divides the subject proclitics to three paradigms given in table 2. Thieberger (2006:156) also notes that each paradigm of subject proclitics can only combine with certain TMA markers (cf. table 3), while auxiliary verbs, on the other hand, do not seem to pose any restrictions on the choice of subject proclitics. I have also found that, in terms of frequency, the realis proclitics are by far the most frequent in the corpus (84% of the occurrences in the corpus), with irrealis being less frequent (11% occurrences), and perfect-agreeing the least frequent form of subject proclitics (5% occurrences).

Table 2. Subject proclitics in Nafsan based on Thieberger (2006:150)

<table>
<thead>
<tr>
<th></th>
<th>Realis</th>
<th>Irrealis</th>
<th>Perfect-agreeing26</th>
</tr>
</thead>
<tbody>
<tr>
<td>1SG</td>
<td>a =</td>
<td>ka =</td>
<td>kai =</td>
</tr>
<tr>
<td>2SG</td>
<td>ku =</td>
<td>$\tilde{p}a$ =</td>
<td>kui =</td>
</tr>
<tr>
<td>3SG</td>
<td>i =</td>
<td>ke =</td>
<td>ki =</td>
</tr>
<tr>
<td>1DU.INCL</td>
<td>ta =</td>
<td>tak =</td>
<td>takai =</td>
</tr>
<tr>
<td>1DU.EXCL</td>
<td>ra =</td>
<td>rak =</td>
<td>rakai =</td>
</tr>
<tr>
<td>2DU</td>
<td>ra =</td>
<td>rak =</td>
<td>rakai =</td>
</tr>
<tr>
<td>3DU</td>
<td>ra =</td>
<td>rak =</td>
<td>rakai = , rai =</td>
</tr>
<tr>
<td>1PL.INCL</td>
<td>tu =</td>
<td>tuk =</td>
<td>tu = , tu1 = , tu10 =</td>
</tr>
<tr>
<td>1PL.EXCL</td>
<td>u =</td>
<td>ko =</td>
<td>ui = , koi =</td>
</tr>
</tbody>
</table>

26 I call this paradigm “perfect-agreeing” subject proclitics (labeled as “perfect” in Thieberger 2006) because they only agree with the perfect marker pe in form, but do not contribute to the perfect semantics (Krajinović 2018a).
As shown in table 3, the perfect marker can combine with perfect-agreeing proclitics and realis, prospective realis and irrealis only with realis and irrealis proclitics respectively, and the conditional marker with realis and irrealis proclitics. In Thieberger (2006:156) the conditional marker was analyzed as combining only with realis, but as I show in section 3.1 the conditional marker can combine with both realis and irrealis proclitics.

<table>
<thead>
<tr>
<th>TMA marker</th>
<th>Proclitic</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>pe</td>
<td>perfect, realis</td>
<td>perfect-agreeing</td>
</tr>
<tr>
<td>po</td>
<td>realis</td>
<td>prospective realis</td>
</tr>
<tr>
<td>fo</td>
<td>irrealis</td>
<td>prospective irrealis</td>
</tr>
<tr>
<td>f/fla</td>
<td>realis</td>
<td>conditional</td>
</tr>
<tr>
<td>ta</td>
<td>realis, irrealis</td>
<td>still</td>
</tr>
</tbody>
</table>

Thieberger (2006:161) analyzes realis as referring to realized events with a past (2) or present reference (3) and irrealis as referring to unrealized events, such as future (4), imperatives (5) and possibilities, especially in conditional and complement clauses (6).

(2) *Nanom* ści *u = mai praktis.*

‘Yesterday evening we came to practice.’ (Thieberger 2006:151)

(3) *Mes i=pi nalewen neu kin i=tefla.*

‘Today it is my opinion that it is like this.’ (Thieberger 2006:167)

(4) *Komam rak = tap fam mau me rak = to.*

‘We won’t eat, but we’ll stay.’ (Thieberger 2006:164)

(5) *Pa = fan preg.patak-ki pano.*

‘You go and prepare the panel.’ (Thieberger 2006:164)

(6) *Kineu a= mur na ka = traus tete natrauswen sees.*

‘I want to tell some short stories.’ (Thieberger 2006:310)

Perfect can have a resultative reading with a past and present reference (7) that indicates that a change of state has occurred, or it can have an anteriority reading in relation to another event (8) (see Thieberger 2006).

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27 The combination of pe and realis was also not mentioned by Thieberger (2006), but it was confirmed in many examples documented in my fieldwork (see also, Krajinović 2018a).

28 The readings of change of state with perfect are achieved only with states and progressives (Krajinović 2018a).
2.2 Conditional clauses

In this section I present the analysis of conditional clauses by Thieberger (2006) and lay out a basic description of different structures of conditional clauses. Some of the facts presented here will be reanalyzed in sections 3 and 4.

The markers f and fla are glossed by Thieberger (2006) as a conditional and a ‘may’ particle, respectively. While f typically introduces the protasis (= subordinate clause) of a conditional clause, fla expresses conditionals and possibilities (Thieberger 2006:250). Examples (9) and (10) show markers f and fla, respectively, cliticized to the subject proclitic in the protasis of a conditional. Thieberger (2006) also identifies the expression i=f-wel (kin) as a conditional marker. I=f-wel (kin) is glossed as 3SG.REAL=COND-like (COMP) and it can be literally translated as ‘it might be like (that)’. In (11) the protasis is introduced by the expression i=f-wel, and the verb is also marked by f attached to a subject proclitic. As we can see in (9)–(11), f and fla typically cliticize to reals subject proclitics. The apodosis (= main clause) is most frequently marked by the irrealis proclitic and the prospective irrealis fo, as in (9) and (11), but it also allows other markers. For instance, in example (10) the verb in the apodosis is marked with the reals proclitic i= (in bold).

(9) [Ru=f to nigmam traus-i-ø], ko=fo
3PL.REAL=COND PROG 1PL.EXCL.BEN tell-TR-3SG.OBJ 1PL.EXCL.IRR=PSP.IRR
tae, me gar i=tik.
know but 3PL 3SG.REAL=not

‘If they had told it to us, we would know, but they didn’t.’ (Thieberger 2006:259)

(10) [Ko ga i=fla mur-i-n na ke=tau tete
or 3SG 3SG.REAL=POT want-TR-3SG.OBJ COMP 3SG.IRR=leave some
nanromien sees], i=kano trau leg mai tao.
present small 3SG.REAL=unable just straight come leave

‘Or if he wanted to leave a small present he couldn’t just come and leave it.’ (Thieberger 2006:320)

29 Literal translation, where ‘it’ refers to the family.
30 ‘May’ is glossed here as POT for potential.
31 The protases, i.e., the antecedents (typically subordinate clauses) of conditional clauses are indicated by square brackets in all relevant examples.
Although i=f-wel kin can be literally translated as ‘if like COMP’ or ‘it might (be) like COMP’, it is a fully conventionalized conditional construction. It can only be marked by 3SG.REAL i= and in the form i=f-wel kin it does not appear with meanings other than the conditional. I=f-wel kin can also be reduced to f-wel kin, (i=)f-wel, or just (i=)wel (kin), as exemplified with wel kin in (12).

Examples (13) and (14) show that, outside of conditional constructions, wel can also be used as a discourse marker and a verb meaning ‘thus’ and ‘like’, respectively.

Table 4 shows the structure of two attested types of conditionals, based on the description in Thieberger (2006). Optional elements are in brackets.

<table>
<thead>
<tr>
<th>Protasis</th>
<th>Apodosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i=)(f) wel (kin) + SBJ.PRO = (f/fla) + verb</td>
<td>SBJ.PRO = (fo) + verb</td>
</tr>
<tr>
<td>SBJ.PRO = f/fla + verb</td>
<td>SBJ.PRO = (fo) + verb</td>
</tr>
</tbody>
</table>

3 TMA combinations in conditionals

3.1 Protasis

In this section, I describe the attested combinations of the TMA and conditional marking. Firstly, I focus on the mood of subject proclitics that attach to the marker f. Secondly, I report on the recently discovered counterfactual marker mer, and finally I discuss the choice of mood in the conditional protasis in general.

According to Thieberger (2006:250), the conditional and ‘may’ particles f and fla can only be used with the realis subject proclitics. While this is the case in examples (9) and (10) in the previous section, there are also many cases of irrealis proclitics attaching to f and fla. In the corpus of Nafsan we also find examples like (15) and (16) where f and fla have irrealis subject proclitics.
(15)  $ka = fo$  

1SG.IRR = PSP.IRR  

make

$nafsan$  

sees

$[i = f-wel]$  

$kin$  

$ka = f$  

$mur-i-nj$.  

3SG.REAL = COND-like  

COMP  

1SG.IRR = COND  

want-TR-3SG.OBJ

‘I will tell a small story if I want.’ (127.087)

(16)  

Go $nafsan$  

$k = tkal$  

$maarik$  

$naot$  

$p̃ur$  

$Nmak$  

$Kalsaur$,  

$elag$

and

word

3SG.PRF = reach

mister

village

big

Nmak

Kalsaur

up

$ntaf$  

$nag$  

$[i = f-wel]$  

$ke = fla$  

$watpun$  

$m̃ aau$  

$nran$  

$wan]$.  

hill  

COMP  

3SG.REAL = COND-like  

3SG.IRR = POT  

kill

giant

two

TOP

‘And the message reached Chief Nmak Kalsaur up on the hill if he would kill these two giants.’ (128.012)

In my investigations in the field (cf. recording AK1-117-01, Krajinović 2017), I derived the paradigm for the marker $f$ as shown in table 5. Depending on the person, the marker $f$ can be attached to both realis and irrealis subject proclitics. However, it combines with irrealis only in those persons where the irrealis element $-k$ does not occupy the same slot as $f$, in all of dual, 1PL.INCL, and 3PL (in bold). The incompatibility of $f$ with these persons is based on a phonological constraint on the sequence $kf#$ as a coda, where $#$ indicates a pause (cf. Billington, Thieberger, and Fletcher 2017).

<table>
<thead>
<tr>
<th></th>
<th>1SG</th>
<th>2SG</th>
<th>3SG</th>
<th>1DU.INCL</th>
<th>1DU.EXCL</th>
<th>2DU</th>
<th>3DU</th>
<th>1PL.INCL</th>
<th>1PL.EXCL</th>
<th>2PL</th>
<th>3PL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$a = f/ka = f$</td>
<td>$ku = f/\hat{p}a = f$</td>
<td>$i = f/ke = f$</td>
<td>$ta = f/*tak = f$</td>
<td>$ra = f/*rak = f$</td>
<td>$ra = f/*rak = f$</td>
<td>$ra = f/*rak = f$</td>
<td>$tu = f/*tuk = f$</td>
<td>$u = f/ko = f$</td>
<td>$u = f/ko = f$</td>
<td>$ru = f/*ruk = f$</td>
</tr>
</tbody>
</table>

In my fieldwork data, the conditional clauses marked with $SBJ.PRO.IRR = f$ are attested especially frequently in counterfactual conditionals, that is, conditionals that report on possibilities that could or would have happened if the condition was satisfied, but according to the speaker’s knowledge they did not or will not take place. In other words, the protasis of the conditional is considered false by the speaker (Kroeger 2018:353). In order to elicit these types of clauses in the field I used the storyboard methodology where the speaker is presented with a story told in pictures. The linguist first tells the story in a contact language, Bislama in this case, and then the speaker tells it in the targeted language (Nafsan) by looking at the pictures. Some of the pictures elicit specific structures targeted by the linguist. Table 6 shows all the storyboards I used together with the number of targeted conditionals and their types.
Table 6. Storyboards eliciting conditional clauses

<table>
<thead>
<tr>
<th>Title</th>
<th>Num. of targeted cond.</th>
<th>Conditional types</th>
<th>Num. of speakers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Festival (von Prince 2017a)</td>
<td>3</td>
<td>past and future counterfactual</td>
<td>8</td>
</tr>
<tr>
<td>The Fortune Teller (TFS 2010)</td>
<td>6</td>
<td>future possibility, past counterfactual</td>
<td>5</td>
</tr>
<tr>
<td>The Woodchopper (TFS 2011)</td>
<td>2</td>
<td>negative past counterfactual</td>
<td>5</td>
</tr>
<tr>
<td>Red Yam (von Prince 2017b)</td>
<td>1</td>
<td>present possibility</td>
<td>7</td>
</tr>
</tbody>
</table>

Past counterfactuals are distinguished from future counterfactuals temporally, which means that the former report on unaccomplished events in the past and the latter on events considered to be unaccomplished in the future. In other words, future counterfactuals are not considered to be accessible possibilities from the point of view of the current state of affairs (von Prince 2016, 2018). This difference in interpretation can be exemplified by structures from the story Festival (von Prince 2017a) in which two friends are talking about the ongoing competitions taking place in their town. The text in bold in (17) expresses a past counterfactual, and in (18) expresses a future counterfactual. These sentences were targeted by the linguist with the corresponding pictures shown in figures 1 and 2, respectively.

(17)    A: Did you play soccer yesterday?  
         B: No, it rained. If I had played soccer yesterday, I would have gotten wet.

Figure 1. A frame targeting a past counterfactual conditional, corresponding to example (17).

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32 The future counterfactuals have also been referred to as future less vivid by Iatridou (2000).
A: Will you play volleyball tomorrow?
B: No, I will not play, because I cut my finger.
A: If I played volleyball tomorrow, my finger would bleed again.

The conditionals expressing a future possibility, mentioned in table 6, differ from the counterfactual conditionals in that they express possible futures, which can be regarded as continuations of the actual present. For instance, in the storyboard The Fortune Teller (TFS 2010) a fortune teller gives predictions about the future, considering different conditions, such as 'marrying John', as shown in (19).

A: John has asked me to marry him. What will happen if I marry him?
The fortune teller looks into the future and says: If you marry John, you will have many children.

We can see in (19) that the future possibility of having children is a possible outcome of marriage, and it is not considered unlikely to ever happen as was the case in (17) and (18). Example (19) relates to example (25) discussed below.

The counterfactual and future-possibility conditionals can be formally distinguished in Nafsan. The counterfactual conditionals can optionally be marked by mer ‘again/in turn; counterfactual (CF)’, which is not permitted with the meaning of future possibility. Although both types of conditionals can also be expressed by the i=f-wel structure, the counterfactuality can be specified with mer. Thieberger (2006) analyzes mer as an auxiliary verb meaning ‘again/in turn’. Although mer does have the meaning of ‘again/in turn’ in other contexts, in conditionals it is used as a counterfactual marker. The typical counterfactual construction is formed by either a realis (20) or irrealis proclitic (21) attached to f and then followed by mer. Example (20) corresponds to figure 2, and (21) to figure 1. There are also cases of either realis or irrealis proclitic attaching directly to mer (22), which suggests that the reading of counterfactuality is due to the presence of mer.

(20) [a=f mer mes matool], go nfang nen kin i=to
naar-u-k, taos, a=tai nakan-i-k ke=fo mer makot
arm-V-1SG.DP like 1SG.REAL=cut finger-V-1SG.DP 3SG.IRR=PSP.IRR again break
‘If I played tomorrow, then the sore on my hand, that I cut on my finger, would break again.’

These conditionals are also referred to as “hypothetical” in the literature (e.g., Thompson et al. 2007; Kroeger, 2018:353), but here I use a more specific term future-possibility conditionals (see also von Prince 2018).
In examples (23) and (24) we can see that the construction $i=f$-wel kin can also be used for past and future counterfactual conditionals, respectively. This shows that $i=f$-wel (kin) is a default conditional expression that encompasses all types of conditionals. Moreover, this shows that mer is indeed an optional marker of counterfactuality.

More evidence for the dedicated meaning of mer constructions is that they are not considered felicitous in future-possibility conditionals (25). All speakers chose $i=(f)$ wel (kin) for these types of conditionals, and in the follow-up elicitation they also confirmed that a construction with mer would not be appropriate (cf. recording AK1-075-01, Krajinović 2017). Example (25) shows a conditional clause with the interpretation of future possibility that was produced in the above mentioned context from example (19).

As we have seen in examples 20–25, both realis and irrealis subject proclitics can be used in the protasis of the conditional clause. The verb in the protasis can be marked with either realis or irrealis, even when the temporal reference is future. Thus, the choice of realis or irrealis does not reflect a temporal distinction. Since realis can also be used in future possibilities like (25) and in counterfactuals like (20–24), that means it does not express a modal distinction either. These data seem to suggest that realis in Nafsan is in fact semantically unmarked for mood and that it simply expresses person and number of the subject. Within this analysis, the “realis” paradigm can be analyzed as a default subject marking which is semantically unmarked in comparison to the irrealis paradigm (Krajinović 2018b).
Table 7 shows the quantified results of all the conditional expressions with future and past references in my fieldwork data. This summarizes results from all the stories from table 6 except Red Yam. The conditional structure with a present reference in Red Yam allowed only for the structure (i)\textit{f wel (kin)} + realis (see example 30 in section 3.2).

Table 7. Conditional expressions with future and past reference in my fieldwork data

<table>
<thead>
<tr>
<th>Construction</th>
<th>Number of sentences</th>
</tr>
</thead>
<tbody>
<tr>
<td>realis + (f) + mer</td>
<td>5 (9%)</td>
</tr>
<tr>
<td>irrealis + (f) + mer</td>
<td>20 (36%)</td>
</tr>
<tr>
<td>(i)\textit{f wel (kin)} + realis</td>
<td>12 (21%)</td>
</tr>
<tr>
<td>(i)\textit{f wel (kin)} + irrealis</td>
<td>19 (34%)</td>
</tr>
<tr>
<td>Total num. of sentences</td>
<td>56 (100%)</td>
</tr>
</tbody>
</table>

One interesting observation is that the marker \textit{f} was not used in the storyboard data outside of the conventionalized constructions \((i=)(f)\textit{ wel (kin)}\) and SBJ.PRO = (f) + mer. A conditional construction in which the main verb is marked with \textit{f} without the intervening \textit{mer} or \textit{wel}, as in example (9), are considered to be ‘old’ language, which was produced only when specifically asked for in elicitation.\(^{34}\)

The typological validity of the category of realis/irrealis has often been debated (cf. Bybee 1998; Elliott 2000), and, indeed, Oceanic languages offer some evidence for the inconsistent behavior of this category. As we have seen in Nafan, regardless of the conditional type, both realis and irrealis can appear in the protasis. A similar situation is attested in Unua, a language of Central Vanuatu spoken on the Malakula island. As Pearce (2015:243) notes, both realis and irrealis are possible in the protasis of conditionals in Unua, as reflected in examples (26) and (27). In (26) we can see the usage of the morphologically unmarked realis subject markers and in (27) their irrealis forms in the protasis. Both sentences have the interpretation of a past counterfactual conditional.

\begin{align*}
(26) \quad [Avra & \quad \text{no-xa} \quad \text{vex} \quad \text{Lakatoro} \quad \text{nano}], \quad \text{b-e-vr-i} \quad \text{raes} \quad \text{bi-sobon}. \\
& \quad \text{if 1SG-go to Lakatoro yesterday irr-1SG-buy-TR rice irr-some} \\
& \quad \text{‘If I had gone to Lakatoro yesterday, I would have bought some rice.’ (Pearce 2015:245)}
\end{align*}

\begin{align*}
(27) \quad [Avra & \quad \text{b-a-xa} \quad \text{ma} \quad \text{nano} \quad \text{vex} \quad \text{Vila}], \quad \text{b-e-ke-i} \\
& \quad \text{if irr-1SG-go only yesterday to Vila irr-1SG-see-TR} \\
& \quad \text{ju} \quad \text{nabburen so-g.} \\
& \quad \text{already friend gen-1SG} \\
& \quad \text{‘If I had gone to Vila yesterday, I would have seen my friend.’ (Pearce 2015:246)}
\end{align*}

Since realis is typically defined as referring to realized or actual\(^{35}\) events (e.g., Elliott 2000; Lichtenberk 2016b), it would not be expected for the realis to appear in the conditional context referring to possibilities of the non-actual domain. A possible explanation for some Oceanic languages lies in the reanalysis of the realis subject proclitics as subject markers of person and number, which would mean they are unspecified for the mood meanings (see also, Cristofaro 2012). This analysis would be in line with the fact that realis is morphologically and semantically unmarked in Nafsan and in Unua (Krajinović 2018b).

\(^{34}\) The corpus (Thieberger 1995–2018) started being collected in 1995 and it contains speech records of older generations, and my fieldwork data was collected in 2017 with speakers between 26 and 48 years old. For more on this topic see Krajinović and Thieberger (2018).

\(^{35}\) Elliott (2000) uses the term “actualized”.
### 3.2 Apodosis and negation

In this section I discuss the TMA marking in the apodosis of conditionals clauses, as well as some strategies of negation.

In all conditionals reported on so far, irrealis marking is obligatory in the apodosis. The irrealis mood appears in the apodosis of all counterfactual and future-possibility conditionals attested in my data, as shown in (28) and (29) respectively.

(28) \([Ka=f\text{ mer mes “volibol” matol}], nakan-i-k\)

1sg.irr = cond  cf play volleyball tomorrow finger-v-1sg.dp
ke = fo mra
3sg.irr = psp.irr bleed

’If I play volleyball tomorrow, my finger will bleed.’ (AK1-004-01, 00:03:27.921 00:03:33.286)

(29) \([F-wel\text{ kin p̃a=lak skot John}], rak = fo pitlak teesa laap.\)
cond-like comp 2sg.irr = marry with John 2du.irr = psp.irr have children many

’If you marry John, you two will have a lot of children.’ (AK1-018-01, 00:17:43.236-00:17:47.525)

The irrealis subject marking is usually followed by the prospective irrealis marked fo that indicates temporal posteriority of the apodosis in relation to the protasis, as can be seen in (28) and (29). This analysis is confirmed by the conditional structure from the storyboard Red Yam. The conditional from Red Yam is the only type of conditional in my data where irrealis and prospective fo are not possible in the apodosis. This is so because the event of the apodosis precedes the event described in the protasis. In the story Red Yam (von Prince 2017b) two friends are discussing who out of their friends might have stolen and eaten their red yam. They suggest that whoever has red teeth must be the person who did it, as shown in (30).

(30) \([f-wel\text{ kin npat-i-n i=miel}, go Yokon ñas}\)
COND-like COMP teeth-v-3SG.DP 3SG.REAL = red then Yokon only
kin \(i=paam\text{ nawi miel gaag.}\)
REL 3SG.REAL = eat yam red 2SG.POSS

’If her teeth are red, then Yokon is the one who ate your red yam.’ (AK1-060-01, 00:03:48.433-00:04:01.225)

The possibility of having red teeth has a present reference, as expressed in the protasis, and having eaten the red yam has a past reference, as expressed in the apodosis in (30). Since irrealis would lead to a future reference and fo to a posteriority reading, they cannot be used in this example.

The classification of different conditional constructions, including the protasis and apodosis constructions is summarized in table 8.

<table>
<thead>
<tr>
<th>Type</th>
<th>Protasis</th>
<th>Apodosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>default</td>
<td>((i=)(f) wel (kin) + SBJ.PRO = verb)</td>
<td>SBJ.PRO = (fo) + verb</td>
</tr>
<tr>
<td>counterfactual</td>
<td>SBJ.PRO = (f) + mer + verb</td>
<td>SBJ.PRO = (fo) + verb</td>
</tr>
</tbody>
</table>

One of the storyboards containing negation in conditionals is the Woodchopper storyboard (TFS, 2011) (cf. table 6). In this story the main character told her husband not to go chop the wood in the dark because he might drop some wood on the way. He did it nevertheless and dropped some wood on the path, which made her trip and fall over into the water. Example (31) shows the sentence subsequently produced by the main character.
We can see that the negative protasis contains the standard way of negating sentences, which uses the discontinuous marking ta(p)...mau. However, in the negative apodosis in (31) kano ‘cannot’ preceded by irrealis and fo was produced by all speakers in this context, instead of ta(p)...mau. Kano has been described by Thieberger (2006) as a negative ability marker, as shown in (32).

The functions of kano in (31) and (32) differ significantly. In the conditional clause in (31) kano has a negative possibility reading and not a negative ability reading, which is available in (32). The usage of kano in conditionals as a general negative possibility marker is also being confirmed in my current fieldwork. Example (33) was produced in a story where a wife goes looking for her husband in the garden, since he said he would be there. But when she arrives to the garden he is nowhere to be found, so she calls him on the phone and asks about his whereabouts. He says he is in the garden, and she answers with the sentence in (33), where kano is used in the apodosis. This usage of kano seems to be more widespread in counterfactual conditionals, but the full distribution of this construction is still being investigated.

The pattern of receiving new grammatical functions only in conditional clauses and maintaining a different function in main clauses is a characteristic of both kano and the counterfactual mer.

4 Paratactic and subordinate conditionals

In this section I compare conditional constructions marked only by f and fla attested in the corpus from Thieberger (1995–2018) and compare them to the i=f-wel (kin) structures. I argue that f and fla are potential and not subordinate markers, and that they form paratactic conditionals, that is, juxtaposed sentences marked with potential mood, which can pragmatically give rise to conditional meanings. On the other hand, conditionals with i=f-wel (kin) show some dependency relations that can be taken as evidence that i=f-wel (kin) is a subordinate marker. Although in the storyboard data I have not attested conditional clauses marked only by f and fla without the intervening mer or wel, this type of constructions is well-attested in the corpus data (Thieberger 1995–2018), and their properties justify the discussion presented here.

As we have seen in section 2.2, the markers f and fla can introduce conditional clauses (34), and in these cases they could be analyzed as subordinate conditional markers. However, neither f nor fla are necessarily interpreted as conditionals. They can both appear in the apodosis, the main clause of the

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36 See footnote 34.
conditional structure, as shown in (35) and (36). The clauses ‘I could have died in the Solomons’ (35) and ‘then (others) could gossip about you’ (36) cannot be interpreted as starting a new subordinate conditional clause. They simply express a possible event that would take place, if the condition of the antecedent was satisfied. Thus, the meaning of $f$ and $fla$ in these cases is the expression of possibility.

(34) $[Ru=f\text{ to } nigmam\text{ traus-i-ø}],\text{ ko=fo}$

3PL-REAL = COND PROG 1PL.EXCL.BEN tell-TR-3SG.OBJ 1PL.EXCL.IRR = PSP.IRR

tae, me gar $i=tik$. 'If they had told it to us, we would know, but they didn’t.' (Thieberger 2006:259)

(35) $[a=f\text{ mer } pa] me a=fla lakor \text{ wel}$

1SG-REAL = COND CF go but 1SG-REAL = POT maybe like

Jimmy Stevens ko $a=f$ lakor mat Solomon.

Jimmy Stevens or 1SG-REAL = POT maybe die Solomon

‘If I had gone, I could have been like Jimmy Stevens, or I could have died in the Solomons.’ (041.014)

(36) $[i=f-wel \text{ kin taos nametrau laap } ru=fla \text{ to } weswes}$

3SG-REAL = COND-like COMP like family many 3PL-REAL = POT PROG work

te-naor welkia $ru=laap$, $ru=f$ tae tilusus-i-k.

some-place thus 3PL-REAL = many 3PL-REAL = POT can gossip-TR-2SG.OBJ

‘If, like, lots of the family might work someplace, and there are lots of them, then (others) could gossip about you.’ (Thieberger 2006:161)

The marker $f$ can also appear in embedded questions, as in (37). In this case $f$ can be analyzed as a potential marker expressing epistemic uncertainty about the reason for getting sick, but it cannot be interpreted as a conditional.

(37) $a=tap\text{ tae } [nafte i=f\text{ pi nlaken } kin i=msak] mau$

1SG-REAL = NEG1 know what 3SG-REAL = POT be because COMP 3SG-REAL = sick NEG2

‘I don’t know what caused his sickness.’ (103.014)

The counterfactual expression SBJ.PRO.IRR = $f$ mer can also be used to express counterfactual wishes that are not followed by an apodosis (38), in contrast to regular conditional clauses. Equally, a similar structure with $fla$ was judged grammatical on its own, without a following apodosis (39). The fact that the sentences in (38) and (39) can stand on their own shows that they are in fact main clauses, and not subordinate conditional clauses.37

(38) $Ka=f\text{ mer } pei patlas-i-ø.$

1SG.IRR = POT CF first meet-TR-3SG.OBJ

‘If only I had met him.’ (Elicited, AK1-045-01)

(39) $A=fla\text{ mer } to patlas-i-k tete } mal$

1SG-REAL = POT again PROG meet-TR-2SG.OBJ some time

‘I might see you again some time.’ (Elicited, AK1-045-01)

37 These structures could also be analyzed as cases of insubordination, i.e., a conventionalized main clause use of what looks like a formally subordinate clause (Evans 2007).
The marker *fla* was also used as a potential marker in the storyboards, especially in the contexts of epistemic uncertainty. For example, in the above-mentioned story *Red Yam* (where two friends discuss who ate their red yam), I obtained example (40), where *fla* can only be interpreted as a marker of possibility.

(40) \[i=fla\] to \[pi\] Yokon kin \[i=paam\] nawi miel,\n\[3SG.REAL=\ POT PROG be Yokon REL 3SG.REAL= eat yam red\]
\[ko\] \[i=fla\] to \[pi\] Ros.\n\[or 3SG.REAL=\ POT PROG be Rose\]

‘It might be Yokon who ate your red yam, or it might be Rose.’ (AK1-008-01, 00:02:14.895-00:02:24.845)

If *f* and *fla* are only potential markers, then how do they acquire a conditional interpretation in examples like (34)? The best explanation for this is that the conditional interpretation of *f* and *fla* is pragmatically derived as an inference that the first clause is a condition and the second one is the outcome that follows it. The juxtaposed clauses are typically temporally interpreted in the linear order of their appearance (Haiman 1985). Thus, the first clause marked by *f* in (34) is interpreted as an earlier possibility and the second clause marked by irrealis is interpreted as a later possibility. This is followed by the interpretation that the two clauses are in a relationship of cause and effect, which leads to a conditional reading (see Dancygier 1998). These types of juxtaposed clauses with a conditional reading are called *paratactic conditionals* (Haiman 1983).

There is another piece of evidence that supports that this process takes place in Nafsan, namely that we find other juxtaposed clauses that can also derive conditional meanings. Examples (41) and (42) do not have any conditional marking and they still yield a conditional interpretation, which means they are also paratactic conditionals.

(41) \[[\text{natañol} \ pa=tu-a-ø\] mal\] go\ ga \[i=piatlak\]
\[\text{person} 2SG.IRR=\ \text{give-TR-3SG.OBJ} \ \text{time and} 3SG 3SG.REAL=\ \text{have}\]
\[\text{educated} wi\ \text{good}\]

‘If you give people time they can have a good education.’ (119.025)

(42) \[[\text{Ku=lak-a-ø} \ npat-i-n i=miel], ga ga kin\]
\[\text{2SG.REAL=\ \text{look-TR-3SG.OBJ} teeth-V-3SG.DP} 3SG.REAL=\ \text{red and} 3SG \ \text{REL}\]
\[i=paam-i-ø nawi gaag,\]
\[3SG.REAL=\ \text{eat-TR-3SG.OBJ yam} 2SG.POSS\]

‘If you see her teeth are red, then she is the one who ate your red yam.’ (AK1-027- 01, 00:12:34.908-00:12:38.680)

The paratactic conditionals are interpreted in such a way that the preceding clause is the antecedent expressing the condition that needs to be fulfilled and the second clause is the consequent expressing the consequence of fulfilling that condition. This mirrors the order of subordinate conditional clauses that typically precede the main clause (Haiman 1978; Bril 2007). However, since iconicity, that is, linear order, of paratactic conditionals plays a role in what is considered to be the condition/cause and what is the consequence/effect (Haiman 1986), we expect that the inversion of the two clauses has effects on that interpretation. Thus, the first clause is always a condition/cause and the second clause is always the consequence/effect. In subordinate clauses this should not be so, because there is a subordinator indicating which clause is the subordinate conditional clause. We can see that in example (35) the inversion of one of the two consequences with the condition would result in an opposite reading. This is because both types of clauses have the same marking and they are not formally distinguished in any other way.
If we look at the $i=f$-$wel$ ($kin$) clauses, however, we can see that the inversion of the clauses is possible while maintaining the same conditional interpretation. In examples (43) and (44), the protasis initiated with $i=f$-$wel$ ($kin$) follows the main clause (apodosis) and results in an unambiguous interpretation where the second clause marked with $i=f$-$wel$ ($kin$) is a condition, and the first clause is a consequence. Previously mentioned example (15) in section 3 also shows an inversion of the two clauses. Another indication of the subordinate character of $i=f$-$wel$ ($kin$) is the fact that it often contains the complementizer $kin$ that has a subordinative function.

(43) He $a=mur$-$i$-$n$ na $p$-$a=mai$ ni Kaltog preg

he 1SG.REAL = want-TR-3SG.OBJ COMP 2SG.IRR = come BEN Kaltog make

nalkis $[i=f$-$wel$]

medicine 3SG.REAL = COND-like

$ku=f$ $tae$ preg-i-$ø$.

‘Hey, I would like you to come and make some medicine for Kaltong, if you can do it.’

(103.012)

(44) Ke=$fo$ pakot naftuan, $[i=f$-$wel$] $kin$ naturiai

3SG.IRR = PSP.IRR buy present 3SG.REAL = COND-like COMP young.man

$ke=wes$ naul nanom].

3SG.IRR = get money yesterday

‘If the boy had gotten the money (yesterday), he would have bought a present for the girl.’

(AK1-083-01, based on Dahl 1985:TMAQ105, 106)

Paratactic conditionals have been reported as a feature of languages of the Pacific region (see Haiman (1983) for Papuan languages, and Verstraete (2010) for Australia). Oceanic grammars often explicitly mention the availability of paratactic conditionals. 38 Here I offer examples from two Oceanic languages: Tirax (Malakula, Central Vanuatu), and Sivisa Titan (Manus, Admiralty Islands). In examples (45) and (46) we can see two juxtaposed clauses marked only with irrealis subject markers in Tirax and Sivisa Titan, respectively. In both cases the derived interpretation is that of a conditional.

(45) $[ba=leh$ dede $hɔk] ba=mtaxit$ ia

2SG:IRR = see mother 1SG:POSS 2SG:IRR = be.afraid there.BI

‘If you see my mother you will be frightened of her.’ (Brotchie 2009:227)

(46) $[Ko$ lai $yo$ manuai], $ko$ ani $yo$.

2SG:IRR take 1SG osprey 2SG:IRR eat 1SG

‘If you had caught me as an osprey, you would have eaten me.’ (Bowern 2011:86)

Another feature of some Oceanic languages is the usage of a discourse marker meaning ‘like’ or ‘thus’ in conditional-introducing expressions. Besides the conditional usage of $wel$ ‘like/thus’ in Nafsan, we find structures of this type in Koro (Admiralty Islands). In (47) the marker $tehene$ is used with the meaning ‘(to be) like’ and in (48) it is used as a marker introducing conditional clauses.

(47) $[i$ $k-i$ ru rangeh] e $i$ $tehene$ ke $jua$ kepi e

3SG IRR-3SG stay:IRR/SG now COORD 3SG like DAT 1SG only PROX

‘If she were still here she would be just like me.’ (Cleary-Kemp 2015:52)

(48) $[munuwe$ $tehene$ lengin] you $k-u$ ru kor

previous.day thus rain 1SG IRR-1SG stay:IRR/SG place

‘If it had rained yesterday, I would have stayed home.’ (Cleary-Kemp 2015:53)

38 I have also found paratactic conditionals in grammars of Mavea (Guérin 2011), Maskelynes (Healey, 2013:192), Koro (Cleary-Kemp 2015:27), Toqabaqita (Lichtenberk 2008:1111), and Saliba (Margetts 1999:17).
The existence of morphosyntactically different kinds of conditionals, such as paratactic conditionals and ‘like/thus’ conditional markers is consistent with the attested polyfunctionality of grammatical markers and subordinators in Oceanic languages (cf. Lichtenberk 2016a).

5 Conclusion

In this paper I analyzed the structure of conditional clauses in Nafsan. Starting from the description of the verbal complex and conditional clauses by Thieberger (2006) in section 2, I presented new findings about conditional clauses that were obtained during my fieldwork. The main findings concern the availability of both realis and irrealis in the protasis of a conditional clause (section 3.1), the usage of the dedicated counterfactual marker mer in conditional clauses (section 3.1), usage of kano ‘cannot’ in the apodosis without the negative ability reading (section 3.2), and the existence of paratactic conditionals (section 4).

The usage of both realis and irrealis subject proclitics in conditional clauses in Nafsan has important consequences for defining these categories. Since most approaches to realis/irrealis treat realis as realized or actual, and irrealis as unrealized or non-actual, this distinction would predict the appearance of only irrealis in counterfactual and future-possibility conditional clauses. However, Nafsan allows for both realis and irrealis in these contexts. Since this feature has been attested in other Oceanic languages, new approaches to the understanding of interchangeability of realis and irrealis should take this into account (for previous works see Baker and Travis (1997); Elliott (2000); McGregor and Wagner (2006); Cristofaro (2012); Cleary-Kemp (2014), among others).

The existence of a dedicated counterfactual marker in conditional clauses in Nafsan evidences the relevance of distinguishing between the counterfactuality and future possibility. However, this distinction is optional because all conditionals can be expressed by the default construction i=f-wel kin, and the counterfactual conditionals can optionally be marked by mer. Thus, i=f-wel kin is a semantically default conditional marker, constructed on the basis of the polyfunctional word wel ‘thus/like’. In a similar vein, the markers f, fla, and wel are polyfunctional because they can express meanings other than the conditional marking. I argue that f and fla are markers of potential mood, which are interpreted as paratactic conditionals only when a reading of cause and effect following the linear order of clauses is possible. In contrast to f and fla conditionals, i=f-wel kin conditionals proved to be dependent and subordinate.

The negation in the apodosis features a possibility of using the negative ability marker kano ‘cannot’ instead of the default discontinuous negation ta(p)...mau. Thus, in conditionals, and particularly in counterfactual contexts, kano has a grammatical function of negation and not negative ability. Similarly to mer, kano receives a dedicated grammatical function in conditional clauses, which does not occur in main clauses.

Finally, the asymmetries between the semantically default and specific structures permeate all aspects of conditional clauses in Nafsan. Besides the default i=f-wel kin vs. counterfactual mer opposition, i=f-wel kin is also a specific conditional marking in contrast to f and fla, which express possibility in general and do not necessarily lead to a conditional interpretation. The asymmetries between the default and specific markings, coupled with optionality and polyfunctionality of grammatical markers are all common features of Nafsan and Oceanic languages. The study of these characteristics brings about insights into relationships between different grammatical functions and paradigmatic contrasts in Oceanic grammatical systems.
References


Honorific and Affiliative Uses of Dual and Paucal Number in Daakie [ptv]

Manfred Krifka

Abstract

The paper investigates number marking in Daakie (Port Vato [ptv]) in South Ambrym, Vanuatu. The language has a complex number system in pronouns, subject agreement, possessives and relational nouns, distinguishing singular, dual, paucal, and plural forms, with an inclusive-exclusive distinction for non-singular first person. As for the referential use of these number features, it is established that dual is strictly used for reference to two entities, whereas paucal forms are used for reference to a smaller number of entities, at least three and up to five or more for animates. There are two derived uses of number that indicate social meaning: The dual is used to address and talk about persons that stand in a certain in-law kinship relation to the speaker, a use that appears widespread but not well-reported in Oceanic languages and can also be found in Munda languages. The paucal is used to address and refer to a group that may be quite large, provided that the speaker socially affiliates with that group.
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## Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1DU.EX</td>
<td>first person dual exclusive</td>
</tr>
<tr>
<td>1DU.INC</td>
<td>first person dual inclusive</td>
</tr>
<tr>
<td>1PC.EX</td>
<td>first person paucal exclusive</td>
</tr>
<tr>
<td>1PC.INC</td>
<td>first person paucal inclusive</td>
</tr>
<tr>
<td>1PL.EX</td>
<td>first person paucal exclusive</td>
</tr>
<tr>
<td>1PL.INC</td>
<td>first person paucal inclusive</td>
</tr>
<tr>
<td>1SG</td>
<td>first person singular</td>
</tr>
<tr>
<td>2DU</td>
<td>second person dual</td>
</tr>
<tr>
<td>2PC</td>
<td>second person pascal</td>
</tr>
<tr>
<td>2PL</td>
<td>second person plural</td>
</tr>
<tr>
<td>2SG</td>
<td>second person singular</td>
</tr>
<tr>
<td>3DU</td>
<td>third person dual</td>
</tr>
<tr>
<td>3PC</td>
<td>third person pascal</td>
</tr>
<tr>
<td>3PL</td>
<td>third person plural</td>
</tr>
<tr>
<td>3SG</td>
<td>third person singular</td>
</tr>
<tr>
<td>COMP</td>
<td>complementizer (realis)</td>
</tr>
<tr>
<td>COMP.NR</td>
<td>non-realis complementizer</td>
</tr>
<tr>
<td>DEM</td>
<td>demonstrative</td>
</tr>
<tr>
<td>DNEG</td>
<td>dependent negation</td>
</tr>
<tr>
<td>FUT</td>
<td>future</td>
</tr>
<tr>
<td>IDEF</td>
<td>indefinite article</td>
</tr>
<tr>
<td>NEG</td>
<td>negation</td>
</tr>
<tr>
<td>NSPEC</td>
<td>non-specific</td>
</tr>
<tr>
<td>POSS</td>
<td>possessive marker</td>
</tr>
<tr>
<td>POT</td>
<td>potentialis (irrealis)</td>
</tr>
<tr>
<td>PROX</td>
<td>proximate</td>
</tr>
<tr>
<td>RE</td>
<td>realis</td>
</tr>
<tr>
<td>REL</td>
<td>relative marker</td>
</tr>
<tr>
<td>TR</td>
<td>transitivizer</td>
</tr>
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</table>
1 Introduction

Oceanic languages are known for their rich systems of grammatical number (Lynch et al. 2002:35f.) All of them distinguish singular and plural, many of them have, in addition, a dual, quite a few have trial or paucal forms, and some even have a five-fold distinction (see overview in Harbour 2014).

The defining semantic feature of grammatical number is the number of referents of noun phrases, pronominals, or referential indices of predicates. Singular is used for referring to a single entity, dual for a pair of two, trial for three and paucal for some small number comparable to the English use of several. However, sometimes number can express additional meanings as well. The present article discusses two such additional meanings of number in the language Daakie (Port Vato [ptv]) in South Ambrym, Vanuatu. One is at least superficially related to the honorific use of plural in European languages, but it makes use of the dual for these purposes and is more or less restricted to addressing and also referring to in-laws. This use of dual appears to be quite widespread in Oceanic languages, but it is rather poorly documented. The second case is a use of paucal to refer to groups of people, presumably of arbitrary sizes, to which the speaker expresses some affiliation. This use is difficult to detect, and it has not been documented so far, to the best of my knowledge.

The relevant data on Daakie39 come from field work starting in 2009 that resulted in a corpus of more than 15 hours of transcribed oral texts, mostly narratives and public speeches. Daakie, spoken by about 1000 speakers in the villages of Port Vato, Lalinda and Lonmei, belongs to the group of four major languages in the West and North of Ambrym. The other languages are Daakaka, (von Prince 2015), Dalkalaen, and North Ambrym, (Franjieh 2012). An early description of the languages can be found in Paton (1971), which focuses on Lonwolwol in the Craig Cove Area, now nearly extinct and replaced by Dalkalaen. The language of Southeast Ambrym, Vatlongos, differs quite drastically (Ridge 2018), and is closer related to the language of Paama and in general to the more southern languages of Epi.

2 Morphological marking of number

Daakie has four grammatical numbers: singular, dual, paucal, and plural. As usual in the languages of Vanuatu, number is morphologically expressed in combination with person, and there is an exclusive / inclusive distinction for first person. The grammatical category of number and person is expressed in the personal pronouns, in the subject agreement markers in combination with modal markers, in nominal phrases by postposed personal pronouns, and in the possessor of possessive markers and relational nouns.

The following table illustrates the forms of the free pronouns and the subject markers. Subject markers are sometimes called subject pronouns but notice that they never occur as free pronouns. They are always combined with a modal marker.

<table>
<thead>
<tr>
<th>Person</th>
<th>Singular</th>
<th>Dual</th>
<th>Paucal</th>
<th>Plural</th>
<th>Forms</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>ngyo</td>
<td>komoo</td>
<td>kidyee</td>
<td>kemem</td>
<td>Pronoun</td>
</tr>
<tr>
<td></td>
<td>na-</td>
<td>komo-</td>
<td>kidyee</td>
<td>keme-</td>
<td>Subject Marker</td>
</tr>
<tr>
<td>1+2</td>
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<td>adyee</td>
<td>dye-</td>
<td>et</td>
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<tr>
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<td>dye-</td>
<td>da-</td>
<td>da-</td>
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<td>ngyak</td>
<td>kamoo</td>
<td>kamdyee</td>
<td>kimim</td>
<td>Pronoun</td>
</tr>
</tbody>
</table>

39 I gratefully acknowledge support by the Volkswagen Foundation from 2009 to 2014 for the DoBeS project “Languages of West Ambrym”, and by the DFG for the project MelaTAMP, “Tense, Aspect, Modality and Polarity in the languages of Melanesia”. I also thank the speakers of Daakie in Ambrym, and in particular Abel Taho for continuing support. Furthermore, I thank the participants of the COOL conference in Honiara for an interesting discussion of the issues raised in this paper, in particular Andrew Gray and Michael Franjieh. I also thank Paul Unger and an anonymous referee for helpful suggestions.
The forms in Table 1 are given in the orthographic representation proposed in Krifka (2017). In the orthographic representation, ng stands for /ŋ/ and y for /j/; notice the somewhat unusual combination /nj/ (ngv-) instead of /nj/ reported for the neighboring language Daakaka (von Prince 2015). By a general rule, short back vowels after alveolar consonants and /j/ are fronted, hence ngyo is realized as [ŋjø]. Vowel digraphs oo, ee stand for long vowels; o stands for open /ɔ/, closed /o/ would be written ơ; e is typically realized as closed /e/, but in case the contrast to /ɛ/ is distinctive, /e/ is written as ĕ, and /ɛ/ as e. The combination dy is often realized as [dɔ]. Voiced stops are prenasalized, hence adoo is realized [aðdo:].

There is one case of syncretism in the subject marker 2nd person dual and 2nd person paucal, which are both realized as ka-. In previous work (Krifka 2016), I assumed a distinct subject marker kadye- for the 2nd person paucal, but this does not occur in the corpus and could not be elicited in a stable way.

Some of the pronominal and agreement forms can be traced back to reconstructed forms of North-Central Vanuatu (Clark 2009), *nau for 1st singular, *igo for 2nd singular, *naia for 3rd singular, *(k)ida for 1st plural exclusive, *gama(mi) for 1st plural inclusive, *gamyu for 2nd plural, *(n)a-ira for 3rd plural. The 3rd person dual koloo is related to *rua ‘two’, Daakie lo [lø], where /l/ was lost in komoo for 1st person dual exclusive and komoo for 2nd person dual. The 3rd person paucal (Dyee in ki(l)yee is presumably related to *tolu ‘three’, Daakie syéé [5e:]. (See also Pearce 2012, for the reconstruction of singular, dual, and plural forms of North-Central Vanuatu.)

There are five modal markers, -m for realis, -re for realis negation, -p for potentials, -t for distal and -n for what can be described as dependent negation, for its most typical use. This results in realis forms like na-m (1st person singular), ko-m (2nd person singular), komo-m (1st person dual inclusive). Notice that there is no agreement marker for 3rd person singular; the realis marker in this case is the bare morpheme m with an epenthetic vowel that, depending on the stem of the following verb, is realized as labiovelar m*. and is followed by an epenthetic vowel -e, -i, -o or -u. It is unclear whether person/number is expressed by a zero morpheme here, or whether agreement markers without person/number features are unspecified for person and number. In the current article the glosses will not express the 3rd person singular feature. For the use of modal markers see Krifka (2016).

Number and person is also marked with relational nouns and possessives. There are three possessive classifiers with 1st person forms, ok (edibles and animals), mok (house-related objects and drinkables) and a general form, sok, which is used to illustrate possessives in the following table. There are several dozen relational nouns denoting relatives, body parts, and body excretions. They are illustrated with the stem nare-, which undergoes certain vowel changes.

<table>
<thead>
<tr>
<th>Person</th>
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</tr>
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<tbody>
<tr>
<td>1</td>
<td>so-k</td>
<td>su-m</td>
<td>se-mem</td>
<td>se-mem</td>
<td>Posessive s-class Relational noun</td>
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<tr>
<td></td>
<td>nuru-k</td>
<td>nuru-mo</td>
<td>nare-memdyee</td>
<td>nare-mem</td>
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<td>sa-doo</td>
<td>sa-dyee</td>
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<td>Pronoun</td>
<td>Subject Marker</td>
</tr>
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<td></td>
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<tr>
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<td>sa-mdyee</td>
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<tr>
<td></td>
<td>nare-m</td>
<td>nare-moo</td>
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<tr>
<td>3</td>
<td>so-n</td>
<td>so-loom</td>
<td>sa-yeey</td>
<td>Sa-a</td>
<td>Pronoun</td>
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<tr>
<td></td>
<td>nare-n</td>
<td>nare-loo</td>
<td>nare-yee</td>
<td>nare-e</td>
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</tbody>
</table>

It should be mentioned that number of actions, especially distributed actions, can be indicated with reduplication of the verb. Also, for verbs there are a number of suppletive forms that distinguish between

<table>
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<td></td>
<td>nuru-k</td>
<td>nuru-mo</td>
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<td>1+2</td>
<td>sa-doo</td>
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<td>sa-t</td>
<td>Pronoun</td>
<td>Subject Marker</td>
</tr>
<tr>
<td></td>
<td>nare-doo</td>
<td>nare-dyee</td>
<td>nare-met</td>
<td></td>
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<tr>
<td>2</td>
<td>so-m</td>
<td>sa-m</td>
<td>sa-mdyee</td>
<td>sa-mim</td>
<td>Pronoun</td>
</tr>
<tr>
<td></td>
<td>nare-m</td>
<td>nare-moo</td>
<td>nare-mdyee</td>
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<td></td>
</tr>
<tr>
<td>3</td>
<td>so-n</td>
<td>so-loom</td>
<td>sa-yeey</td>
<td>Sa-a</td>
<td>Pronoun</td>
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<tr>
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<td>nare-n</td>
<td>nare-loo</td>
<td>nare-yee</td>
<td>nare-e</td>
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</tr>
</tbody>
</table>
number of participants, for example pwet vs. du ‘stay’ for singular or dual subjects vs. non-singular subjects, and idi vs. sógó ‘take’ for singular or dual objects versus plural objects (see von Prince 2015, for similar verb pairs in Daakaka).

All person/number features occur in the recorded corpus. The form indicating 3rd person singular is most frequent (> 7000 tokens), which is to be expected, especially in a corpus consisting mostly of narratives. Notice that this form is also formally unmarked, as it is expressed only by the bare modal marker. 3rd person singular not only refers to single persons other than speaker and addressee, and to entities, but also to events in event-related serial verb constructions, as in the following example, with a 1st person subject and an event-related serial verb marked by the bare realis marker mu expressing 3rd person singular.

(1) na-m longane mu wuo
     1SG-RE feel RE good
     ‘I feel / felt good.’ (EJosis.048)

3PL occurs with more than 2000 tokens and 1SG with slightly less than 2000 tokens. The next frequent cohorts are 2SG and 3DU with more than 800 tokens, followed by 3PC with more than 400 tokens. 1DU.EX, 1DU.IN, 2DU, 1PC.EX, 1PC.IN, 1PL.EX, 1PL.IC and 2PL occur with between 100 and 200 tokens, and 2PC is the rarest form, occurring with about 50 tokens. These numbers show in particular that dual and paucal forms are actively used in the language.

Even compared to other languages of Vanuatu, the number system of Daakie is remarkably rich. Pearce (2012) discusses the person and number systems of languages of Vanuatu. She concentrates on the distinction between singular, dual and plural; the frequency of the use of trial or paucal forms in these languages is unclear. Among those languages, she discusses various patterns of syncretism. In Daakie, there is just one such syncretism, between the relatively rare form 2DU and the rarest form 2PC. Even this syncretism only holds for the subject markers, and not for the free pronouns, possessives or relational nouns.

3 Basic uses of dual, paucal and plural

Data elicitation with sentences whose subjects were modified by number words made it clear that dual has to be used with subjects referring to two entities, that paucal can be used with subjects referring to three to five entities, and that plural can be used starting with subjects referring to five or more entities. I elicited these sentences with four speakers as a paradigm. The purpose of the elicitation was to determine the use of number forms with a more random and casual presentation of sentences and of descriptions of visual stimuli. However, from my experience with the language I would not expect to get results much different than the current elicitation method. Examples of various person/number combinations follow.

(2) timaleh soo mwe pwet pán em
    child one RE stay under house
    ‘A / one child was in the house.’

(3) timaleh woro-ló kolo-m pwet / du pán em
    child number-two 3DU-RE stay under house
    ‘Two children were in the house.’

---

40 The transcribed audio or audiovisual corpora will be made available in the PARADISEC collection.
(4) **timaleh** _woro-syee_ **kiye-m** _du_ **pán** _em_  
child number-three  **3PC-RE** stay under **house**  
‘Three children were in the house.’

(5) **timaleh** _woro-vyet_ **kiye-m** _du_ **pán** _em_  
child number-four  **3PC-RE** stay under **house**  
‘Four children were in the house.’

(6) **timaleh** _woro-lim_ **kiye-m / la-m** _du_ **pán** _em_  
child number-five  **3PC-RE / 3PL-RE** stay under **house**  
‘Five children were in the house.’

(7) **timaleh** _molop-syeh_ ??**kiye-m / la-m** _du_ **pán** _em_  
child number-six  **3PC-RE / 3PL-RE** stay under **house**  
‘Five children were in the house.’

(8) **timaleh** _songavi_ **la-m** _du_ **pán** _em_  
child ten  **3PL-RE** stay under **house**  
‘Ten children were in the house.’

All of the examples above had animate subjects. Similar elicitations were done using inanimate subjects. With those subjects, singular agreement is accepted as an alternative if the subject refers to two or more entities.

(9) **vyoh** _woro-ló_ **kolo-m** / _me_ **pwet/du** _lon_ **aróówóó**  
coconuts number-two  **3DU-RE / RE** stay in basket  
‘Two fresh coconuts were in the basket.’

The examples above involved agreement between an overt subject and the subject marker of the verbal predicate. Number marking within a noun phrase appears to be more flexible. The plural marker *ngyee* can be used in case just two entities are involved, as in (10). After recording it was judged that *koloo 3DU* would have been better than *ngyee*, but *ngyee* was accepted as well. In the example, *tere* is the 3rd person singular form of the realis negation -re, and *ne* is the form of the dependent negation -n when not attached to a subject prefix.

(10) **a ye-n** **ngyee** **te-re** **wese** **ka** **ne** **loko**  
but leg-3SG  3PL  3SG-NEG be.able COMP.NR DNEG walk  
‘but his legs could not walk’ (Apia.009)

Animate subjects that refer to two entities always trigger dual agreement in the texts of the corpus. This is less strict for the choice of paucal or plural. There are cases in which reference to the same entities vary in the texts, as in the following example, where reference switches from 3rd person paucal to 3rd person plural.

(11) **kiye-m**  **téé-van** **lehe** **timaleh** **soo**  
3PC-RE look-go see **child** one  
la- _m_ *seseat-góló* **timaleh** **ki-ye**  
3PL-RE decorate-cover child **DEM-PROX**  
‘They looked and saw a child. (…)  
They decorated this child’ (Andri1.036,038)
For impersonal reference, which corresponds to impersonal passive in English, only 3rd person plural can be used. Consider the following example:

(12) siti ke tobo ne ot Jemani la-m kie Berlin
    city REL big TR place Germany 3PL-RE call Berlin

    ‘the big city of Germany they call / is called Berlin’ (Abel3.398)

Furthermore, with non-referential subjects there is no nominal plural marking. In the following example, the subject is vanten ‘person’, not vanten ngyee.

(13) ko-m van Laalida vanten la-m dyanga
    2SG-RE go Lalinda person 3PL-RE lack

    ‘You went to Lalinda, there were no people’ (Jack1.047)

This concludes the short overview of the regular, or denotational, properties of number marking in Daakie. We now turn to the use of number marking to indicate aspects of social meaning.

4 Honorific use of dual

There are well-known instances of grammatical number and person markings that cannot be solely explained by reference to a given number of entities. Number and person marking often carries with it social meaning, in addition to their referential core semantics.

A well-known case is the use of plural for honorific purposes (Joseph 1987 for Indo-European languages; Agha 1994 for the larger issue of honorification). French uses 2nd person plural for honorific address to a single person; German uses 3rd person plural for this type of address. Typically, this form is used to address adult strangers and persons that do not belong to family, friends, or colleagues.

(14) Avez vous une cigarette?
    have.2PL 2PL IDEF cigarette

    ‘Do you (singular, honorific) have a cigarette?’

(15) Haben Sie eine Zigarette?
    have.3PL 3PL IDEF cigarette

    ‘Do you (honorific) have a cigarette?’

In orthography, the honorific use of 3rd person plural in German is distinguished from the non-honorific use by capitalization. As is well-known, the highly unusual non-distinction of number in the 2nd person in current standard English is due to the replacement of 2nd person singular thou by the honorific use of 2nd person plural you. The honorific use of pronouns coincides with other markers of honorification, like the use of title and family names instead of given names.

Interestingly, we find a kind of social use of number in Daakie as well. But in Daakie, it is the dual that is used for this purpose, and it is not applied for strangers, but for in-laws that stand in a taboo relation to the speaker. Also, it is not only used to address a person, but also to refer to a person in the 3rd person.

A case of this use of dual can be seen in the following example, which was recorded during the ceremony that is performed five days after the death of a person. The extended family, friends and acquaintances come together for this occasion, at which the nuclear family of the deceased person hands out sums of money to the extended family, including in-laws. The ceremony happened in 2014 and was recorded on video; the episode shows Wili Santo, all by himself walking up to the master of ceremony, who hands him some money.
Honorary uses of dual are not restricted to second person. In the following example from a narrative, a place is described where a person named Maika lives. I made sure that reference was to only one person, and that the speaker stands in an in-law-relationship to that person. Nevertheless, this reference to Maika is expressed with the dual, this time with the 3rd person dual.

(17) mwe pwet mwi pyen van, berop-ne woo Lap
RE stay RE shoot go close-TR body.water Lap
o-kege Maika koloo kolo-m du weren
place-REL Maika 3DU 3DU-RE stay where

‘He kept shooting and so on, close to the lake Lap, the place where Maika lives’ (IB2.006-007)

In the honorary uses of plural in French and German, there is a syncretism of addressing a single person or a group of persons; in either case, vous or Sie has to be used when addressing a group of persons that contain persons for whom these pronouns of address would be appropriate. What happens in Daakie when addressing such a group?

Interestingly, honorary uses of the dual appear not to be restricted to referring to single persons. In the following example, also from a narrative, a speaker addresses a group of persons that may include persons of respect.

(18) Mwe kie ka, A-ka-p tééteé wobuong a-bwe songavi
RE say COMP FUT-DU-POT look.out day FUT-POT ten

‘Look out (after him) till he is ten.’ (JPau.071)

However, we have noticed a syncretism in the subject marker between 2nd person dual and paucal. The form a-ka-p could have been glossed as 2nd person paucal as well. When we look at the choice of pronouns in such cases, we find that paucal pronouns are used. This is illustrated in the following example from the funeral speech:

(19) s-ememdyee sipa-en me venok saane kamdyee
POSS-1PC.EX thank-NOM RE go towards 2PC
byen ke ka-m mee ka-m ling=gongone s-amdyee tuutuu
because COMP 2DU/PC-RE come 2DU/PC-RE put=make.good POSS-2PC grandfather

‘Our thanks go towards you all because you all came to put to rest your grandfather’ (5Days.004-005)

Here, the ambiguous agreement forms ka-m (2nd person dual / paucal) are used, together with the paucal pronoun kamdyee and the possessive samdyee; the group addressed contains in-laws, as we have seen in (16).

The final example, from the same funeral speech, shows that reference to one’s own group is possible with a dual exclusive first person, komoo. The construction non-singular pronoun + sen is a partitive, singling out one or possibly more elements of the group referred to by the pronoun. Verbal agreement is with the simple realis form, indicating 3rd person singular. The speaker appears to refer to the group that he belongs to with an honorary dual, possibly because of the presence of addressees to which the speaker stands in honorific relation to.
Which kinds of persons should be addressed with the honorific plural? It is primarily used for in-laws, that is, the mother-in-law and the father-in-law. By extension, it is also used for the sisters of the mother-in-law and the brothers of the father-in-law, due to the complex kinship system of Ambrym (Deacon 1927, Rio 2007, von Prince 2015). In this system, the preferred wife of a male ego is his father's father's daughter's daughter. As the male ego is nominally identified with his son's son, his daughter's daughter and their kin (except the mother) will be addressed with the honorific dual as well. This also holds for the in-laws of a male ego’s sister. The following diagram from the Daakie dictionary (Krifka 2017) gives the terms in Daakie and delineates the three taboo groups mentioned above. It also indicates the persons that are (potential) wives of a male ego’s grandfather or grandson and the brother of one's daughter's daughter, to which a male ego entertains a joking relationship (in the sense of Radcliffe-Brown 1940:195–210).

The honorific use of dual for Oceanic languages has been documented. Ray (1917:287) reports that in Lifú (New Caledonia: Loyalty Islands), married women were addressed with a dual pronoun. Ray (1926:79) states that in Nengone (New Caledonia: Loyalty Islands) the dual marker no is used to express “respect”. Dixon (1988:53) reports that in Boumaa Fijian the 2nd person dual is used for in-laws, whereas the 2nd paucal is used to address brother or sister of the opposite sex or an elder sibling of the same sex, and 2nd plural is used to refer to the village chief or to other persons of high respect (Schmidt 1988:71). Hafford (2014:60) observes that in Wuvulu (Papua New Guinea: Admiralty Islands), in-laws...
are addressed by the 2nd person dual pronoun. According to him, this is motivated by expressing “the idea that the listener is equal to two people.”

For Polynesian, the use of dual pronouns for honorific purposes is reported very early for Samoan as a form to address chiefs (Turner 1861:340). Turner reports: “The first time I had this applied to me I was riding, and thought it must mean me and my horse, and did not feel at all complimented by the classification”; this shows that the dual of respect in Samoan is clearly not restricted to in-laws. For Tuvaluan see Besnier (2000:389), who also observes that this use can be found in Tikopia and Mota. Besnier describes the conditions as follows: “Use the dual number of number with pronouns of all persons, but particularly the second person, in social contexts where the social identity of participants is given greater prominence than their personal identity. The most prototypical context in which the honorific dual is used is in formal oratory.” This corresponds to the honorific dual in Daakie as in (16), where it is used in the setting of a public speech, to refer to an in-law that has a formal role in this setting.

For the languages of Vanuatu, honorific use of dual was identified by François (2005:9) for Mwotlap and by von Prince (2015) for Daakaka, the closest relative to Daakie. The use is similar for Daakie, mainly restricted to in-laws. This also holds for the closely-related language of North Ambrym (Franjieh 2012), where other kinds of indirectness with in-laws has been reported. For South Efate, Thieberger (2009) reports that older speakers remember an honorific use of dual and plural.

The honorific use of dual appears to be quite wide-spread in the Oceanic subfamily, as it occurs in Melanesia and in Polynesia. It is a sociolinguistic feature that is either of considerable age, or it has developed independently from each other in subbranches of the Oceanic languages under comparable linguistic and cultural conditions.

There is evidence that parallel developments of that feature are indeed possible. The honorific use of dual is reported in one other language family as well: the Munda languages of India that belong to the Austroasiatic languages. Choksi (2010) provides a rather detailed description for Santali (see also Anderson 2015). According to Choksi, Santali speakers use the 2nd person dual to refer to one's parent-in-laws and the elder siblings-in-law. Partly due to language reforms that introduced a standard written version, the dual was extended to persons of respect in general (corresponding to the use of plural in Indo-European and Dravidian languages in India), and also to refer to respected individuals in the 3rd person. For another description of honorific use of dual in Munda, see Petersen (2014) for Kharia. In Kharia, 1st, 2nd and 3rd person can be used to signal honorification, which extends in the case of 3rd person also to plural referents; this applies to kin but is also extended to show respect in general. Petersen also points out that in Mundari, where dual is not used as honorific, married women are referred to with a dual, signaling their married status (similar to what Ray (1917) reported for Lifu). In general, the dual is used to signal the role that is assigned to the married women.

We have to distinguish the honorific use of dual from other uses in which it expresses inclusivity (Cysouw 2005). In Kilivila, the dual inclusive is used as a polite address (Senft 1986:53); this is a form of expressing affiliation with the addressee. It does not seem to be restricted to addressing taboo relatives.

Why is the dual used to express respect? Hafford (2014) proposes that 2nd person dual expresses that the addressee counts as two people, and therefore is considered more important or powerful. This is plausible and can also explain the use of plural to express respect in other languages. However, we should ask: Why use the dual and not plural (or paucal)? In contrast to these numbers, dual would express a kind of “limited” importance. This is certainly not what is expected from an honorific marker.

One could argue that the use of dual for honorifics does not express limited importance, but rather that the person referred to is a single person. In a sense, dual is a kind of “augmented singular.” In many stories, two agents act in parallel as a small group, and obviously are conceived of as a unit. So, the use of dual might play a double role: to express higher importance, while still conveying a notion of singularity.

An alternative to the augmentation theory of the use of plural was proposed by Joseph (1987) and Agha (1994). The use of plural adds a measure of indirectness, as formally, the addressee includes “other” persons as well. The indirectness is motivated by a desire to avoid blunt direct reference to the person. The dual can be used in this situation because, while being more indirect than the singular, it achieves this by a minimal semantic extension.
A more specific version of indirectness was proposed by Peterson (2014) for the use of dual in Kharia. According to Peterson, direct and sole reference to a taboo relative is avoided, in favor of a dual reference that nominally includes another person to which no taboo relation exists. This other person would be the husband when addressing a married woman. In the case of referring to an in-law relative, the other person would be one’s spouse who comes from the in-law family. So, when a male speaker addresses his father-in-law by the 2nd person dual, this would nominally include the speaker’s wife. In this way, direct sole reference to the father-in-law is avoided, and by use of the dual, the connection of the father-in-law (here by way of the speaker’s wife) is expressed. Notice that this scenario explains why this form of honorific is used especially for in-laws, and not for honored persons in general.

5 Affiliative use of paucal

After having looked into an unexpected use of dual, we now turn our attention to the affiliative use of the paucal. There is evidence that the paucal is not just used for a group of people or things of a relatively small number, roughly comparable with English *a couple of* or *several*. Crowley (1982) reports for Paamese that paucal is used in a comparative way. According to him, when there is the need to refer to a smaller and a larger group of people, then the paucal is used for the smaller group, and the plural for the larger group. He gives, as an example, referring to one’s patrilineage within a family with the paucal, and to the people of the whole village with the plural.

It appears to me that it is not the comparative size that matters here, but rather that the speaker identifies with his own patrilineage more closely. I became aware of this use when I worked with Abel Taho on a translation of a children’s Bible (Krifka and Taho 2013). He insisted on using the paucal for the group of Jesus and his followers, like the twelve apostles or the attendees of the Sermon on the Mount. Consider the following example from that text, referring to Jesus and the apostles:

(21)  
\[\text{Jisas mane } s-an \text{ vanen kiyee kiye-m loko kiye-m van.}\]
\[\text{Jesus with 1POSS-3SG man PC 3PC-RE walk 3PC-RE go}\]
\[\text{‘Jesus and his men walked on.’}\]

\[\text{S-an vanen kiyee kiye-m lehe sowe ke Jisas mwe gone}\]
\[1POSS-3SG man PC 3PC-RE see what COMP Jesus RE make}\]
\[\text{‘His men saw what he had done.’}\]

\[\text{Kiyee-m longane daa kevene ke Jisas mwe kie,}\]
\[3PC-RE hear word all COMP Jesus RE say}\]

\[\text{byeen ka kiyee mon a-kiye-p kie mane vanen ngyee}\]
\[\text{for COMP.IR 3PC too FUT-3PC-POT say to man 3PL}\]
\[\text{‘They heard all the words that Jesus said, in order that they too should say them to the people.’}\]

The people around Jesus are referenced by the 3rd person paucal throughout, in contrast to the people to whom they should preach, who are marked by the plural.

Other occurrences of paucal that can be verified as being used for referring to a large group are evident in speeches. For example, they occur in the funeral speech. The speaker uses paucal to refer to their own group, the family of the deceased, and to the guests that came from outside, a large group of at least fifty persons.
Another case of this use of paucal comes from the story about the human sacrifice, where the narrator consistently refers to the people of his own village using the paucal, and to the people of the other group with the plural.

(23)  
kiyee  Lonbelaa  kyiym  var=du  lon  s-aye  emee,  kiyem  kie  
3PC  Lonbelaa  3PC-RE  go=stay  in  3POSS-3PC  meeting.house  3PL-RE  say  
ka  a-dye-p  mas  seseat=golo  timaleh  desoo  ke  me  mesaa  
COMP.IR  FUT-PC.INC-POT  must  decorate=cover  child  NSPEC  COMP  RE  clean  
‘They (from) Lonbelaa, they went and stayed in the meeting house, they said that we must decorate a child from head to toe that looks clean’ (Andri1.031)

The question arises how paucal can acquire this affiliative use, where it expresses that the speaker identifies with the group of people referred to. I would like to suggest that this comes about as follows: When the paucal is used to refer to a large group of people, this is made with a form that is appropriate for a smaller group, and hence it marks it as a smaller group than it actually is. A small group is less intimidating than a large group, as its smaller size makes it less likely to inflict violence. The groups one belongs too, like one’s extended family, are also less intimidating. This makes it plausible that the paucal can be used to refer to such entities when the speaker wants to show affiliation with them. This is similar to the widespread affective use of diminutives (cf. Juravski 1993). While there is no diminutive morphology in Daakie, there is evidence for the affective use of smallness. For example, in the song about the redhead bird (*bot piipili*), one line refers to *sok vaven kekeli* ‘my little woman’, clearly in an affective way.

This concludes our discussion of seemingly abstract number features that can acquire social meanings—of respect and distance in the case of dual, used to refer to a single person; and of affiliation and closeness in the case of paucal, used to refer to a larger group of persons.
References


The Duration Ratios of Short and Long Segments in Mele [mxe] and their Linguistic Functions

Tsutomu Sato

Abstract

This paper aims to clarify the duration ratios (DR) of short and long segments in Mele [mxe], one of the Polynesian Outliers spoken in Vanuatu. Data collection was conducted in Mele village. Not only short and long vowels, but also short and long consonants perform to show grammatical distinctions, in addition to semantic contrasts. The DR of vowels in Mele was found to be 1.125. That value is compared with the DR of six non-Polynesian languages.

Two other field studies were held on Tuvaluan and Hawaiian, and linguistic functions of these languages are compared with those of Mele, such as singular and plural differences and intransitive and transitive differences. The ultimate goal of this research is to construct the typological relations between the linguistic functions and segmental durations of Polynesian outliers.
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1 Introduction

The purpose of this paper is to clarify the duration ratios of short and long segments in Mele [mxe], one of the Polynesian Outliers spoken in Vanuatu. Data collection was conducted in Mele village near Port Villa and the result will be reported.

The value of duration ratio (hereafter DR) can be gained through the calculation of dividing the average duration of long segments by that of short segments. For example, Lehiste (1970:46) mentions that the ratio between short and long vowels in Estonian is 58.1%. In this case the DR is 1.72 (1 ÷ 0.581 = 1.72). Sato (2004) found the DR of short and long vowels in Japanese to be 2.66. Furthermore, Sato (2010a) presents the DRs of six other languages and compares them with each other. The values of DRs differ from language to language, and the order of DRs was found out, which will be shown and compared with this Mele result in Section 4. Further investigations have been conducted on other Austronesian languages, because the number of Austronesian languages which contain short and long segments turned out to be the largest among the world's language families in corpus-based examinations by Sato (2016).

The main reasons for these investigations are as follows: First, accurate measurements based on acoustic analyses can provide better pedagogical suggestions in differentiating the semantic contrasts produced by duration differences for the learners of a target language. Second, the acoustic information gained through this kind of measurement can be useful for better speech synthesis of the language. In addition, by examining languages relatively less investigated before, a good description based upon acoustic and objective observations can be obtained, resulting in new preservation of linguistically unknown or less investigated languages.

The experimental procedure will be shown in the next section. Section 3 will introduce the examples of short and long segmental contrasts in Mele, then, follow with conclusions in section 4. Finally, remarks on further investigation will be given in section 5.

2 Procedure

The participants and method on measurement will be introduced in the following subsections.

2.1 Participants

The test tokens had been randomly written on a sheet of paper, and they were presented to the following six native speakers, three males (M) and three females (F), of Mele village:

MK (M, 73), KM (M, 55), TA (M, 52), TM (F, 70), AT (F, 63), TS (F, 76)

The average age is 64.8 years old. The reason why these relatively old participants were chosen is that they can understand words which had been collected in Clark's dictionary for the period of 1974 to 1986 (Clark 1998:vii).

They were individually asked to pronounce the tokens one by one, with five repetitions of the whole list. In this way, 1380 tokens (46 x 6 x 5 = 1380) were recorded using a Sony M10 linear PCM recorder.

2.2 Measurement

The duration of vowels or consonants in the tokens were measured by using waveform and wide-band spectrogram produced by the speech analysis program called Praat. 41 Both first and second vowels were

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41 See http://www.fon.hum.uva.nl/praat/.
measured in the pairs, \textit{popo/popo}, \textit{susu/susu}, \textit{jila/jila}, and \textit{siva/siva}. In measuring plosives, the voice onset time was calculated, that is, the interval between the burst and the onset of the following vowel. In the case of double bursts, the first burst was chosen for the measurement.

3 Functions of Mele segmental duration

While searching for the DRs of more and more languages, more functions performed by short and long segmental oppositions were discovered, in addition to the semantic oppositions. For example, Lynch and Piau (1989:36) describe the “extremely crucial” functional contrast between short and long [o] in Aroma (PNG). The long vowel in (1b) indicates the negative imperative form.

(1) a. \textit{pono\textordmasculine} ‘go!’ (Lynch and Piau 1989)  
    b. \textit{pono\textordmasculine} ‘don’t go!’

Other instances of grammatical functions were indicated in previous works by Sato. Singular and plural relations are denoted in Hawaiian, Tuvaluan, and Kiribati, respectively, in (2):

(2) a. \textit{wahine} ‘woman’ / \textit{wahine} ‘women’ (Sato 2017:50)  
    b. \textit{tagata} ‘man’ / \textit{tagata} ‘men’  
       \textit{sulu} ‘dive’ (sg.) / \textit{ssulu} ‘dive’ (pl.) (Sato 2018:4)  

In Tuvaluan, a noun and its stative verb counterpart is represented by a difference in vowel duration, as in (3):

(3) a. \textit{lafa} ‘ringworm’ / \textit{lafa} ‘have ringworm’  
    b. \textit{aka} ‘roots’ / \textit{aka} ‘be heavily rooted’  
    c. \textit{kaumana} ‘cloud’ / \textit{kaumana} ‘be cloudy’ (Sato 2018:4)

3.1 Data

Mele is a rich language in its linguistic functions by the short and long segmental contrasts, that is, the duration oppositions of vowels and consonants. As Clark (1998) states, “the vowel length has a fairly high functional load.” The examples hereafter are quoted mainly from the Mele dictionaries compiled by Biggs (1975) and Clark (1998). These were carefully checked from cover to cover. Then, seven pairs containing short and long vowels and nine pairs with short and long consonants were chosen for the semantic group, and four pairs containing short and long vowels and three pairs with short and long consonants were selected for the grammatical group. In total, 23 pairs (46 words) were prepared as test tokens.

3.1.1 Semantic group

In some instances, contrasts of short and long vowels and short and long consonants change the meanings of words. They are referred to as semantic contrasts in this paper.

3.1.1.1 Vowels

(4) a. \textit{sisi} ‘snail’ / \textit{sisi} ‘cut coconut’  
    b. \textit{lekina} ‘have’ / \textit{lekina} ‘clear away’

\textsuperscript{42} Long vowels are represented with a length mark [ː] and long consonants are marked by geminate representation, such as [ss].
c. fefe ‘read’ / fefe ‘fan’
d. mara ‘garden’ / mara ‘eel’
e. tu ‘we’ / tu ‘stay’
f. popo ‘heart’ / popo ‘sit on egg’
g. susu ‘breast’ / susu ‘dress’ (v)

3.1.1.2 Consonants

(5) a. mau ‘plenty of food’ / mmau ‘find’
    b. mara ‘garden’ / mmara ‘sour’
    c. namu ‘mosquito’ / nnamu ‘smell’ (v)
    d. pua ‘back’ / ppua ‘deep’
    e. tao ‘spear’ (n) / ttao ‘count’
    f. tua ‘outside’ / ttua ‘outermost part’
    g. sau ‘dew’ / ssau ‘blow’
    h. saxia ‘led by hand’ / ssxia ‘hit’
    i. visia ‘lash’ / vvisia ‘roll a rope’

3.1.2 Grammatical group

In addition to semantic contrast, Mele has grammatical oppositions. Examples such as (6a–d) and (7a–c) are called grammatical contrast in this paper.

3.1.2.1 Vowels

Mele vowels have phonological oppositions, which demonstrate grammatical contrast. See selected examples 6a–d:

(6) a. jila ‘steer’ / jiːlaː ‘steer a boat’
    b. siva ‘bounce’ (vi.) / siːvaː ‘bounce (vt.)
    c. soro ‘cut with a saw’ (v) / soːro ‘saw’ (n)
    d. jijika ‘hopping’ / jiːjika ‘hop’

As a comparison, Mongolian vowels also demonstrate grammatical contrast, as in (6e). More examples are listed in Sato (2010b:28):

    e. asax ‘catch fire’ / asaːx ‘make something burn’

Intransitive / transitive contrast

First, Mele grammatical contrast is evident when short and long vowels show intransitive and transitive contrasts as in (6b).

siva ‘bounce’ (vi.) / siːvaː ‘bounce (vt.)

Verbal action / instrument

Second, verbal action and its tool or instrument can be expressed by short and long vowels as in (6c).

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43 Clark (1998:ix, 37) cites a word, mara ‘breadfruit, tree’, and the word could have been used as a corresponding token to the word, mmara ‘sour’. However, mara was not familiar to the participants of this study, and so the word, mara ‘garden’ was selected.
soro ‘cut with a saw’ (v) / soro ‘saw’ (n)

Derivation of word form: verb / noun

Third, the derivation of a word such as a verb form to a noun form is another example of Mele vowel contrast, as in (6d):

jijika ‘hopping’ (n) / jiːjika ‘hop’ (v)

Sato (2011) has treated derivation by short and long vowel contrasts in Hindi, and the following examples (6f, g) are quoted here for comparison:

f. anuhar ‘imitate’ / anuhaːr ‘imitation’
g. sarbari ‘equal’ / sarbark ‘equality’

3.1.2.2 Consonants

Among Mele consonants a contrast of length is evident in fricatives (7a), nasals (7b), and oral stops (plosives) (7c). As demonstrated in short and long vowels in (6c), consonant length can affect verbal action / instrument, as illustrated by (7a) and (7b).

(7)

a. fana ‘bow’ (n) / ffana ‘shoot with a bow’
   b. mata ‘eye’ / mmata ‘watch’
   c. fikau ‘messenger’ / fikkau ‘give orders’

Word pairs with associated meanings

Finally, Mele consonant contrast can denote a pair which can be associated with each other in the words’ meanings as in (8).

(8)

a. fikau ‘messenger’ / fikkau ‘give orders’

Examples of word pairs with associated meanings were found in Hindi as well. Instances (8b, c) were quoted from Sato (2011:70):

b. tanti ‘string’ / tantiː ‘musician’
   c. plavan ‘water’ / plaːvan ‘floating’

3.2 Research questions

In previous studies of Mele, no quantitative analysis seemed to be made on the segmental length differences between the short and long segments. This study aims to investigate the differences. The research questions of this study are the following two points:

- What is the DR of Mele short and long segments?
- How and where is the value compared and ranked in comparison with the DRs of other languages?
4 Results and discussion

The average duration ratios of vowel contrasts and consonant contrasts in Mele are as follows:

- Vowel contrast of semantic group = 1.2
- Vowel contrast of grammatical group = 1.05
- Consonant contrast of semantic group = 1.055
- Consonant contrast of grammatical group = 1.005

The average DR of vowels was found to be 1.125. This is compared to six other non-Polynesian languages selected from different language families (Sato 2010a) as below. In descending order of DR, these are

Japanese 2.66 > Mongolian 2.27 > Kiribati 1.855 > Hindi 1.29 > Silozi 1.14 > **Mele 1.125** > Miskito 1.0005

The DR of Mele is rather low; the second lowest, in fact. As for consonants, the average DR is 1.03. To compare this value with those of other languages, more data on consonantal oppositions are necessary in addition to those of Tuvaluan (Sato 2018), and should be investigated further. The average DR of vowels and consonants of all the tokens in Mele is 1.077.

Kozmin (2011), comparing vowel length of six Polynesian languages, assumes that Tongan retains Proto-Polynesian long vowels, and Hawaiian retains part of Proto-Polynesian long vowels; however, Rapa Nui loses long vowels. One interpretation of the DR of Mele is that Mele might be in the stage of losing the short and long segmental oppositions.

Another possibility is that other phonetic cues than duration may play a role such as pitch or intensity for Mele speakers to distinguish the contrasts. Sato (2012) posits that pitch-peaks on second syllables may play a role in distinguishing short vowels from long ones in the stressed first syllables in Miskito, the DR of which had been found to be 1.0005, the lowest of the seven languages above. Like Miskito, the segmental contrast is not so much a short-long duration opposition as a prominence with higher pitch and/or stronger intensity.

Further investigation will be needed to clarify the cause of this relatively low DR of Mele.

5 Further research

As stated in section 3, Austronesian languages are rich in their grammatical functions of segmental duration contrasts, such as: singular/plural, transitive/intransitive, and derivation of word formation. More research will be carried out on the relationship between grammatical functions and corresponding duration ratios of other Polynesian outliers than Mele. For instance, as an example of Polynesian outlier in Micronesia, singular/plural relations by short and long consonants are given in Lieber and Dikepa (1974:xviii) in the Kapingamarangi lexicon, such as /wele/ ‘burned’ (sg.) and /wwele/ ‘burned’ (pl.). Lynch (1998:51) cites 14 Polynesian outliers: Nukuoro and Kapingamarangi in Federated States of Micronesia; Nukuria, Nukumanu, and Takuu in Papua New Guinea; Luangiu, Sikaiana, Rennellese, Pileni, Tikopia-Anuta in Solomon Islands; Ifira-Mele, Emae, West Futuna in Vanuatu; and Fagauvea in New Caledonia. More about grammatical functions performed by segmental duration contrasts in these Polynesian outliers will be investigated, and attempts will be made to see if Micronesian or Melanesian languages influence the outliers.

The functions performed by segmental duration contrasts of Austronesian languages examined so far by the author can be summarized as follows:

- singular/plural: Hawaiian vowels, Tuvaluan vowels and consonants, Kiribati vowels
- intransitive/transitive: Mele vowels
- derivation: Mele vowels
- verbal action and its equipment: Mele vowels and consonants
The ultimate goal of this research is to find more grammatical functions of short and long segments in Austronesian languages, in addition to their semantic contrasts, and construct the typological relations between the functions and languages.
References


Eralo! Sing! The Example of Waueng in Nengone [nen]

Stéphanie Geneix-Rabault and Suzie Bearune

Abstract

This article will focus on the use of gender in the waueng register of Nengone [men], an Oceanic language of New Caledonia: the waueng. Firstly, we will describe some linguistic principles to understand how Oceanic languages, and particularly Nengone [nen] operates the distinction or the expression of gender categories. That is, how this Kanak language spoken by Mare and Tiga people, express gender in their oral literature. Secondly, we will analyze the process used by the composers, musicians and speakers of Maré, in their oral performances, in order to indicate the gender. Finally, the ethno-linguistic analysis of some oral tales will allow us to describe how the performers sometimes transgress the norm, by violating the social boundaries and hierarchical system in the distinction between men/women, as well as in their social relationships.
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1 Introduction

Oral literature in the KanaFk languages is distinguished by a significant diversity of genres and practices which comprise a rich and long-extant oral culture. Traditional ceremonies are routinely accompanied by songs and dances that are intrinsically linked to the history of the different groups that are present. In addition to this primary orality, there is a second orality (Ong 1982) that is more widely publicized (as Kaneka music, for example Bensignor 2013). In this repertoire, different types of oral stories are (re)written and arranged in a more modern musical register.

Much research has been carried out on Oceanic languages for over the past fifty years. Linguistic research has contributed to a better understanding of the Kanak languages and has helped amass a considerable body of written and audio documentation, such as those at the LACITO-CNRS and the Pangloss collection, and by scholars from New Caledonia. Nevertheless, as is true for the rest of the Pacific, this vast poetic-literary archipelago remains relatively under-studied, with the exception of some research on the oral tradition of Kanak literature (Aufray 2013, 2015; Geneix-Rabault 2008–2018) and music (Beaudet and Wieri 1990; Ammann 1994, 1997; Degeorges and Le Gargasson 2009; and Geneix-Rabault 2008–2018). Our research forms part of a multi-disciplinary study comprised of linguistics (Rivierre 2006; Moyse-Faurie 1983, 1995; Bearune, Hmae; and Vernaudon 2013), ethno-linguistics (Calame-Griaule 1970; Aufray 2000), musico-linguistics, (Arleo and Despringre 1997) and ethno-musico-linguistics (Geneix-Rabault 2008–2018).

This contribution will focus on one Kanak language and a specific literary register: the waueng. First, we will analyze the functional distribution of certain discursive oral genres in Nengone, according to the gender and social status of the speakers and the participants that interact in the situation. We will then explore how the waueng is one of the literary genres that promotes playing with these constructed categorizations, and finally, in what way(s) composers and/or interpreters transgress certain social and linguistic conventions.

2 The Nengone, or P’ene Nengone, language

New Caledonia is home to a rich linguistic and cultural diversity: Twenty-eight Kanak languages and dialects from the indigenous population are still spoken today. They form a branch of the large Austronesian language family: the easternmost Oceanic subgroup. P’ene Nengone, or simply Nengone, is spoken by people from Mare and Tiga islands in the Loyalty Islands, and from the capital, Nouméa. Nengone is a polysemic word which designates the language, the island and the people.

Nengone is the second largest Kanak language spoken in New Caledonia, after Drehu. It has 8,940 speakers (ISEE, 2014), about 20% of whom live in Nouméa/Grand Nouméa. As a language of evangelization, numerous religious publications have been produced in Nengone since 1852. The entire text of the Bible was published by the London Missionary Society (LMS) in 1903 (Bearune, 2012), then circulated via an intense literacy project directed toward the local population. This was implemented primarily by Father Dubois, a missionary on the island of Maré. Taught from nursery school to high school as an elective subject, Nengone has been offered as an optional living language examination at the high school level since 1992. It has also been taught at the University of New Caledonia (UNC).
within the framework of the bachelor’s degree in local languages, literatures, and civilizations since 2000. Finally, recent linguistic research has led to the publication of an online educational software program\(^{50}\) (Bearune, Hmae and Vernaudon 2013). In the linguistic world, this language is therefore relatively well-documented compared to other Kanak languages. Therefore, we are able to ask the following questions: How are the spoken arts distributed in Nengone? What does this tell us about how the world is seen and represented in Maré?

3 Dividing the oral literature by genre

The various oral genres that comprise the Nengone repertoire include multiple performance registers: *era* ‘singing’, *pia* ‘dancing’,\(^{51}\) *puul* ‘developing a speech’, *toatit* ‘telling a story’, and *eamo* ‘advising’. This first paradigm level of oral styles can be further divided into a variety of literary genres:

- *era*, the singing register, includes *aee ya lullabies’ and *waeraera* ‘songs for children’ and *waueng* ‘songs for young people’, as well as *do* and *taperas* ‘polyphonic religious songs for four voices’;
- *pia*, ‘dances’, can be divided into *kurutera/kutera* ‘dances with synchronized gestures’, *cab* ‘those for courtship rituals’, and *pehua* ‘war dances’;
- *puul* ‘speeches’ consist of reciting traditional speeches\(^{52}\) when *shudru waruma* ‘leaving on a trip’, *parowo* ‘at a ceremony or a traditional event’, by way of expressing gratitude, *ci ore* (meaning literally, ‘thank you’, and finally, *puul* ‘speeches during religious sermons’;
- *toatit* ‘storytelling of founding stories of a people group’, *yeretit* ‘mythic, legendary, and fantastical stories’, and *wanata* ‘stories inspired by daily life’;
- *eamo* ‘to advise someone’ using an *onatr* ‘proverb, metaphor, adage’.

Based on this typology, interpretation of the Nengone literary genre is generally subject to two principles: either an explicit or implicit restriction, or by the absence of restrictions, permitting interpretation in all circumstances. Thus, there are:

- stories that can be performed by anyone, and
- stories that are assigned to a specific clan.

In the first case, there is no specific distribution of interpretation. For example, *toatit, yeretit* ‘proverbs or stories’ based on *wanata* ‘the facts of daily life’, can be expressed in very diverse circumstances, times, and places, and by any speaker. Certain song/dance repertoires, which make up part of the common collection of oral literary knowledge, can also be interpreted by anyone, regardless of the social status of the speaker, the participants, the context, or the spatio-temporal framework: The round-dance is public property, it is not in the possession of a person or a family, and to hold this dance requires no special permission. It makes up a part of almost every feast or festival, everyone may participate in it and there is no choreography to be learned. (Ammann 1997:64).

In the second case, the genres are divided both according to a men/women distribution, but more importantly, also according to social and status-related considerations. *Kurutera* is the generic term used to designate all of the dances with synchronized gestures. However, in practice, there is a distinction

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\(^{51}\) While these two terms both designate a form of dance, this one it always associated with singing and, thus, is considered a mode of oralization.

\(^{52}\) These speeches accompany the greeting ceremony when someone has taken a trip or been away. The ceremony, called “doing what is customary”, is a multiform and variable act of ceremonial exchange representing humility and respect. It can be a gesture of greeting such as much more significant customs presented by different groups at marriages, during mourning, or at other significant traditional events. It allows a group to enter into a relationship with an individual, or multiple groups. It therefore takes on its definitive form as a function of social and geographic anchoring of the moment in which the gesture is presented. It is manifested in the presentation of objects (Kanak currency, mats, lengths of cloth) and agricultural products (yams, taro, livestock). It is expressed in gestures, the exchange of gifts, accompanied by spoken reminders of genealogies and links between groups.
between *pehua*, dances that are performed exclusively by men, evoking *wahieku* ‘historic battles or war dances’; and *wabiengo* or *wayai*, those practiced by women.

Literary stories are assigned to a social status instead of to a biological sex. *Aeae* ‘lullabies’ or *waerera* ‘children’s songs’ are exclusively the repertoire of women engaged in maternal practices. However, this distinction must be interpreted based on their social status as *hmenev* ‘married women’ or *waeteshe* ‘older women’, in other words, *morow* ‘those who care for very young children’. Other examples of divisions by gender and ages are *waueng* ‘songs of the young people’, which are (a priori) the exclusive repertoire of *yenakunu* ‘young, unmarried boys’; and proverbs and adages which are the domain of the elderly. More specifically, this restriction of old age for proverbs and adages is not based solely on the age of the individual; rather it is necessary that the speaker be older than the individual whom he or she is addressing.53

Finally, the status of the speaker(s) and the situation in which the interpretation takes place are defining traits of each oral performance. This highlights the importance of the context of interpretation (circumstances, time, space, social context, and social status not only of the interpreters, but also of the participants who are present, the type of interaction between them) and the interpreters themselves (status of the speaker(s), links between the people or groups that are present, etc.).

Certain speeches or dances evoking historic battles are associated with specific Nengo chiefdoms: they can only be performed by their custodians or their representatives. Sung stories having to do with the genealogy of groups, their history, and their identity, are preserved by the descendants of these same groups, who pass them on in their turn within their clan. Each generation is thus the custodian and guardian of this collective memory relayed by the dance: “Chants et danses sont (…) la "propriété" de clans, de familles ou de "vieux" respectés qui peuvent, le cas échéant, autoriser ou non la présentation de cette expression originale dont ils ou elles sont dépositaires” 54 (Bensignor et Degeorges 2009:4). The specialization of repertoires thus creates specific categories of interpreters of literary genres that are not based on a distinction between sexes, but rather to a social status: as for *waueng*.

### 4 When social status influences the interpretation of a literary genre

*Waueng* is a polysemic term. It designates the sung oral literary genre55 of *yenakunu* ‘young men’. This designation is independent of age and reflects social status: an unmarried person who is not (yet) socialized. In other words, someone who is still on the margins of the rules and social conventions. This etymology comes from the term *wa* ‘small’ + *ueng* ‘tree’, a variety of “apple wood” called « bois de reinette » in French. By extension, it designates an airy forested space primarily composed of this species. By their nature, these spaces are easier to cultivate than *woedran/wocepod* ‘primary forest’.56 This is why they are primarily assigned to young girls and young boys, and sometimes to widowed and older women, for their plantations.

Interpretation by many voices is generally performed a cappella. But it can also sometimes be accompanied by an acoustic guitar or idiophonic instruments. *Canelu*! ‘plant!’ is an expression that is...
frequently used to encourage a young man to begin a *waueng* song. The leader starts off the main melodic line and leads the sequences between the different musical phrases: he will be followed by the other voices, which improvise freely, up to five or six depending on the number of young men that accompany him. The interpretation is free, and the duration of a song is very variable, and depends on the inspiration of the moment. In terms of the literary content, however, the text is often short: it is generally limited to three or four phrases that are repeated many times.

Performance is not constrained to a specific spatio-temporal context. It can take place at any time of the day or night, at any place, whenever young boys are together: while swimming, fishing, at a party or a wedding, on the way to the fields, or during the shaving ritual. The social status of the speaker fundamentally influences how it is performed. Nengone speakers all agree that it is inappropriate for a young girl to sing for a boy, or for a *cahman/waluba* ‘married man’ or a *hmeneu* ‘married woman’ to interpret a *waueng*. These restrictions regarding interpretation are linked to the semantic content of the genre in question. A poetic register linked to the private self of the leader or its author-composer, it is always intended for a woman. The words are often very metaphoric, and evoke love, but can also have mocking, even risqué, connotations. The song is used to declare passion, to celebrate the beauty of a young girl, to evoke the sadness of a break-up or an impossible relationship, or to speak of the sadness of love and of separations. Certain *waueng* may also contain allusions of a sexual nature. They therefore express very personal and private elements, which must not be interpreted or understood by everyone. The imagery in the speech thereby enables a personal message to be sent that only the woman who is the intended recipient will be able to understand and decode.

5  *Waueng: A bad reputation*

By definition, *waueng* is a genre associated with the idea of transgression. There is an expression that is particularly significant in this regard. A *nengone* speaker will say: *Inu ci pene nengone waueng!* ‘I speak a lighter form of Nengone!’ Maré has three distinct language registers: *pene nengone* ‘normal speaking’; *pene iwateno* ‘the more formal register used to address older individuals or those with a certain social status’; and finally, *pene egesho* ‘the coarse and vulgar register’. Another expression is: *Inu ci eleda gitar waueng!* ‘I have not mastered the guitar’. In other words, the person does not consider himself or herself to have mastered a practice (language, instrument, technique, skill), the basic linguistic codes, or perhaps even certain sociocultural conventions. These usages therefore refer to the idea of immaturity (uninitiated).

At the same time, these expressions reveal the representations that the speakers create from usages, forms, limits, and evaluations of an imagined model that is considered the norm for such practices. In parallel, we see a real awareness of differences with regards to the norm(s) and being (voluntarily) on outside of correct usage. Being a literary genre of young boys, a form of transgression is tolerated in this register, although it is not in other repertoires, such as songs having to do with the genealogical history of families or lullabies that are intended to establish the basis for the first language and musical acquisitions for babies. In the absence of normative pressure, interpreters demonstrate uninhibited creative usages, understood here as disengaged from any semantic propriety, freed from all inhibitions or social prescriptions, as illustrated in this example where adultery is sung about openly:
Write my name behind yours
And cross out definitely the name of your husband.

(Ammann 1997:263. Used with permission.)

In this second waueng, a young boy sings his love:

Waguava niminangieni, 58
Inu ci sheusheu co nue bo co i thua inu
Haeked haicadawen eawa.
(Nengone language)

Little guava, my love
It makes me sad to let you leave
Goodbye, farewell.

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It is written in two different Kanak languages: the author/interpreter declares his love here, playing not only with words but also with code-switching to accentuate the aesthetic effect. By addressing his love interest in her language, he ensures at the same time, that she will understand the message that is intended for her. Even though he consciously plays with registers in the combined languages, these multilingual language practices are often frowned upon by older speakers or institutions. This excerpt from an interview with a traditional elder speaks to this point: “For us, adding in other languages isn’t well regarded” (Corpus Geneix-Rabault 2016). It is seen as a form of deterioration of the language.

This third example 59 is a declaration of love from a young man who begins with a metaphor to indicate his beloved:

Corilen ci enge ci akaca ko ha ezia pia,
Eziene ni nodei rumadival co ded.

The hibiscus flowers are in bloom indicating that it is time to dance
It is the moment when lives of love take flight.

©2016 Anonymous. Corpus Geneix-Rabault

These results leave us with the following questions: Is this division of genres always so regular and systematic in practice? When does the question arise of “playing with genre(s)”?

6 Playing with genre(s) to avoid/play with certain social conventions

In the absence of normative pressure in this repertoire, interpreters exhibit uninhibited and creative usages, as much in the linguistic practices and literary content as in oral performances. During our recent study, we observed games of transformation in how waueng is practiced. These changes take place at multiple levels: mixing literary genres, playing with the role of the interpreter(s), and playing with masculine/feminine and social status divisions.

These days, it is not rare to hear of all types of waueng being performed at weddings or traditional events. In addition, these performances add to, but do not replace, other practices, such that while the literary substrate has been maintained, new varieties are emerging. In the contexts mentioned previously, the waueng is begun as a call for everyone to assemble before beginning a song, a speech, or a traditional ceremony (a marriage). These new performances exhibit hybrid forms: the waueng is interpreted by four voices, similar to polyphonic religious songs. In this case, the manner in which the

57 Efase and marie are borrowing from the French language.
58 Waguava niminangieni is a borrowing from the Drehu language.
waueng is performed and the manner in which the religious song is performed overlap completely, giving rise to a new type of waueng. Their authors, who are fully aware of this mixing of genres, reconstruct these different types of content and manipulate them for aesthetic purposes. Conversely, Nengones say of certain songs that they are performed "the waueng way". In these cases, the message addressed secretly by a young person to his beloved can be sung by groups of mixed social status (man/woman, married or not, initiated or not), without any distinction in genre, and in any situation. This is the case for this kaneka song « C'est toi que j'aime »60 performed by the Buamas (Dick and Hnat Buama from Gurejele), a representative Maré group:

*Ngei bo me ci ra nu*61
Ne ngeri lo re wajekol
Ne wathera ci nanara
C'est toi que j'aime
Anelu ri hnore ni bo
Ko warangi Koakoa !
*Jamais nilo*62 *co malheureux !*

Ci jo kore hawogu
Ci ua bo ri thuaii
K'e inu ko ha melei
Kedi me ta ci tutuon
Rune watusi
P'arowiage du bua
Hna dede t'i du nu
Kedi me yengu no vent du nord
Ha nidi kece in kei ATR fort-i-tru
Ci shedo lu hula i shoral
Ka tako t'e kei asoa.

If you think of me
Lift your head to the stars
My tears fall
It is you that I love
Put that in your heart
Ah, young people!
We will never be unhappy!

My head hurts
Knowing you are far from me
I thought that you were there
But it was only a dream
The letter
My presence close to you
It was sent to me
By the north wind
I hate the ATR 42
It touches down at La Roche
And my beloved is not there.

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The performance of this song allows the public transgression of social conventions: this waueng is not the work of a young unmarried boy, but of a married man and his spouse who proclaim their love

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61 The endline of verses are underlined to indicate the text which is firstly interpreted by the leader called *laan* ‘first voice’ in Nengone, and secondly, by the other singers.
62 *Nilo: nyiho* in the Drehu language means ‘we’ (her, him, and me).
loud and strong. In another sign of transgression, this text is rewritten in the form of an arrangement or reconstruction in the *kaneka* style, thus allowing it to be modernized without departing from it completely. Its literary form is much longer than the previous examples: this one includes two stanzas comprising seven and eleven lines, respectively. In this sense, the literary form is much closer to the genre of *era* ‘song’, than that to which it is conventionally attributed. While *kaneka* by definition is based on a mixing of genres – a common style combining multiple literary and musical genres – we also note that four languages are used together in this interpretation. The majority of this text is in Nengone, but it is also punctuated with references to other languages spoken in NC: Drehu, with the use of *nilo* ‘we, she, and me’, and *aso* ‘beautiful’; French, in italics in the transcription; and a word borrowed from English *forti-tru*. The hybridization modalities occur at three overlapping levels: linguistic, literary genres, and musical genres.

Finally, other forms of transgression of genres exist. Ever since this musical trend became successful in NC, young girls or boys often dance to a *kaneka* song popular at celebrations or weddings, reproducing the synchronized gestures of *kutera* dances. In contrast to *kutera*, which distinguishes socially between exclusively male versus exclusively female, *cenew* ‘young girls’ and/or *hmnew* ‘women’ can dance with the *yenakunu* and *waluba* ‘young men’ in front of everyone.

These different genre games transgress social conventions and practices which are considered to be traditional. They contribute to “moving the dividing lines” that are habitually constructed based on male/female and social status divisions. At the same time, they blur the borders between discursive genres. This game of breaking down the barriers contributes to a diverse usage of multiple genres, promoting the creation of new types of *waueng*, while at the same time participating in literary creativity and artistic production.

7 Conclusion

Our analysis has demonstrated the genre-specific assignments of certain oral practices, whose distinction is not based solely on the separation of the sexes but also on extralinguistic sociocultural considerations (the nature of social relationships, the status of the interpreters, and the circumstances of the performance). In epi/metalinguistic usages, certain language practices and speech acts allow the arbitrary lines between genres to be erased. The speakers consciously manipulate genre categories for expressive and artistic reasons. These new speech acts become an act allowing the (re)construction of new varieties of oral literary genres and the (re)definition of status-based relationships between interpreters. While these practices are socially (better) tolerated because they arise from the register of the uninitiated young people, they are the subject of an ambivalent evaluation in the social sphere and are often judged harshly by the linguistic community.

References


Abstract

In 2015, the first author participated in Natqgu [ntu] language and culture documentation fieldwork in Santa Cruz, Solomon Islands (Boerger, et al. 2019 this volume; Boerger 2018). One of its special projects was documenting indigenous banana fiber weaving performed on a backstrap loom, a craft exclusive to the men of a particular clan. The younger generation’s lack of interest had reduced the number of weavers to a single individual, the co-author of this paper, who retaught himself the craft after his father and uncle had died and no other weavers remained. Elicitation of craftsman-level vocabulary occurred as the craftsman became the instructor and the researcher his apprentice. Throughout the instructional process, the researcher conducted interviews to provide background, the origin myth of how weaving came to Santa Cruz, and the more recent history of the craft’s near-extinction. During the course of this research, two younger clan members observed the outsider’s interest in their family craft and the community’s response to that interest, then approached the principal weaver and asked to also become apprentices. There are now eight active weavers. I demonstrate that the activity of outside researchers going deep into Natqgu language and culture has had a positive impact on the revitalization of Natqgu culture and language. This case study suggests that similar results could be gained by “going deep” into a domain of interest to both the researcher and the community, such that specialized vocabulary may be documented along with its context and culture.
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1. Introduction to the research

1.1. About the language

The Solomon Islands is an island nation in the South Pacific Ocean, located east of Papua New Guinea. The Santa Cruz Islands comprise all of Temotu Province, the easternmost of Solomon Island provinces. The largest of these islands is typically called Santa Cruz Island or “Nendö” by cartographers. Solomon Islands Pijin is the language of wider communication, with English being used in written communication and Pijin for spoken communication. Natqgu (or Natügu [ntu]) is one of four indigenous languages spoken on Santa Cruz Island in the northern regions of the island.

Until the twentieth century, Natqgu was exclusively a spoken language. Language workers on Santa Cruz developed an orthography that used diacritics to distinguish vowels, but the markings were unpopular and not used. Later orthographic development by Boerger (2007) designated c, q, r, x, and z as vowels, as indicated in table 1:

<table>
<thead>
<tr>
<th>Old</th>
<th>New</th>
<th>IPA</th>
<th>Sample word</th>
<th>English gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>a</td>
<td>a</td>
<td>kalva</td>
<td>betel nut</td>
</tr>
<tr>
<td>e</td>
<td>e</td>
<td>e</td>
<td>neke</td>
<td>who, interrogative</td>
</tr>
<tr>
<td>i</td>
<td>i</td>
<td>i</td>
<td>mibi</td>
<td>rotten</td>
</tr>
<tr>
<td>o</td>
<td>o</td>
<td>o</td>
<td>ioto</td>
<td>infant</td>
</tr>
<tr>
<td>u</td>
<td>u</td>
<td>u</td>
<td>tumu</td>
<td>fish species</td>
</tr>
<tr>
<td>ö</td>
<td>q</td>
<td>ü</td>
<td>nqmq</td>
<td>way, tradition, character</td>
</tr>
<tr>
<td>ö</td>
<td>r</td>
<td>ɞ</td>
<td>mrbr</td>
<td>to forget</td>
</tr>
<tr>
<td>æ</td>
<td>z</td>
<td>æ</td>
<td>kxrkx</td>
<td>which is spicy</td>
</tr>
<tr>
<td>ê</td>
<td>z</td>
<td>ə</td>
<td>zvz</td>
<td>always, habitually</td>
</tr>
</tbody>
</table>

1.2. Pre-field training

In 2015 I was invited to be part of a team that would assist in conducting a Rapid Word Collection workshop to help Natqgu speakers to develop a dictionary in their vernacular language. Six interns were trained to use video and audio recording technology, SayMore, and FieldWorks Language Explorer (FLEx). Basic Oral Language Documentation (BOLD) techniques were part of the pre-field training (Boerger, et al. 2016). Botanical documentation was also an important component of the project, so we were trained at the Botanical Research Institute of Texas (BRIT) to learn proper methods of preserving samples so they could be shipped for scientific classification and further study at the Honiara Botanic Gardens and BRIT.

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The authors are indebted to Dr. Brenda H. Boerger for introducing them to each other and encouraging them to collaborate on this work. The research presented here is cultural documentation of the weaving process for traditional clothing of Natqgu speakers of Santa Cruz, Solomon Islands.
In addition to the three weeks of training, I took two additional courses at the Graduate Institute of Applied Linguistics (GIAL): Melanesian Studies was part of my pre-field training. I also undertook a Special Projects course simultaneous with the research trip, with the purpose of documenting the banana fiber weaving that was perilously near extinction. I was selected for this project since I had previous experience in weaving as a hobby.

1.3. The research

Until this point, I had known Dr. Brenda Boerger only socially. It was only later that I discovered she had been an advisor to the Natqgu Language Project where she spent nearly twenty years living with her family in Znwz village on Santa Cruz Island. In that advisory role, she had worked as a field linguist studying Natqgu, collecting oral and written texts, translating and producing written texts, and collecting over 5,000 lexical items for the dictionary database. Her writings have been indispensable to my specialized projects. The research conducted in 2015 was part of a larger linguistic project that developed lexicography with targeted cultural foci. This was done by including research team members that are specialists in different fields, rather than a team comprised exclusively of linguists, the results of which have been presented by Boerger (2018) at a Linguistic Society of America meeting in an organized session on collaboration.

During the time she lived in Znwz, Santa Cruz Island, Dr. Boerger had often observed the nelc dance. Its apparent importance in all of the villages along Graciosa Bay, in which Znwz is situated, determined that the dance would be the starting point of inquiry that drove our team’s research in botany, dance, music, weaving, and worldview. Lyric verses associated with the nelc dance that were captured by William H. Davenport (1975) illustrate the prominent role it plays in Natqgu life.

<table>
<thead>
<tr>
<th>II</th>
<th>V</th>
</tr>
</thead>
<tbody>
<tr>
<td>The sacred dance baton draws them from Mamini [a haunted reef]; A conch shell announces their arrival; Tengaviti [a deity] awaits them, the sacred dancers, with money [to pay them for dancing];...</td>
<td>The fan palm tucked in my belt at my back shakes [from my dancing]; I stand at Meenūni [a haunt of the deities]; The sacred batons are raised [in the dance] at Cape of Death [the eastern point of the island, a place associated with deities].</td>
</tr>
</tbody>
</table>

Each village has at least one dance ring that has been specially constructed for community dances and rituals. An interview with Selwyn Balq, principal weaver and head of the Nelc dance committee, revealed that the purpose of the dance involves an ongoing relationship with the local spirit, and its arrival is indicated by the presence of a seventh personage “devil-man” in the dance ring when only six choristers have been singing inside the ring. Once the “devil-man” has arrived, the ring is opened for general participation, with the men in front and the women following. The dance ring utilizes decommissioned dugout canoes that have been buried upside down to create the effect of an enormous bass drum that resonates with the rhythmic stomping of the choristers.


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65 GIAL is now Dallas International University. https://www.diu.edu/
The *nelc* dance itself is typically an all-night event that includes singing the entire time by the choristers in the dance ring. Elaborate rituals are involved in the opening and closing of the dance ring including food preparations and the sacrifice of pigs. Traditional costuming involves body painting, hair coloring with lime, and the wearing of pieces of specific plants and feathers. The men wear a *kastom* breechclout called a *lrpz nqesa'* traditionally made of woven banana fibers. My assignment was to document the weaving process and its associated vocabulary.

2. **Endangered weaving**

Some arts and crafts on Santa Cruz are done by men, and weaving is one of them. The weaving craft is passed from father to son, kept within the clan, and is highly proprietary. For this reason, there was no small concern as to whether I would be permitted to learn and document the weaving process. Selwyn Balq had been the last weaver on the island until he began its revival. He first taught his son, Walter Kola, who then taught Selwyn’s brothers David Yanepia and Paul Meplu. He has also taken it upon himself to collect every scrap of printed material he can find of all Santa Cruz crafts and artifacts. He has gathered three albums of articles, photos, descriptions, diagrams and drawings of weaving-related materials as well as any other craft, such as wood carving and *temz* designs. Some of these resources have been given to him by previous researchers who support his efforts and have access to pertinent cultural information. Selwyn is actively involved in the *nelc* dance association and travels with the group around Oceania and other Pacific island nations as part of cultural events and celebrations.

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66 *Kastom* (Pijin) is literally ‘custom’, as in traditions or tribal customs.
67 See those new words, in bold, in the Appendix.
68 The *temz* is the round breastplate worn by the choristers as they perform the *nelc* dance.
Two previous researchers who have consulted Selwyn, one from the ethnology department of the Auckland Museum, and Paul Mesenhöller, from the Rautenstrauch-Joest Museum of World Cultures in Köln, Germany, have done fieldwork to learn about the Santa Cruz nelc dance, Santa Cruz customs and culture, including some things about weaving. Selwyn is willing to share with foreign researchers because he is painfully aware of how very close Santa Cruz weaving has come to being lost forever. He does not teach everyone who wants to learn; it is still a proprietary craft and that is what makes it special, distinctive and exceptional. However, he will teach any man in his clan who is willing to learn and to foreign researchers who have gone through the trouble to get to him, provided that not every detail will be published. This is one reason Selwyn accepted me as his apprentice. The other reason was due to the longstanding relationship Dr. Boerger and her family had with Selwyn and his family. My relationship to him was as apprentice to craftsman, rather than as contemporaries or colleagues—as our co-authorship of this paper might make it appear.

3. The technical vocabulary of weaving

Every field and craft has a specialized vocabulary. Some words are exclusive to said field/craft, while other words are used that have a common meaning or multiple meanings, yet in the art or craft have a very specific meaning, such as the use of terms like inversion, scale, dominant, mode, etc., are used in music. In the course of learning about the Santa Cruz banana fiber weaving, it was necessary to capture the words associated with each action, tool, and material. A total of twelve general vocabulary words surfaced during elicitation that hold a common place in the Natqgu lexicon but have a specific usage within the weaving craft. Of particular interest are the words that surfaced for which there is no English equivalent when the principles of the craft are unchanged. Furthermore, it was also discovered that there are no words in Natqgu for some very important weaving words in English. In sum, there were a total of forty-five craftsman-level terms discovered in addition to the seven banana varieties used in the weaving process.69

3.1. General vocabulary with specialized meanings

The two most common general vocabulary words used in the context of weaving are “scrape” and “cloth”.

3.1.1. Scrape—kz

**Kz** words  scrape, grate coconut; crack open; scrape banana fibers; scale fish scrape; any repeated action of rubbing a harder object against a softer one, to change the physical condition of the softer object; the action of scraping banana fibers with a belc ‘oyster shell’ for weaving; remove scales of a fish.

**kz** (v) scrape banana fibers with a belc

**nznrzngr** scraping

**nc nznrzngr** scraping board (used for scraping banana fibers with belc)

3.1.2. Cloth—lrpz

The Natqgu word lrpz ‘cloth’ is used as part of the names of traditional cloths woven on the loom, such as those following figure 4.

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69 See the Appendix.
Traditional breech clout used for dances
women’s dance wrap skirt
decorative burial shroud
backstrap, literally ‘cloth of the back’. It is made from king tree bark (be ngr nc soli).

Some other common words and their usage in weaving include the following:

**atuo** (v) set post or sticks into the ground / to position the warp beams in floor for warping
**bznrz** sword stick / beater
**nznipnz** hand breadth from end of index finger to thumb
**nenz** crab bug / weaving shuttle
**nimz** literally ‘convulsion’, ‘contraction’; in weaving, the point of a warped loom where the warp inside the heddles and the warp outside the heddles meet and cross
**ado** to hang; in weaving, to attach the warped loom to wall
**aebq** (v) tie knot
**yrvi** (v) to pull up; in weaving it means to remove the loom from the floor after warping
**pesali** (v) to rip or separate; in this case, to separate (banana) fibers for weaving and make them into narrow strands
**tri** literally ‘arrow’; heddle rod
**veco** (v) to pull down; to pull down fiber for coiling (in a basket)

Photos 1 and 2 in figure 5 demonstrate the weaver’s application of **yrvi** ‘pull out’; and photos 3 and 4 demonstrate **ado** ‘hang’. The term **nznipnz** is especially noteworthy as it is a previously undocumented term that had not been discovered in the course of prior fieldwork and vocabulary collection efforts. The nearest English equivalent would be ‘hand’s breadth’, but in this case what is measured from the
fullest extension of the thumb and index finger. Just as *hand’s breadth* is not intended to be a technically accurate measurement, *nznipnz* is also an approximation to denote a general, rather than specific understanding of size.

### 3.2 Specialized weaving vocabulary

Within the weaving vocabulary are weaving-specific terms used to describe the loom, the tools, the materials, and the actions taken to execute the process of weaving that are not likely to be used in the vocabulary of the broader population. Aside from the parts of the loom and tools that will be mentioned separately, there are actions and concepts with their own names. Since the impetus for discovery of the Santa Cruz banana fiber weaving involved language documentation and not exclusively culture documentation, it was necessary to capture as much of the weaving-related vocabulary as possible for inclusion in a lexicon that would eventually become a dictionary distributed to Natqgu speakers. Examples of technical vocabulary include all of the loom parts, weaving tools and actions.

#### 3.2.1. Weave—teka

- *da kx nzrteka*: any loom-woven item
- *kxrteka*: weaver
- *me nzrekangr*: loom
- *teka* (v): weave
- *teka bq* (v): pulling inward with the beater to force the fibers into the web

#### 3.2.2. Weaving actions

- *aplxo* (v): to warp the loom with 2–3 people, one person at each warp beam, one person to create the heddles on the shed stick
- *nzreongr*: warping the loom (1 person)
- *nzryablekengr*: picking design into warp with pick up stick (weaving needle)

#### 3.2.3. Weaving tools and materials

- *belc*: pearl oyster shell used as scraper for banana fibers
- *hnzrz*: beater or sword stick
- *drlepq*: fringe, tassel (banana fiber)
- *ncnardr*: measuring rod, a pre-measured warp length for a weaving project
- *nenz*: bobbin shuttle
- *nqanibz*: measuring rope, 1 fathom long
- *nqvi ngr nzrlqr*: heddle string, string used to create heddles using shed stick and heddle rod
- *nqvi*: rope, string, thread
- *nzrlqr*: heddles; name of string after it has been made into heddles onto the shed stick
- *yableke*: weaving needle/pick up stick
3.2.4. The loom

<table>
<thead>
<tr>
<th>Loom vocabulary</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a. <em>nclzi</em></td>
<td>back beam</td>
</tr>
<tr>
<td>b. <em>ncbu</em></td>
<td>warp beam</td>
</tr>
<tr>
<td>c. <em>dzbrnesr</em></td>
<td>lease rods</td>
</tr>
<tr>
<td>d. <em>wiblx</em></td>
<td>shed stick</td>
</tr>
<tr>
<td>e. <em>tri</em></td>
<td>heddle rod</td>
</tr>
<tr>
<td>f. <em>bznrz</em></td>
<td>beater-in, sword stick</td>
</tr>
<tr>
<td>g. <em>nenr</em></td>
<td>shuttle</td>
</tr>
<tr>
<td>h. <em>dzbrnesr</em></td>
<td>lease rods</td>
</tr>
<tr>
<td>i. <em>ncbu</em></td>
<td>breast beam</td>
</tr>
<tr>
<td>j. <em>lrpz ngr nibr</em></td>
<td>back strap</td>
</tr>
</tbody>
</table>

Figure 6. *Me nztekangr*—loom. Diagram origin unknown, n.d. Courtesy of S. Balq, First Collection, p. 18. Vocabulary adapted by authors.

3.2.5. Trees and sticks

Boerger (2009) did an extensive study of Natqgu trees, for which the short form of the Natqgu word *noun* ‘tree’ is *nc* ‘tree’, and can also mean ‘stick’. Table 2, below at left, gives the names of the banana trees\(^70\) that are suitable for weaving. The first simply means ‘banana tree.’ The others are specific varieties of banana trees.

Table 2. Natqgu banana tree and stick terms, Natqgu *nc*

<table>
<thead>
<tr>
<th>Banana trees</th>
<th>Sticks</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>nc brpi</em></td>
<td>banana tree</td>
</tr>
<tr>
<td><em>nc brpi bz</em></td>
<td>black banana tree</td>
</tr>
<tr>
<td><em>nc brpi dapubwa</em></td>
<td>big-fruited b. tree</td>
</tr>
<tr>
<td><em>nc brpi bckq</em></td>
<td>yam-size-fruited b. tree</td>
</tr>
<tr>
<td><em>nc brpi nyaka</em></td>
<td>young black b. tree</td>
</tr>
<tr>
<td><em>nc brpi plcali</em></td>
<td>twice-bearing b. tree</td>
</tr>
<tr>
<td><em>nc brpi soke</em></td>
<td>broad-based b. tree</td>
</tr>
<tr>
<td><em>nc brpi do</em></td>
<td>wild banana tree</td>
</tr>
<tr>
<td><em>nc brpi loa</em></td>
<td>small-fruited b. tree</td>
</tr>
<tr>
<td><em>nc brpi nivc</em></td>
<td>compact banana tree</td>
</tr>
<tr>
<td><em>nc brpi pi</em></td>
<td>striped-fruited b. tree</td>
</tr>
<tr>
<td><em>ncbu</em></td>
<td>warp beam/breast beam</td>
</tr>
<tr>
<td><em>nclzi</em></td>
<td>back beam; the piece of wood mounted to the wall for attaching and stabilizing the loom</td>
</tr>
<tr>
<td><em>ncardr</em></td>
<td>measuring rod, a pre-measured warp length for a weaving project</td>
</tr>
<tr>
<td><em>ncnarkzng</em></td>
<td>scraping board (used for scraping banana fibers with <em>belc</em>)</td>
</tr>
</tbody>
</table>

\(^{70}\) Banana plants are among the largest herbs, but they are not ‘trees’ by botanical categorization. See Papyrus Australia, Ltd. 2016, “Why banana palm?” http://www.papyrusaustralia.com.au/why-banana-palm/ (Accessed 14 January 2016). Even so, in this paper we call them ‘trees’ since that is equivalent to the Natqgu categorization.
3.3. Differences between Natqgu and English technical terms

Figure 7. Backstrap loom positions.

3.3.1. No Natqgu equivalent

Depending upon the position of the loom, the openings between the warp ends (threads) is called either a **shed**, as in the top image, or a **counter shed**, as in the bottom image (Roth 1977:1). Because these concepts are so basic to weaving, they are among the most common English weaving terms. When I enquired about the names for these spaces in Natqgu, Selwyn said that there is only one word, **nzrluongr**, regardless of what position the loom is in. Additionally, there are two separate words in English for the **warp beam** and **breast beam** (the large pieces that form the outer frame of the backstrap loom—the piece furthest from the weaver and the piece closest, respectively), while there is only a single Natqgu word used for both parts, **ncbu**. Most interestingly, though, is that there is no noun in Natqgu for such fundamental ideas such as **warp**, **weft** / **woof**, or **web** (the general word applied to whatever is on the loom, regardless of what the finished product will actually be), in spite of the fact that the principles are definitely used.

3.3.2. No English equivalent

Analysis of the elicited weaving vocabulary revealed that Natqgu has a wealth of weaving-specific terms that are not present in English. For example, there is only one word in English for warping, but Natqgu has two separate terms, one used when one person warps the loom, and the other is used when two or more people perform the warping. Another interesting term is used when picking the design into the warp, **nzryablekengr**, because it utilizes the name of the weaving needle, **yableke**, expressly in verb form. **Tekabq**, which means the weaver is to pull inward with the beater to force the fibers into the web, is actually very precise because it has the root word for weaving, instead of the generic “beat,” that is used in English. English has only a general “beat down” or “batten” instead of a more specific term, **tzlvz** for using the beater on the top of the warp while forming a counter shed to beat down the warp ends that need to be nudged into proper position. The following represents a list of words that were gathered that had no exact English equivalent and had not previously been collected for the Natqgu dictionary.

- **aplxo (v)** to warp the loom with 2–3 people, one person at each warp beam, one person to create the heddles on the shed stick
- **krnslq** warp ends inside the heddles
- **nesaqrde** warp ends outside the heddles
- **nzrleongr (v)** warping the loom (step one), 1 person
- **nqvi ngr nzrlqr** heddle string, string used to create heddles using shed stick and heddle rod
- **nzrnktiongr (v)** cut the (woven project) web from the loom
- **nzryablekengr (v)** pick design into warp with pick up stick (weaving needle)
**tekabq (v)** pulling inward with the beater to force the fibers into the web

**tzlvz (v)** using the beater on the top of the warp when forming a counter shed to beat down the warp ends that need to be nudged into proper position [n̄zrtzlvzngr (v) when heddle rod is raised, using the beater to press down the warp to make space beneath the heddle rod]

**wilvx (v)** roll heddle rod and shed stick together while weaving

### 4. Conclusion

![Figure 8](image)

Figure 8. (L–R): Paul Menata, Jackson Daneh, Jos Bxli, and Selwyn Balq. Photo ©2015 Kim Beebe Wells.

In terms of cultural preservation, truly the only reason that Santa Cruz weaving has not become extinct has been because Selwyn’s father forced him to learn to weave. Permitting the deep and targeted research required has preserved the endangered vocabulary as well as the craft itself.71 There are now a total of 8 men in the clan who weave: Selwyn Balq, 54; David Yanepia, 40; Henry West, 36; Jos Bxli, 35; Paul Meplu, 32; Walter Kola, 24; Jackson Daneh, 18; and Paul Menata, 18. Henry West and Walter Kola live in Honiara.

As the research for this cultural documentation project was being done in Selwyn’s home, the younger clansmen, Selwyn’s son, Paul Menata and nephew, Jackson Daneh, saw a white-skinned American woman who had traveled a very long way to ask questions, take photos and make videos, taking great interest in their particular, very distinctive style and method of weaving. They asked Selwyn to teach them to weave. Paul and Jackson co-wove their first basket and sold it right away to finance a trip to Honiara. This is a victory for the conservation of Santa Cruz weaving, as Jackson and Paul are the youngest men now weaving and the craft can be preserved and supported for another generation.

![Figure 9](image)

Figure 9. The first basket woven by Paul Menata and Jackson Daneh, October 2015. Photo ©2015 Kim Beebe Wells.

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71 See the Appendix.
Retro-innovation

It is said that “necessity is the mother of invention.” So, just like when Selwyn taught himself to use his father’s *lrpz nqesa’* as a template because someone wanted to purchase one, what follows is a story of re-innovating something that has been lost or is unavailable.

As field research for this project was drawing to a close and it was nearly time to leave the island, I realized that I had no still photos of the finishing stage of the *lrpz nqesa’*. Of course the images could have been captured from the videos (which I still ended up doing for another project), but I thought some time and effort could be saved, at least on my part, by having Selwyn weave a basket in the same manner as a *lrpz nqesa’* and then take the pictures when he cut the fringe and so forth. After all, it would take him less time than producing an actual *lrpz nqesa’* and I could have a basket to keep and show off. What happened afterwards turned into something far more than I ever imagined.

As I described to Selwyn what I wanted, I could see in his eyes that he understood what I was asking for, but he was not completely certain about the outcome. There was nothing I was requesting that he had not already expertly shown me how to do, so I had confidence that he would be able to create the basket. When he was finished and I went to his home to fetch it, the basket was hanging prominently in the main room over the place where he weaves. He excitedly told me about how this was the kind of bag the *nelc* choristers used in the past, but he had not known how to make them. Now he knew how! People who had come into his home had seen it and their reactions had all been strongly favorable. Someone had already asked him to make one for them and it had only just been completed!

![Image of the basket](image.png)

Figure 10.

The specimen (left), dated 15 November 1913, anonymous, is courtesy of Selwyn Balq, Second Collection.

The reinvented version (right), was completed over one hundred years later, on 12 November 2015. Photo, courtesy of Kim Beebe Wells.

Selwyn said they would now call the basket *bxli sc Ingr* ‘lady-singer's basket’ after me, using my local custom name, “Lady-Singer.” This is a pun in Natqgu, since the male *nelc* dancers are referred to as ‘choristers,’ and the name of the basket is the feminine form, and translated ‘(lady) singer’s basket’.

In the two years since the 2015 fieldwork and Rapid Word Collection workshop, whose effectiveness has been discussed by Boerger and Stutzman (2018), there has been an exciting revitalization of Natqgu with renewed interest in literacy and culture (Boerger 2017). The children’s choir from St. Thomas Anglican Church on Graciosa Bay has been invited to sing in Natqgu all over the island. St. James Anglican Church, which had previously reverted to using English only, has since begun conducting its liturgy and sermons in Natqgu, as anticipated by Boerger (2015). The older members of the community are expecting the dictionary to play an important part in teaching the younger generations. Selwyn happily observed a phenomenon that is occurring in the Natqgu communities: “When the young people ask the old people, ‘what does this mean?’ or ‘how do we say...?’ the older people tell them, ‘Once we have our dictionary, you won’t need to ask us, anymore!’”

There has also been increased confidence among the weavers in regard to their craft. As of 2017, instead of focusing their energy on creating or developing new patterns, the weavers’ primary efforts have been to try to recreate traditional patterns and styles from the pictures of earlier patterns, which they previously thought were beyond their capacities. Because he had the experience of creating the *bxli*...
sc Ingr for me, Selwyn had discovered that such reconstructions of historical patterns could be done by looking at the pictures. Even if they do not know their traditional names, the weavers are reproducing the kastom ‘traditional’ designs. The weavers are also sharing their knowledge with one another as their experience grows. As principal weaver, Selwyn hopes to have a weavers’ hut as a place for them to work together as a guild.

As of July 2017, the prices of the loom-woven items are as follows: $350 SBD for baskets, $1000 SBD for lrpz nqesa’ ‘breechclout’, $1500 SBD for a lrpz namz ‘burial shroud’, and $1000 SBD\textsuperscript{72} for a lrpz nzapu ‘woman’s dance skirt’. To promote sales of the dance skirts he plans to make one for his wife, Miriam, to wear at nelc dance performances. When his sons marry, he will also make them as part of the bride price and for others’ weddings. This is so that other people can see that he knows how to make them, and they can commission the work to be done. He is building an inventory of baskets, breechcloths, burial shrouds, and dance skirts to sell. He does not wait to be commissioned. The lrpz namz ‘burial shroud’ is a specialty item that is a lot of work. This is prohibitively expensive for most locals, and only the “bigmen” can trade for trees or land in lieu of cash, if necessary. Another victory of conserving the Santa Cruz banana fiber weaving has been that two of Selwyn’s sons are paying their university fees and living expenses by weaving.

Since all of the technical weaving questions have been answered and the vocabulary has been documented, an avenue of continued research could consist of interviewing all weavers and discovering how they went about recreating old patterns, as well as any innovations or new designs. If any changes in techniques or methods have been made in the time since fieldwork was conducted, if names have been assigned to designs whose names have been lost, and names given to any newly-developed patterns, all of these should be documented. Any language-related research in weaving will necessarily have a cultural focus.

\textsuperscript{72} SBD—Solomon Islands currency.
Appendix: Vocabulary

This vocabulary list was elicited during the researcher’s fieldwork with her co-author in 2015. The semantic domain 6.6.1.4 is the Rapid Word Collection subdomain in which the weaving vocabulary terms are documented. The terms in bold face represent terms that had not been previously entered into the Natqgu lexicon. Previously collected terms had been related to other domains, and not for weaving, as is discussed above. Other terms indicate no known English language equivalent.

Weaving cloth vocabulary, semantic domain 6.6.1.4

<table>
<thead>
<tr>
<th>Natqgu</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>aebqr (v)</td>
<td>tie knot</td>
</tr>
<tr>
<td>aplxo (v)</td>
<td>warp the loom with two-to-three people</td>
</tr>
<tr>
<td>belo</td>
<td>pearl oyster shell used as scraper for banana fibers</td>
</tr>
<tr>
<td>brpi kxbo</td>
<td>black banana fiber</td>
</tr>
<tr>
<td>bznrz</td>
<td>beater or sword stick</td>
</tr>
<tr>
<td>da kx nzrteka</td>
<td>any loom-woven item</td>
</tr>
<tr>
<td>dzbrnresr</td>
<td>lease rods</td>
</tr>
<tr>
<td>driz</td>
<td>design</td>
</tr>
<tr>
<td>drizpq</td>
<td>fringe, tassel (banana fiber)</td>
</tr>
<tr>
<td>kmznlq</td>
<td>warp ends inside the heddles</td>
</tr>
<tr>
<td>kxrteka</td>
<td>weaver</td>
</tr>
<tr>
<td>lrpz namr</td>
<td>decorative burial shroud</td>
</tr>
<tr>
<td>lrpz ngr nibr</td>
<td>back strap</td>
</tr>
<tr>
<td>lrpz nqesa</td>
<td>traditional breech clout used for dances</td>
</tr>
<tr>
<td>lrpz nzapu</td>
<td>women’s dance skirt wrap</td>
</tr>
<tr>
<td>me nzrtekangr</td>
<td>loom</td>
</tr>
<tr>
<td>ncnizrka</td>
<td>scraping board (used for scraping banana fibers with belo)</td>
</tr>
<tr>
<td>ncbu</td>
<td>warp beam / breast beam</td>
</tr>
<tr>
<td>nclzvi</td>
<td>back beam, stabilizes the loom into weaving position</td>
</tr>
<tr>
<td>ncnardr</td>
<td>measuring rod, a pre-measured warp length for a weaving project</td>
</tr>
<tr>
<td>nc trkir</td>
<td>pandanus tree</td>
</tr>
<tr>
<td>nenz</td>
<td>bobbin shuttle</td>
</tr>
<tr>
<td>nesaqrde</td>
<td>warp ends outside the heddles</td>
</tr>
<tr>
<td>nimz</td>
<td>point of a warped loom where the warp inside the heddles and the warp outside the heddles meet and cross</td>
</tr>
<tr>
<td>ninrtrbz</td>
<td>nut design pattern</td>
</tr>
<tr>
<td>nikio (v)</td>
<td>cut the (woven project) web from the loom</td>
</tr>
<tr>
<td>nqngi nc brpi</td>
<td>banana fiber</td>
</tr>
<tr>
<td>nqngi trnipo</td>
<td>‘shark teeth’ design</td>
</tr>
<tr>
<td>nqngi bwa</td>
<td>‘shark teeth’ (same as above = synonymous)</td>
</tr>
<tr>
<td>nqvi</td>
<td>rope, string, thread</td>
</tr>
<tr>
<td>nqvi ngr nzrlqr</td>
<td>heddle string, string used to create heddles using shed stick and heddle rod</td>
</tr>
<tr>
<td>nyanibz</td>
<td>measuring rope, one fathom long</td>
</tr>
<tr>
<td>nzrleongr</td>
<td>warping the loom by alternating banana fibers onto the heddle rod, one person</td>
</tr>
<tr>
<td>nzrlqr</td>
<td>heddles, string after it has been made into heddles</td>
</tr>
<tr>
<td>nzryablekengr</td>
<td>picking design into warp with pick up stick (weaving needle)</td>
</tr>
<tr>
<td>rtx (v)</td>
<td>braid, twist (basket handle)</td>
</tr>
</tbody>
</table>
teka (v) weave
tri heddle rod
trkabq (v) pulling inward with the beater to force the fibers into the web
tzlvz (v) press down warp with beater when heddle rod is raised, to make space beneath the heddle rod
vq (v) roll up, twist (banana fiber)
wiblx hollow bamboo shed stick
wilvx (v) roll heddle rod and shed stick together while weaving
yableke weaving needle/pick up stick

General vocabulary, with specific usages in weaving

ado hang; attach the warped loom to wall
atuo (v) stand something up; position the warp beams in floor for warping
bxli basket
kz (v) scrape; scrape banana fibers with a belc
lmpz cloth
nidol (Pijin) needle
nznipnz hand breadth from end of index finger to thumb
nzrningr selvage, finished edge of woven article
pesali (v) rip; separate banana fibers into strands
silvz (v) sew
veco (v) pull down; pull fiber down to coil (in a basket)
yrvi (v) pull out; pull loom from floor after warping
References

Balq, Selwyn. n.d. First Collection of Santa Cruz banana fiber weaving designs, photos, and articles.
Balq, Selwyn. n.d. Third Collection of Santa Cruz banana fiber weaving designs, photos, and articles.
Boerger, Brenda H. 2018. Inclusiveness in fieldwork. (Poster presentation at January 2018 Linguistic Society of America meeting in an organized session on collaboration.)
On Integrating Ethnobotany with Natqgu [ntu] Field Linguistics


Abstract

We report on ethnobotanical aspects of linguistic fieldwork in the Solomon Islands in 2015 and make suggestions for continued collaborative, interdisciplinary, language-related fieldwork. We relate how ethnobotany was integrated with other research goals for which funding had already been obtained. The specific phases of ethnobotanical activities are itemized and then the successes and shortcomings are noted. We conclude that ethnobotany adds a key component to field linguistics and suggest that it be considered best practice to incorporate it, as well as similar interdisciplinary efforts, in documentary linguistic fieldwork.
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1 Introduction

The four authors of this paper had different roles. Brenda H. Boerger was the Natqgu [ntu] fieldwork coordinator and corresponding author. Alexander Boerger served as the Natqgu ethnobotany fieldwork intern. Leonard Menrlwz was one of the Natqgu rainforest consultants who assisted the team. Myknee Q. Sirikolo, Jr., who is Director of the Solomon Islands Herbarium and Botanical Gardens, helped clarify some of the data and provided Latin names for many of the plants. None of us could have succeeded without the others.

Natügu [ntu] is an Oceanic language and one of four closely related languages spoken on Santa Cruz Island, in the easternmost Temotu Province of the Solomon Islands. The language name is spelled Natqgu in the local orthography which is used throughout this article. Together with Äiwoo [nfl], in the Reef Islands, these languages comprise the Reefs-Santa Cruz family of languages (RSC). Long-term language development work in Natqgu gives it the strongest vitality of the five RSC languages. Nalögo (aka Nalrgo) [nlz] and Äiwoo are both relatively healthy spoken languages being passed to the next generation, while Engdewu [ngr] is endangered and shifting to Solomon Islands Pijin (Boerger et al. 2012). The fourth RSC language, Noipä [npx], is spoken in a single village and surrounding areas. Speakers of the other three languages on Santa Cruz cannot understand it, but Noipä speakers generally understand and speak at least one of the other varieties. Noipä received its own ISO 639-3 code in 2016 as a result of the 2015 fieldwork reported on here, but that is not a focus of the paper.

Map 1. Languages of the Temotu Language Network

©2006 Piet Lincoln. Used with permission.
In 2015-2016 Brenda Boerger was awarded a 12-month US government Documenting Endangered Languages fellowship73 for a project entitled “Natqgu Dictionary and Legacy Texts.” As part of that work she led a team of five fieldwork interns,74 aged 28-45, to the Solomon Islands for twelve weeks, with ten of those weeks spent on Santa Cruz Island.


In section 2 of the paper we relate the value of ethnobotanical data in linguistic fieldwork. Section 3 describes the overall fieldwork research goals, including how the ethnobotanical research dovetailed with other goals. The specific phases of ethnobotanical activities are itemized, and results and pitfalls noted in section 4. Finally, in section 5, we show how our experience correlates with suggestions in the ethnobotanical literature for how scholars might interact better with communities and conclude by incorporating our experiences with these suggestions to propose some best practices for further interdisciplinary fieldwork. We conclude by recommending ethnobotanical and other collaborative research as best practice in documentary linguistics.

2 The value of ethnobotany

2.1 Awareness

Dan and Brenda Boerger moved to the Solomon Islands when their older son, Alex, co-author of this article, was five months old. He grew up multi-lingual and multi-cultural. Brenda became aware of the significance of ethnobotanical knowledge for Natqgu speakers during a furlough to the US when Alex was 10 years old. Mother and son were talking about culture shock and how he was not feeling at home in the US culture. As Brenda has written elsewhere (Boerger 2009), Alex’s response was vehement: “Yes, that's right! I don't feel at home here. On Santa Cruz, when I walk down the road I know every tree and

73 Acknowledgements: This research could not have been conducted without the funding provided in part by a Documenting Endangered Languages Fellowship FN-230212-15 from the US National Endowment for the Humanities and the National Science Foundation, awarded to Brenda Boerger for 2015-2016. We gratefully acknowledge the assistance of Natqgu speakers on Graciosa Bay who gave more than three weeks of their time for the Rapid Word Collection (RWC) workshop. The research reported on here was conducted in part by US fieldwork interns and Natqgu-speaking rainforest consultants who participated in the ethnobotanical aspects of the research. One intern and one rainforest consultant collaborated with the linguist on this paper, along with the Director of the Solomon Islands Botanical Gardens and Herbarium. The authors also acknowledge assistance from personnel at the Botanical Research Institute of Texas (BRIT). As always, any errors or misinterpretations remain the responsibility of the authors.

74 Figure 1. Alex Boerger, who grew up on the island, acted as intermediary between the US group and islanders, as well as contributing in other areas. Figure 2. Donald Furnival was a recent linguistics MA from the University of North Texas, with an interest in language documentation. Figure 3. Jeremiah Aviel, had finished all coursework for a linguistics MA at the Graduate Institute of Applied Linguistics (GIAL, now known as Dallas International University), and had previously done language and culture documentation in Papua New Guinea. Figure 4. Adam Walker, a speaker of several signed languages and a dance specialist, is writing a book about indigenous dance around the world. Figure 5. Kim Wells, a former elementary music teacher and amateur weaver, was just starting an MA in anthropology at Dallas International University.
what it is good for. But here, I don't know what kinds of fruit or nuts the trees have, I don't know what they're good for, and I don't even know their names!"

That was an eye-opener for Brenda, contrasting the significance of ethnobotanical knowledge on Santa Cruz where people know the trees and their uses, as opposed to the US where trees are things people look at out their windows or which pass by as a green blur when they drive down the highway.

2.2 Traditional ecological knowledge (TEK)

It seems logical that as languages become endangered, one of the categories of knowledge loss would be ways to talk about things in their environment, including plant life. An internet search for “loss of ethnobotanical knowledge” to support this idea yielded 240,000 results. In limiting our scope in this article to results for the first computer screen only, the abstract of an article by Turner and Turner (2008) seems to provide a good summary for linguists as we consider the importance of ethnobotanical knowledge to a community.

Knowledge and practices of indigenous peoples relating to local plants used for food, medicine, materials, and other purposes are threatened in many parts of the world.... Reasons for this...include...loss of indigenous languages, loss of time and opportunity for traditional practices owing to participation in the wage economy, increasing urbanization of indigenous populations, loss of access to traditional resources, restriction of management practices for sustaining these resources, and forces of globalization and industrialization. Efforts to renew and restore traditional practices and relationships with plants and environments must recognize the cumulative effects of these factors and find ways to retain and reinforce the knowledge and practices still held by individuals and communities, (in order, ed.) to reverse some of the negative influences on cultural retention, and to develop new, relevant, and effective ways to revitalize languages, cultures, and ethnobotanical knowledge within contemporary contexts (emphases ours).

The representative articles unveiled on the first computer screen of that search include the following, with short summaries:

McDade et al. (2007) found that the ethnobotanical knowledge of the mother was reflected in greater health in children for three measures (C-reactive protein related to immune system, subcutaneous fat stores, and height-for-age).

Ramirez (2007) briefly reviews the literature, showing there is a close correlation between the destruction of tropical forests and other ecosystems and the decrease of biological diversity, as well as cultural loss. He suggests seven actions which could be taken by ethnobotanists to help reverse this trend. We revisit some of these in our conclusions about best practices.

Reyes-García et al. (2007) provide a review of 34 quantitative studies of ethnobotanical knowledge and show how the studies differ in their conceptualizations and measurements of that knowledge. This lack of conceptual consistency limits the inferences which can be made by comparing the studies. They suggest that future interdisciplinary work be more rigorous in this regard.

Vandebroek and Balick (2012) found that Dominicans of all ages in New York City actually knew more medicinal food plants than their counterparts in the Dominican Republic. This is the first study to show an increase in the retention of plant knowledge related to migration.

Beltrán-Rodríguez et al. (2014) interviewed 41 people about the value and uses of plants the participants identified. They found that women’s and men’s knowledge of plant species differed, and that in addition to gender, occupation and age were statistically significant, while income, education, and home areas were not.

Benz et al. (2000) found that although there was some loss of knowledge and loss of indigenous language use as a result of modernization and services provided from outside the community, this loss was not universal, especially in communities where such knowledge still has a role in subsistence.
Maffi, Luisa, ed. (2001) was the final result on screen one of the internet search. Hers is a 544 page, 33 chapter volume, entitled, *Linking Language, Knowledge, and the Environment*, and has more of a linguistics slant. In fact, one chapter was written by Oceanic linguist Andrew Pawley. Furthermore, Maffi has published more on this and related topics.

In fact, it is not new to propose merging linguistic and botanical fieldwork. Si (2011:172–176) proposes five reasons to incorporate biology in documentary linguistic fieldwork, and these remain relevant today: 1) biology is relevant to daily life, 2) biological data is easy to elicit, 3) biological topics lend themselves to multiple speech genres, 4) biological data is plentiful, and 5) biological data is often neglected in linguistic fieldwork. So, it is not just biologists who talk about loss of ethnobiological knowledge; anthropologists and linguists have also been aware of the interconnections involved in losses in biological knowledge, cultural knowledge, and language knowledge.

Following Boerger’s exploration of tree metaphors in Natqgu in 2009, her own awareness of these issues increased in 2013 where numerous speakers at the 3rd International Conference on Language Documentation and Conservation talked about traditional ecological knowledge, both botanical and zoological. One presentation related how the presenter accidentally found that speakers were often prepared to tell an entire descriptive narrative about an animal—its habitat, its life cycle, and its habits—if he didn’t cut them off too soon. Instead, waiting and listening meant that he gathered, not only a lexical item and its gloss, but also a connected text of a genre that might not otherwise be collected (Odango 2013). This relates to Si’s third of five points mentioned above. However, as described in section 3, our funding was for a dictionary. Therefore, the fieldwork team did not seek extended discourses about botanical lexemes; but we did make detailed notes in the glossing rooms where interns worked with Natqgu speakers to clarify the meanings and add glosses in English for the words collected during the RWC workshop. See, for example, the following entries from Appendix B: *be nyz bq, bia mnrtq ncnaibx*, and *bou*. Note that, by encouraging all varieties of trees to be named, the database ended up with 40 different named breadfruit varieties and 15 banana varieties. This was much more satisfying than having merely one breadfruit and one banana lexeme.

The scholars summarized above from the internet search, as well as others, have shown that loss of TEK has been correlated with decreased well-being of a community with respect to the health of children and loss of cultural and linguistic knowledge. It has also been demonstrated that communities where language development and documentation activities have been undertaken often experience a parallel increase in well-being (Ostler 2003:176, Boerger 2015:152). By including an ethnobotanical component in our fieldwork goals during language and culture documentation, our hypothesis, based on claims in the literature, was that linguistics and ethnobotany would mutually support each other. We hoped to achieve three things: a) increased community well-being, both short term from our presence there and longer term from the results of the work, b) a broader and a deeper documentary linguistic corpus than might otherwise have been the case, and c) a contribution to ethnobotanical research and knowledge, especially since Santa Cruz is located in Remote Oceania, and more data from that area will allow more accurate comparisons with Near Oceania (McClatchey 2012).

### 3 Basic fieldwork research goals

The title of the research project was, “Natqgu Dictionary and Legacy Texts,” so primary fieldwork goals aimed at fulfilling the parameters of that project.

#### 3.1 Dictionary augmentation through a Rapid Word Collection (RWC) workshop

The dictionary work started with a database of around 5500 unique senses gathered over a period of nearly 20 years, mostly through texts and conversations. FLEX stands for Fieldworks Language Explorer and is a powerful lexical database software which also has tools for grammar, text processing, and anthropology. For the fieldwork we conducted a Rapid Word Collection (RWC) workshop over a period of three weeks, eventually collecting a total of 12,500 words by semantic domains, using the “collect word” tool in FLEX. Once duplicates with previous entries were removed, editing completed, and the
post-workshop cultural domain work done, there were approximately 11,000 unique senses, basically
doubling the size of the starting lexicon. Details of the RWC process and its effectiveness are described
elsewhere (Boerger and Stutzman 2018).

Following the workshop, the team dug deeper into the local kinship system, bee-keeping (an
introduced practice), and Natqgu verbs. We ran out of time and opportunities for exploring the music
and lyrics of the nelc dance songs, house-building terminology, and Santa Cruz birds. The main focus was
exploring aspects of the costuming and performance of the culturally significant nelc folk dance.

3.2 Annotation of legacy texts

We had annotation goals for two kinds of legacy texts. First, there was a set of 34 oral texts by eleven
speakers collected in 2002, which had never been transcribed or translated. Part of the annotation work
involved several interns working with different speakers on 34 different texts. They used an aspect of
Basic Oral Language Documentation (BOLD) as described by Boerger (2011) for the annotations. Two
interns did not work directly with speakers but supported the BOLD interns in other ways. Sixty percent
of the files received slow, careful respeaking, but only five percent were transcribed using the local
orthography and then translated. Clearly there is significantly more work to be done on these tasks. The
team encountered no ethnobotany components in the oral texts processed to date.

The second legacy text was a long, handwritten autobiography, which ended up being 30 pages,
single-spaced, once it was typed. It is the story of a man born in 1921, who was a young man during
World War II. This is the longest, natively-authored discourse in Natqgu, which we expect will serve as both a historical and a cultural document. It is being prepared as an illustrated, diglot reader with Natqgu and English on facing pages. Its translation uncovered several previously unrecorded botanical terms.

Figure 8. Simon Meabr, Autobiography annotation: Jeremiah Aviel and Leonard Menrlwz. ©2015 Brenda H. Boerger.

4 Phases of ethnobotanical research

The ethnobotany component of the work was integrated with the tasks relating to the dictionary and legacy texts. There were six phases necessary for incorporating the proposed ethnobotanical activities: a) pre-field training, b) new plant words from texts already collected, c) deeper semantic domain elicitations during RWC, d) use of plants in dance costuming, e) collection of plant specimens on the island, and f) donation of two sets of each plant type to the Solomon Islands Herbarium and Botanical Gardens in Honiara, one of which was to be sent onward as a donation to the Botanical Research Institute of Texas (BRIT).

4.1 Pre-field training

The team spent a little over three weeks preparing for the field research. One day of that was spent at BRIT in Fort Worth, Texas, where the team received hands-on training in ethnobotany, including how to collect plant specimens of various types, how to press and dry them, how to properly label them, and how to make hypotheses about the uses of objects made from plant materials. In addition to the training, BRIT donated two presses for the research.
Prior to flying to Santa Cruz Island where Natqgu is spoken, the team made contact with botanist and co-author Myknee Q. Sirikolo, Jr. at the Solomon Islands Herbarium so that he would be aware of our intention of collecting plant samples and donating them following our fieldwork. He welcomed and encouraged the team, and they toured the Botanical Gardens.

4.2 Harvest plant words from texts

There were references to several trees and plants in the written legacy text which were not already in the lexical database, even after the RWC workshop, and which remain unidentified. When Natqgu speakers did not recognize the words, we wondered whether they were Natqgu or Nalrgo words, since the writer’s first language was Nalrgo. A linguistics graduate student was doing fieldwork in Nalrgo, so Boerger regularly texted the unknown words to her and asked her to find out if anyone recognized the word or knew what plant it was. Not many were identified in this way.

4.3 Deeper work on some semantic domains during RWC

Even though RWC workshops are not designed for deeper study, some ethnobotanical digging happened during the workshop itself. The most obvious domain for botanical explorations in the set of domains used for RWC is 1.5 Plant and all its subdomains for tree, bush, grass, moss/fungus, parts of a plant, growth of a plant, and plant diseases. While linguists might merely be interested in words and names of trees, ethnobotany is also interested in the roles and uses of plants in a society. These correspond with multiple semantic domains in FLEx, namely 6.2 Growing crops, 5.2.3.1 Food from plants and perhaps less obviously, the domain 6.5.1.3 Land, property, a subdomain of 6.5 Working with buildings, became relevant in the Natqgu work, as we discuss later.

These domains and others covered some of the 15 usage categories for trees and plants Boerger (2009) found as part of her earlier research, as repeated in Table 1. This demonstrates that such ethnobotanical knowledge has been maintained and is still in use on the island.

<table>
<thead>
<tr>
<th>food and drink</th>
<th>baskets and containers</th>
<th>rust removal</th>
</tr>
</thead>
<tbody>
<tr>
<td>house and boat building</td>
<td>personal grooming</td>
<td>weaponry</td>
</tr>
<tr>
<td>fuel and lighting</td>
<td>fishing and hunting</td>
<td>glue and rope</td>
</tr>
<tr>
<td>clothing and mats</td>
<td>musical instruments</td>
<td>resin and incense</td>
</tr>
<tr>
<td>medicine and drugs</td>
<td>decoration and scent</td>
<td>toys</td>
</tr>
</tbody>
</table>
Of fish and trees

Elicitation by semantic domain generated excitement about discovering as many lexical items as possible. For example, the Natqgu database started with 26 fish names. But co-author Alex noticed that of the 16 words one of the groups wrote for fish, seven of them were categories of fish based on their habitats—sea fish, reef fish, surface fish, deep sea fish, etc. We suspect that the reason for this is that the English question prompts for RWC were not clear. Of those collected fish terms remaining, four were names of salt water fish and four were names of fresh water fish. But from his years of being an avid spear fisherman, Alex could easily name fifteen or twenty additional salt water fish off the top of his head. As Alex began listing fish names in the glossing room, another glosser, Henry Teti, became so excited that together they collected 61 unique fish names on that day. Their success motivated Teti to borrow one of the available fish reference books with photos in order to ask older villagers for any further names they could provide. This effort gleaned 113 additional unique fish names. Then later work in 2016, working remotely, and 2017 in the capital, Honiara, Solomon Islands, resulted in 25 new names, for a total of 241 fish names in fish domain 1.6.1.5.

But why are we talking about fish in an ethnobotany paper? Well, interestingly, the word for tree noun is shortened to nc in tree lexical compounds, such as nc bq ‘koi loo tree’ (Calophyllum inophyllum, a.k.a. Alexandrian laurel, Borneo mahogany). But at the same time the word for fish is also nc and it is used in fish lexical compounds, such as ncbq ‘triggerfish’. To distinguish these orthographically, the Natqgu tree words have arbitrarily been written with a space after nc and the fish words have not. This decision is being re-evaluated in consultation with the community, prior to printing a Natqgu dictionary.

Figure 10. Nc bq ‘Alexandrian laurel’.
©2015 Alex Boerger.

Figure 11. Ncbq ‘yellow margin triggerfish’.
©2016 Kathiresan Ramachanderam on YouTube
https://www.youtube.com/watch?v=dAwO8Zidal8.

75 There also did not seem to be a place in the FLEX semantic domains for collecting shell fish, which are not categorized as fish by Natqgu speakers. Nor do they necessarily belong to the domain 1.6.1.9 small animals. This is a gap that should be remedied either for the larger domain list or for languages in ocean environments, perhaps by dividing the ‘small animal’ category into three: small land animals, small salt water animals, small fresh water animals.
76 Loaned by the Temotu Province Department of Fisheries.
Interestingly, the same pattern of trees and fish occurs in the related language, Äiwoo [nfl]. In its recently published dictionary (Naess 2017) tree compounds are made with nyā or nyä, cognates of Natqgu nc or in a previous Natqgu orthography nā. And this leads to similar tree-fish homonyms in this related language. For example, we find the following Äiwoo entries:

nyānumobo¹ (N) - a type of tree with soft wood
nyānumobo² (N) - barracuda (*Sphyraena*) at a small stage of growth; juvenile barracuda.

Meanwhile, 140 new tree names were collected for Natqgu and added to the 36 already present in the lexical database; more were added later while working with an individual consultant. The end result at the time of writing is 280 lexemes in the 1.5.1 Tree domain, and 434 total words in the 1.5 Plant domain.

Another way that the RWC workshop dug deeper in botanical knowledge happened during discussions of the domain 6.5.1.3 Land, Property under the larger domain 6.5 Working with buildings, as mentioned above. While outsiders might expect gardening to be part of the 5.2.3.1 Food from plants domain, the fact that, for island residents, it was more salient in the land and property domain, correlates with the high importance of land and land ownership in Melanesia.

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77 The author would appreciate input from the reader regarding whether that is a good decision or not. Additionally, input on how and where in the dictionary database to include the fish and tree words, and whether tree items should be logged with the nc as part of the compound, or separately.

78 These numbers of words or senses per domain are estimates because editing of the dictionary is ongoing.
It was in this land and property domain that one of the collection groups began discussions of how a Santa Cruz garden plot is laid out and what its various sections are called. Group members from different villages disagreed with each other about the exact details of a garden plot and their discussion ran over into the break time. Eventually all the workshop participants were gathered around a broken piece of Masonite being used as a chalk board. The discussion was animated with numerous disagreements about the size, shape, sections, and layout of a prototypical garden plot, as exemplified by the photos taken during that discussion. Here again, the effectiveness of working with groups of speakers is demonstrated. An individual linguist working with a single language consultant would only get the terminology from that one person's perspective and assume it to accurately represent general knowledge. But here we found that the speakers themselves were surprised at the levels of disagreement they had about garden plots. Some of the terminology unveiled in the discussion is in Table 2. Note that certain terms have still not been clarified and that this task remains for future fieldwork. Thankfully, we managed to video record part of the discussion when it became apparent that we were witnessing a once-in-a-lifetime event. The annotated video will become part of the Natqgu corpus to be archived once annotations are completed.
Table 2. Garden plot layouts

<table>
<thead>
<tr>
<th>Natqgu</th>
<th>English</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>bei</td>
<td>outer garden band</td>
<td>Strip of land that encircles a garden plot and touches the outer boundary at all points.</td>
</tr>
<tr>
<td>brte</td>
<td>inner garden patch</td>
<td>Used for planting food for strangers, visitors.</td>
</tr>
<tr>
<td>bute nyrde</td>
<td>its corners</td>
<td>Also used for corners of other things. General term. In gardens, it is the four corners remaining when an elongated oval is inscribed inside the rectangle formed by the band running along the border (bei).</td>
</tr>
<tr>
<td>drlq</td>
<td>garden</td>
<td>Not sure how this is different from nrlanc, if it is.</td>
</tr>
<tr>
<td>lc nyz be</td>
<td>center strip of tepu</td>
<td>Divides the round center of the garden plot in half.</td>
</tr>
<tr>
<td>nprq</td>
<td>plot of land</td>
<td>Not necessarily planted as a garden.</td>
</tr>
<tr>
<td>nzti drka'</td>
<td>devil's path</td>
<td>A path that runs through a garden lengthwise, alongside the round, center part of the garden plot (tepu).</td>
</tr>
<tr>
<td>ncngrbz</td>
<td>boundary</td>
<td>Used for any kind of boundary. For gardens it means the stone or log boundary.</td>
</tr>
<tr>
<td>nrlanc</td>
<td>garden</td>
<td>General word for garden.</td>
</tr>
<tr>
<td>nrlarde</td>
<td>its sides</td>
<td>General word for sides. For gardens it is two lengthwise strips on either side of the round center, and outside the devil's path.</td>
</tr>
<tr>
<td>nrlc</td>
<td>area, yard, place</td>
<td>General word for place.</td>
</tr>
<tr>
<td>nyrapalvz</td>
<td>??</td>
<td>Garden-related</td>
</tr>
<tr>
<td>nyrprlqve</td>
<td>??</td>
<td>Garden-related</td>
</tr>
<tr>
<td>nyrlxkq</td>
<td>??</td>
<td>Garden-related</td>
</tr>
<tr>
<td>popz'</td>
<td>bow-shaped garden section</td>
<td>General word for bow used to shoot arrows.</td>
</tr>
<tr>
<td>tepu</td>
<td>round center part of garden plot</td>
<td>Named for its shape being similar to tepu 'coconut shell'.</td>
</tr>
</tbody>
</table>

4.4 *Nelc dance*

The third phase of our ethnobotany research was to study plants related to the culturally significant *nelc* dance (Boerger 2009, Davenport 1975). The Santa Cruz *nelc* dance is shared by the four related languages on the island—Natügu [ntu], Nålōgo [nlz], Noipä [npx], and Engdewu (formerly called Nagu) [ngr], and the dance is one of the most significant cultural identifiers. As Davenport (1975:39) says, they are “the most-enjoyed social occasions and display distinctive Santa Cruz art forms—the lyric poetry and the elaborate costumery.” Though “costume” components use materials from the sea and animals, most of the dance costume articles are made from plant materials, making the dance study a good intersection of culture documentation and ethnobotany. That is, the breechclout, armbands, wristbands, and headbands, plus leg rattles, pounding sticks, and decorative leaves are all plant materials. The only non-plant materials are some shells and feathers.

As noted earlier, ethnobotany involves learning about the uses of plants in a society. So, while it is interesting that plant A is used for purpose B, that information cannot actually be applied unless one knows the procedures for how to prepare A so that it becomes B. For example, it is one thing to know that the leaves and branches of certain palms are good for making baskets; it is quite another thing to actually be able to make a basket. Of particular interest with regard to the *nelc* dance was the woven banana fiber breechclout worn by the hired dancers. Such weaving is the proprietary skill of a particular clan from Nrrle village on Graciosa Bay. As part of this research, Selwyn Balq, the weaving clan leader,
taught fieldwork intern Kim Wells, an amateur weaver herself, the entire process from felling specific kinds of banana plants to processing the fibers, and from stringing the backstrap loom to creating the finished product. She did a term paper on this (Wells 2016) and her paper co-authored with Balq about endangered weaving vocabulary is in this volume (Wells and Balq 2019).

Adam, another of the interns, interviewed men from the community to investigate the nelc dance, including the materials, design, and production of other aspects of the nelc dance costume. Both he and Kim then added these new technical terms to the lexical database, and any unknown tree and plant names were targeted for collection and identification, as advised by Pawley (2009) for indigenous dictionaries.

Figure 16. Dance costume. ©2015 Adam Walker.

4.5 Collect, label, and package plants

The fourth facet of the ethnobotany focus was delayed multiple times due to a period of heavy rains, making the rainforest unconducive to photos and the paths too slippery for safety. Ultimately, our collection of plants ended up being limited to two days in the bush to collect the targeted samples. The target list came from several sources: trees used in other aspects of nelc dance costume, trees for which we had a Natqgu word but no English or Latin scientific name, and suggestions from our rainforest consultants regarding what might be found at various altitudes and environments. Santa Cruz has a coastal area that rises steeply to higher plateaus at different elevations. So, six rain forest consultants led four interns into the high bush, mid-bush, low bush, and coastal areas for tree and plant collection purposes. Each group had the full list of target trees, but with specific ones identified for them to bring back two separate samples of. The list of trees collected is included as Appendix A to this article.

While all of the consultants were extremely helpful, Leonard Menrlwz was identified to be co-author on this article due to having the greatest experience in Natqgu literacy and in consulting with the team. We depend on his insights. In addition, though not named as a co-author here, Selwyn Balq also served as a rainforest consultant and later helped clarify some of the samples collected.
To process the samples, the team then used two sets of presses donated by BRIT, along with corrugated ventilators purchased and shipped by Brenda Boerger to the Solomon Islands, and newspapers acquired there. The combination of ventilators and newspaper allows the samples to be pressed flat while drying.

4.6  Donate plants to herbaria

The final aspect of the ethnobotany research was to donate the samples collected to two herbaria for official, scientific identification. Herbaria around the world have reciprocal agreements and necessary permissions for shipping plant samples to and from each other. Therefore, on our return to Honiara, team members returned to the Botanical Gardens and met with co-author Myknee Q. Sirikolo, Jr. to donate both sets of samples—one for the Solomon Islands and one for the Solomon Islands botanists to send to BRIT.

5  Natqgu ethnobotany successes and shortcomings

5.1  Successes

The successes of integrating ethnobotany with linguistic fieldwork include potential for positive effects in at least four areas: effects on the community, the corpus, scholarship, and the research team. Some positive effects of community engagement regarding the entire dictionary process using the RWC workshop were reported in Boerger (2017).

5.1.1  Community effects

One of the positive effects of the ethnobotany component of the fieldwork was that it created an opportunity for community members to reflect on the importance of their botanical resources. Knowledge about gardening and tree cultivation seem to be well maintained, confirming the findings by Benz et al. (2000) that TEK is maintained when it is critical to subsistence.

In ethnobotany we were able to involve a broader spectrum of the community than might be the case in more individual, language-focused fieldwork. This included working with older people, those who were not yet able to read Natqgu, and those who had expertise in TEK. The sample collection trip into the bush also promoted the health of one of the rainforest consultants. He is an older man and thought that he was not physically capable of leading interns into the bush. However, he was willing to try and later reported that the physical exertion actually made his back feel better than it had in a long
time. After that he had the endurance to stay up very late several nights in a row in order to make hand-
crafted gifts for each of the expat team members.

A less tangible effect is the increased status afforded a community, a culture, or a language when
outside scholars demonstrate an interest (Ostler 2003:176, Boerger 2015:152). The people themselves
often feel valued when they are recognized as a significant part of the mosaic of communities around the
world. And their status is also effectively higher in the eyes of provincial and national government
offices. Two years later we heard reports that there has been renewed, strong interest in Natqgu
language and Santa Cruz culture since the fieldwork there in 2015.

5.1.2 Fieldworker effects

Some of the effects on the fieldwork interns are the following: It deepened relationships with the
rainforest consultant who led them on the collection trip. It took all but Alex, who grew up on the island,
outside their physical comfort zones and intellectual competence zones. It increased their appreciation
for tropical rainforest ecology. One of the interns, Jeremiah, has been employed as a US wilderness forest
guide. He had the same kind of culture shock in the tropics that Alex experienced in the US. He did not
know any of the trees or their uses or their dangers. Another intern, Adam, bonded with his host family
while researching the nelc dance. Kim also bonded with the family where she learned banana fiber
weaving. She plans to study Santa Cruz weaving craft more deeply for her MA.

As for Alex and Brenda, the fieldwork deepened our existing relationships with the community—
with both old friends and new ones. As we discussed words in the glossing rooms, it made Brenda
nostalgically reflect back twenty years or more to the specific occasion when she learned a particular
word or another. As Alex and Brenda worked on the paper, we were discussing the appearance of one of
the trees. He said its branches were trkla ‘pronged’, but Brenda didn’t know that word and heard trklae ‘a
kind of bird’. That led us into a discussion of how the domains of words the two of us know often do not
overlap.

5.1.3 Corpus effects

Corpus-related effects are of two types. First, one obvious effect of the ethnobotany focus on the corpus
has been to give a deeper and richer database in ethnobotany. It is deeper with regard to the 280 tree
names. And it is richer because some of the tree and plant terms are enhanced by descriptions and uses
in the culture. The latter is particularly true for the banana fiber weaving terminology and the nelc dance
vocabulary. Secondly, the corpus, once archived, provides a repository for the preservation of TEK, so
that this knowledge will be available to the community and others long term.

5.1.4 Scholarship effects

The products of the fieldwork will eventually include a dictionary—both print and digital—whose
entries will also contain the TEK documented to date. In addition, presentations and articles like this one
can contribute to making scholars more widely aware of Natqgu speakers’ TEK, and can also influence
others to include TEK as a component of their linguistic fieldwork.

5.2 Shortcomings

As team leader, I, Brenda, made several mistakes that we hope others can learn from going forward.
First, I vaguely recall that I was the one who suggested postponing the glossing of the entire 1.5 Plant
domain of handwritten wordlists from the collection groups until we could take time to focus on it and
perhaps get some more books to help us find English and Latin names. Then when the workshop ended,
however, it was completely forgotten and the 414 words collected were not glossed or entered into the
FLEx database. I discovered the error in April 2017 when my work on this presentation required me to
test the actual handwritten data sheets we collected. I added all the words to the lexical database, but
many of them still did not have glosses of any kind. But thanks to input from co-author Alex in April, and co-author Sirikolo in July, and with further input from master weaver Selwyn, I was able to fill in most of the missing terms, tree names, and scientific names.

Another misstep occurred during the RWC workshop itself. One of the participants got interested in showing trees to one of the interns and was bringing samples to show him. I made the mistake of asking them to wait until the later plant gathering focus so we could collect the words during the workshop. But my being task-oriented means we may have missed a plant narrative, similar to what Odango (2013) described as being particularly fruitful. Regrettfully, that particular participant left the island before the plant gathering trip, and was unable to participate in the plant collection trip after all.

Furthermore, as mentioned above, I could have and should have insisted that they start the botany collection trips earlier, so that we could have obtained more samples.

I also blundered during the plant collection event by being too “hands off” in the data management aspects of it. The four men who collected samples had a hand-written master list somewhere, which may have been tossed with the trash when we were packing to leave. I did take another list out of the trash, but it was missing the names of the first eleven plants collected. As it turns out, according to the botany training we received, the vernacular names were written on the newspaper used for bundling the samples, so when I returned to the Solomon Islands in June 2017, I was able to consult with co-author Sirikolo at the Solomon Islands Herbarium, where we opened both sets of tree samples to get the names for the missing trees. However, when we did that, we found that the two sets were not identical, as we had intended. There was no sample 11 in Set A and there was no sample 46 in set B. Some of the other samples did not line up with those in the other set, and in one sample there were leaves from two different trees. These discrepancies were resolved with assistance from Sirikolo and later from Selwyn Balq, so the data was not ultimately lost.

The four field teams also took photos of the trees they were sampling, which was intended to make any discrepancies in the dataset easier to resolve. I was informed, however, that one of the interns did not write down any of the tree names at the time, but later when they were strapping them together for pressing, he tried to remember the sample, the vernacular name and the corresponding photo all from memory. While his memory may be better than mine, I am not confident of that particular data set.

Clearly data management for the trees and samples was not handled well in the field. I had asked Alex to take leadership for the ethnobotany focus because of his knowledge and interest. But none of the names of the tree samples were typed into a computer before we left the island. He had asked me to hover less and let the team do their work. But by backing off completely, the data sets we collected for the samples were not handled well. Alex and I learned that we need to work on more effective communications when we have a professional as well as a family relationship.

I had hoped that the second set of plant samples would be sent to BRIT in time for me to have the scientific names in advance of my presentation at the 10th Conference On Oceanic Linguistics (COOL10) in July 2017. But another oversight was my failing to provide the necessary postage and customs fees for shipping the sample until after the conclusion of COOL10. Thankfully, following the conference, the second set of samples collected was prepared, paid for, and posted to BRIT in Fort Worth, Texas, and the work done by the team in 2015 was still made effective.
So, in spite of the good training received at BRIT, in retrospect, the co-authors agree that it would have been more effective to include either an intern with training in field botany or a professional botanist on the team with us in Santa Cruz for the botanical fieldwork portion of the research. That way, even though the mistakes were not catastrophic, a botanist could have helped us be more rigorous in our handling of the materials and the data, and very likely more samples could have been collected.

6 Fieldwork gleanings

We have seen that like language endangerment, TEK is often also endangered and incorporating it in language-related fieldwork supports community well-being and enriches the data corpus. But linguistics can also be of value to botanical expeditions. A linguist can strengthen botanical work by collecting local names of plants with perhaps a more accurate spelling than has often otherwise been achieved. Linguists can also facilitate working in the vernacular, rather than just the language of wider communication, which can lead to longer term effectiveness and language maintenance (Drew and Henne 2006:36; Si 2011:169).

The same advantages will hold not just for ethnobotany, but also when including other cultural knowledge, such as the following categories recognized by UNESCO:

Cultural heritage...also includes traditions or living expressions inherited from our ancestors and passed on to our descendants, such as oral traditions, performing arts, social practices, rituals, festive events, knowledge and practices concerning nature and the universe or the knowledge and skills to produce traditional crafts (http://www.unesco.org/culture/ich/index.php?pg = 00002).

Therefore, whenever linguists can target such cultural heritage and practices in the interviews we do or in the data sets we collect. It adds value to our work and to our corpus.

We also mentioned above two further strategies for achieving these kinds of goals and results. One of these is the RWC workshop, during which an exploration of all domains means that words and concepts are explored which can be missed in text-based fieldwork. The Natqgu workshop generated interest in several participants to continue researching words beyond the workshop context. And it
brought together generations and genders of community members who do not necessarily relate that intensively in their daily lives.

7 Best practice in collaborative research with communities and other disciplines

One of the articles identified in our initial Google search for “Loss of ethnobotanical knowledge” was an editorial by Carlos R. Ramirez (2007). At the end of it he makes seven suggestions for how the Society for Economic Botany might help slow or reverse the loss of TEK. These are listed below, with our input on how his suggestions can be applied more broadly in interdisciplinary fieldwork by linguists and their associates to support community well-being through undergirding language and culture vitality. We include three additional suggestions for effective collaborative fieldwork.

1. Promote collaborations with indigenous people.

Ramirez suggests including our local consultants as co-authors of our publications, just as we might include students or academic collaborators. Our paper, itself, is an application of that principle, since an intern, a rainforest consultant, and the Solomon Islands botanist Myknee Sirikolo, are all co-authors with Boerger. Similarly, Kim Beebe Wells applied this principle in the paper (2019, this volume) she co-authored with Selwyn Balq. Furthermore, Sirikolo conducted an ethnobotany workshop for participants in conjunction with COOL10, where the papers were first presented.

Figure 21. Sirikolo at ethnobotany workshop. ©2017 Brenda H. Boerger.
2. Help indigenous communities map their lands to identify sites critical for their cultural survival.

In addition to the botanical mapping suggested by Ramirez, we might also suggest activities which help communities identify language and culture loss and ways they want to work together to strengthen language vitality.

3. Work with young members of communities and establish long term collaboration projects that can be carried on by them.

Just as Ramirez reported that botanists often work with the elders who have the greatest TEK, linguists, too, often do the same thing due to the greater knowledge and command of a language. He is right in saying that this can marginalize younger members of the community, who should be included in long term projects since they will live longer and can carry such a project through to completion. To partially apply this principle, participants in the Natqgu RWC workshop in 2015 represented youth, middle-aged people, and elders. Some of the younger, single men learned to read and write Natqgu during break times and after hours in relation to the workshop.

We noted above that Beltrán-Rodriguez et al. (2014) found that men’s and women’s botanical knowledge differed. Assuming that men and women might differ in other domains of knowledge, as well, the RWC participants also included five women in the younger and middle-aged groups, allowing for one woman per collection group. One older woman participated in an all-female group one day when they discussed childbirth practices and was particularly helpful sharing about home births in the past before the hospital at Lata became the norm for deliveries on the island. Having multiple age groups participate increased unity as their appreciation of each other grew.

4. Promote the exchange of knowledge and ideas between communities and scientists by hosting community members in some of our meetings.

One of the advantages to having COOL10 in the Solomon Islands was the chance for more community members to attend than when COOL has met in New Zealand or Australia. We were hosted in their country and community members are being hosted in our professional meeting. It has been particularly stimulating to have speakers of some of the languages we study at the conference with us. In particular, weaving master, Selwyn Balq, attended all week, along with most of the Solomon Islands Museum staff, as co-sponsors of the event.

5. Promote opinion letters in our publications by indigenous people.

We are unaware of linguistics publications where opinion letters or editorials are common (e.g., *Ethnobotany Research and Application* or *Economic Botany Newsletter*). So, exactly how to apply this suggestion needs to be explored. Social media may provide such avenues and this should be explored.

6. Take advantage of indigenous peoples’ skills.

In 2007, Carlos Ramirez said

> Do not just use people for collecting and identifying plants but also recognize them for their artistic or pedagogic knowledge. For example, this can be done when teaching courses abroad by involving local community members to demonstrate their skill in making artifacts, like extracting plant fibers, dying them with natural dyes and basket weaving. Learning directly from weavers can be transforming for students and teachers and in the end provides an extra income to community members.

It is especially interesting that Ramirez mentions extracting plant fibers and weaving, this relates directly to Selwyn Balq, the weaving craft expert who taught Kim Wells.

7. Educate the next generation (of outside scholars) to make every effort to improve our involvement with indigenous communities wherever they conduct their studies.
Once again, Ramirez expresses what linguists already agree is important. When we come as learners—of a language, or a skill, or a domain of knowledge—we show the value we place on the expertise of people in the communities who allow us to become part of them for a season. Encouraging interns to learn from community members was B. Boerger's intent with the five who joined the fieldwork team in 2015. They found this aspect of the trip particularly rewarding.

The co-authors would add three more points to those made by Ramirez, for more effective collaborative fieldwork. These have been mentioned above and are included here for completeness.

8. Include scholars of the complementary disciplines on the fieldwork team.

Interdisciplinary teams should include at least one individual with leadership capabilities in each of the relevant disciplines for which research is targeted.

9. Strategically collect materials and recordings which can serve multiple goals and purposes—the community's and all disciplines involved.

Many of the UNESCO cultural heritage categories are likely to lend themselves to interdisciplinary fieldwork which is also of interest to the community.

10. Engage in team building; sort out roles in advance; negotiate as needed.

There were times when interpersonal conflicts within the team and between team members and community members could have been more effectively handled. Advance preparation could have made the resolutions smoother.

8 Conclusion

In this paper we have shown that ethnobotany can be successfully integrated into linguistic fieldwork and we proposed that the reverse is also true (Si 2011). As evidence of this success, the majority of the research goals of the project were accomplished. Furthermore, this research benefitted the community, the fieldworkers, the documentary corpus, and scholarship in linguistics and ethnobotany. We gave evidence that Rapid Word Collection (RWC) is effective in deeper explorations of botanical domains, as well as domains related to the uses of botanical items. Highlights of the ethnobotanical research were working with the local community, collecting botanical samples, exploring variations on garden layouts, and learning about Santa Cruz nocl dance costume, more specifically the banana fiber weaving craft used to make the breechclouts worn by the male singer-dancers.

While the research team leader made some mistakes, we feel that the positive impacts of the fieldwork outweigh the negative ones. We hope that others will follow our recommendations for how to do effective collaborative fieldwork, so that future interdisciplinary work is improved through what we learned. We conclude that ethnobotany adds a valuable component to field linguistics for both the community and for scholarship and suggest that it be considered best practice to incorporate it—as well as other interdisciplinary efforts—in documentary linguistic fieldwork.
Appendix A: Botany samples from Santa Cruz Island

A.1. Metadata

Supervising professor: Dr. Brenda H. Boerger

brenda_boerger@sil.org
US mobile # 972-273-9356
Or in Solomon Islands, phone James Ashley at SITAG 7494908 mobile

Fieldworkers:

AB Alex Boerger
AW Adam Walker
BB Brown Bolon
DF Donald Furnival
DM Douglas Medxi
JA Jeremiah Aviel
KC Kennedy Clq
LM Leonard Menrlwz
PM Philip Malu
SB Selwyn Balq

Collected October–November 2015

Corrected data 2017, with Selwyn Balq and Myknee Q. Sirikolo, Jr.

These materials also have accompanying photos. GPS data is embedded for some of them. The only camera with GPS was sent with the team going for vegetation in the deep bush.

All of the samples were collected on Santa Cruz Island, Solomon Islands, along Graciosa Bay, between the villages of Bznwz and Nzu and the coastal and bush areas associated with them. In the geography of Graciosa Bay, the villages are at coastal elevations with the bush rising fairly steeply behind them, eventually leveling off somewhat onto plateaus where people plant their gardens. The highest elevation on the island is 549 meters.

Four elevations are referred to on the chart:

- Coastal/Cultivated, at the lowest elevation, sea level to 5 meters
- Near bush, at approximately 5-50 meters elevation, immediately behind the houses on the bush side of the road along Graciosa Bay
- Bush, at approximately 50-200 meters elevation; one must walk for 10-15 minutes to reach the bush areas, and are out of sight of villages
- Deep bush, at over 200 meters elevation; one must walk for 30 minutes or more to reach the deep bush
### A.2. Trees collected in November 2015

<table>
<thead>
<tr>
<th>Natqgu</th>
<th>Scientific</th>
<th>English</th>
<th>Latitude</th>
<th>Longitude</th>
<th>Altitude/Habitat</th>
<th>Field workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>01. be nyz bq</td>
<td>Lygodium palmatum</td>
<td>palm fern</td>
<td></td>
<td></td>
<td></td>
<td>AB, AW, DF, SB</td>
</tr>
<tr>
<td>02. nc soli x</td>
<td>Gnetum gnemon</td>
<td>king tree</td>
<td></td>
<td></td>
<td></td>
<td>AB, AW, DF, SB</td>
</tr>
<tr>
<td>03. nc soli, nc bqlr, nc loprta</td>
<td>Gnetum gnemon</td>
<td>king tree, male</td>
<td></td>
<td></td>
<td></td>
<td>AB, AW, DF, SB</td>
</tr>
<tr>
<td>04. nc kalvao</td>
<td>Licuala lauterbachii</td>
<td>fan palm, seedling</td>
<td></td>
<td></td>
<td></td>
<td>AB, AW, DF, SB</td>
</tr>
<tr>
<td>05. nc kalva</td>
<td>Areca macrocalyx</td>
<td>betelnut, wild</td>
<td></td>
<td></td>
<td></td>
<td>AB, AW, DF, SB</td>
</tr>
<tr>
<td>06. natrkyya</td>
<td>Selaginella rechingeri</td>
<td>creeper</td>
<td></td>
<td></td>
<td></td>
<td>AB, AW, DF, SB</td>
</tr>
<tr>
<td>07. nc mini</td>
<td>Melicope elleryana</td>
<td>pink flowered doughwood</td>
<td></td>
<td></td>
<td></td>
<td>AB, AW, DF, SB</td>
</tr>
<tr>
<td>08. nc trkir</td>
<td>Pandanus (sp.)</td>
<td>pandanus</td>
<td></td>
<td></td>
<td></td>
<td>AB, AW, DF, SB</td>
</tr>
<tr>
<td>09. nc leng</td>
<td>Cordyline fruticosa</td>
<td>cabbage palm</td>
<td></td>
<td></td>
<td></td>
<td>AB, AW, DF, SB</td>
</tr>
<tr>
<td>10. loya</td>
<td>Hornstedtia lycostoma</td>
<td>ginger</td>
<td></td>
<td></td>
<td></td>
<td>AB, AW, DF, SB</td>
</tr>
<tr>
<td>11. _____</td>
<td>Licuala lauterbachii</td>
<td>palm, rattle, Similar to nzklo</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. nc trpili</td>
<td>See #34</td>
<td>kauri</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. leuwaga</td>
<td>Asplenium nidus</td>
<td>bird’s nest fern</td>
<td>S -10,45,4. 704</td>
<td>E 165,46,55. 98</td>
<td>Deep bush</td>
<td>AW, PM, BM</td>
</tr>
<tr>
<td>14. nc bia kio</td>
<td>Artocarpus altlis</td>
<td>domestic breadfruit</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. nc lzkuba</td>
<td>---</td>
<td>vomit tree</td>
<td>S -10,45,3. 654</td>
<td>E 165,47,8. 424</td>
<td>Deep bush</td>
<td>AW, PM, BM</td>
</tr>
<tr>
<td>16. nrpa’i</td>
<td>Derris heterophylla</td>
<td>poison tree</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. nc srpwale</td>
<td>Pangium edule</td>
<td>rattle tree</td>
<td>S -10,45, 31.752</td>
<td>E 165,46,29. 142</td>
<td>Deep bush</td>
<td>AW, PM, BM</td>
</tr>
<tr>
<td>18. nc ningzlo</td>
<td>Ficus (sp.)</td>
<td>ficus, fig</td>
<td>S 10,45,4. 410</td>
<td>E 165,46,55. 920</td>
<td>Deep bush</td>
<td>AW, PM, BM</td>
</tr>
<tr>
<td>19. nqvi milihq</td>
<td>Scindapsus latissimus</td>
<td>forest rope, climber, creeper</td>
<td>S 10,45,21. 792</td>
<td>E 165,46,46. 674</td>
<td>Deep bush</td>
<td>AW, PM, BM</td>
</tr>
<tr>
<td>20. nc yrni</td>
<td>Pterocarpus Indicus</td>
<td>rosewood tree</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Code</td>
<td>Local Name</td>
<td>English Name</td>
<td>Notes</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>21.</td>
<td>nc lrpz</td>
<td><em>Tapa</em> cloth tree</td>
<td>ficus wass</td>
<td>Deep bush</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22.</td>
<td>nc drltzu</td>
<td><em>Syzygium</em> (sp.)</td>
<td>assid, wild fruit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23.</td>
<td>nc mrz</td>
<td><em>Codiaeum variegatum</em></td>
<td>croton, ornamental tree</td>
<td>Cultivated / Coastal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24.</td>
<td>nc niglq</td>
<td><em>Cordia subcordata lam.</em></td>
<td>sea trumpet</td>
<td>Cultivated / Coastal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25.</td>
<td>nc nima</td>
<td><em>Pipturus argenteus</em></td>
<td>white nettle</td>
<td>Cultivated / Coastal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26.</td>
<td>nqvi nyz kx rlvc</td>
<td><em>Mikania micrantha</em></td>
<td>mile-a-minute creeper</td>
<td>Weed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27.</td>
<td>legou</td>
<td><em>Pothos</em> (sp.)</td>
<td>climber, creeper</td>
<td>Near bush AB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28.</td>
<td>nc nzlu</td>
<td><em>Cocos nucifera</em></td>
<td>coconut</td>
<td>Cultivated / Coastal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>29.</td>
<td>nc blei</td>
<td><em>Bambusa vulgaris</em></td>
<td>bamboo</td>
<td>Near bush</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30.</td>
<td>nc saliki</td>
<td><em>Elaeocarpus sphaericus</em></td>
<td>seedling of a tree called ‘rudraksha’. It has a blue olive berry</td>
<td>Cultivated / Coastal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31.</td>
<td>nc leble</td>
<td><em>Melicope elleryana</em></td>
<td>pink flowered doughwood</td>
<td>see #7 (diff species)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>32.</td>
<td>nc tea</td>
<td><em>Cyathea vittata</em></td>
<td>tree fern</td>
<td>Cultivated / Coastal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>33.</td>
<td>nc lebwao</td>
<td><em>Crinum asiaticum</em></td>
<td>spider lily</td>
<td>Cultivated / Coastal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>34.</td>
<td>nc trpili</td>
<td><em>Agathis macrophylla</em></td>
<td>kauri</td>
<td>Bush JA, DF, BB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35.</td>
<td>nc plobia ncpc</td>
<td><em>Ficus septica</em></td>
<td>ficus, fig storm tree?</td>
<td>Bush JA, DF, BB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>36.</td>
<td>nc nya'px</td>
<td><em>Canarium</em> sp.</td>
<td>rel of ngalinut</td>
<td>Bush JA, DF, BB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>37.</td>
<td>nc malx</td>
<td><em>Calamus holrrungii</em></td>
<td>rattan, cane</td>
<td>Bush JA, DF, BB, ?</td>
<td></td>
<td></td>
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<tr>
<td>38.</td>
<td>nc nei</td>
<td><em>Cycas seemanii</em></td>
<td>cycad</td>
<td>Bush JA, DF, BB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>39.</td>
<td>bwì</td>
<td><em>Myrmecodia solomone</em></td>
<td>ant plant</td>
<td>Bush JA, DF, BB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40.</td>
<td>nc ___</td>
<td><em>Cerbera manghas</em></td>
<td>tree with mango-like fruit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>41.</td>
<td>nc lubia</td>
<td><em>Intsia bijuga</em></td>
<td>legume tree</td>
<td>Bush JA, DF, BB, ?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No.</td>
<td>Code</td>
<td>Common Name</td>
<td>Scientific Name</td>
<td>Description</td>
<td>Location</td>
<td>Method</td>
</tr>
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<td>-----</td>
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</tr>
<tr>
<td>42.</td>
<td>nc nrkr</td>
<td>poison, posts; unknown by Sirikolo and Alex B.</td>
<td><em>Myrtaceae?</em> (c.f. <em>Syzygium</em> [sp.?])</td>
<td>S 10,45,42. 696</td>
<td>E 165,49,20. 952</td>
<td>Cultivated / Coastal</td>
</tr>
<tr>
<td>43.</td>
<td>nc nqlq</td>
<td>treasure, bigman.</td>
<td><em>Mytasi</em> family</td>
<td>S 10,45,44. 13</td>
<td>E 165,49,26. 886</td>
<td>Cultivated / Coastal</td>
</tr>
<tr>
<td>44.</td>
<td>nc brpiamc</td>
<td>herbaceous plant</td>
<td><em>Coles</em></td>
<td></td>
<td></td>
<td>Cultivated / Coastal</td>
</tr>
<tr>
<td>45.</td>
<td>dramc</td>
<td>small creeping herb</td>
<td><em>Purple</em></td>
<td></td>
<td></td>
<td>Cultivated / Coastal</td>
</tr>
<tr>
<td>46.</td>
<td>legou</td>
<td>creeper, climber</td>
<td><em>Potos</em> (sp.)</td>
<td></td>
<td></td>
<td>Deep bush</td>
</tr>
<tr>
<td>47.</td>
<td>nc nole</td>
<td>rengas tree</td>
<td><em>Semecarpus forstenii</em></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix B: Natqgu Plants

A a

aklo  N  shell ginger. Pink-colored. [Alpinia nutans]

B b

babwin  N  pumpkin. Both meat and greens are eaten. [Cucurbita maxima; Cucurbita moschata; Cucurbita pepo L.] (<English)

bancte nyz lr Bznwz  NP breadfruit from Bznwz village.

bancte nyz lr Mzlo  NP breadfruit from Mzlo village.

banyapu  N  pineapple. [Ananas comosus] syn: ckrle  pineapple. (<English)

be  N  top part of something

bc  N  top part of pumpkin greens. Top part of pumpkin vine that is cut off and eaten. [Cucurbita maxima]

bcbaepu  N  vegetable fern. Greens that grow along the river, frequently sold at market, small leaves [Diplazium esculentum]

bcnc  N  leaf vine. Found near loprta, but leaves are rough, so people only eat the young leaves. Rope from the vine is used to tie firewood to carry down from bush.

be nounc  N  bark of a tree

be nyz bq  NP  palm fern. Its rope is used for tying leaf panels on houses and for making baskets, round baskets or ones with handles. Also used to make armbands for custom dances. [Lygodium palmatum]

be tepu  N  empty coconut half shell used as a container or scooping tool.

bei  N  outer garden band. This is a narrow band of land that encircles a garden plot and touches the outer boundary at all points. PIC

bia  N  breadfruit. [Artocarpus incisus]

bia bikqlq  N comp breadfruit tree described as bikqlq [Artocarpus]

bia boi  N comp long-fruited breadfruit. Normally found in Nrrle. [Artocarpus]

bia brlc  N comp large-fruited breadfruit. It has a firm meat. Not many seeds. Good for making dried breadfruit. [Artocarpus]

bia bula  N comp tan breadfruit. Breadfruit with light brown meat. Not much on Graciosa Bay. But found on Neo Island. Called moldy (bula) because the color makes it look like it is spoiled, but it is not. [Artocarpus]

bia kai  N comp pudding breadfruit. Kind used to make pudding (kai). [Artocarpus]

bia kilu  N comp kilu-shaped breadfruit. The fruit is shaped like leaves of 'kilu' greens. [Artocarpus]

bia kio  N comp domestic breadfruit. Literally 'dog breadfruit.' So named because it grows near villages. Round, smooth fruit. White stripes on body of fruit when it is ripe. [Artocarpus altillus]

bia kio nyz lr Napr  N comp domestic breadfruit from Napr village. [Artocarpus]

bia kxboi nyz lr Nrrle  N comp long breadfruit from Nrrle village. Sap is gummy and sticky. [Artocarpus]

bia lekq  N comp yam-like breadfruit. Breadfruit is shaped like yam (lekq) [Artocarpus]

bia loma  N comp loma breadfruit. Its fruit relates to welcome vine plant (loma). [Artocarpus]

bia lomini  N comp village breadfruit. It does not grow well in the bush. But near the village it grows well with good, big, round fruit. Its skin is rough. [Artocarpus]

bia lopx  NP  seagrass breadfruit. Small-fruited and suitable for baking, but not roasting. Named after seagrass (lopx). [Artocarpus]

bia mena  N comp Breadfruit similar to bia lomini in size. Has a spread out leaf. [Artocarpus]
**bia mnrtq ncnai**b\x N comp  late breadfruit. Last breadfruit to be harvested. It keeps a long time before going bad and can be shipped to Honiara without spoiling. Tree is tall and grows quickly, within two years. When the fruit falls it is still firm and can be picked up from the ground even after three or four days. No seeds inside it. Skin is bright yellow. [Artocarpus]

**bia nabzde pc** N comp yellow breadfruit. Inner fruit is yellow. Fruit is smallish, nice-tasting. Small fire is suitable for cooking it. If its thin skin is burned it spoils the food. When it falls it is ripe and must be eaten immediately. [Artocarpus]

**bia narrnpya** N comp  big yellow breadfruit. Inner fruit is yellow, similar to bia nabzde pc, but its fruit is bigger. [Artocarpus]

**bia nc lea** N comp  round breadfruit. Has round fruit, similar to short-stemmed bia nr. [Artocarpus]

**bia nr** N comp  short stem breadfruit. Stem where fruit attaches is short. Fruit has a green body with bumpy skin. Spacing in openings of leaves is spread out. [Artocarpus]

**bia nratrpwalro** N comp smooth breadfruit. Similar to domestic bia kio, also having round, smooth fruit. [Artocarpus]

**bia nyz lrmzta** N comp  soursop. Literally 'foreigner's breadfruit' [Annona muricata]

**bia olvz** N comp  female breadfruit. Looks similar to Bznwz breadfruit, but tastes different. [Artocarpus]

**bia opx** N comp  go out breadfruit. Very productive and easily moves out to grow in nearby places. [Artocarpus]

**bia prlvzki** N comp  well-liked breadfruit. Literally 'breadfruit we-2.like.it'. [Artocarpus]

**bia tengzliq** N comp fan-leaf breadfruit. Has elongated fruit and a long stem. Leaves are shaped like a fan (tengzliq). [Artocarpus]

**bia trkutu** N comp  early breadfruit. Ripens before others; named after louse (trkutu). [Artocarpus]

**bia tz** N comp  long stem breadfruit. Has big fruit and long stem; found only in Lr Nomi. Spacing between openings of leaves is more closed than the spread out spacing of bia nr leaves. [Artocarpus]

**bia Yrpulz** N comp  Yrpulz breadfruit. Found at a place in the bush near Mateone village, named Yrpulz. [Artocarpus/ shortened form of bia nyzdr lr Yrpulz]

**blak bin** (E) NP  black bean. (<English)

**blos** N Reef islands breadfruit. Large variety found in Reef Islands. [Artocarpus] (<Äiwoo bulosi large breadfruit)

**boksoi** N Chinese cabbage. Bok choy. [Brassica rapa var. chinensis (L.) Kitamura; Beta vulgaris] (<English bok choy [from Chinese])

**bou** N comp  Hard, dense, yellowish wood with very wavy grain; easy to saw, but very hard to chop with a bladed tool. It has extreme resistance to elements and insects, so is used for house posts and carvings. Also used for chalices for priests in COM churches. Not compounded with "nc".

**bqk** N vine papaya. syn: tabao kx mz nqvi vine.papaya.

**bqlr** N edible flower of kingtree. [Gnetum gnemon]

**brpi** N banana. Generic word for any kind of banana. [Musa]

**brpi bede ve** N comp  thick-skinned banana. Bears thick-skinned bananas on a narrow stalk. Fruit is 4-6 inches long, with two flat sides and a rounded edge. [Musa]

**brpi bz** NP  black fiber banana tree. Its fruit grows straight up. Its fruit is bigger and fatter than wild banana. [Musa]

**brpi dapubwa** N comp  big fruit banana tree. Fruit is eaten cooked or raw. Large nine inch bananas. Tree is used for weaving fibers. [Musa]

**brpi do** N comp  wild banana tree. Has very small fruit which grows straight up, without hanging. [Musa]
brpi loa  N comp  small fruit banana tree. Small fruit like brpi do.  [Musa]

brpi lxkq  N comp  huge fruit banana tree. Has very large fruit. Used for banana fiber.  [Musa]

brpi nivc  N comp  compact banana tree. Bunches of bananas grow very close together. Green skin turns yellow when ripe. White fibers for weaving.  [Musa]

brpi nyaka  N comp  young black banana tree. Used for weaving fiber; black fibers when young.  [Musa]

brpi nyz Lebz  N comp  Lebz banana tree. [Musa]  Where is Lebz?

brpi plcali  N comp  twice ripe banana tree. Its skin becomes red twice. The first time it isn't ripe. Then it changes a bit darker when it is really ripe. Hence the name ripe-twice. Used for weaving fiber.  [Musa]

brpi soke  N comp  broad based banana tree. Similar to thick-skinned banana, but the stalk of brpi soke is one broad base and its branches are also thicker and bigger. Used for weaving fiber.  [Musa]

brpi szlekaon  N comp  feast banana. Small cooking banana which is short and nice tasting. Often served at feasts.  [Musa]

brpipi  NP  striped banana. Fruit is 4-6 inches long with stripes.  [Musa]

brte  N  1) inner parts, guts of something; plant or animal must be cut to get to the inner parts.  2) inner patch of garden, used for planting food for strangers


bupi  N  1) parasitic growth on tree, shaped like a peaked dome. Ants can go live in it.  2) boil on body which looks like a parasitic tree growth syn: kxpubu boil; swollen body part.

bute' ngr nrlanc  NP  corners of a garden plot. Formed by making an oval inside the narrow band along the border of the rectangular garden plot.


D d

do  V  hang syn: pa, bear.

dolveti

drame  N  purple herb. Used for medicine and to make purple dye.

drzk  N  1) beetle. Can be destructive to plant life.  2) flying stage of grub; eaten

drlq  N  garden

drlz  N  1) stripes  2) design  3) colour syn: kala color.

drngi  N  Ming aralia greens. Yellow bush whose leaves are eaten. Also used for boundary hedges and decoration. [Polyscias sp.]

drtc' nyz doa  <Not Sure>  land property

dx  N  lychee, tavx. Fruit of island lychee tree (nc dx).

dxbr  N  mushroom, generic name for all kinds

dzbr  N  root of a plant

E e

egplan  N  eggplant. Usually Chinese eggplant, having long, thin bodies, rather than the fatter, rounder varieties. [Solanum melongena L.] (<English)
**N**

- **egr** N vine whose roots grow along the ground.

**F**

- **faef kcnz** NP starfruit. Called five corner fruit. *Averrhoa carambola* (<English five corner)

**G**

- **galik** N garlic. Purchased in stores rather than grown locally. (<English)
- **gwavz** N guava. Tree not indigenous to Santa Cruz. *Psidium guajava* (<English)

**K**

- **kilu** N vine greens. Grow up trees and cooked with pig for feasts.
- **kokoa** N cocoa. Grown elsewhere in the Solomon Islands.

  **Spelling kokwa? Check pronunciation.**

  (<English)

- **komo** N 1) human or animal liver syn: *pqti* liver, *sate* liver. 2) liver fruit. When cut this fruit looks like liver. syn: *pqti* liver, *sate* liver. 3) chestnut. Nut from Tahitian chestnut tree (nc komo). Nut called oki in Reefs. 4) kidney
- **kon** N corn or maize. Ears of corn grow on stalks. *Zea mays L.* (<English)
- **Krismas tri** N comp Christmas tree, flame tree, fire tree. Named for its brilliant red flowers which bloom around December in the Solomon Islands. *Delonix regia*

**L**

- **laemon** N lime [*Citrus aurantifolia; Citrus limon*]
- **le nyz be** NP garden center strip. Runs through the center circle, called tepu.
- **legou** N creeper, climber. Vine which grows on tree. Similar to nqvi milipq, but has larger and thinner leaves. [*Pothos sp.*]
- **leng mqbq** N green vine that grows along the ground, big as computer cord.
- **leu** N 1) leaf. Any kind of leaf. 2) edible leaves
  - **leurde**
  - **leutrpz**
  - **leuwaga**
- **leu krkla** NP small leaf that crackles if you step on it; grows close to ground [ck krkx, krklzo, mwi krkla]
- **leuwaga** N bird's nest fern. A parasitic leafy vine. *Asplenium nidus*
  (der. of leu)
- **loma** N necklace vine. Smells nice and is used to make necklaces for dancing and for welcoming guests.
- **loma bla** NP red leaf vine. Smells nice and is red-colored.
- **lomanadq** N lemon grass. A grass used in cooking for adding flavor. It turns broths or foods yellow. [*Cymbopogon citratus (Nees) Stapf.*]
- **long bin** NP long bean. Long green bean. Most common kind on Santa Cruz. *Canavalia ensiformis*
- **loprt** N king tree greens. This green is a Santa Cruz specialty and loved by everyone. It is normally cooked in coconut milk and often has some canned tuna, as well.
- **lopx** N slippery cabbage. An edible green that is cut into small pieces. When cooked it oozes a viscous liquid, similar to cut okra, giving it the name 'slippery.' [*Abelmoschus manihot*] syn: *scmx* slippery cabbage.

- **loprta** N slippery cabbage. An edible green that is cut into small pieces. When cooked it oozes a viscous liquid, similar to cut okra, giving it the name 'slippery.'
lopx na nzq NP sea grass. Eaten by sea turtles.

loya N ginger. Similar to loma in appearance, but its leaves do not smell nice, like loma. People eat the bottom of the plant. *[Hornstedtia lycomastoma]* syn: *lqkx*, ginger, *riya* ginger.

*lqkx*, N ginger. Plant with red flower, but not the edible kind; small fruit *[Alpnia purpurata ???]* syn: *loya* ginger, *riya* ginger.

lrpz N 1) cloth. A piece of fabric of any size. 2) clothing. Any fabric wrapped around one's body or other sewn and shaped clothing. 3) husk. Inner covering of nut; not the outer skin, but the husk.

dzlq lrpz

lrpxi

lrpz nqesa'

lrpzu

lue mqmi NP sweet water

lve-lrp V grow.slowly

lxbi N 1) weed in a garden (once it has been planted-Bznwz) syn: *bido* 1 bido.weed. 2) any plant-like thing that isn't a tree or grass syn: *bido* 1 bido.weed.

lxkq N yam [*Dioscorea alata ?]*

lxkq do NP wild yam. *[Dioscorea alata]*

M m

ma nyz poi do NP tree fern. Wild female pigs use the fern to make a hut when ready to give birth. *[Cyathea lunulata]*

mago N mango [Mangifera indica L.]

megan N mahogany (English)

melon N melon [*Cucumis melo L.; Citrullus lanatus*] (English)

mnrtq ncblo NP Man odor tree. Leaves of this tree have a strong smell, so during war they rubbed this on themselves to disguise their odor. But then the plant smell was recognized and it was no longer successful. And the tree became called 'man odor.'

mwzlimc N fungus. Can kill plants and trees from under ground. It makes the base of a tree white, but sometimes you only know it has spoiled a root crop when you dig it up. *Noun kc atipe mwzlimc.* That tree it goes for kill mwzlimc.

mz1 vi 1) die. Used for inanimate things like trees, grass, and vines. syn: *bz*, die. 2) quench fire. Used for putting out flame, fire, or fire-like material 3) heal up. Refers to when an open sore or wound heals, dries up or scabs over. *A' kxsqki lc mztitrte x bzmrdt sc tayctxtx trlalo.* But that sore was healed up and its scar was there permanently. syn: *amrlz* 2 heal (der. of *mrzl*). 

cf: *amz*.

N n

nablr N 1) cluster, bunch. Used of things that cluster together, especially regarding fruit clusters, like bunches of bananas or grapes. 2) average. Presumably the places where items or numbers cluster together.

nabr N grass, herb. General term for any such growth. syn: *malz* grass.species.

nabrpu

nabr nang kzu NP grass.for.cows

nabr nyz lr Bznwz NP grassy weed. Found in Bznwz. Grows in gardens and must be weeded out.
nabx₁ N 1) shoulder *syn: trpa ngr nabx shoulder. 2) wing 3) branch

nabz nai NP old garden area. Place where there was formerly a garden, but not at this time.
nabz nc N comp forest. Places in the bush which are primarily trees, rather than gardens.
(der. of nabz₁)

nabz nc kx po NP secondary forest. Trees which are not yet mature.
nabznabr N comp field.of.grass Mz nrlekxbq lede kzdup sept sep ztaclvenedr sipsip nedr mz nabznabr kxycpx mzlilxlr. At night there were some shepherds looking after their sheep in an open area of grass. *syn: lclr field.
(der. of nabz₁)

nattrkya N spikemoss. A creeper, similar in appearance to ferns. [Selaginella rechingeri]

navxlc N worm, grub. A wood eating "worm" which later transforms into a flying insect. Grub is found on pwpwrli trees felled for that purpose. Tastes nice. Lots of grease. Can be eaten raw or cooked. *set: nc pwpwrli worm.log.

nc apwz N comp devil's trumpet. Poisonous bush, especially seeds and flowers. Flowers stand erect and are used to make hallucinogenic and dangerous drink. Tree is nearly exterminated on Santa Cruz due to overharvesting for intoxicating properties. [Datura candida]

nc bcnc N comp sandpaper cabbage tree. Type of sandpaper fig. Young leaves are eaten as greens; similar to loprtta. The leaves are hairy and rough. Bark of tree can be used to make a rope for tying firewood for carrying. [Ficus copiosa; Ficus wassa] POc *iguRa (not cognate), *p*abosi (possibly cognate)

nc bia N comp breadfruit tree. Sap or latex can be used for glue. [Artocarpus altilis] See other varieties under 'bia'.

nc bikali N comp guest tree. An evergreen, tropical tree; its flowers turn to five-part fruit. [Kleinhovia hospita]

nc blei N comp 1) bamboo. Normally uncut, living bamboo; but can be used generically in context for living or dry bamboo. [BAMBUSA vulgaris ] 2) panpipe. Panpipes are normally made from bamboo, but sometimes with PVC pipe.

nc blei kxglr

nc blei binc NP House walling bamboo. It is split to stand up close to each other. Then leaf panels are put on top and the whole thing is held on with cross pieces of this same bamboo which is hammered onto the standing wall. *syn: nc blei bive wall.bamboo.

nc blei bive NP house walling bamboo *syn: nc blei binc wall.slat.bamboo.

nc blei kxglr N dry bamboo
(der. of nc blei )

nc blei melx NP thin-skinned bamboo. Light weight, often used for woven walls.

nc blei rplz NP small, strong bamboo. Used for fishing poles and for climbing into other trees because it is small, but strong.

nc bo N comp Balsa wood tree. Soft tree used for rolling fishing line on. Skin used for belt for tying on nelc dance breechclout. Children use them for making small boats for playing, but also making a raft for fishing held together with betelnut stips nailed on. Toys carved from it for play. Strong when dried and can be used to make a house. [Ochroma pyramidale]

nc bq N comp Koilo tree or Alexandrian laurel. Sap is used for glue, and wood is dark and strong, and rot-resistant. Wood has a wavy grain. It grows along the coast. Children skin the seeds and use them to play...
marbles. Seeds float on the water. *[Calophyllum inophyllum]* [T21 11.29] (koiloKwara'ae)

**nc bq do** *N comp* wild koilo tree. Alexandrian laurel.

**nc bqldr** *N comp* male king tree. Both male and female trees have leaves that are cooked (loprta). Its flowers are in one line along the stem. Its bark is used to make string and rope. *[Gnetum gnemon]* syn: **nc loprrta**

**nc br** *N comp* bowwood tree. Strong wood. One several woods for bows; less preferred. Also used for spears for shooting fish.

**nc br kx mzrte pc** *N comp* red-faced bowwood tree. Used for bows, but also for house building. It has red leaves.

**nc brpi** *N comp* banana tree. General word for any banana tree. *[Musa]*

**nc brpianc** *N comp* coleus. Herbaceous plant. *[Plectranthus]*

**nc butq** *N comp* Pointy mangrove tree. Tall, pointed tree that sticks up out of a mangrove area. If pulled out and dried, it can be used for a floating fishing line. When a fish takes it, then they have to run out to catch the end of the stick.

**nc bz** *N comp* banyan tree. *[Ficus]*

**nc bzntni** *N comp* big-leaved banayan tree. *[Ficus]*

**nc bzt dataTable** *N comp* leafy banyan. Tree has large, plentiful leaves. *[Ficus]*

**nc da** *N comp* stalk of a plant.

**nc dai** *N comp* Soft white tree. Big leaves. It is very lightweight when cut.

**nc dre** *N comp* canoe tree. Used for making canoes. Sap is gummy and sticky.

**nc dre** *N comp* canoe tree. Used for making canoes. Sap is gummy and sticky.

**nc drkq** *N comp* wall stud.

**nc drlzttu** *N comp* myrtle tree. Its wild fruit is eaten by birds. Tree is not big, but used to make axe handles. Used for purlins and rafters of house. Its bark is brown. *[Syzygium sp.]*

**nc drngi** *N comp* Draghi tree. Yellow bush for boundary. Leaves are eaten as greens.

**nc drrbu** *N comp* talipot palm. A giant palm among the largest in the world. Flowers once between 30-80 years old, then dies. *[Corypha umbraculifera]*

**nc dx** *N comp* island lychee tree, tavx. It has green fruit, with a pinnate leaf, and a center rib with leaves. Kids strip leaves off and use center rib for safe play arrows. *[Pometia pinnata]* syn: **nc tavx** island.lychee.

POc *tawan* (probably cognate. Cf Áiwoo tavæ)

**nc dx bo** *N comp* black lychee tree. It has black fruit when it is ripe. *[Pometia pinnata]*

**nc dx buba** *N comp* brown lychee tree. Similar to dxlqvia. Fruit is green when young and then it gets dark brown when ripe. Desirable fruit. *[Pometia pinnata]*

**nc dx lqvia** *N comp* red lychee tree. Similar to nc dxbubla, but ripe red fruit is red. *[Pometia pinnata]*

**nc dx nqngi** *N comp* toothy lychee tree. Bears small fruit the size of a bottle cap. *[Pometia pinnata]*

**nc dx nrancbr** *N comp* cross lychee tree. Fruit is similar to nc nrancbr, with big fruit, sweet taste. *[Pometia pinnata]*

CK spelling nra vs nar

**nc dbxli** *N comp* basket lychee tree. Fruit grows in big bunches. *[Pometia pinnata]*

**nc dxnraszke** *N comp* another lychee tree. Name means 'lychee tree fruit of sandpaper cabbage (nc szke). Perhaps fruits are similar in size. *[Pometia pinnata]*

**nc dxp** *N comp* orange tree with sweet fruit and thorns *(dxp)* *[Citrus sinensis]*

POc *molis* (not cognate)
nc dxpa' kx piz N comp sour orange tree. syn: nc leimon orange.tree.
nc dxpa' rplz N comp wild orange tree. Fruit has a very strong skin. [Citrus sp.]
nc dzpu N comp curvy tree. Grows curvy. with a hole in the center of its bark.
nc dzpwz' N comp plant.for.bellyrun; weed used for tattoos
nc fiki N comp fig.tree
   fiki
nc jama N comp tall strong tree
nc kalva N comp 1) betelnut tree. [Areca macrocalyx (wild); Areca catechu L.] 2) betelnut strips. Cut pieces of the tree for building purposes.
nc kalva mz nepi N comp sealing wax palm, likely.
nc kalvao N comp wild betelnut. A type of fan palm. Smaller fruit than nc kalva. The nuts are eaten by birds. Chewed by people in Reef Islands where there's no betelnut. Two types. One has red betelnut inside, used for custom medicine. The other has white betelnut. [Licuala lauterbachii]
nc koka N comp cocoa tree. (English)
nc komo N comp Polynesian chestnut. Seasonal. Edible nut inside a fibrous, husk, shell. Must be cooked. Dicot. Largish oval leaves, 8-10" long. Medium-sized tree. [Inocarpus fagifer]
POc *ipi; PEOc *mabʷe (neither cognate)
nc komo drtwr koa N comp Polynesian chestnut. Its nuts hang in a curve like a heron's neck. ck spelling koa vs kwa. Same or diff?
nc koma trpa N comp flat fruit chestnut. Tree with large flat nuts.
nc lc N comp mangrove. Bark is dark brown. One of three woods used for making bows. Used for hunting small game, not strong enough for pigs or humans.
nc lc kz prla N comp sea mangrove
nc leble N comp Pink-flowered doughwood tree. Leaves and branches do not smell nice, but related to nc mini, which does smell nice. Same Latin name for both. Its dried leaves are used to make cooked coconut oil smell nice. Its base can be scratched and used for custom medicine, which does not kill the tree. [Melicope elleryana] syn: nc mini pink-flowered.doughwood.tree.
nc lebwao N comp spider lily. Plant has many names in English. White, showy flowers. Multiple medical uses. Poisonous when eaten. [Crinum asiaticum]
nc lebwita' N comp custom house tree. Small tree which they made houses from in the past, like custom house at landing. Its small, gravel-sized fruit hangs in bunches. When it falls it is eaten by birds, especially doves.
nc lebwita' kz peto N comp wild custom house tree
nc legou NP (comp) false monsteriosa vine. Sometimes the leaves have a rope that hangs from it and the rope is used to tie leaves of house. Rope is called milipq. [Epipremnum pinnatum (L.) Engl.]
nc leimon N comp sour orange tree [Citrus aurantium] syn: nc dxpa' kx piz orange.tree.sour.
nc leng N comp cabbage palm plant. It has long, narrow green or red leaves and is used as a boundary hedge. There are numerous medical uses in South Pacific. [Cordyline fruticosa]
nc leng mrbz N comp cabbage palm bush which doesn't grow very tall.
nc leutrpz NP sago palm tree. [Metroxylon sagu]
nc li kzpli N comp dry tree. Nc li that has no taste and is dry.
We don't have nc li in dictionary.

**nc lo**  *N comp* ivory nut sago palm. Its broad leaf is used for walling.  *[Metroxylon warburgii]*

**nc loa**  *N comp* lobster claw tree. Green flowers which open at night. Fertilized by bats.  *[Heliconia Solomonensis]*

**nc lobu**  *N comp* lime parcel tree. Leaves used for baking and for parceling lime. Lime parcel hung above the fire to keep lime dry. Used also for plates during feasting. Polynesians use it for parceling fish.

**nc loptra**  *N comp* king tree, without distinguishing male or female.  *syn:*  **nc bqlr** male.king.tree,  **nc soli** female.king.tree.  **T22 22.35**

**nc lrpz**  *N comp* tapa tree. Inner bark is used to make tapa cloth. It has inedible, possibly poisonous fruit.  *[Ficus wassa]*  *syn:*  **nc lrpz** tapa.cloth.tree.

**nc lxpr**  *N comp* ngalinut tree.  *[Canarium (harveyi ?)]*  *syn:*  **nc lxpr** kx twzne lzke wildngalinut tree  *[Canarium]*  *Napr to Corner*

**nc lxpr**  *N comp* ngalinut tree.  *[Canarium (harveyi ?)]*  *syn:*  **nc lxpr** kx twzne lzke wilderness ngalinut tree  *[Canarium]*  *Napr to Corner*

**nc lz**  *N comp* sago palm. Has narrow leaves used for roofing.  *[Metroxylon sagu]*  *syn:*  **nc lzkoko** sago.palm.

**nc lzkoko**  *N comp* sago palm. Has narrow leaves used for roofing.  *[Metroxylon sagu]*  *syn:*  **nc lz** sago.palm.

**nc lzkqba**  *N comp* vomit tree. The smell of the liquid when the trunk is cut is so bad it makes people vomit. Can be used for timber for furniture.

**nc madarin**  *N comp* manadrin orange tree. Small sweet fruit.  *[Citrus reticulata]*

**nc malx**  *N comp* rattan palm tree. Leaf used for roofs. Also used for rope (malx).  *[Calamus (hollrungii?)]*

POc *qu(w)e (not cognate)*

**nc mini**  *N comp* pink flowered doughwood tree. Used for bows. Its yellow leaves are used for nelc dance arm band decoration. Its leaves are used to disguise smell of man when hunting pigs. Also used by dancers before dancing because it smells nice. Dried leaves used to scent coconut oil, but nc leble preferred.  *[Melicope ellenyana]*  *syn:*  **nc leble** pink.flowered.doughwood.tree.

**nc mini lol**  *N comp* small leaf doughwood. Has smaller long yellow leaves. Same attributes as nc mini.

**nc mini trpu**  *N comp* mini.trpu.tree  *cf:*  mini trpu, choose one


**nc mqmia**  *N comp* hibiscus bush. Grown as hedges. Flowers in a variety of colours. Tea made primarily from flowers.  *[Hibiscus tiliaeus]*

**nc mrlz**  *N comp* Australian maple tree. Used for timber.  *[Flindersia brayleyana ?]*

**nc mrz**  *N comp* garden croton bush. An ornamental bush with reddish leaves, often used to mark graves in cemeteries or boundaries in the bush.  *[Codiaeum variegatum]*  **T22 33.35**

**nc nabir**  *N comp* baking leaf tree. Tree produces very large leaves used to bake pig in stone ovens. The stones of the oven are lined with the leaves, then the meat put down and covered with more leaves and more hot rocks. Then the oven is shut for baking.  *bi* V bake in any kind of oven

**nc nabl**  *N comp* thornless rukam tree. Strong wood, branches sharpened and used in past to dig holes to plant taro. Now an iron tool is used. Small mable-sized fruit is eaten by birds.  *[Flacourtia inermis Roxb.]*

**nc nabl**  *N comp* rukam apple leaf tree. See nc nabl. Leaves are shaped like those of Malay apple (nc naq).
nc nabx  *N comp* alite, sea almond tree. The alite almond is highly valued on Santa Cruz and can have very large, 60 mm nuts. The sweet nuts are roasted and parceled with dried breadfruit (See bo nabx) and said to improve its taste. [*Terminalia catappa*]

POc *talise (not cognate)*

nc nabx do  *N comp* alite.tree.wild [*Terminalia*]
nc nabxtqz  *N comp* alite.tree.tqz [*Terminalia*]
nc nadrivc  *N comp* tall tree. One of the tallest trees over all the trees in the bush. He has flat seeds and lightweight which wind blows everywhere. Timber. Not strong enough for mast. Color of timber is yellowish.
nc naklx  *N comp* kava tree. Used to make things taboo. If they make pork, used to make it taboo. Leaves used to decorate house after custom killing of pig. It is used to keep out devils. Also used if someone falls out of a tree and is unconscious, people hold leaves of this tree and call his name to revive him. Used after climbing breadfruit (or other) tree to keep it safe. [*Piper methysticum Forster*]

nc nalmztq nc  *N comp* Tree used for handles of axes and other tools. It is strong and not easy to break. Flexible. [*Corynocarpus similis ??*]
nc napqnrx  *N comp* Bow tree. Tree used for bows. Its leaves are similar to cutnut leaves. Not a big tree.
nc naq  *N comp* Malay apple tree. Bark and leaves have medicinal properties. [*Syzygium malaccense*]

POc *kapika (not cognate)*

nc naq mepyr  *N comp* bloody Malay apple tree. Red liquid comes out when trunk of tree is cut.
nc naq nzlu  *N comp* Malay apple whose fruit is hard like coconut.
nc natzkrlo  *N comp* house tree. Bush tree used for making houses. Its leaves are small like Christmas tree leaves. Has a brown appearance.
nc nayrvikr bona  *N comp* orchid tree. Liked by pigeons. [*Grammatophyllum speciosum?*]
nc ncbkrkrlu  *N comp* Roots are strands that hang from high up in the tree and then meet the ground.
nc nei  *N comp* cycad tree. They typically have a stout and woody trunk with a crown of large, hard and stiff, evergreen leaves. [*Cycas seemanii*]
nc neyu  *N comp* red silkwood tree. General name for either long or short-fruited tree of this name. [*Burckella sp.*]

POc *ñatuq (cognate) for Burckella obovata*

nc neyu kx nrade boi  *N comp* long-fruited red silkwood tree. [*Burckella sorei*]
nc neyu kx nrade mrbc  *N comp* short-fruited red silkwood tree  [*Burckella obovata*]

POc *ñatuq (cognate)*

nc ngr koni  *NP* stalk of corn.
nc ngrvr  *N comp* firewood tree. Once a garden has been harvested and left to rest, this tree often grows in it. Has really small leaves. Used for firewood and carried to village.
nc nilq  *N comp* nilq tree. Grows in abandoned gardens. Its leaves are very fine, round. Nothing sticks to the leaves. Rots quickly.
nc nima  *N comp* white nettle tree. Other names: false stinger, native mulberry, white mulberry. Used for poison and medicine. Touching it makes the body itch. [*Pipturus argenteus*]
nc nimqz  *N comp* post tree. High quality posts for house. Large posts in St. Thomas' new church are made of this wood.
nc ninz  *N comp* ngalinut tree (Pijin). Also called Pacific almond. [*Canarium asperum; Canarium chinare; Canarium harveyi; Canarium hirsutum var. leeuwenii; Canarium indicum L.; Canarium salomonense; Canarium villosum; Canarium hirsutum; Canarium asperum; Canarium chinare; Canarium harveyi; Canarium hirsutum var. leeuwenii; Canarium indicum L.; Canarium salomonense;*]
Canarium vitiense

\( \text{(der. of ninz)} \)

nc ninz kxkc \( N \) comp nutless ngalinut tree. \([\text{Canarium}]\)

nc ninz nilama \( N \) comp red-skinned ngalinut tree. Inner nut has red skin. \([\text{Canarium}]\)

nc ninz trpae \( N \) comp flat nut ngalinut tree. Nut is big and flat, like a stingray (trpae). \([\text{Canarium}]\)

nc ninztrbz \( N \) comp triple kernel ngalinut tree. Nuts have three corners and three inner nuts. \([\text{Could it be: Canarium trifoliolatum Engl.}]\)

nc nivc \( N \) comp giant pandanus. Leaves used for making items. Seeds are eaten. \([\text{Pandanus tectorius}]\)

POc *padran, *kiRe, *poipoi (none cognate, unless *poipoi. Cf. PSOc *va(i,y)yu and PSV *na-va(i,y)u)

nc nole \( N \) comp poisonwood tree. Sap can be eaten when it is completely ripe, but may sting the mouth due to still being somewhat poisonous. Not used for fishing. \([\text{Semecarpus forstenii}]\)

POc *walasi \( \text{(not cognate)} \)

nc noli \( N \) comp tevi tree, golden apple tree. Also called Polynesian plum, Jew plum tree, or ambarella. It has edible fruit containing a fibrous pit. Bark, stem, and shoots can be used for various medicinal purposes. \([\text{Spondias cytherea; S. dulcis; S. magnifera}] \text{ syn: } \text{nc tevi golden.apple.tree.} \)

nc noli nesrkr \( N \) comp tevi plum tree. Fruit is points-pear shaped like pana. \([\text{Spondias dulcis}]\)

nc noli po \( N \) comp 1) unripe tevi tree, Polynesian plum. Fruit of the tree is very round with a pit and peels like it isn't ripe yet (po), even though it is ripe. Tevi tree (Āiwoo). Commonly known as golden apple, ambarella or Polynesian plum. \([\text{Spondius dulcis Forst. (Spondius cytherea Sonn.)}] \text{ syn: } \text{tevi.tree.po} \)

nc nqglq \( N \) comp 1) sea trumpet tree. Also called beach cordia. It grows along the coast, and timber is used for canoes or outriggers. Its red flowers are favorites of the red honey eater bird (mzngra), whose feathers are used to make red feather money (lrdq, nceapu). \([\text{Cordia subcordata}当下 ] \text{ mzngra' feather.money.bird.} \text{ T16 14.24 2) treasure. Man with this tree has treasure from the red feather money birds which frequent the tree. mzngra' feather.money.bird.} \text{ 3) (archaic) rich man. Any rich man. But usually someone uses wealth from this tree to become a leader. Josip Clq nide nc nqglq. Joseph Clq is a bigman.} \text{ syn: nceapu 1 feather.money.stick.} \text{ 4) (archaic) leader's seat of power. A place of power associated with a leader, as a result of him having this tree on his property. Parallel to a king's throne.} \text{ POc *kanawa(n), *toru, *jasi (none cognate); PWOC *nagi (possible cognate)}

nc nqngq \( N \) comp 1) rooster tail. A type of bush having long, narrow reddish leaves whose branches are fibrous and non-woody. \([\text{Cordyline fruticosaf Kxetu, nim Ngrlrvea ngrgr. Glalzm nc nqngq bagr.} \text{ Bigman, you are our war leader. Lift up the nc nqngq banner for us-ex.} \) 2) war flag, banner. Branches of the nc nqngq were put in the back of the breechclout of the war leader (nglrvea) to identify him as the person for warriors (ncblo ngr vea) to follow during battle. The branches could also be removed and waved in the hand or tied to a stick to used as a flag, banner, or battle standard.

nc nrabutqbr \( N \) comp cave tree. Stands over the opening of a cave and nearby stones. Roots grow out over the rocks.

nc nralrve \( N \) comp ladder tree. Roots are long and some start above ground. The above ground roots can be used for bows. The tree's branches are close together and alternating, which makes it easy to climb. so it is often planted near a breadfruit tree to use for climbing to harvest breadfruit.

nc nran \( N \) comp beach mulberry tree. Large, globular fruit with wart-like bumps. Some medicinal value. \([\text{Morinda citrifolia}]\)

POc *ñoñu (possibly cognate)
**nc nranc**  
_N Fish poison tree. Grows along shore. Thick bark. Branches bend over the sea. Bark and seed of its fruit are used in poisoning fish. Its fruit has four corners. Its nut is sour, not good to eat.  
[Barringtonia asiatica]

**POc *putun (not cognate)*

**nc nranc br**  
_N comp Fish poison tree with big fruit. Fruit is red even until it is mature. It does not change. It has a nut inside which can be grated and mixed with lime to use as a patch for a hole in a canoe. Same substance used in production of red feather money to strengthen the band to which the red feathers are attached.  
[lrdq red.feather.money.

**nc nranc wido**  
_N comp Java olive or skunk tree. Its fruit can be strung on a string and pulled to cause it to make music.  
[Sterculia foetida]

**nc nranyz**  
_N comp nutmeg tree.  
[Myristica fragrans]

**nc nratrlnvi**  
_N comp nutmeg tree.  
[Myristica fragrans]

**nc(nr)kr**  
_N comp post-med tree. Used for posts and house building. Used for medicine.  
[Myrtaceae? or Syzygium? unknown by MQS]  
_T27 09.34

**nc nrpnna**  
_N comp soft wood tree. Grows everywhere. Used in past for building houses. White heartwood, with green colors. Not timber wood, but whole trunks can be used for studs. Serated, cardioid leaves are a bit rough, but can be used for toilet paper because they're big, flat, and not poisonous. Also used to clean up messes at home, so they bring back these leaves from the bush.

**nc nrpnna mimi**  
_N comp red soft wood tree. Bark is red with a red liquid. Otherwise similar to nc nrpnna.

**nc nrx'**  
_N comp cutnut tree.  
[Barringtonia edulis; B. novae-hiberniae B. procera (originated Santa Cruz); plus four not edible in Sols]

**POc *pala(ŋ) (not cognate) for B. novae-hiberniae*

**nc nrx' do**  
_N comp wild cutnut tree. Two types: one with green nuts, one with red nuts.  
[Barringtonia novae-hiberniae; B. procera]

**nc nrx' kxpc**  
_N comp red cutnut tree. Green nut on the outside, and red-skinned inner nut.  
[Barringtonia]

**nc nrx' kxprki**  
_N comp white cutnut tree. Fruit is green outside, but white inside.  
[Barringtonia]

**nc nrx' mrbz**  
_N comp tiny cutnut tree. Bears when it is only four feet tall and doesn't get very tall.  
[Barringtonia]

**nc nrx' trpplq**  
_N comp jointed cutnut tree. Has green nuts which look like they have boils on them.  
[Barringtonia]

**nc nyatrpwel**  
_N comp Similar to lawyer cane, rattan. Strong, used for tying things.  
[Calamus (stipitatus?)]

**POc *qu(w)e (possibly cognate, but unlikely)*

**nc nyr**  
_N comp flamewood tree. Lit. fire tree. It has very small leaves and grows near sea. Wood is used for carving. Leaves or bark are used for medicine.  
[Pterocarpus indicus ?? guessing by description]

**nc nz**  
_N comp four-corner bush. Leaves are really rough; bark of tree has thorns. Not very big. Used by Noipx to weave the distinctive Santa Cruz four-corner basket.

**nc nzklo**  
_N comp fan palm. Large leaves used to parcel red feather money. Also used in back of waistband during nelc dance, when rooster tail (nc nqngq) is not used.  
[Licuala lauterbachii]

**POc *piRu(q) (not cognate)*

**nc nzlu**  
_N comp coconut tree. General name for any of numerous varieties of coconut tree.  
[Cocos nucifera]

**POc *niuR (cognate)*

**nc nzlu bi**  
[Cocos]
yellowish-brown coconut tree. Shorter than other coconuts. [Cocos]

easy-fall coconut tree. Lit. betelnut coconut tree. Fruits are easy to knock down because they are not attached strongly; like with betelnut. [Cocos]

dwarf coconut tree. Does not grow very tall. [Cocos]

small-nutted coconut tree. The shells are used by older men as the mortar for pounding betelnut inside of them. [Cocos]

Tree found along shore, but not in bush. It has nuts which no people or animals eat. [Elaeis guineensis Jacq.] (<English)

olive tree. [Elaeis guineensis Jacq.] (<English)

olive oil

When he came near Jerusalem, where the road goes down the mountain of olive trees, a crowd of his disciples started rejoicing over Jesus and praising God in [big words] = [loud voices], because of the works of God they had seen. (<English)

palm tree (<English)

pomelo tree [Citrus grandis] (<English)

perfume tree, Ylang-ylang tree. Oil used as a base in floral scented perfumes. [Cananga odorata]

boat tree. Tree used for canoe, soft tree. Grows by shore. Fruit looks like it has white plastic skin, but it has small black nuts inside. Rounded with pointy top, with some corners. Nuts are not eaten.

wild boat tree. Like the seaside boat tree, but grows in the bush. Same uses as other boat tree.

river timber tree. Grows along river. It has large, flat roots that are shaped like flat timber, and just need to be cut off and smoothed. Also used for timber and for canoes. It has hard wood.

big timber tree. Used house-building.

worm log. A particular tree is killed and log is left on the ground for worms (navxlo) which like it to use as nesting place. After some time people go back to harvest the worms to eat. set: navxlc tree.grub; wood.worm.

tree whose leaf is chewed with betelnut syn: pwx, leaf; set: nc korokwa betel.pepper.tree.

rain tree. Similar to Christmas tree, at St. Barnabas Cathedral in Honiara there are lots of them. Used for timber and carving. [Samanea saman] (<English)

beach hibiscus tree. Bark is used to make four-corner baskets, like nc nz. [Hibiscus tiliaceus]

cherry tree. Transplanted to Santa Cruz from other islands. The tree has a small, light red, edible

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berry. It is not the cherry tree (Prunus avium) known to Europeans. \textit{Muntingia calabura} (<English)

\textbf{nc soli} N comp king tree. Female variety. Leaves (loprta) are eaten. Flowers and fruit (nra soli) are eaten. It has a branch with a leaf and the fruits hang in a bunch on both sides of the stem, from near the leaf. Different from male king tree. \textit{Gnetum gnemon} syn: \textbf{nc bqlr} male.\textit{king.tree}, \textbf{nc loprta} king.\textit{tree}, \textbf{nc loprta} king.\textit{tree}.

\textbf{nc srpwale} N comp rattle tree. Found in deep bush. Dried seed pods are used to make leg rattles (nrasrpwale) used in local dance (nelec). \textit{Pangium edule}

PEOc *paRage (?possibly cognate)

\textbf{nrassrpwale}

\textbf{nc tabao} N comp papaya tree. Has a male and female variety. Grows and produces fruit quickly. \textit{Carica papaya}\textit{f} tabao \textit{kx nceblongr} male papaya \textit{tree} tabao \textit{kx olvzngr} female papaya \textit{tree} T27 25.34

\textbf{nc tea} N comp tree fern. This tree was used for shutting the custom house at the landing, wharf. \textit{Cyathea vittata}

POc *bʿʷʼala (not cognate)

\textbf{nc teabz} N comp short tree fern. Used for posts, short and strong. Stand up around house for other plants to use as a climbing post. Fern leaves are eaten. \textit{Cyathea sp.}

\textbf{nc tepok} N comp kapok tree. Fiber from flowers used to stuff pillows. Some people are allergic to it. (<English)

\textbf{nc tevi} N comp golden apple tree. \textit{Spondias cytherea}; \textit{Spondius dulcis} syn: \textbf{nc noli} golden.\textit{apple.tree}.

POc *quRis (not cognate), but Cf PSV *na-viris

(<Äiwoo)

\textbf{nc tik} N comp teak tree. Used for timber. \textit{Tectona grandis} (<English)

\textbf{nc trkiye} N comp trkiye timber tree. Used for building houses.

\textbf{nc trkir} N comp pandanus tree. Fruit is inedible. Leaves used for making mats and for tufts on breechclouts (lrpz nqesa’). \textit{Pandanus sp.; Pandanus compressus}

POc *padran (not cognate)

\textbf{nc trmili} N comp blue marble tree. Very tall, straight tree. Roots are buttressed at the bottom for stability. Used for making houses or boats. It has white flowers and produces a round, blue fruit that doves like very much. Makes blue excrement of the birds. Taller than \textbf{nc saliki}, with bigger berries, between 20 and 30 mm across. Seed inside berry is deeply pitted. Tree grows quickly and is useful for reforestation. \textit{Elaeocarpus angustifolius} syn: \textbf{nc saliki} Rudraksha.\textit{tree}.

\textbf{nc trmilo} N comp current tree. Grows along shore. Wood used for bows, paddles, and custom bowls.

\textbf{nc trpa} N comp river fruit tree. Found alongside rivers. Fruit grows along trunk of tree all the way to the bottom. Bats (flying foxes) like to eat them.

\textbf{nc trpili} N comp kauri tree. Also called dakua. Tall, thick, strong trees used for large canoes because they don't rot quickly. Highly valued and rather scarce. \textit{Agathis macrophylla} \textit{Natq Yawe rpesaliti nc trpili, mz nzapu-krdr nounc kx nzlapirting}. The voice of Yahweh splits the kauri trees, in their being like trees that are chopped-up (into firewood).

\textbf{Not present in POc homeland.}

\textbf{nc trple ngr trklae} N comp swamphen tail tree. Small like a bush. Sometimes it has white leaves and sometimes green leaves. White leaves are used to take away pain in the teeth. White leaf looks like swamphen's (trklae) tail.

\textbf{nc trpuka} N comp lettuce tree. Leaves are for custom medicine. Leaves used as greens to eat. Some use leaves cooked with pig in place of kilu leaves. \textit{Pisonia grandis}
PROc *buka (cognate)
(<Polynesian lgs)

nc vanila NP (comp) vanilla tree. [Vanilla planifolia]

nc Vanuatu.apol N comp Vanuatu apple. Similar to Malay apple (nc naq). [Syzygium aqueum]

nc yrni N comp rosewood tree. Tall tree used for first grade timber, having strong roots. It is found in the deep bush. The sawdust of rosewood secretes a poison when it gets wet and needs to be kept away from children and domesticated animals. [Pterocarpus indicus] Natq Yawe apule neng kc tqrkqtuti necnri x klxpqtle leu rdr. The voice of Yahweh is like wind that uproots rosewood trees and strips their leaves.

POc *naRa (not cognate)

ncngrbz N 1) log or stone boundary of a garden Drtc ngr nibr ncngrbz dtwr ngrde leplz keng drtwdrt tresz'tiu. The ground outside the border means people who are not single minded. 2) Any geophysical boundary, whether marked or unmarked

ncpx N wild yam. Variety of wild yam.

neketu NP wild yam. Variety of wild yam.

neni N reed.

nesrkr N pana. Also lesser yam, prickly yam. [Dioscorea esculenta]

ngdrde (L) N land used for planting food for strangers

nin2 N ngalinut, breaknut, almond. Also called pili nut by some. Can be used as a general term for any kind of nut. [Sol Is: Canarium; C. asperum; C. chinare; C. harveyi; C. hirsutum; C. indicum; C. salomonese; C. vitense] syn: nc lxpr ngali.nut tree.

*POc *[kaŋaRi (not cognate) C. indicum

bqlr nc ninz

nc ninz

niprni N poison leaf of a vine. syn: lengme poison.leaf.species, nrpa'i poison.leaf.vine.

nou N 1) base, source. This means both a physical base or source, like a water source or the bottom part of an object, as well as being used abstractly to mean the reason, beginning, or basis for thought or argument. 2) clan. People from the same clan share an ancestor as the source of that lineage. syn: neidu tribe, neidu tribe, nqvi 3 ancestral.line. 3) trunk. Stem and main wooden axis of a tree; that is, its base.

nounc N 1) tree, bush. Has a woody stem or trunk (nou), usually with branches off the ground. Any tree-like shrub, bush, or plant, such as banana, which is scientifically a grass. syn: nc, 1 tree. 2) stick. Any piece of material from a felled tree, more normally 'nc', including log, timber, or wood in general.

dapu nounc

nqngya N 1) sap which comes from tree 2) blood

nqvi N 1) vine. A living vine found in the bush. 2) rope. Any long strand used for tying things, whether as small as a string or as large as a rope. It may be an actual vine, or cordage made from plant materials or rope purchased from a store. Nqvi yzpr mz mzlrgr badr. The rope is broken between us-excl. 3) ancestral line. People who share descent from a common ancestor. syn: neidu tribe, nou 2 clan.

nqvi milipq NP Bush rope. A bush vine used for rope, usually found in deep bush. It has thicker and smaller leaves than legou. [Scindapsus latissimus]

nqvi nyz kx rlvie NP mile-a-minute creeper plant. Its vine grows along the ground. Its leaves are crushed and the liquid is put on cuts, even serious ones, before taking the person for treatment. [Mikania micrantha]

nra N 1) fruit. Refers to anything possibly edible that grows on trees, such as fruits, nuts, and berries. Kzdq ncblo petile kc nrlanc ngr grep. Zbz sc tqrlrpe-ngrbzle mz ncblo kx narbilqng, kx naxpebzlr bade kzdung nra
grep mz nrlanc lc. A man planted a grape garden. Then he let it out to men that rented it, so that they might pay him some of the fruits of the grapes from the garden. classifier for fruits 2) result. The outcome of an effort or work. As in, "Did it bear fruit?" 3) fruit-like. Used to talk about things that attach to a larger body in a fruit-like manner. Usually also requires the name of both parts in a compound. nradrq ear, lit. 'fruit of body' 4) financial gain. The interest or profit from an investment. Memule tryrlqtr-wrnqu trau scnge mz bxng, murde nzyzlu-krmc nrade nayctrpebz? Why didn't you put my money in the bank, so that in my returning it's interest|profit would be there? 5) additional. Something extra added on.

nra brpi
nra nabr
nratoki

nra bnc n comp sandpaper cabbage fruit. the figs of this tree are edible. syn: nra wedo sandpaper.cabbage.fruit.

nra brpi N banana fruit on a tree. More commonly just 'brpi'. (der. of nra1)

nra lebwao NP 1) spider.lily.fruit 2) swollen glands. A sickness that causes swelling on the top of the head or the neck. Swelling looks like spider lily fruit.

nra nabr N rice. Literally 'fruit of the grass'. syn: raes rice. (der. of nra1)

nra nzlu N coconut fruit. More commonly just 'nzlu'. (der. of nra2)

nra wedo NP sandpaper cabbage fruit. Figs of this tree are edible. [Ficus copiosa; Ficus wassa] syn: nra bnc sandpaper.cabbage.fruit.

nrabc1i N betelnut fruit. As it is bitten into; used by Balo dialect frequently; and used too if kalva is too close to the name of an inlaw.

nraleng1 N pana type. May be red or white inside.

nraleng2 N hairy yam. syn: srlipi hairy.yam.

nranc N 1) fruit. General word for fruit from any tree. 2) seedling. Any sprouted seed or fruit. A sapling which has not yet developed branches.

nraselewz NP grass.rattle. Grass that grows wild in gardens bears small fruit that can be dried and used as a rattle.

nrkarnrlc NP garden plot. Full rectangle of property used for a single garden.

nrla1 N branch. Small tree branch, as opposed to a vine. syn: ningali 1 branch.


nrngx1 N purple yam. [Dioscorea sp.]


nrpq N flower. The part of a tree or plant that blooms. Its bud, flower, or blossom.

nrtr2 N sprout, shoot. A young plant which has some roots.

nrx' N cutnut.

nrx' do <Not Sure> wild cutnut.

numnq N bush grass.

nya N taro. Planted as a root crop. [Colocasia esculenta] POc *talos, *mʷapo(q) (neither cognate)
**n**ya **lotua** *NP* giant taro. Can grow to two to four feet long. Has large leaves. If not peeled well and cooked well, it will scratch one's mouth; it spoils the taste. *[Alocasia macrorrhiza]*

P**Oc** *piRaq (not cognate)*

**n**ya **ngr** **trl**oka *NP* swamp taro. Grown in wet areas. Also called 'walk about taro' because it can go underground and come up several yards away. *[Cyrtosperma merkusii]*

**n**ya **nyz** **Ir** Balo *NP* Balo taro. Taro grown by people from Balo.

**n**ya **nyz** **Ir**mztangi *NP* foreign taro. Imported variety from Fiji.

**nz**lq, *N* 1) sugarcane. The cane is chopped into shorter lengths and peeled, then chewed to get the sugary part, then the fibrous remains are spat out. *[Saccharum officinarum]* 2) rafter made of bamboo *syn: bi,* 1 rafter, **toka** 1 beam.

P**Oc** *topu*

**nz**lq **pq** **poi** *NP* pig's sugarcane.

**nz**lq **pq** **tr**klae *NP* swamphen's sugarcane.


be **nz**lu

nra-**nz**lu **ngr** **leplz**

**nz**lu **bla**

**nz**lu **kxglr**

**nz**lunq

**nz**lu **bq** *N* green coconut. Green **mq**bq.

**nz**lu **kxglr** *N* dry coconut. Has fallen to the ground.

(*der. of **nz**lu*₄*)

**nz**lunq *N* fallen coconut. One which has just fallen to the ground and is not yet growing or sprouted

(*der. of **nz**lu*₄*)

**nz**lwapx *N* plant mold. Gets on plants and kills them; especially root crops, like kumara.

**nz**mq *N* grove. A planting of a group of trees. Plantation. field. *Sc tzvzdzpeng mz nrlar nabztua ke x sc tsztrtpeng mz nzm-olivi.* They went up the side of the valley and entered into an olive grove.

**nz**mq **nabr**

**nz**mq **nabr** *NP* field of grass.

(*der. of **nz**mq*)

**nz**lq, *N* 1) fungus. Kills the roots of trees. 2) tinea. Fungus that affects people's skin.

be **nz**q

nibr **nz**q

**nz**ti **drka**’ *NP* devil's road. A path that runs through a garden lengthwise on one edge of the center tepu.

**O o**

**onab**brub**r** *N* no food tree. Tree bears no edible fruit. People strip its bark and use it to tie things. The wood is used for framing a house, and the leaves are used to parcel fish. The leaf is about 12 inches long and 8.5 inches wide, and is a pointed tear drop shape with no edge scalloping.

(*unspec. comp. form of **onabq*)

**onyon** *N* onion. (<English)
**P p**

_pap_, _V_ to bear _Nc dx kc pape_. That tavx tree is bearing fruit now. _Ncdx keng nzpapeng_. Those tavx trees are bearing fruit. _syn:_ _do_ hang.

_pabcLz_

_paef kona_ <Not Sure> starfruit

_paeli_ (B) _N_ wild pana. _syn:_ _pose_ wild.pana.

_pe_ _vi_ plant _Kzdq ncblo petile kc vinyad_. A man planted a vineyard.

takes -_ti_ for transitive


_plc_ 1) _be_. _V_ ripe or soft _Krlzpebzle mzli kx plc ngr grep, sc tqatwzlrpe-ngrbzle kzdq slev mz ncblo keng trzblqng, rpile natwzple dzu kx ngi mdle mz grep keng_. The time came when the grapes were ripe, and he sent a slave to the men that rented. He[owner] thought[said he[slave] would take a portion of the grapes that was his.  2) <Not Sure> yellow. Yellowish green, the color of ripe fruit

_plclq_ _V_ break.off.prematurely

_plc_ _N_ high peak fruit. Used to talk about the fruit at the highest peak of a tall tree which cano only be reached by poking it with a very long stick or shaking the tree. _Kx mqnge kc tqdopx mz plede_. That's mine that hangs from its highest peak.

_plrkqtu_ _be_. _V_ bushy. An area having dense undergrowth.

_pobz_ _N_ grass that appears to die if you step on it.

_pose_ _N_ wild pana. Has long needles on its vine. [Dioscorea sp.] _syn:_ _paeli_ (B) wild.pana.

_pwx_ _N_ leaf for betelnut. _syn:_ _nc pxi_ tree.leaf.for.betelnut. _N_ Noole

**R r**

_raes_ _N_ rice. [Oryza sativa ] _syn:_ _nra nabr_ rice (der. of _nra_). (<English)

_red bin_ _NP_ red bean. (<English)

_riya_ _N_ ginger. Spice ginger used for cooking. Apparently the ginger of Santa Cruz (lqkx) is not used in food. This word is a borrowing from a Guadalcanal language, and is used by some. [Alpnia purpurata] _syn:_ _loya_ ginger, _lqkx_ ginger.

**S s**

_salot_ _N_ shallots. Spring onions. Both greens and white bulb are eaten. [Allium cepa var. aggregatum L.] (<English)

_sili_ _N_ chili pepper. Bird's eye chili. Short and hot. They turn red when ripe. [Capsicum frutescens L.]

_sipu_ _N_ coconut flower bud.

_smol bin_ _NP_ short bean. Small bean, as compared to the long bean. (<English)

_snk bin_ _NP_ snake bean, snake gourd. Generally grows to 1-2 feet long and over 2 inches in diameter. The gourd is hollow and lined with inner seeds covered in a fuzzy white substance. The inner seeds are removed and the outer gourd whose skin is around 1/8 inch think is chopped up to put into soups and stirfries. In Santa Cruz the gourd is harvested when it is still green, but edible, before it reaches maturity and turns yellow or red. [Trichosanthes cucumerina var. anguina L.] (<English)
srlipi  N  hairy yam.  *syn:* nraleng, hairy.yam.

sukaba  N  cucumber. They generally grow to be quite fat, with up to 4 inch diameter.  *[Cucumis sativus L.]* (<English)

T  t

tabao  N  papaya. Fruit from papaya tree. Grows quickly and bears fruit soon after.  *[Carica papaya]*
tabao  kx  mz  nqvi  NP  vine papaya. Sometimes called Choko or Chayote.  *[Sechium edule]*  *syn:* bqk
  vine.papaya.
tabao  pq  lrkr'  NP  rat's papaya.
tapwa  N  frond. The branches of a coconut or other palm tree.
teko  N  pandanus leaf.
tengr  N  midrib of palm frond.
teomo  N  manioc. Also called cassava and tapioca.  *[Manihot esculenta]*
tepu  N  1) coconut shell  2) garden center. Round plot in the center of a garden, which has a strip through it
  called lc nyz be.
tomato  N  tomato. General word for any variety or size of tomato.  *[Lycopersicon esculentum]*  (<English)
topulu  N  bunch of fruit. A single gathering of fruit that grows in bunches like bananas, cocounts, betelnut, or
  grapes.
trbztq  N  three part nut.
trkava  N  coconut fiber. Refers to fibers of a coconut shell and ropes made from it.
trpq  N  wild taro.
trpulu  N  tobacco wrap. Part of a betel nut tree used to wrap tobacco for drying.

W  w

watakes  N  watercress.  *[Rorippa nasturtium-aquaticum]*  (<English)
wing bin  NP  wing bean.  *[Psophocarpus tetragonolobus]*  (<English)

Y  y

ycli  V  changing of leaves of a tree.

yrbla  vi  sprout. Used to talk about plant growth as it comes up, comes forth, comes out.  *syn:* yrblapu
  sprout.

yrblapu  vi  sprout.  *syn:* yrbla sprout.

yrli  be.V  vibrant. Refers to the full richness of the attribute being described. Used to talk about luxuriant
  foliage of a tree or plant, as well as multi-part music as in the example sentence.  *X natq lcde nzyrlvi-krde
  apule nzyrnikr navi r gita kxkglu.* And the sound of it it's richness is like the strumming of the strings of
  many guitars.  *syn:* hvcpu 1 sprout (der. of hvce), opu grow, yrlvz 1 grow.

Z  z

ztq  N  bamboo joint.
References


The Cape Gooseberry and its Many Fijian and Pacific Names

Paul Geraghty

Abstract

Physalis peruviana/angulata (Solanaceae), known in English as the wild cape gooseberry, was probably introduced into the Pacific from South America in the early 19th century – though it could have been much earlier. In this article I trace its introduction and spread throughout the Pacific and especially Fiji, the uses to which it has been put, and the many names it has acquired. Two unexpected observations from Fiji are that (1) it now has more different names than any other plant taxon, native or introduced, including examples of borrowing, compounding and semantic extension; and (2) most of the names coined in Fiji refer to a feature of the plant that is never found in standard botanical descriptions.
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1 Introduction

In Fiji, with its approximately 300 communalects, the average number of distinct names for botanical taxa (indeed, for anything) is around four or five. At one end of the scale there are taxa that have exactly the same name throughout Fiji, such as niu (coconut, Cocos nucifera), ivi (Tahitian chestnut, Inocarpus fagifer) and buabua (beach gardenia, Guettardia speciosa), along with those that have one name but different pronunciations resulting from regular sound changes, such as kavika/xavixa/`avi`a/avia (Malay apple, Syzygium malaccense), dakua/da`ua/daxua/daua/taxua (Fiji kauri, Agathis vitiensis), and dilo/zilo/tilo (Alexandrian laurel, Calophyllum inophyllum).

At the other end of the scale is the cape gooseberry (Physalis spp) for which 5379 names have so far been recorded in Fiji (excluding phonetic variants). In this paper I attempt to trace the spread of this plant in Fiji and Polynesia, explore how its Polynesian and Fijian names came about, and speculate as to why this particular taxon has so many different names in Fiji. I will also point out that many of its names, in Fiji and the Pacific, denote a characteristic which is usually absent from botanical descriptions. Botanists tell us there are two species of Physalis, P angulata syn P minima ‘wild cape gooseberry’ and P peruviana ‘cape gooseberry’, in the Pacific, but they are so similar that most Pacific languages, including Fijian, do not distinguish them (Smith 1991:28-31), though some people do recognise that there is a larger one with larger fruit and a smaller one with smaller fruit that is less appetising. In this paper, we will not distinguish these two species in Fiji, since they constitute a single taxon.

2 Origin and spread

The cape gooseberry is native to tropical South America. Botanists are divided on the time of the introduction of P angulata into Polynesia, Whistler (1996:98, Rensch and Whistler 2009:606) stating that it was before the arrival of Europeans, while Cambie and Brewis (1997:142) believe that it was a European introduction. It seems not to have been recorded by any of the Cook expeditions in the 1770s, but being a small and rather insignificant plant, it may have been overlooked. On the other hand, P peruviana is agreed to have been a European introduction (Parham 1964:329; Whistler, p.c.). Neither plant is coastal, and they flourish mainly in inland regions of high islands, rarely on atolls. They are common weeds of cultivation, often springing up on wasteland, or on agricultural land after it has been burnt, and in most parts of the Pacific are used for food and/or medicine. The fruit is like a small yellowish or reddish tomato, edible when ripe, and surrounded by an inflated paper-like lantern (technically its calyx).

Though there is insufficient data to determine the precise path of its progress from South America to the Pacific islands, it is reasonable to assume that it would have travelled from east to west, thus arriving in Eastern Polynesia first, followed by Western Polynesia and then Fiji. As defined and illustrated in

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79 This is an increase over the 36 I earlier reported (Geraghty 2004:74).
80 For example, tukitukiya`de is pronounced tukitu`xiya`de in western Kadavu, coboco`ya`de is coboco`ya`de in Drakaniwai (central Vanualevu), boko`bo`o’o in Koroalau (northeastern Vanualevu), malasou`ni is malahouni in parts of Nadroga (southwest Vitilevu) etc.
81 My thanks to Larry Kimura, John Lynch, Will McClatchey, Claire Moyse-Faurie, Jeff Siegel, Paulini Tamaninuva, Randy Thaman, Art Whistler, Pila Wilson and colleagues, students and friends too numerous to mention for data and comments. The usual disclaimers apply.
82 Unless otherwise stated, Polynesian plant names are from Rensch and Whistler 2009 and references therein, while Fijian names are from my own research. Note that some sources do not consistently mark vowel length or glottal stop.
83 It is also present in Vanuatu, the Solomon Islands and New Caledonia, but it appears to be not very common or well known there, and it is likely that it arrived there from Australia, where it was recorded early in the nineteenth century. Luomala (1953:31–6) cites Pickering of the United States Exploring Expedition as having reported the presence of Physalis on Butaritari (an atoll) in Kiribati in 1841, giving its name as ‘teiparu’, but comments that this is probably a mistake for tepero ‘Ficus tinctoria’, which has a similar fruit. Sabatier (1971) gives
Geraghty (2004:73-4), there are broadly speaking three ways of naming new plant introductions – borrowing, extension and compounding (which includes reduplication) – and all three are found with the cape gooseberry names in Polynesia. In drawing historical inferences, borrowing indicates contact of some sort – not necessarily direct – with speakers of the source language, while the internal naming strategies (extension and compounding) suggest lack of such contact.

The name for *P. angulata* in Tahiti is *tamanufari*’i, which is clearly a compound, as is the related Rarotonga name *tāmaruariki*. While the first element is of uncertain meaning, and indeed the two forms do not correspond perfectly, the second element is most probably Tahitian *fārī* ‘container’, Rarotongan *‘ārīki* ‘covering’, referring to the distinctive covering of the fruit. The Tahitian name for *P. peruviana* is *tūpera*, from English ‘gooseberry’,84 which is also recorded for both species in Rarotonga, along with a variant *tāpera*. These data support the thesis that *P. angulata* was an earlier introduction to East Central Polynesia, while *P. peruviana* was later, being named at a time when the English name was more readily available for borrowing.

Further north, in Mangareva (Gambier Islands) and the Marquesas, the name *konini* is found, for both species. The origin of this name is uncertain, but it was probably an extension of an existing plant name, since in Mangareva it refers also to *Tephrosia purpurea*, a flowering plant in the pea family, certainly not a recent introduction. It refers to other plants with edible fruit in other Eastern Polynesian languages (Greenhill and Clark n.d.). In Mangareva, *maru* is also recorded, which may be a short form, related to the Tahitian and Rarotongan names for *P. angulata*.

At the northernmost extreme of Eastern Polynesia, in Hawai‘i, only *P. peruviana* is found, and the only name known today is *pohā*, which is an extension, the original meaning being ‘explode, bang’. It gets this name from the paper-like ‘lantern’ enveloping the fruit which is popped, usually on their foreheads, by children as an amusement, not only in Hawai‘i but in other parts of the Pacific (a theme we will return to). Other names recorded for the plant in Hawaiian, *pa‘ina* and *‘i‘iwihaole*, are not known to contemporary informants, though *pa‘ina* is another word for ‘burst, explode’ used on the island of Hawai‘i (Pukui and Elbert 1986), and the element *haole* ‘foreign’ in *‘i‘iwihaole* indicates that it was believed to have been introduced from a foreign country.

### 3 Western Polynesia

Whatever the means of its arrival in Western Polynesia, it is of interest to note that the cape gooseberry has no names that seem to be borrowed from Eastern Polynesia. This contrasts with *kumala* (sweet potato *Ipomoea batatas*) the name for which spread from East to West Polynesia, and then further west, probably at a much earlier date. Niue has *manini*, the origin of which is obscure, though it may be related to Proto Central Eastern Polynesian *manini* ‘pleasant, agreeable’, referring to the taste of the ripe fruit.85 The fact that Niue *manini* refers only to *P. angulata* while *P. peruviana* is *manini pālagi* (*manini* from overseas) adds further weight to the proposal that *P. peruviana* was a later arrival, probably of the nineteenth century.

Tongan appears also to distinguish between the two species, with *kuusi* for *P. peruviana*, which is clearly a borrowing from English ‘gooseberry’, and *polopā* for *P. angulata*, a compound of *polo* ‘*Solanum* spp’ (*Solanum* being closely related to *Physalis* in the family *Solanaceae*) and, probably, *pā* ‘explode’. Again it is notable that the name for *P. angulata* is a compound, while that for *P. peruviana* is a borrowing from English, indicating later arrival.

East Futuna, Samoa and Tuvalu apparently only have *P. angulata*. In East Futuna, an earlier term for this was *fulumigi*, named after a kind of boil it was used in treating, but this is now being replaced by *la’akau fuamapāpā* ‘exploding fruit plant’. Samoan *vīvao* is a compound of *vī* ‘*Spondias dulcis*, Polynesian plum’ and *vao* ‘bush, forest’. The comparison is unexpected, *Spondias* being a large tree very unlike the

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84 Note that Tahitian has no velar stops, so all oral stops are borrowed as dental stops – a well-known example being *‘Cook*’, the name of the English navigator, borrowed as Tute.

85 Niue is not an Eastern Polynesian language, but has many borrowings from Eastern Polynesian sources.
cape gooseberry, but the connection may be in the bitter taste of the fruit when unripe. Tuvalu matū may be related to Tongan mātu`u, an alternative name for \textit{P angulata}, but they are of uncertain origin – perhaps derived from homophonous words for ‘dry’.

4 Fijian names: borrowed

For a complete listing of Fijian names for \textit{Physalis} to date, see Appendices 1 and 2 below.

As in Tahiti, Rarotonga and Tonga, there is a borrowing from English, but it is clearly not derived from Tongan or any other nearby language. The borrowed form is \textit{kosipeli} (with the variant \textit{kosiveli} in communalects lacking \textit{/p/}), which is used in many parts of eastern Fiji. The form – rather than, say, the expected \textit{kusiperi} – may have been influenced by the fact that it is also the borrowing of the word \textit{gospel}. If this is the case, it suggests that the plant was named, though not necessarily introduced, after the introduction of Christianity in the 1830s and 1840s. To this day, many speakers who call the plant \textit{kosipeli} or \textit{kosiveli} believe it is so named because it spreads quickly like the Gospel.\textsuperscript{86}

In a small number of localities in eastern Fiji, the name is \textit{tisaipeli} (variant \textit{tisaiveli}), a borrowing from English ‘disciple’, which I will term a ‘borrowing by association’, though it could be interpreted as extension of meaning of an existing borrowing. The most likely explanation is that the borrowers were aware that the name was one with associations with Christianity, but instead of borrowing \textit{kosipeli} they borrowed the similar-sounding \textit{tisaipeli} – with the same number of syllables and the last two syllables identical. Clearly this kind of borrowing can arise only when there is little or no direct connection with the initial donor language.

A third borrowed name is \textit{makoia}, which is used in parts of northeastern Vanualevu (Dogotuki, Udu) and has the distinction of having been borrowed from Labasa Fiji Hindi. Since Hindi speakers have only been present in Fiji in any numbers since 1879, this word must have been borrowed after that date, so either the plant was not present in that area before that date, or it was unnamed or had a different name which was replaced for whatever reason by the borrowing from Hindi. Generally, Hindi names for plants are only found in Fijian when the referent was introduced by Hindi speakers (eg. \textit{baigani} ‘eggplant’).

5 Extension

A number of Fijian names are, like that of Marquesan, extensions of the name of an existing similar plant, in all cases either \textit{Solanum americanum} or \textit{S repandum}. These include \textit{borosousou}, \textit{boroyalewa}, \textit{burasou}, \textit{malasou}, and \textit{sousouyalewa}. Note that while the borrowing from English \textit{kosipeli} is found only in parts of eastern Fiji, simple extensions of the name for \textit{Solanum sp} are found only in western Fiji and Kadavu.

Two of these are extensions of the simple word for ‘explode, burst, pop’: \textit{cabolo}, \textit{cabote}; and three are reduplicated forms of a root with the same meaning: \textit{botoboto}, \textit{cabocabolo}, \textit{cevucevu} (this last is one of the most widespread names).

6 Compounds

One compounding strategy is to combine the word for ‘explode’ or ‘pop’ with \textit{yadre} ‘forehead’, usually with a preposition \textit{i}: \textit{cobaiyadre}, \textit{coboiyadre}, \textit{patoiyadre}, \textit{toboiyadre}, \textit{topoiyadre} (of which \textit{topoi} is a truncated form). More commonly the verbal part of the compound is reduplicated: \textit{botebotelakiyadre}, \textit{boteboteyadre}, \textit{botobotoiyadre}, \textit{cobocobiyadre}, \textit{cobocobyadre}, \textit{potepoteiyadre}, \textit{potopotoiyadre}. A similar strategy is to use a word meaning ‘strike, hit, plonk, flick’, which is also often reduplicated, and followed by the preposition \textit{i} plus ‘forehead’: \textit{cabocobiyadre}. \textit{cobacobaiyadre},

\textsuperscript{86} I will not attempt to explain here why the borrowings from a single English form are so disparate in these languages, other than to note that the Tongan \textit{kuusi} may be a reduction of \textit{kuusipeli}, in the same way that the borrowing \textit{pulumokau} ‘cattle’ has been reduced to \textit{pulu}. 
tekilakiyadre, tekitekilakidrē, tikitikilakiyadre, tukitukilakiyadre, tukitukiyadre (the ‘standard’ form), tukitukiyedre, videvideyadre.

A number of forms, confined to Western Fiji and Kadavu, use the name of an existing Solanum species (boro or malasou ‘S americanum, S repandum’), or in one case the name of an existing amaranth (moca), and qualify it with the name of any of a number of birds that like to eat the fruit of the cape gooseberry: kenaboronaruve (pigeon’s solanum), malasounītō (of which malatō appears to be an abbreviation), meaboronamanu, meamasalasounatō, meamocanatō (chicken’s solanum, chicken’s amaranth), malasounīgā (duck’s solanum).

Two types of compounds have only one example each: tinaniboro ‘mother of solanum’ and tukitukicabolo ‘strike + strike + explode’, both found in Eastern Fiji.

Something of a mystery is the form tuvutuvulakwā and its apparent derivatives tovotovulakwā, titīvolakwā and tuvutuvulakwaya, found in a swathe from the provinces of Serua and Namosi to the district of Waidina in south central Vitilevu. While tuv is a word for ‘explode’ or ‘smash’, the meaning of lakwā/lakwaya is uncertain. Even more mysterious is the form siloni, reported from Solevu in Bua, for which I can offer no explanation.

7 Food, medicinal and other uses

It is not my intention here to give a complete catalogue of uses of Physalis in Polynesia and Fiji, but to provide a general account and raise the question of how Pacific islanders came to know of these uses.

Hawai‘i appears to be unique in the Pacific in that Physalis is not used medicinally, and also in that it is used to make jam, a use only reported elsewhere from Rarotonga (Wilder 1931) and mid-nineteenth-century Fiji (Seemann 1862).

The Marquesas Islands are the only place where the use of the ‘fragrant’ fruit of both species of Physalis in garlands is reported (Brown 1935).

Elsewhere, medical uses appear to cluster geographically. In Samoa and East Futuna the leaves are chewed or crushed and applied as a poultice to boils. As a medicine, the whole plant is pounded (in some cases only the leaves) and may be boiled, then drunk as a cure for anxiety (Tahiti), exhaustion (Fiji), difficulties in childbirth (Fiji), post-natal problems (Fiji, Tonga (Yunker 1959)), the common cold (Fiji) and as a diuretic (Tahiti). It may have been the bitter taste of the unripe fruit that prompted people to experiment with its curative properties.

It is generally reported throughout the region that the ripe fruits are eaten as a snack by children and, as is reflected in many of the names, children play with the fruit like popping a balloon, often on their foreheads. This practice is the basis of most of the names given to the plant in Fiji and Polynesia, but not one that is typically found in botanical accounts.

8 Conclusion

The above suggests the following as a possible history of the introduction of Physalis from South America into the Pacific that is compatible with the available evidence. Physalis angulata arrived in Central Eastern Polynesia by unknown means and at an unknown date, but probably late eighteenth century. Since it was not a deliberate introduction, no name was available for borrowing, so neologisms were used, formed by compounding in Tahiti and Rarotonga and by extension in the Gambier and Marquesas islands. That the most common form of compound is one indicating its being used by children popping it like a balloon is also compatible with its not being a deliberate introduction.

From there it spread to Western Polynesia and then Fiji, where again strategies of compounding and extension were used, indicating that there was no donor language name available. The first record of the plant in Fiji I am aware of is Cargill and Jagger’s (1835-1840) dictionary of Lakeba (Lau) Fijian, where tukitukiyadre is defined as ‘a kind of grass’, and the Rewa equivalent is given as tekilakiyadre.

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87 Nowadays one can also buy pohā-flavoured ice cream in Hawai‘i (William Wilson, p.c., 2017).
88 I have drunk this concoction and can confirm that it tastes absolutely foul - as all herbal medicine should.
Physalis peruviana, on the other hand, appears to have been a deliberate introduction by English speakers, from the early nineteenth century. Degener (1984:257) dates its introduction to Hawai‘i to before 1825. Where borrowings from English were used, the different forms suggest that the introductions were independent. In Fiji, the borrowed forms are only found in the east, where they became generic for Physalis, and this is also compatible with the idea that it was a European introduction, since European settlement began in the east and did not spread to the west until the latter part of the nineteenth century. In many parts it was simply given the name of P angulata. The reasons for parts of northeastern Vanualevu borrowing the name from Hindi require further investigation.

9 Postscript: linguistic knowledge of botanists

I conclude with a word of caution: beware of names for plants given by botanists! A sorry example is Parham (1964:329-330) who lists as Fijian names for the cape gooseberry boteboteyadra, kospeli, maulaqua, and tukiyadra – none of which is correct. The modern trend of linguists working with botanists (and vice-versa) has much to recommend it.
Appendix A: Fijian Names for the Cape Gooseberry

Fijian names of *Physalis angulata/peruviana* by communaut group and/or island, arranged roughly west to east. Note that the forms are written diaphonemically (Geraghty 1983), so actual pronunciation may vary.

A.1 Western Fijian

Yasawa: cevucevu
Waya: burasou
Vuda: burasou, malasou
Ba: burasou, cevucevu
Savatu: cevucevu
Navosa: burasou
Nadroga: malasou, malasounigā, malasounitō, meamalasounatō, meamocanatō
Vatulele: meaboronamanu
Emalu: cevucevu
Serua: malatō, tovutovulakwā, tuvutuvulakwā, tuvutuvulakwaya

A.2 Eastern Fijian

Kadavu: borosousou, boroyalewa, cabolo, kenaboronaruve, sousouyalewa, tinaniboro, tukitukiadre
Ono: borosousou, kenaboronaruve, tinaniboro
Beqa: cabolo
Deuba: kosipeli, kosiveli
Rakiraki: cevucevu
Wainibuka: cevucevu
Nakorotubu: cevucevu
Namena: cevucevu
Waimarō: cevucevu, kosivelī
Wainimala: cevucevu
Waidina: tekitekilakidrē, tūtūvolakwā, tuvutuvulakwā
Namosi: tekitekilakidrē
Suva: tukitukilikadre
Naitasiri: cabolo, tikitiilikadre
Vugalei: cabolo, cevucevu, sömemu?
Rewa: cabolo, kosivelī (Nuku), tekilikadre, tekitekilikadre, tinaniboro, tisivelī (Tokatoka), tukitukilikadre, tukitukiadre
Bau: cobocoboyadre, kosipeli, kosivelī, tinaniboro, toboiyadre (Nairai)
Verata: cevucevu, kosivelī, tukitukiadre
Ovalau: cevucevu, kosipeli, patoiyadre, tisapelī (Tokou)
Gau: cabocabolo, cevucevu, patoiyadre
Koro: cabote, coboiyadre, topoiyadre
Bua: boteboteyadre, cabocaboiyadre, cabolo, cobocabaiyadre, cobocoboiyadre (Dama), cobocoboiyadre, kosipeli (Koroinasolo), kosivelī (Yadua), siloni (Solevu), tisapelī (Bua)
Vanualevuiloma: botobotoiyadre, cabocaboiyadre, cobocaiyadre, cobaiyadre, cobocoboiyadre, cobocoboiyadre, coboiyadre, toboiyadre
Vanualevuicake: botobotoiyadre, botoboto, makoia, potepoteiyadre, potopotoiyadre
Vatulawa: cobaiyadre, kosipeli
Taveuni: patoiyadre, tōpoi, topoiyadre, tukitukiadre
Vanuabalavu: tukitukiadre, kosipeli

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Yasayamuala: borosousou, cabolo, kosipeli, tukitukiadre, videvideyadre
Lauicake: kosipeli, tukitukiadre
Appendix B: Alphabetical Index of Fijian Names for the Cape Gooseberry

borosousou: Kadavu, Ono, Yasayasamuala
boroyalewa: Kadavu
botebotelakiyadre: Vanualevuiloma (Cikobia), Vanualevuicake (Labasa)
boteboteyadre: Bua
botoboto: Vanualevuicake (Saqani)
botobotoiyadre: Vanualevuiloma
burasou: Ba, Navosa, Vuda, Waya
cabolakoiyadre: Bua, Vanualevuiloma
cabolakoiyadre: Gau
cabolakoiyadre: Kadavu, Beqa, Bua, Naitasiri, Rewa, Kuku, Namata, Naila, Vugalei, Yasayasamuala
cabote: Koro
cevucevu: Ba, Emalu, Gau, Namena, Ovalau, Rakiraki, Savatu, Verata, Vugalei, Waimaro, Wainibuka, Wainimala, Yasawa
cobicobaiyadre: Bua, Vanualevuiloma
cobicaiyadre: Vanualevuiloma (Muanivatu)
cobicoboiyadre: Bua, Vanualevuiloma
cobicoboyadre: Bua, Vanualevuiloma
cobicaiyadre: Vanualevuiloma (Muanivatu), Koro
kenaboronaruve: Kadavu, Ono
kosipeli: Bau, Cautata, Deuba, Lauicake, Ovalau, Vanuabalavu, Vatulawa (Naweni), Yasayasamuala
kosivel: Deuba, Bau, Bua (Yadua), Rewa, Nuku, Verata, Waimaro
makoia: Vanualevuicake (Dogotuki, Udu)
malasou: Nadroga, Vuda, Yakete
malasounigā: Nadroga (Naqwalimare, Bemana)
malasounitō: Nadroga
malatō: Serua
meaboronamanu: Vatulele
meamalasounatō: Nadroga
meamocanatō: Nadroga
patoiuyadre: Ovalau, Taveuni
potepoteiyadre: Vanualevuicake
potopotoiyadre: Vanualevuicake
siloni: Bua
sousouyalewa: Kadavu
tekilakiyadre: Rewa
tekitekilakidrē: Namosi, Waidina
tekitekilakiyadre: Rewa
tikitikilakiyadre: Naitasiri, Rewa
tinaniboro: Bau, Kadavu, Ono, Rewa
tisaipeli: Ovalau (Tokou), Bua (Bua)
tisaivel: Rewa (Tokatoka)
toboiyadre: Bau (Nairai)
tobolakiyadre: Vanualevuiloma (Cikobia)
tōpoi: Taveuni
topoiyadre: Gau, Koro, Taveuni
tukitukicabolo: Taveuni
tukitukilakiyadre: Rewa, Suva, Navakavu
tukitukiyadre: Kadavu, Lauicake, Vanuabalavu, Yasayasamuala
tukitukiyedre: Rewa
tovutovulakwā: Serua
tūtūvolakwā: Waidina
tuvutuvulakwā: Serua, Wainiyavu, Waidina
tuvutuvulakwaya: Serua
videvideyadre: Yasayasamuala
References


