

**Wellington Working Papers in  
Linguistics**

**Volume 17, 2005**

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P.O. Box 600  
Wellington  
New Zealand**

Published 2005

Printed for  
Victoria University of Wellington  
P.O. Box 600  
Wellington  
New Zealand

ISSN 1170-1978

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## Editorial

All of the papers in this issue draw on data collected in work with native speakers of three Oceanic languages: Roviana, spoken on New Georgia in the Solomon Islands, and Aulua and Unua, both spoken on the island of Malakula in Vanuatu. Special thanks are due to the speakers of these languages for their work with us, not only to those whose names appear here as co-authors (Kalangis Bembe, Willy Makenzie and Glorious Oxenham), but also to the many speakers in the Aulua and Unua communities who have helped us towards understanding their languages.

The Roviana text which appears in this volume came out of an MA/Honours Field Methods class conducted in 2001. In that class, Glorious Oxenham was the Roviana speaker and Agnes Terraschke was a participant.

The Aulua and the Unua data were collected in field work on the island of Malakula, respectively by Martin Paviour-Smith and Elizabeth Pearce in a research project instigated by Terry Crowley from Waikato University. Martin completed his PhD thesis 'Tok Pisin and *i*: Subject and verb agreement in MPE and two other unrelated Melanesian creoles', at VUW in 2003 and, now on the staff at Massey University, he continues his collegial collaboration with us on the Malakula research.

The contribution by Laura Dimock was written originally as a research paper as part of course work for an MA degree.

The contributions in this volume mark in a small way our ongoing engagement in the larger research project which was shockingly interrupted by the passing of Terry Crowley in January 2005.

*Terry, ol wok blong yu i stap gohed yet.* ('Terry, your work continues')

Elizabeth Pearce

December 2005

## Unua texts

Kalangis Bembe and Elizabeth Pearce

The following two Unua texts are *kastom* stories from the repertoire of the oral tradition in the Unua community. Both are 'origin' stories and both are given in the Unua versions written down by Kalangis Bembe, who is an elder and chief at Ruhumbo, one of the five main Unua villages.

CD recordings of readings of the stories by Kalangis Bembe in 2004 are held at the Vanuatu Cultural Centre and at VUW (Unua CD 1/04).

For general background information on the Unua language, the reader is referred to the Introduction to the paper by Elizabeth Pearce in the present volume. The map on page 3 shows where Unua is spoken on the island of Malakula.

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### ABBREVIATIONS

1INCL	1 person inclusive
1SG	1 person singular
2DU	2 person dual
2SG	2 person singular
3DU	3 person dual
3PL	3 person plural
3SG	3 person singular
ATTEN	Attenuative
C	Complementizer
CONT	Continuous
DAT	Dative
DIST	Distant
DU	Dual
EMPH	Emphatic
GEN	Genitive
IO	Indirect object marker
IRR	Irrealis
LOC	Locative
NEG	Negative
PERS	Person
PL	Plural
PROX1	Proximate first person (near speaker)
PROX2	Proximate second person (near hearer)
Q	Question marker

SG	Singular
SUBJ	Subjunctive
TR	Transitive

## Comments

Deictic or demonstrative forms show at least a three-way distinction, glossed here as 'PROX1' versus 'PROX2' versus 'DIST'. In fact, at least one of the PROX2 markers, post-nominal *ngo*, appears in many cases to be bleached of any ostensive value giving rise to interpretations similar to those obtaining with prior reference 'the' in English.

The 'SUBJ' term has been applied to a verbal affix which occurs on the verb of a relative clause and in question clauses.

In the Unua texts, a <bb> sequence is a pre-nasalized bilabial trill; the voiced stops are all prenasalized; an <rr> sequence is a strongly trilled rhotic, contrasting with <r> which has its strongest realization as a flap; <v> represents a bilabial fricative; <x> is a velar fricative and <j> is a post-alveolar voiceless affricate.

## TEXT 1

## Imrebe rrate rremravi nani

The story of how we got the coconut tree

Nabong soxa, motara soxa rroni vindra sen xeru.  
day one man one with woman GEN.3SG two

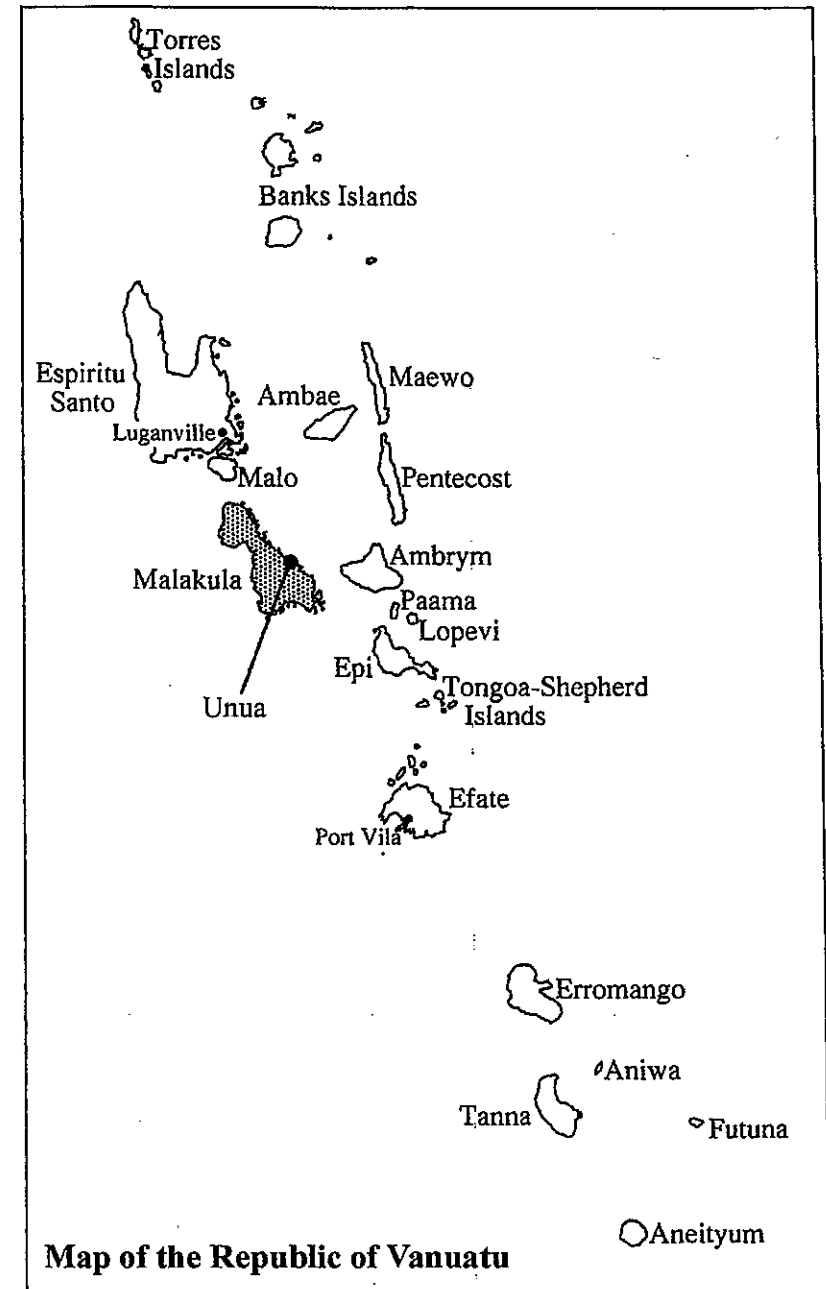
*Once there was a man with two wives.*

Ro-non regeri Nue Reb ro-non i-xa. Go arres  
3PL-stay near Pangkumu River 3PL-stay 3SG-go and man

*They lived near the Pangkumu River and they went on living there. And there was a*

soxa i-mo-vij ni motara go desevin sen tuen. I-xa  
one 3SG-CONT-hide IO man and wife GEN.3SG other 3SG-go

*man who was hiding from the man and one of his wives. And*



go motara ngo i-ke-i vin ngo dabango-n. I-xa go  
and man PROX2 3SG-see-TR woman PROX2 belly-3SG 3SG-go and

*the (first) man saw his wife's belly. And*

i-mo-ngva i-vra: "Vin nge i-rav-i dabango-n  
3SG-CONT-think 3SG-say woman PROX1 3SG-take-TR belly-3SG

*he was thinking and said (to himself): "How did this woman get*

ngo i-mrebe?"  
PROX2 3SG-how

*that belly?"*

Nabong soxa i-vosi navoes sen xabat i-xa go  
day one 3SG-pick up bow GEN.3SG white man 3SG-go and

*One day he picked up his gun and he went and*

i-tab re naman. I-ke-i ju nga tanga  
3SG-hide LOC garden 3SG-see-TR already C PERS.DIST

*hid in the garden. He had seen the other one*

i-vena. Naxerr nga tongo i-ruj vena regeri-n,  
3SG-come time C PERS.PROX2 3SG-approach come near-3SG

*coming. When that one came near*

go i-rva i-rrum apen. Motara nga i-rve-i tanga  
and 3SG-shoot 3SG-fall below man DIST 3SG-pull-TR PERS.DIST

*he shot him and he fell down. The man dragged the body along*

i-xa i-bra re nue, go i-sar sur-ue. Tongo  
3SG-go 3SG-throw LOC river and 3SG-float follow-river PERS.PROX2

*and went and threw it in the river, and it floated down the river. The body*

i-sar vena go i-bet re naxos soxa. Ro-non  
3SG-float come and 3SG-stick LOC floating rubbish one 3PL-stay

*floated down and it got stuck in some floating debris. They (the family) stayed on*

i-xa go vin ngo i-pas-i dabango-n nga,  
3SG-go and woman PROX2 3SG-give birth-TR belly-3SG DIST

*there and the woman gave birth,*

go nati-n nen i-ve moxman. Nogo nati-n go bi-ve  
and child-3SG GEN 3SG-be male maybe child-3SG and 3SG.IRR.be

*and the child was a boy. Maybe when the child was about*

navur bi-mrovtes, go nabong soxa mokiki i-mo-ngar ma.  
Month 3SG.IRR-six and day one boy 3SG-CONT-cry just

*six months old, one day the boy just kept on crying.*

I-ngar i-xa go motara i-re i-ngorngor ni, go  
3SG-cry 3SG-go and old man 3SG-feel 3SG-tired IO and

*It kept on crying and the man felt tired of it, and*

i-srosra raru. Ivra: "Xamru mur-b-xa ba vex  
3SG-force out 3DU 3SG-say 2DU 2DU-IRR-go ATTN to

*he sent the two of them out. He said: "You two must go away*

r-aut bi-soxa, no-berax ju be-re  
LOC-place 3SG.IRR-one 1SG-not want already 1SG.IRR-hear

*somewhere else, I don't want to hear*

mur-b-ngar ien."  
2DU-IRR-cry here

*any more crying here."*

Vin ngo i-vos-i nati-n, go  
 woman PROX2 3SG-pick up-TR child-3SG and

*The woman picked up the child and*

ru-sur-ue sarix, ru-vena ru-jbar-i nut nga  
 3DU-follow-river down 3DU-com 3DU-reach-TR place C

*they followed the river down, and they came to the place where*

mokiki teme-n mi-bet r-en. Go mokiki i-ter,  
 boy father-3SG 3SG.SUBJ-stick LOC-GEN and boy 3SG-strong

*the boy's father was stuck. And the boy was strong*

i-seb-ngar rre nu rre. I-xa ru-sarix vena morox  
 3SG-NEG-cry NEG EMPH NEG 3SG-go 3DU-down come down

*and didn't cry any more. Then they went down*

nen kiki, go mokiki i-ngar mu. I-xa go ru-gir  
 GEN small and boy 3SG-cry again 3SG-go and 3DU-return

*a bit further, and the boy was crying again. And so they returned*

mu vena maxat ru-jbar-i nut nga motara  
 EMPH come high 3DU-reach-TR place C old man

*again higher up until they reached the place where the man*

mi-bet r-en, go mokiki i-ter. Ru-non goj  
 3SG.SUBJ-stick LOC-GEN and boy 3SG-strong 3DU-stay now

*was stuck, and the boy was strong. They now stayed*

iog, naut i-bong go ru-matur. Abong ngo mokiki  
 there place 3SG-dark and 3DU-sleep night PROX2 boy

*there, the place was dark and they slept. In the night the boy's*

rrese-n i-ke-i nabor, i-ke-i motara i-vra-i xini:  
 mother-3SG 3SG-see-TR dream 3SG-TR old man 3SG-say-TR 3SG

*mother had a dream and she saw the man who said to her:*

"Bu-ke-i jiten soxa i-tov re naxos nga re nue  
 2SG-see-TR thing one 3SG-grow LOC rubbish DIST LOC river

*"You will see something growing in the debris in this river,*

ninge, bu-rav-i go bu-rv-i." Vin ngo  
 thing-PROX1 2SG.IRR-take-TR and 2SG.IRR-plant-TR woman PROX2

*take it and plant it." In the morning the woman*

mevixso go i-xa i-ke-i nani soxa i-tov go  
 morning and 3SG-go 3SG-see-TR coconut one 3SG-grow and

*went and saw a coconut tree growing and*

i-vos-i go i-rv-i. I-krokrox-ni i-xa i-ras go  
 3SG-pick-TR and 3SG-plant-TR 3SG-look after-IO 3SG-go 3SG-big and

*she picked it up and planted it. She looked after it and it grew big and*

i-van. Naxerr nga venen mi-tra vin ngo  
 3SG-bear fruit time C fruit 3SG.SUBJ-ripe woman DIST

*bore fruit. When the fruit was ripe the woman*

i-ta-i soxa go i-ke-i suen go i-min-i go  
 3SG-cut-TR one and 3SG-see-TR liquid and 3SG-drink-TR and

*cut one open and saw the liquid and drank it and*

i-rra-i karon go i-re i-vo.  
 3SG-eat raw-TR flesh and 3SG-feel 3SG-good.

*Ate the flesh and it tasted good.*

**Unua:**

Nabong soxa, motara soxa rroni vindra sen xeru. Ronon regeri Nue Reb ronon ixa.

Go arres soxa imovij ni motara go desevin sen tuen.

Ixa go motara ngo ikei vin ngo dabangon. Ixa go imongva ivra: "Vin nge iravi dabangon ngo imrebe?"

Nabong soxa ivosi navoes sen xabat ixa go itab re naman. Ikei ju nga tanga ivena. Naxerr nga tongo iruj vena regerin, go irva irrum apen. Motara nga irvei tanga ixa ibra re nue, go isar surue. Tongo isar vena go ibet re naxos soxa.

Ronon ixa go vin ngo ipasi dabangon nga, go natin nen ive moxman.

Nogo natin go bive navur bimrovtes, go nabong soxa mokiki imongar ma. Ingar ixa go motara ire ingorngor ni, go isrosra raru. Ivra: "Xamru murbxa ba vex raut bisoxa, noberax ju bere murbngar ien."

Vin ngo ivosi natin, go rusurue sarix, ruvena rujbari nut nga mokiki temen mibet ren. Go mokiki iter, isebugar rre nu rre.

Ixa rusarix vena morox nen kiki, go mokiki ingar mu. Ixa go rugir mu vena maxat rujbari nut nga motara mibet ren, go mokiki iter.

Runon goj iog, naut ibong go rumatur.

Abong ngo mokiki rresen ikei nabor, ikei motara ivrai xini: "Bukei jiten soxa itov re naxos nga re nue ninge, buravi go burvi."

Vin ngo mevixso go ixa ikei nani soxa itov go ivosi go irvi. Ikrokroxni ixa iras go ivan. Naxerr nga venen mitra vin ngo itai soxa go ikei suen go imini go irrai karon go ire ivo.

**English:**

Once there was a man with two wives. They lived near the Pangkumu River and they went on living there.

And there was a man who was hiding from the man and one of his wives.

And the (first) man saw his wife's belly. And he was thinking and said (to himself): "How did this woman get that belly?"

One day he picked up his gun and he went and hid in the garden. He had seen the other one coming. When that one came near he shot him and he fell down. The

man dragged the body along and went and threw it in the river, and it floated down the river. The body floated down and it got stuck in some floating debris.

They (the family) stayed on there and the woman gave birth, and the child was a boy.

Maybe when the child was about six months old, one day the boy just kept on crying. It kept on crying and the man felt tired of it, and he sent the two of them out. He said: "You two must go away somewhere else, I don't want to hear any more crying here."

The woman picked up the child and they followed the river down, and they came to the place where the boy's father was stuck. And the boy was strong and didn't cry any more.

Then they went down a bit further, and the boy was crying again. And so they returned again higher up until they reached the place where the man was stuck, and the boy was strong.

They now stayed there, the place was dark and they slept.

In the night the boy's mother had a dream and she saw the man who said to her: "You will see something growing in the debris in this river, take it and plant it."

In the morning the woman went and saw a coconut tree growing and she picked it up and planted it. She looked after it and it grew big and bore fruit. When the fruit was ripe the woman cut one open and saw the liquid and drank it and ate the flesh and it tasted good.

\*\*\*\*\*

## TEXT 2

**Imrebe rrate rremravi norrom namat**  
How we got the snake yam

Vindra soxa rroni tinva<sup>v</sup>in, go teme raru i-mej ju.  
woman one with daughter and father 2DU 3SG-die already

*There was a woman and her daughter and the father had already died.*

Ru-non i-xa go nabong soxa vinkiki go i-vra-i xini  
3DU-live 3SG-go and day one girl and 3SG-say-TR DAT

*The two of them went on living and one day the girl said to her*

rrese-n, i-vra: "Mama, xina reken ba-xa be-xr-i  
mother-3SG 3SG-say mama 1SG today 1SG.IRR-go 1SG.IRR-dig-TR

*mother, she said: "Mama, today I am going to go and dig*

ba rraxum, be-vena go rru-b-maur xini."  
ATTEN crab 1SG.IRR-come and 1INCL.DU-IRR-make pudding IO

*for crabs, I will come back and we will make a pudding with them."*

Go rrese-n i-vra-i: "Merre i-vo, go bu-seb-xa  
and mother-3SG 3SG-say-TR OK 3SG-good and 2SG.IRR-NEG-go

*And the mother said: "OK, that's fine, but don't go*

vex re r-apen nebag soxa iog, nut ngo i-ve  
to LOC LOC-under banyan tree one there place PROX2 3SG-be

*under the banyan tree there, that place is*

nut kon."  
place taboo

*is a taboo place."*

Go vinkiki nga i-vra: "I-jxe, xina be-xr-i morix  
and girl DIST 3SG-say 3SG-NEG 1SG 1SG.IRR-dig-TR near

*And the girl said: "No, I will only dig near*

ni ma ien."  
IO just here

*here."*

Go rrese-n i-vra-i: "Merre i-vo bu-xa."  
and mother-3SG 3SG-say-TR OK 3SG-good 2SG.IRR-go

*And the mother said: "OK, that's fine, you can go."*

Naxerr nga vinkiki i-xa i-xr-i rraxum nga i-xa  
time C girl 3SG-go 3SG-dig-TR crab DIST 3SG-go

*When the girl went and dug for crabs she went*

go i-jbar-i r-apen nebag nga.  
and 3SG-reach-TR LOC-under banyan tree DIST

*and got to underneath that banyan tree.*

Vinkiki i-xr-i rraxum nen soxa i-xa go i-ke-i  
girl 3SG-dig-TR crab GEN one 3SG-go and 3SG-see-TR

*The girl dug up a crab there and then she saw*

namat soxa, go namat ngo i-vo<sup>x</sup>vare go i-rej rroni  
snake one and snake PROX2 3SG-come out and 3SG-speak with

*a snake, and the snake came out and spoke to*

vinkiki, i-vra: "U-bbrare xina re mero-g. Go reken  
girl 3SG-say 2SG-disturb 1SG LOC bed-1SG and today

*the girl and said: "You disturbed me in my bed. And today*



bu-xa vox-be ba-tang re xai. Bu-matur abe reken,  
2SG.IRR-go to-where 1SG.IRR-follow LOC 2SG 2SG-sleep where today

*wherever you go I will follow you. Where you are going to sleep today*

be-matur rroni xai."  
1SG.IRR-sleep with 2SG

*I will sleep with you."*

Vinkiki i-tumrax i-sa-i rraxum nga mi-xr-i  
girl 3SG-get up 3SG-pick up-TR crab C 3SG.SUBJ-dig-TR

*The girl stood up, picked up the crab that she had dug up*

nga go i-gom i-xa i-ke-i rrese-n. Go i-vra-i  
DIST and 3SG-run 3SG-go 3SG-see-TR mother-3SG and 3SG-say-TR

*and ran back to see her mother. And she said*

xini rrese-n, i-vra: "Mama, namat soxa i-gom taxu xina."  
IO mother-3SG 3SG-say mama snake one 3SG-run behind 1SG

*to her mother, she said: "Mama, there is snake is running after me."*

Go rrese-n i-vra-i: "Xai u-xa vex re nut kon nga,  
and mother-3SG 3SG-say-TR 2SG 2SG-go to LOC place taboo DIST

*And the mother said: "You went to that taboo place*

be-rru-b-verrem ni go?"  
1SG.IRR.1INCL.DU-IRR-do IO Q

*what are we going to do about this?"*

Namat nga i-ror i-xa go i-xa vex re naim.  
snake DIST 3SG-crawl 3SG-go and 3SG-go to LOC house

*The snake kept crawling along and it went into the house.*

Vinkiki rroni rrese-n ru-seb-matur rre, ru-tu ma.  
girl with mother-3SG 3DU-NEG-lie down NEG 3DU-stand just

*The girl and her mother did not lie down, they just stood there.*

Go rraxum nga soxa i-rej, i-vra: "Bu-revtox-ni  
and crab DIST one 3SG-speak 3SG-say 2SG.IRR-take off-IO

*And one of the crabs spoke, saying: "Take*

neter re xina."  
rope LOC 1SG

*the rope off me."*

Rraxum nga i-gor i-xa go i-vxa rivon, go  
crab DIST 3SG-crawl 3SG-go and 3SG-open claw and

*The crab crawled along and open its claws and*

i-xaj-i sernixe namat nga.  
3SG-bite-TR neck snake DIST

*it bit the snake's neck.*

Ru-mermervur i-xa go namat nga i-mej, rraxum  
3DU-roll 3SG-go and snake DIST 3SG-die crab

*The two of them rolled over together and the snake died, the crab*

i-xej bbuni. Vinkiki rroni rrese-n ru-sa-i namat  
3SG-grip dead girl with mother-3SG 3DU-pick up-TR snake

*choked it to death. The girl and her mother picked up the snake*

nga ru-xa go ru-tev-ni.  
DIST 3DU-go and 3DU-bury-IO

*and went and buried it.*

Nabong re mu ru-xa go ru-ke-i duvin norrom  
 day LOC again 3DU-go and 3DU-see-TR vine yam

*The next day they went and saw that there was a yam vine*

soxa i-tov, re danon namat nga.  
 one 3SG-grow LOC place snake DIST

*growing there, in the place they had put the snake.*

Ru-krokrox-ni i-xa i-mej. Ru-xr-i go ru-ke-i  
 3DU-look after-IO 3SG-go 3SG-die 3DU-dig-TR and 3DU-dee-TR

*They looked after it until it died. Then they dug it out and they saw*

i-ve norrom. Go reken ngo ro-mo-kese norrom ngo  
 3SG-be yam and today PROX2 3PL-CONT-call yam PROX2

*it was a yam. From that day they call that yam*

nexse-n ra-vra-i: rrom namat.  
 name-3SG 3PL-say-TR yam snake

*by the name: snake yam.*

Duxutxun nge i-nog ien.  
 custom story PROX1 3SG-end here

*This custom story ends here.*

### Unua:

Vindra soxa rroni tinvavin, go teme raru imej ju.

Runon ixa go nabong soxa vinkiki go ivrai xini rresen, ivra: "Mama, xina reken baxa bexri ba rraxum, bevena go rrubmaur xini."

Go rresen ivrai: "Merre ivo, go busebxa vex re rapen nebag soxa iog, nut ngo ive nut kon."

Go vinkiki nga ivra: "Ijxe, xina bexri morix ni ma ien."

Go rresen ivrai: "Merre ivo buxa."

Naxerr nga vinkiki ixa ixri rraxum nga ixa go ijbari rapen nebag nga. Vinkiki ixri rraxum nen soxa ixa go ikei namat soxa, go namat ngo ivoxvare go irej rroni vinkiki, ivra: "Ubbrare xina re merog. Go reken buxa voxbe batang re xai. Bumatur abe reken, bematur rroni xai."

Vinkiki itumrax isai rraxum nga mixri nga go igom ixa ikei rresen. Go ivrai xini rresen, ivra: "Mama, namat soxa igom taxu xina."

Go rresen ivrai: "Xai uxa vex re nut kon nga, berrubverrem ni go?"

Namat nga iror ixa go ixa vex re naim. Vinkiki rroni rresen rusebmatur rre, rutu ma.

Go rraxum nga soxa irej, ivra: "Burevtoxni neter re xina."

Rraxum nga igor ixa go ivxa rivon, go ixaji sernixe namat nga. Rumermervur ixa go namat nga imej, rraxum ixej bbuni.

Vinkiki rroni rresen rusai namat nga ruxa go rutevni.

Nabong re mu ruxa go rukei duvin norrom soxa itov, re danon namat nga.

Rukrokroxni ixa imej. Ruxri go rukei ive norrom. Go reken ngo romokese norrom ngo nexsen ravrai: rrom namat.

Duxutxun nge inog ien.

### English:

There was a woman and her daughter and the father had already died.

The two of them went on living and one day the girl said to her mother, she said: "Mama, today I am going to go and dig for crabs, I will come back and we will make a pudding with them."

And the mother said: "OK, that's fine, but don't go under the banyan tree there, that place is is a taboo place."

And the girl said: "No, I will only dig near here."

And the mother said: "OK, that's fine, you can go."

When the girl went and dug for crabs she went and got to underneath that banyan tree. The girl dug up a crab there and then she saw a snake, and the snake came

out and spoke to the girl and said: "You disturbed me in my bed. And today wherever you go I will follow you. Where you are going to sleep today I will sleep with you."

The girl stood up, picked up the crab that she had dug up and ran back to see her mother. And she said to her mother, she said: "Mama, there is snake is running after me."

And the mother said: "You went to that taboo place what are we going to do about this?"

The snake kept crawling along and it went into the house. The girl and her mother did not lie down, they just stood there.

And one of the crabs spoke, saying: "Take the rope off me."

The crab crawled along and open its claws and it bit the snake's neck. The two of them rolled over together and the snake died, the crab choked it to death.

The girl and her mother picked up the snake and went and buried it.

The next day they went and saw that there was a yam vine growing there, in the place they had put the snake.

They looked after it until it died. Then they dug it out and they saw it was a yam. From that day they call that yam by the name: snake yam.

This custom story ends here.

## The Bilabial Trill in Unua

Laura Dimock

### ABSTRACT:

This research paper investigates prenasalised bilabial trills in Unua. Their distribution is investigated based on previous work done by Pearce (2004b, 2004c) and careful analysis of 4 hours of speech recordings. I find some evidence to suggest that the bilabial trill is a separate phoneme from the prenasalised voiced bilabial plosive, based on the difference between two words, one borrowed and one native. Many questions are raised that could be addressed in further research.

### 1. Introduction

This paper investigates the prenasalised bilabial trill [ʷb] in the Unua language of Vanuatu. The ultimate goal is to determine whether it constitutes a separate phoneme from the prenasalised voiced bilabial plosive /ʷb/ or whether it is only an allophone. To do this, I will explore its distribution and origin. Sections 2 and 3 are an overview of the Unua language and its general phonology. Section 4 is an initial look into bilabial trills in Unua. Section 5 summarises the literature on bilabial trills in other languages. Section 6, the longest section, explores the distribution of [ʷb] in Unua, comparing it to other languages and making several possible hypotheses. Section 7 is a very brief discussion about sociolinguistic variables. Section 8 concludes the discussion, bringing together any evidence for the phonemic status of [ʷb] and outlining further research possibilities.

### 2. The Unua language

Unua is one of 81 actively spoken languages of Vanuatu (Lynch and Crowley 2001: 4). More accurately, Unua is a dialect of the Unua-Pangkumu language, which belongs to the Southern Oceanic subgroup of the Central-Eastern Oceanic language group (Lynch and Crowley 2001: 20). The Unua dialect is spoken by more than 400 people in 5 villages on the island of Malakula (Pearce 2004a: 3). As is the case with most languages in Vanuatu, the tribal language is spoken as a first language and Bislama, the national pidgin language, is used to communicate with speakers of other languages. French or English are often learned in school.

### 3. The phonology of Unua

Pearce (2004b) has outlined Unua phonology. Table one is based on her findings.

Table 1: the consonants of Unua. Source: Pearce (2004b)

	bilabial	alveolar	post-alveolar	velar
Voiceless plosive	p / p <sup>w</sup>	t		k
Prenasalised voiced plosive	<sup>m</sup> b / <sup>m</sup> b <sup>w</sup>	<sup>n</sup> d		<sup>ŋ</sup> g
Affricate			tʃ	
Fricative	β / β <sup>w</sup>	s		ɣ
Nasal	m	n		ŋ
Tap		ɾ		
Trill	<sup>m</sup> B	r		
Lateral		l		

For three places of articulation, there is a voiceless plosive, a prenasalised voiced plosive, a nasal stop, and a fricative which may be voiced or voiceless. For older speakers, there is also a phonemic distinction between velarised and non-velarised non-nasal bilabial obstruents, but the distinction is not present for younger speakers (Pearce 2004b: 8-9). The prenasalised consonants may be realised in a variety of ways depending on where they occur. In initial position, the prenasalisation may not be perceptible, and in word-final position, prenasalised plosives may be devoiced or realised as the nasal portion only (Pearce 2004b: 13). In fact, many younger speakers prefer this nasal realisation to the point that there is no longer any contrast between prenasalised voiced plosives and nasal stops in word-final position (Pearce 2004b: 13).

There are minimal pairs that distinguish the alveolar tap from the alveolar trill: /<sup>n</sup>dere/ "axe", /<sup>n</sup>dere/ "clam" and /rate/ "we" (1INCL.PL), /rate/ "they" (3.PL). The lateral approximant /l/ is uncommon, and is probably only used in borrowed words (Pearce 2004b: 10). Pearce (2004b: 5-7) also lists the prenasalised bilabial trill as a phoneme, but I will be looking further into this issue throughout the rest of this paper.

Pearce (2004b: 13-19) identifies five basic vowels for Unua, and for some speakers a sixth vowel, a front rounded vowel, but it is not very common.

### 4. Bilabial trills in Unua

My data on Unua comes from Pearce's collection. In 2003 and 2004, she recorded on minidisc approximately 36 hours of speech from Unua speakers from different villages and of different ages and genders. This includes words in isolation, sentences in isolation, longer texts, and songs. From this data, she

compiled a word list of about 1200 words. To check the bilabial trills in this collection, I analysed approximately four hours of data. It included direct elicitation of individual words from a group of five women, a conversation with an 18-year-old female speaker about which words have the prenasalised bilabial trill sound and which have a normal prenasalised voiced bilabial plosive, and a 65-year-old man's twelve-minute spoken story about a woman and a pig, chosen for the number of words that could potentially have the trill.

The basic distribution of prenasalised bilabial trills in Unua is shown in Table 2. The general pattern is that they occur word initially and medially before the high back rounded vowel [u]. And in a word final position, they occur after a rounded vowel, [u] or [o]. At first glance this appears to be an allophonic distribution, but there are some complications in the identification of the contexts, and the distribution of this trill segment in Unua will be discussed further in section 6.

Table 2: distribution of bilabial trills in Unua  
(Source: Pearce 2004c)

a.	b.	c.
[ <sup>m</sup> bue] "pig"	[na <sup>m</sup> bur] "oven"	[na <sup>m</sup> u <sup>m</sup> B] "grass"
[ <sup>m</sup> auyas] "charcoal"	[a <sup>m</sup> ua <sup>m</sup> u] "moth"	
[ <sup>m</sup> batin] "head"	[ɣu <sup>m</sup> basi] "too much"	[-ta <sup>m</sup> b] "hide"
[ <sup>m</sup> beroβ] "cucumber"	[a <sup>m</sup> be] "where"	[na <sup>m</sup> e <sup>m</sup> b] "mud"
[ <sup>m</sup> biton] "navel"	[ <sup>n</sup> dembir] "crayfish"	[riβti <sup>m</sup> b] "tusk"
[ <sup>m</sup> botue] "well"	[a <sup>m</sup> boɟ] "night"	[noɣo <sup>m</sup> B] "fire"

### 5. Bilabial trills in other languages

Although lingual trills are reasonably common in the world's languages, bilabial trills are an uncommon linguistic phenomenon. However, they have been observed in several languages. There are twelve East Manus languages in Papua New Guinea reported to have bilabial trills: Sora (Blust 1986 in Maddieson 1989), Andra-Hus, Ere, Kele, Koro, Kurti, Leipon, Lele, Nali, Papitalai, Ponam, and Titan (Ross 1988: 343). They have also been reported in Nias near Sumatra (Catford 1988) and Muna in S.E. Sulawesi (Maddieson 1998: 91). There are four languages of Malakula in Vanuatu that have been reported to have bilabial trills: Uripiv (Puest 1997), Naʔahai (Ladefoged and Maddieson 1996: 30), Ninde (Maddieson 1989: 91), and Avava (Crowley (internet)).<sup>1</sup> They

<sup>1</sup> Unua could be added to this list, and there are likely to be more languages in Malakula that have bilabial trills since it has so many poorly documented languages which are related to those listed here.

have also been reported in Ngwe (Dunstan 1969 in Laver 1994: 220), Babanki, and Kom (Hyman 1980 in Maddieson 1989), three languages of the Narrow Grassfields group in Cameroon, and also in Baka and Mangbetu (Puest 1997), two Central Sudanic languages. In Central and South America, bilabial trills have been reported in two languages in Mexico, Amuzgo and Isthmus Zapotec (Pike 1963 in Laver 1994: 220), and in Piraha in Brazil (Everett 1982: 94). There have also been bilabial trills reported in some dialects of Yi in China (Ladefoged and Maddieson 1996: 130 and 314, Maddieson 1989: 112).

At first glance, this list seems to show a wide geographic range for bilabial trills from Asia to Africa to the Pacific to South and Central America. However, they do not all use bilabial trills in the same way. For example, in Amuzgo and Isthmus Zapotec bilabial trills only occur in a couple of words and they seem to function as ideophones (Maddieson 1989: 112). Babanki only has one word with a bilabial trill (Maddieson 1989: 99). The dialects of Yi are also different from the other languages because its bilabial trill is an allophone of a fricative vowel rather than a consonant (Maddieson 1989: 112).

Among the languages listed in this section, there are two notable groups that have very similar characteristics. The first is that large Austronesian group with languages centred around Manus Island in Papua New Guinea and Malakula Island in Vanuatu. The other group contains a few languages in Cameroon.<sup>2</sup> The bilabial trills in both of these groups are prenasalised and occur only before high back rounded vowels. For many of them, the bilabial trill is an allophone of /mb/. Ladefoged and Maddieson (1996: 130) claim that "Apart from a few exceptions which remain unexplained in Nias (Catford 1988),<sup>3</sup> and the special case of Luquan Yi fricative vowels, all bilabial trills historically developed from a sequence of a prenasalised voiced bilabial plosive followed by a relatively high back rounded vowel." In most of these languages, the bilabial trill still only occurs in this situation (Ladefoged and Maddieson 1996: 130).

Trills are caused by a cycle of air pressure building up, which then causes the lips (in the case of bilabial trills) to separate. A combination of muscular forces and the Bernoulli Principle of the moving air causes the lips to close again (Laver 1994: 219). In connected speech, trills usually consist of two or three

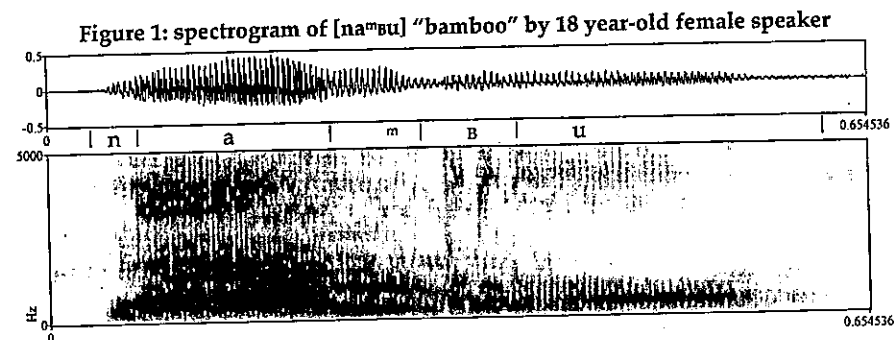
<sup>2</sup> Baka and Mangbetu are geographically not too distant from Cameroon, but they are in the Nilo-Saharan family while the others are in the Niger-Congo family. It is possible that bilabial trill may be an areal feature. But since the only information I have about bilabial trills in Baka and Mangbetu is one website (Puest 1997) reporting their existence without any data, I do not include them as part of this group.

<sup>3</sup> The mystery of Nias is that bilabial trills, though prenasalised, seem to be possible before any vowel (Maddieson 1989: 99-101)

closures at the most (Laver 1994: 219). But Ladefoged and Maddieson (1996: 217-218) point out that even a small deviation in articulation could mean that a potentially trilled sound fails to trill. Thus it is not uncommon for a trill to consist of only one closure or for part of the duration of the consonant to be articulated in another way, for example as affrication (Ladefoged and Maddieson 1996: 219). However, even when a trill consists of only one closure, it may differ from other segments (I discuss this possibility further in Section 6.4).

## 6. Exploring the phonetic distribution of [mb̥] in Unua

Figure 1 below is proof that bilabial trills do in fact happen in Unua. In this example, [na<sup>m̥</sup>bu] "bamboo" is pronounced with three visible closures on the spectrogram. However, in my data, speakers did not consistently produce such clear examples of trills every time. There may have been some "one-tap trills". These will be discussed later in this section, along with other issues such as why the bilabial trill occurs in the context before [u], why and whether it occurs at the ends of words, whether it can occur before consonants, and interesting exceptions to the basic distribution that may reveal more about its nature.



### 6.1. Why does it occur before [u]?

In nearly all of the languages mentioned in section 5, the prenasalised bilabial trill occurs in a position where there is (or was historically) a prenasalised voiced bilabial plosive before a high back rounded vowel. Even Piraha, whose bilabial trills occur before a vowel written by Everett (1982: 96) as /o/, fits this pattern since this is the only rounded vowel in the language.<sup>4</sup> But why is this the case? Maddieson (1989) explains that the prenasalisation, the way the lips are held, and the articulatory characteristics of the following vowel are all factors that combine to allow this sound to happen. Prenasalised plosives have

<sup>4</sup> I have found no information as to whether the voiced stops in Piraha are prenasalised, and if they are not, then Piraha does not fit the same pattern as the others.

a lower maximum oral pressure than non-prenasalised plosives, possibly because the length of time when the oral and nasal passages are both closed is very short (Maddieson 1989: 104). If the oral pressure were higher, bilabial trills would not happen because the air pressure would move the lips apart further at the first release. Also in order for the trill to occur, the lips must be held together loosely in the stop. There would be rounding and protrusion during the stop phase to prepare for the articulation of the following rounded vowel (Maddieson 1989: 104). If the lips are too tight, either vibration would be prevented or the frequency of vibration would be much higher than it is (Maddieson 1989: 106). The third factor is the following vowel. Bilabial trills happen naturally before high back rounded vowels because they have a small target lip aperture, so the transition of the lips from the bilabial stop to such a vowel is much smaller than the transition to more open vowels. This means that the lips separate very slowly, increasing the likelihood of trilling (Maddieson 1989: 104). Maddieson (1989) demonstrated these factors using a model to simulate the articulation of these sounds. He found that all three of these factors had to be present for a strong trill. If air pressure was higher or the "lips" were stiffer or the target lip position was wider, the trilling was significantly reduced.

Since prenasalised bilabial trills have arisen in a number of languages in Malakula, it is either an areal feature or something that has arisen independently in many of the languages due to the shared factors of prenasalisation and loose, protruding lip rounding. In any language that shares these articulatory features, bilabial trills could happen naturally, even if not consistently or as part of the phonological system. The fact that they are so rare in the world's languages may be due to the relative rareness of this particular gesture of loose, protruding lip rounding.

### 6.2. Why does it occur at the end of words?

Given the lack of a following rounded vowel, the occurrence of word-final prenasalised bilabial trills in Unua is of some interest. The most likely explanation would be that there were historically high rounded vowels at the ends of these words. Similar processes have occurred in other languages with prenasalised bilabial trills. Uripiv, another language of Malakula, has lost some word-final vowels and as a result has prenasalised bilabial trills at the ends of words, contrasting with prenasalised bilabial plosives (Maddieson 1989: 97). Final vowel loss is common in Oceanic languages, and Lynch (2003: 397) sees it as a relatively recent process in a set of languages that includes Unua.<sup>5</sup> And Pearce (this volume) gives several examples of final vowel loss in Unua. Tryon's (1976) collection of word lists from around Vanuatu provides

<sup>5</sup> Languages that have Low Vowel Dissimilation

additional evidence of word-final vowel loss in one of the Unua words that ends in [ʷ]. Table 3 shows the cognates for [noxoʷ] "fire" in Unua and Pangkumu (closely related) and other related languages that still have a [u] at the end.

Table 3: cognates of [noxoʷ]

Source: Language names and transcriptions taken directly from Tryon (1976).

Language	"fire"
Unua	nyuʷp
Rerep (Pangkumu)	noyoʷp
Tutuba	aʷp(u)
Aore	aʷbu
Malo North	xaʷbu
Malo South, Tangoa, and Araki	xapu
Woraviu	na-kapu
Ngwatua	kaʷbu

Another possibility however, is that Unua does not have word-final bilabial trills at all, but rather it has devoiced high-back vowels at the ends of those words.<sup>6</sup> That seems to be the case in another Malakula language, Naʔahai, in which the final [u] is devoiced in all the words ending in [ʷu] in Maddieson (1989: 94). It could be that Unua also has devoiced [u], but it would be a complicated issue since there are three words that Pearce has transcribed as ending with [ʷu]: [ra ʷu] "lizard", [na ʷu] "bamboo", and [aʷuaʷu] "moth".<sup>7</sup> However, as is explained later in this section, the words that end in [ʷ] or possibly [ʷu] are often pronounced without any oral opening at the end, which would be a surprising realisation for a stop or trill that was followed by a devoiced vowel. It seems more likely that the final vowel has been lost at least for the speakers who pronounce these words without an oral opening at the end. But a spectrographic analysis would be needed to completely rule out the possibility.

If Unua has lost those final vowels, it is different from Uripiv in that word-final [ʷ] and [ʷu] seem to be in complementary distribution in Unua, with [ʷ]

<sup>6</sup> Unfortunately, none of my samples of an obvious bilabial trill at the end of a word were suitable for spectrographic analysis, so with my limited data, I could not confirm or reject this possibility.

<sup>7</sup> It could be that there is another difference between this set and the words that end in [ʷ] such as stress, time of adoption into the language, etc.

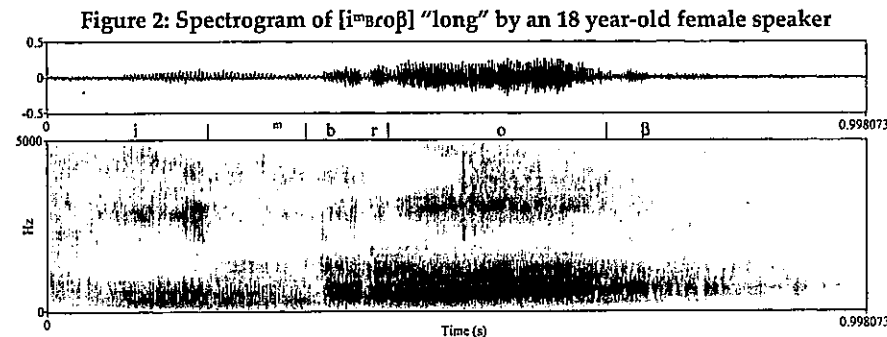
occurring after rounded vowels and [ʱb] after non-rounded vowels (see Table 2). It seems as though the rounding feature of the final vowel was assimilated or transferred to the preceding vowel before the final vowel was lost. In table 3, languages that still have a final vowel have [a] for the preceding vowel in their word for "fire". So Unua could have historically had [a<sup>m</sup>bʱu] at the end of this word, and after assimilation the penultimate low vowel received rounding and became [o].<sup>8</sup> There are interesting parallels between this process of assimilation and deletion and the Low Vowel Dissimilation discussed by Lynch (2003). He investigates many cases of Low Vowel Dissimilation in Oceanic languages where aCa > eCa, and in many languages where this sequence is word-final, the final [a] has been lost. And for languages that have not lost the final vowel, the dissimilation has not occurred (Lynch 2003: 396-397). The rounding of the penultimate vowel is one of assimilation, which is a more common process than dissimilation. But in both situations, the penultimate vowel is influenced by the final vowel either before or during the deletion of the final vowel. More investigation into other languages could shed light on the process of the rounding assimilation and possibly also bilabial trills in word-final positions. It may even be the case that the languages which have Low Vowel Dissimilation with final vowel loss also have the penultimate vowel rounding with final vowel loss.

The words that can end in a prenasalised bilabial trill are not pronounced with trills by all speakers. In fact, word-final prenasalised stops (including those that have a bilabial trill for some speakers) are normally pronounced as nasals by many speakers, particularly younger speakers (see Section 3). In all of the speech files that I investigated, there were only a few obvious examples of bilabial trills at the ends of words. These were all from one particular older woman (in her 50s). In the connected speech examples that I have from a 65-year-old man, such words are pronounced with what sounds to me like a non-trilled prenasalised plosive. It would be useful to compare these stops to stops that occur after non-rounded vowels to see if there is a difference. It could be that they could be classified as a single-tap trill. Unfortunately, I did not get any clear samples of prenasalised voiced bilabial plosives at the ends of words following non-rounded vowels. So this is a good area for future investigation. It could be that the answer lies in some of the other recordings that Pearce has done that I did not get a chance to take a close look at.

<sup>8</sup> Although Tryon (1976: 322) transcribes the Unua word for "fire" as [nuyʱmp] and the Pangkumu (which he labels Rerep) word as [noyʱmp], he transcribed the words for "firewood" in both dialects as [noyʱmp] (342). In the recordings of Unua speakers that I have analysed, speakers insist that they are the same word and that the vowel is [o] rather than [u].

### 6.3. Does it occur before consonants?

Pearce (2004b: 7) claims that prenasalised bilabial trills can occur before [r] within a root word and gives the following examples: [i<sup>m</sup>broβ] "long (3SG)" and [i<sup>m</sup>brare] "spoil (3SG)". This is surprising considering the fact that these words do not meet the requirements for a bilabial trill to arise naturally. It is possible that there was a [u] at one point after the trill, which has since been elided. But I question the claim that they occur in this situation at all. I have one clear sample of the word [i<sup>m</sup>broβ] "long (3SG)", and Figure 2 shows a sound wave and spectrogram for it. In the [i<sup>m</sup>br] portion of the word, there is a sequence of two closures followed by a third drop in amplitude (visible in the sound wave), which is not as strong as the others and may be more of an approximant, which is not uncommon in the latter stages of a trill (Maddieson 1989: 102-103). However I believe the second closure to be part of the [r]. One reason for this is that I isolated this segment and to me it sounded more like [r]. Another reason is that I have recorded myself producing [β] and [r] and found that in the spectrogram, the difference can be seen by more energy at higher frequencies (above 3500 Hz) at the releases of the [β] compared to the [r]. The second release in this spectrogram does not have this characteristic. The third reason I suspect that the second closure is [r] is that the length of time between the first release and the second release is about 59 ms, which is much longer than any of the measurements that Maddieson (1989: 103) or Ladefoged et al (1977: 52) reported for bilabial trills in a range of languages which were set around 30-45



ms. Although it is impossible to get an exact measurement for the length of time between the second release and the third (because it is an approximant rather than a stop), it would be more in the range of 30 ms, which is normal for lingual trills (Ladefoged et al (1997: 52) report an average of 28.6 with a standard deviation of 3.3). Therefore, I suggest that this is a sequence of [i<sup>m</sup>br] rather than [i<sup>m</sup>br].<sup>9</sup>

#### 6.4. Exceptions

There are some exceptions to the patterns of distribution discussed so far. These are borrowed words and the second person singular irrealis prefix.

Borrowed words may have a sequence of [mbu] where trilling never occurs. This seems to be the case with [mbuluk] "cow", which was borrowed from Bislama. By comparing 23 examples of [mbue] "pig" with 8 examples of [mbuluk] from the connected speech of the story in my data, I have found that even when the trill in [mbue] is realised with only a single closure, there is a consistent difference between the two bilabial sounds. An example of a clear trill is shown in [mbue] in 3a. After the initial nasal segment, there is a marked decrease in amplitude for the period of closure. The vertical line on the spectrogram is the initial bilabial release followed by the formant of the [u] vowel, but about 20 ms after the initial release, there is another vertical line followed by a decrease in amplitude. This is the lips closing again due to the Bernoulli Principle. About 17 ms later, the lips open again as shown by the third vertical line. This means that the period between trills is about 37 ms, which is similar to Maddieson's (1989: 103) findings for other languages with bilabial trills (35-45 ms). After this second opening, the [u] vowel continues, but again after about 20 ms, there is a decrease in amplitude that can best be seen on the sound wave. This is probably due to the lips moving together, but not actually touching. A "one tap trill" is shown in [mbue] in 3b, but it is important to note that there is still a decrease in amplitude approximately 20 ms after the release, meaning that the Bernoulli Principle is at work here. I found this characteristic very consistently in the 23 examples of [mbue] "pig". But in the eight instances of the borrowed word, [mbuluk] "cow", this does not happen. Figure 3c shows a spectrogram of one instance of [mbuluk]. After the bilabial release, the amplitude increases until it is at its full vowel strength. There is no sign of anything but vowel happening around the 20 ms mark after release. This is essentially the same as the prenasalised voiced bilabial plosives that happen before other vowels. This suggests that there is some phonetic difference between the initial CV sequences of the two words, but there are a few possibilities. One is stress. However, according to Pearce's (2005: 18-22) analysis of Unua stress, these two words are both two syllables with stress on the first syllable. Another possibility is that the [u] vowels are actually different. This seems unlikely that a language would add a new vowel to its inventory for use in a borrowed word when there is already a vowel in the language which is so close in quality.

Figure 3a: [mbue] "pig" with clear trill by 65 year-old male speaker

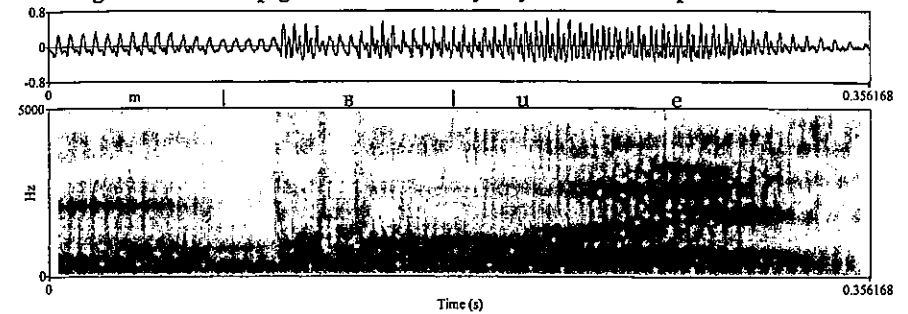


Figure 3b: [mbue] "pig" with one-tap trill by 65 year-old male speaker

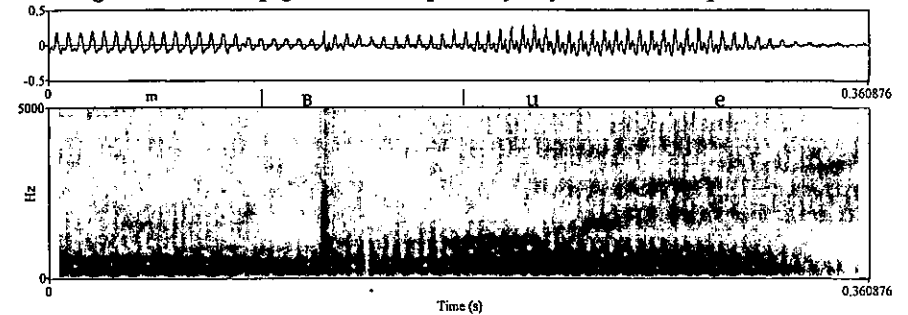
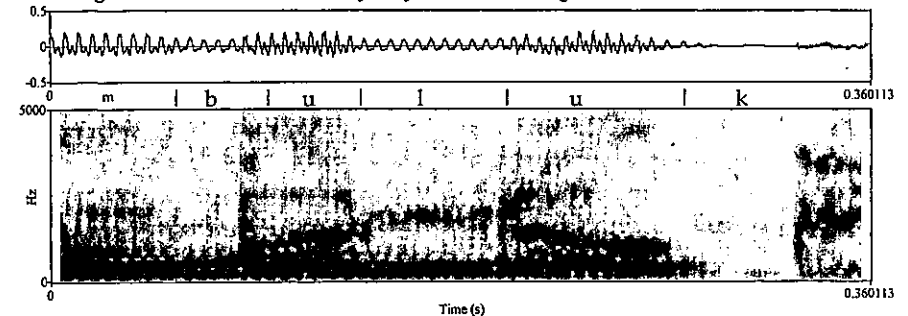


Figure 3c: [mbuluk] "cow" by 65 year-old male speaker

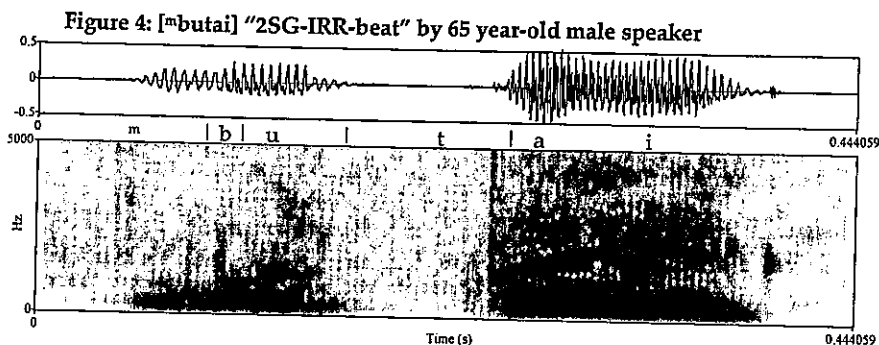


However, native speakers' perception of the vowels in isolation would be necessary to discount the possibility. If native speakers could consistently identify which word an isolated vowel came from, it could be that there are actually two separate vowels. The final possibility is that the initial consonants are different. This difference between the articulation of bilabial consonants in [mbuluk] and [mbue] could support the claim that they have become separate phonemes. Presumably [mbuluk] would have been borrowed after the bilabial



plosive and the bilabial trill had become a separate phonemes, and therefore was not pronounced with a trill as it might have been if it were borrowed into a situation where [ᵐb] was merely an allophone of [ᵐb]. While I cannot hear a difference between a single tap prenasalised bilabial trill and a simple prenasalised voiced bilabial plosive, native speakers of Unua may be able to.<sup>10</sup>

Another exception to the basic pattern of [ᵐb] before [u] is the second person singular irrealis prefix, *ᵐbu-*. It is actually made up of two parts – the irrealis marker, *ᵐb-*, and the second person singular agreement marker, *u-*. As in [ᵐbuluk], the [ᵐb] is not trilled despite being followed by [u]. As an example, [ᵐbutai] “2SG-IRR-beat” is shown below in spectrogram in (4). It does not show any sign of decreased amplitude after the initial bilabial release.



There are a number of possible explanations for why this would not be trilled. One possibility is that the trilling does not occur if the bilabial plosive and the [u] vowel are in different morphemes. I am not aware of any counter-examples to this theory. Another possibility is that historically the [ᵐb] and [u] were metathesised in this affix. This occurs to me because in other parts of the Unua irrealis paradigm the subject marker comes first, one exception being the singular irrealis affixes. So if the second person singular irrealis prefix was at one time *uᵐb-*, then it would not have been trilled. And if [ᵐb] became well-established as a separate phoneme before the order switched, it might not have been applied there. A third possibility is that it has something to do with stress. Such prefixes would not normally be stressed, and perhaps all the instances of trills occur at the beginning of stressed syllables. However this seems unlikely since there are two-syllable words that have a trill in the first syllable ([ᵐbuɣas] “charcoal”) and others that have a trill in the second syllable ([naᵐbuɣ] “oven”) and according to Pearce (2004: 20) these would both have first syllable stress, and from the speech samples it sounds that way to me. One more possibility is that this trilling phenomenon is restricted to roots. This is the case in the Manus languages, where the bilabial trills only happen stem-initially (Maddieson 1989:

95). There are many possible explanations for why the trill does not happen in the second person singular irrealis prefix. Further research would be needed to determine which (if any) are correct.

#### 6.5. Are there other parts of Unua phonology that reflect this?

Could the bilabial trill be a manifestation of a larger trend in Unua? Below I discuss possible links between the bilabial trill and the lingual trill and between the bilabial trill and other bilabial consonants.

Besides prenasalised bilabial trills, there are cases of prenasalised alveolar or post-alveolar plosives becoming prenasalised alveolar trills (Ladefoged et al. 1977: 50, Laver 1994: 234). And there are some examples in related languages of prenasalised plosives where Unua has alveolar trills<sup>11</sup>. However, Unua’s alveolar trills are not prenasalised, so either the prenasalisation was lost (which seems unlikely since it remained in many other segments of the language) or the alveolar trill was not derived from the same kinds of aerodynamic conditions as the bilabial trill. In fact, it is likely that both the Unua alveolar trill and the prenasalised plosive in cognate words in other languages both descended from an original trill in Proto-Oceanic (Lynch et al. 2002: 63)<sup>12</sup>.

Besides the bilabial trill, which is not definitely a phoneme, Unua has voiceless bilabial plosives, prenasalised voiced bilabial plosives, and bilabial fricatives, which can be voiced or voiceless but generally tend to be voiced intervocally and less often voiced in a word-initial or word-final position. In addition to these, some speakers (mainly older speakers) have an additional set of velarised bilabial obstruents: [pʷ], [ᵐbʷ], and [βʷ]. At least in the case of [βʷ]<sup>13</sup> they can occur before any vowel except [u].<sup>14</sup> This is not surprising since [u] is always velarised to some degree. However, it is a possibility that this velarised bilabial feature can occur (or historically occurred) before [u] and in the case of the prenasalised plosive was realised as a trill (perhaps because it increases the duration of the consonant). More research is called for here, particularly an investigation into related languages that have the velarised bilabial obstruents and whether there is any sign of their happening before an [u] vowel.

#### 7. Sociolinguistic variables

It is possible that the use of bilabial trills varies by gender, age, formality of speech, and or geography. From the limited data I have looked closely at, I know that at least one 18-year-old woman, one 50+ year-old-woman, and one 65-year-old man use them. I know that at least one speaker in Ruhumbo and a few speakers in Batambur use them. I know that they occur in careful speech (though I do not know about formal speech) as well as in more fluent connected speech. I know that younger speakers may be less likely to use them word-finally than older speakers. But that leaves a lot more to be investigated.

### 8. Conclusion

This paper has explored many aspects of prenasalised bilabial trills in Unua. I have made many claims and hypotheses, many of which were not well supported. Table 4 gives a summary of these claims and hypotheses, their status, their implications, and how they could be further researched.

The ultimate goal of this research paper was to determine whether [ᵐʙ] is its own phoneme, separate from [ᵐb]. Though I had hypotheses that suggested both ways, the strongest evidence I found was in the difference between the initial sound of [ᵐʙue] and [ᵐʙuluk]. The spectrograms were consistently different between the two words, with [ᵐʙue] showing signs of the Bernoulli Principle even when there was only one full tap. If [ᵐʙuluk] were borrowed into a language that only had the bilabial trill as an allophone of /ᵐb/, it probably would have treated the borrowed word the same as the other words, producing a trill. However, if /ᵐb/ and /ᵐʙ/ were two separate phonemes at the time of borrowing, the initial sound in [ᵐʙuluk] would have been interpreted as having the same sound as /ᵐb/ (which until then may have only occurred in contexts other than before [u]). So I propose that /ᵐʙ/ is in fact a separate phoneme in Unua, and this is supported by the way that native speakers talk about the sound in the speech data I analysed. For some words they said that only /ᵐb/ or /ᵐʙ/ was acceptable, but not the other.

My conclusions are still tentative because more research is needed. This was a small-scale research paper, so there could very well be more evidence in Unua to disprove or support what I have found, either within the other recordings that Pearce has made or in other speech that has not yet been recorded.

Table 4: Summary of Claims and Hypotheses

	Claim or Hypothesis	Status	Further Research
1.	In Unua, [ᵐʙ] developed from an environment of [ᵐbu].	This claim is well-supported by Maddieson (1989).	More investigation into Proto Central Oceanic would probably support this.
2a.	Where [ᵐʙ] occurs at the ends of words, there was a final [u] that has been lost.	Plausible. There is one example in Tryon 1976 to support this hypothesis, and there is evidence of final vowel loss in Unua.	A comparison with other cognate languages and for each of the words that ends [ᵐʙ] in Unua
b.	Before the [u] disappeared, its rounding feature was transferred to the preceding vowel.	Speculation. The same one example in Tryon 1976 supports this hypothesis.	Comparison with other languages
c.	There is actually still a vowel at the ends of these words, but it is devoiced. This hypothesis was inspired by Maddieson's (1989) examples of word-final devoiced [u] following [ᵐʙ] in Naʔaha.	Speculation.	Even in Pearce's recordings, there could be a clear sample of an apparent trill at the end of a word, which, analysed on a spectrogram, would reveal whether or not there were formants after the trill associated with a devoiced [u].
d.	What sounds to me like a non-trilled prenasalised voiced bilabial plosive at the ends of words that other speakers produce with a trill is actually a one-tap trill.	Speculation	With more clear samples (possibly from Pearce's recordings) of the words that apparently end in a non-trilled prenasalised voiced bilabial plosive, the two could be compared on a spectrogram, and there may be evidence similar to the [ᵐʙuluk] / [ᵐʙue] distinction in section 6.4.
3.	[ᵐʙ] does not occur before [ɾ].	Supported by my analysis of only one word which had been identified as having [ᵐʙɾ], but has since been claimed not to.	Further analysis of more speech samples of other words which may contain [ᵐʙɾ]. Also, comparison with words which contain [ᵐbɾ]
4a.	The initial consonants of [ᵐʙuluk] and [ᵐʙue] are two different sounds. If this is true, it supports the phonemic status of [ᵐʙ]	Theory supported by my analysis of 8 samples of [ᵐʙuluk] and 23 samples of [ᵐʙue]	Further investigation is needed into other words.

(Table 4 continued)

	Claim or Hypothesis	Status	Further Research
4b.	There is actually another phonetic difference between [mbuluk] and [mbue] (such as stress or different vowels) that determines whether or not there is a trill. This would mean that they were not separate phonemes.	Speculation	Further study of the Unua data
5.	Native speakers of Unua can hear the difference between a one-tap bilabial trill and a simple prenasalised voiced bilabial plosive.	Speculation	These sounds could be isolated and played for native speakers to judge.
6a.	[mb] + [u] across morpheme boundaries does not result in trilling.	Speculation	
b.	Historically the prefixes for 2SG and IRR were in the opposite order: [u <sup>m</sup> b], and they switched after / <sup>m</sup> b/ had become a phoneme.	Speculation	Comparison with other languages
7.	[mb] only happens at the onset of a stressed syllable.	There is some evidence against this, but it may have been the case at one point in Unua's evolution.	
8.	[mb] originally only occurred root initially.	Speculation	
9.	[mb] is a manifestation of / <sup>m</sup> b <sup>w</sup> / before [u].	Speculation	Comparison with related languages
10.	There could be differences in use of [mb] depending on sociolinguistic variables.	Speculation	Further research. A survey of speakers with a wide range of sociolinguistic variables

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**Roviana text :**  
**Vivinei di ari ka ngeta tatamana**

Story told by Glorious Oxenham

Glorious Oxenham, Agnes Terraschke and Elizabeth Pearce

INTRODUCTION

*Roviana*

Roviana is an Oceanic language with some 5,000 - 6,000 native speakers in the north-west of New Georgia Island in the Solomon Islands (Corston-Oliver 2002). Lynch et al (2002) place Roviana in the New Georgia/Ysabel subfamily of the Meso-Melanesian Cluster of the Western Oceanic Linkage. According to Corston-Oliver (2002), whereas, in the past, Roviana was used extensively as a lingua franca (the 1976 census showing some 16,000 non-native speakers of Roviana), this use of the language has more recently been taken over by Solomons Pijin.

*Sources*

The earliest descriptions of the grammar of the Roviana language are contained in Ray (1926) and Waterhouse (1949). The latter work also contains the most extensive published dictionary of Roviana. A recent sketch grammar of Roviana (Corston-Oliver 2002) includes references to other published material on aspects of Roviana grammar. A web-site maintained by Peter Ninnes is a further source of material on Roviana: <http://fehps.une.edu.au/f/s/edu/pNinnes/roviana/u.html>

*Glorious Oxenham*

Glorious Oxenham is a first language speaker of Roviana who came to live in New Zealand in 1981 at the age of 19. Her home village is Buni on Parara Island by the Vonavona Lagoon off the north-west coast of New Georgia. In the Solomons, Glorious attended schools at Madou, also on Parara Island, and at Vonunu on Vella la Vella Island, followed by two years at the Teachers' Training College in Honaria. Glorious also speaks a little Vella la Vella (her maternal grandfather's language) and a little Choiseul (the language of her paternal grandfather) and, to a degree, she understands Kusaghe and Marovo, as well as other dialects similar to Roviana in the Western Province. She is a

fluent speaker of Solomons Pijin and of English. Glorious has contributed material to the word list of the Ninnes web site.

**Vivinei di ari ka ngeta tatamana: The story of a family of three**

- 1 Sa vivinei hie si na vivinei-di ri ka ngeta  
the story this TOP INDEF story-3PL 3PL NUM three
- 2 tatama-na, // sa palabatu na-na barikaleqe // meke// dia  
family-3SG the husband GEN-3SG wife and GEN3PL
- 3 koburu hite, na koburu koreo si asa.  
child litte INDEF child boy ABS 3SG

This story is a story of a family of three, the man, the woman and their small child, who was a boy.

- 4 Pukerane si koa sari ka ngeta tatama-na hire  
a long time ago TOP stay the.PL NUM 3 family-3SG these
- 5 pa dia nusa, meke // koa eke tugo sari ka ngeta.  
P GEN3PL island and stay alone EMPH the.PL NUM 3

A long time ago this family of three were living on their island, and the three of them were living alone there.

- 6 Ba doduru rane si // [koba] // pude vangunu tugo sa koburu  
but every day TOP always so wake up EMPH the child
- 7 si hoi pa batu huda (a)tu si la hale asa la koa na-na  
TOP that P top tree away TOPgo climb 3SG go stay GEN-3SG
- 8 vasina.  
there

But every day, as soon as the child is awake, he is up there on top of the trees, and he goes and climbs up to stay there.

9 [Na] // ke doduru rane vangunu tugo sa koburu si hoi  
and every day wake up EMPH the child TOP that

10 pa batu huda tu si hoke la hake na-na.  
P top tree EMPH TOP HABIT go perch GEN-3SG

Every day after the child wakes up, he is there in the tree tops, he goes and perches there.

11 Meke // doduru rane si // hoke gua mo sa koburu//  
and every day TOP HABIT like only the child

12 pude vangunu tugo sari ka ngeta tatama-na.  
so wake up EMPH the.PL NUM 3 family-3SG

So, everyday, this is what the child does when the family wakes up.

13 "Aria mada la pa inuma," hoke [gua sa] gua sari  
Hey IMPER..1INCL go P garden HABIT say the.PL let's

14 karu tina-na meke sa tama-na. //  
DU mother-3SG and the father-3SG

"Hey, let's go into the garden," the mother and father used to say.

15 Pude kamo tugo pa inuma si hoi pa batu huda tugo  
so arrive EMPH P garden TOP that P top tree EMPH

16 sa koburu.  
the child

So that when they arrived in the garden the child would be in the tree tops.

17 Keke rane si zama sa tina-na sa koburu: "Ki  
one day TOP speak the mother-3SG the child EXCL

18 kara! Kote hoqa mate sa koburu he na koba hale lamo  
EXCL FUT fall die the child this INDEF always climb CONT

19 pa batu huda," gua si asa.  
P top tree say ABS 3SG

One day the child's mother said: "Oh goodness! The child will fall to his death because he's always climbing into the tree tops," she said.

20 Ke // keke bongi korapa puta sa koburu si  
and one night PROG sleep the child TOP

21 vari-zama-i-Ø sari karua tamaloa-na: "Sa beka  
RECIP-speak-TR-3PL the.PL two couple-3SG the perhaps

22 si [ko] kote ta(v)et-i-a gita kara pude lopu va  
TOP FUT do-TR-3SG1PL.INCL two so NEG CAUSE

23 hale-ni-a huda sa koburu?"  
climb-2TR-3SG tree the child

And one night while the child was asleep, the couple talked with each other: "What can we do to stop the child from climbing the tree?"

24 Keke [keke] bongi pule sana si // vivinei pule tugo  
one [one] night again that TOP story again EMPH

25 sari karua tamaloa-na, beto hoi si // balbala<sup>1</sup> sa  
the.PL two couple-3SG finish there TOP thinking<sup>2</sup> the

26 tama-na sa koburu:  
father-3SG the child

Another night, the couple had another discussion, after which the child's father thought:

<sup>1</sup> or *balabala*

<sup>2</sup> "to remember, consider, recollect"

27 "Ai<sup>3</sup> kote peqo-a rau si keke mola<sup>4</sup> tanisa," gua sa  
EXCL FUT carve-TR.3SG 1SG ABS one canoe GEN.3SG say the

28 barogoso.  
old man

"Hey, I will make him a dug-out canoe." said the husband.

29 Ego<sup>5</sup> kamo pana<sup>6</sup> munmunu,<sup>7</sup> sapu,<sup>8</sup> [pa] soku rane tugo  
EXCL arrive when morning REL [P] many day EMPH

30 sana, si hale lamo sa koburu hie. Sa barikaleqe si  
that TOP climb CONT the child this the wife TOP

31 hoke la tata(v)ete pa inuma si asa ba sa barogoso-na  
HABIT go work P garden ABS 3SG but the old man-3SG

32 si pa hiqhiqo<sup>9</sup> tu(go) si asa la peqo-i-a sa mola  
ABSP forest EMPH ABS 3SG go carve-TR-3SG the canoe

33 tanisa koburu.  
GEN.3SG child

In the morning, and for many days, this child kept on climbing trees. The woman would be working in the garden, but her husband would be in the forest carving a canoe for the child.

34 Kamo<sup>10</sup> keke// totoso pule sapu beto sa hore,<sup>11</sup> //  
reach one time again REL finish the canoe

35 si pana bongi sana si [ko/kote] (to)tosoto korapa puta  
TOP when night that TOP FUT time PROG sleep

36 sa koburu, si [mae] // vura sari karua tamaloa-na  
the child ABS come appear the.PL two couple-3SG

37 meke la pa hiqhiqo, la ovulu gore-ni-a sa mola // meke  
and go P forest go lift descend-2TR-3SG the canoe and

38 tome<sup>12</sup> veko-a<sup>13</sup> [ri] ari kara<sup>14</sup> pa masa.  
hide put-TR.3SG 3PL two P beach

The time came when the canoe was finished. That night, while the child was asleep, the couple came out and went into the forest, they took the canoe down and hid it away at the beach.

39 Pana munmunu sana si tozi-ni-a ri kara sa dia  
when morning that TOP tell-2TR-3SG 3PL two the GEN.3.PL

40 koburu sapu// keke tingitonga<sup>15</sup> si tome veko-a ri kara  
child REL one thing TOP hide put-TR.3SG 3PL two

41 tanisa gua.  
GEN.3SG say

In the morning they told their child that they had hidden something for him.

<sup>3</sup> an exclamation, generally implying dissent

<sup>4</sup> a build canoe not a dug-out one

<sup>5</sup> an exclamation of approval – "All right"

<sup>6</sup> in Future tense only, otherwise *pana* means "scissor"

<sup>7</sup> or *munumunu*

<sup>8</sup> "what, which, who"

<sup>9</sup> or *hiqhiqo*

<sup>10</sup> "to arrive, to extend to; to arrive by land"

<sup>11</sup> This is a dug-out canoe.

<sup>12</sup> "to hide"

<sup>13</sup> *veko* – "to put down, place"

<sup>14</sup> can also occur as *ri kara* or *ari kara*

<sup>15</sup> or *tingitonga*

42 Ke topue sari ka ngeta meke la dogor-i-a // meke  
and start off the.PL NUM 3 and go see-TR-3SG and

43 qetu hola<sup>16</sup> sa koburu sapu dogor-i-a sa sa hore.  
happy very the child REL see-TR-3SG 3SG the canoe

So the three of them went off to see it and the child was very happy when he saw the canoe.

44 [sapu tome veko-a sa] Ke asa, podalae tugo vasina //  
REL hide put-TR.3SG the and 3SG start EMPH there

45 si beto hale huda sa koburu kokoi<sup>17</sup> lamo pule pa kolo  
TOP finish climb tree the child paddling CONT again P water

46 sa koburu.  
the child

From then on the child stopped climbing trees and went on paddling (his canoe) in the water all the time.

47 Ke gua mo asa sa koburu tadi kara. Kokoi mo  
and like only 3SG the child GEN.3PL two paddling only

48 pa masa kamo pule bongi la puta gua mo.  
P beach arrive again night go sleep like only

And so it was with their child. He just paddled his canoe at the beach and, when another night arrived, he went to sleep.

49 Beto hoi seunae hola pule si zama sa tinana: "Kote  
finish that a long time very again TOP speak the mother FUT

50 Iodu sa koburu hie.  
sink the child this

Again, after a while, the mother said: "This child will drown.

51 Karao! Aria mada tome-i-a sa hore  
goodness Let IMPER.1PL.INCL. hide-TR-3SG the canoe

"Oh goodness! Let us hide the canoe!"

52 Gua ke tome-i-a pule ari kara sa hore.  
like and hide-TR-3SG again 3PL two the canoe

So the two of them hid the canoe again.

53 Asa, beto tugo ta tome sa hore si hoi sa koburu  
3SG finish EMPH PASS hide the canoe TOP that the child

54 pa batu huda pule hale doduru<sup>18</sup> rane, kamo-ni-a bongi pa  
P head tree again climb every day reach-2TR-3SG night P

55 batu huda  
head tree

Once the canoe was hidden, every day the child would climb to the tree tops again, and when night came he would still be in the tree tops.

56 Beto si // nomnomi<sup>19</sup> pule sa tina-na ke gugua  
finish TOP complain again the mother-3SG and be.like

57 mo sari ka ngeta tatama-na.<sup>20</sup>  
only the.PL NUM 3 family-3SG

At the end, the mother complained again - and that is how it was in this family of three.

<sup>16</sup> "to pass, to exceed"

<sup>17</sup> "to bound, to limit"

<sup>18</sup> "all, every, the whole"

<sup>19</sup> or *nominomi*

<sup>20</sup> a term for the relationship between father, mother and children

58 Pude ele seunae hale lamo (pa) huda sa koburu si  
so PERF long time climb CONT P tree the child TOP

59 kote va vura pule sa hore tanisa koburu  
FUT CAUSE appear again the canoe GEN.3SG child

Once the child had been climbing the trees for a long time, the child's canoe would appear again.

60 Gua mo.  
like only

That's it.

61 Meke asa mo sa vivinei.  
and 3SG only the story

And that's the story.

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## Mood marking on Malakula

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### Abstract

Much has been made of the so-called initial consonant mutation distinguishing (among other things) realis and irrealis verb stems in the languages of Central Vanuatu (Lynch 1975, Walsh 1982, Clark 1985, Crowley, 1991). The mutation often produces a nasal or prenasalised consonant at the left edge of the base to which subject agreement and other morphology indicating tense/aspect or negation is attached. This pattern has been recorded in the language of Paama (Crowley 1982, 1991), the languages of Epi (Tryon 1986, 1996), Ambrym, (Crowley 1991) and the Shepherd Islands (Sperlich 1987). While little has been published on the languages of the island of Malakula, this mutation is attested in two languages. Crowley's (1998) salvage sketch of Nāti revealed that the mutated verb form was associated with the irrealis rather than the expected realis mood. Recent fieldwork undertaken by the author with Aulua confirms that the mutation exists on the island and conforms to the pattern found elsewhere. This paper examines why the two languages where it attested do not pattern in the same way. I propose that, while the Nāti irrealis morpheme is similar to the irrealis in the non-mutating languages, it shares with Aulua a pattern of progressive assimilation towards the left edge of the base that the non-mutating languages do not have. Further evidence of the differences and similarities of the Malakula languages is provided by the interaction of a morpheme marking negation with agreement morphemes to the left of irrealis or realis markers and the verb base to the right.

### 1. Introduction<sup>1</sup>

This stem initial consonant mutation of the verb is well attested in languages of central Vanuatu (Schütz 1968, Sperlich 1987) and is exemplified here by Paamese below. In this language, there are four orders of the mutation. That is, the verbal base takes on four different forms. In the examples below only the distant irrealis and realis are contrasted.<sup>2</sup>

Paamese

(1) Ø-gān  
3sg-REAL.sharp  
'It is sharp'

(2) he-kān  
3sg-DIST.sharp  
'It will be sharp.'  
(Crowley, 1991, 193)

<sup>1</sup> The author gratefully acknowledges that this research was conducted as part of the Marsden grant UOW-305 Threatened languages on Malakula: Lessons for linguistic theory.

<sup>2</sup> The system of glossing examples has been regularised for ease of comparison across the languages presented here. Hyphens separate segmentable morphemes, while periods join the glossed meanings of portmanteau morphology. See list of abbreviations at the end of the paper.



In these examples, the initial consonants of the verb reflect the mood of the clause. We also see that the third singular agreement markers contrast, i.e., there are separate series of agreement morphology for realis and irrealis verbs. The mutation and mood-distinguishing agreement markers appear in Paamese, and we shall see that the languages of Malakula seem to choose one or both of these options. That is, we find a language which exhibits the mutation, Aulua, and a language which exhibits mutation and has two distinct series of agreement morphology, Nāti, and a group of languages where the distinction between realis and irrealis is only signalled by separate series of agreement markers.

Clark's (1985) hope that the consonant mutation would be found on Malakula was realised when in 1998 Crowley published data on Nāti, a language from the south of the island. However, the language yielded an unexpected pattern in the mutation. Elsewhere, the nasal(ised) initial consonant of a verb base indexes a realis reading of the verb, while the oral grade marks an irrealis mood for the clause. In Nāti, nasalization is a signal for irrealis mood. This state of affairs was surprising given that a reconstructed PCV form \**ma* - past tense or realis had been proposed as the instigator of the mutation (Lynch, 1975). Merging and subsuming into the base, the nasal provoked an assimilation of the initial consonant of the verb. Until recently on Malakula, only Nāti was known to show the mutation, albeit in this unexpected form. However recent fieldwork undertaken by the author demonstrates that in Aulua in South East Malakula the mutation is also alive and well and follows the pattern expected elsewhere in Central Vanuatu.

In this paper we will compare a number of Malakula languages and explore the different surface phenomenon of mood marking in the languages of this island. We shall suggest that there are two groups of languages on the island with respect to processes that see mood marking morphemes interact with the material to the left and right of them. We shall begin by looking at the languages of the north and centre of the island where the mutation is not found. In the second section we shall contrast the two 'mutating' languages. In the last section we will confirm the pattern by seeing a similar one, where in the non-mutating languages the base remains unchanged when a negative morpheme is attached, while in the mutating languages, negation provokes a nasal grade verbal base.

## 2. Mood marking in the non-mutating languages

Malakula is a linguistically dense island, possible home to around thirty languages. Published information on these, however, is scanty, and only three extensive grammars are available. The mutation is reported to be absent in Big Nambas (Fox, 1979), in the northwest, Nefe'ei, (Musgrave, 2001) and Port Sandwich (Charpentier 1979). Recent work carried out on the island has seen the beginnings of documentation on a number of other languages largely in the centre of the island, Unua (Pearce see this volume), Neverver (Barbour 2005), Tirax (Brotchie 2005) and Naman (Crowley 2004). Taking the opportunity to present some of the data from these newer projects, we shall look at mood marking in the non-mutating languages of the north and centre of the island.

### 2.1 Nefe'ei

In the Nefe'ei language, mood marking is entwined with person and number marking. That is, for most forms in the pronominal paradigm, the portmanteau prefixes mark person and mood. However, Musgrave (2001) notes that a distinct irrealis marker with the shape  $b^wV^{-3}$  is recognisable in all but the second person singular form. Its positioning is decidedly odd. With a first person singular and a non-specific subject form  $b^wV-$  follows the same prefix denoting first person singular in the realis forms. That is, the 1<sup>st</sup>sg realis  $nV-$ base contrasts with irrealis  $nVb^wV-$ ; impersonal subject realis  $rV-$  versus irrealis  $rVb^wV-$ . In the dual forms, the consonant added to the irrealis  $b^wV$  is consistent with the final segment of the realis form: realis  $er-$ , irrealis  $b^wVr-$ . The first person plural realis form follows the  $b^w$  of the irrealis. In the second dual and plural forms however, the irrealis sequence appears to be inserted between the segments that mark person and number in the irrealis.

Table 1. Nefe'ei subject morphemes for two moods

Person	Number	Realis	Irrealis
1	sg	$nV-$	$nVb^wV-$
1	dual	$er-$	$b^wVr-$
1	plural	$it-$	$b^wit-$
2/3	dual	$ar-$	$ab^wVr-$
2/3	plural	$at-$	$ab^wit-$

(based on Musgrave, 2001, p.55)

The form of the morpheme marking irrealis in Nefe'ei appears to be  $/b^wV/$ . Its position within the word however is not uniform. In the first singular the order of morphemes is clearly agreement>irrealis>verb base. However in the dual and plural forms of the first person, the irrealis morpheme is at the left edge. The second/third person non-singular forms show a different position for irrealis which appears to be inside the morphemes marking number. If this position is the result of metathesis then the irrealis marker could have been positioned closer to the earlier base before metathesis takes place. The nature of this position will be returned to when we examine the Neverver data.

Nefe'ei, then, has realis zero marked and irrealis mood marked by some kind of quasi-morpheme. If there ever was a prefix for irrealis in Nefe'ei it appears it used to intervene between the subject prefix and the base, the position it has remained in for first singular, merging but moving forward in the rest of the paradigm.

### 2.2 Neverver

Barbour (2005) shows that in Neverver also has a zero morpheme for realis and allomorphy for the irrealis morpheme. As well as allomorphy restricted to the second person morpheme in plural realis contexts, one allomorph of the irrealis marker,  $b(i)-$ , reflects the shape of the Nefe'ei irrealis marker.

<sup>3</sup> Musgrave represents the labiovelar bilabial stop with a tilde.

Table 2. Partial paradigm of plural markers in Neverver<sup>4</sup>

person	pl realis	plural irrealis
1incl	ni-t-	ni-b(i)-t ni-m-t
1excl	na-t-	na-b(i)-t na-m-t
2	ka-t- ga-t-	ka-b(i)-t- ka-m-t-
3	a-t-	a-b(i)-t- a-m-(t)-

(Barbour, 2005, p.27)

Not shown here is that in the first and third singular irrealis forms the morpheme has the same two allomorphs *m-* and *b(i)-* (Barbour 2005, p.26). What we do see is the same pattern as Nefe'ei, with the irrealis morpheme seemingly inserted inside the agreement morpheme. Barbour suggests that the morpheme *t-* is a plural marker. If we take this approach, we might want to account for Neverver and Nefe'ei morpheme ordering as agreement>irrealis>number, although this approach would mean that the Nefe'ei sequences *ar* and *at* are segmentable into an agreement morpheme followed by the dual and plural morpheme respectively, though the first person plural is a portmanteau morpheme. More importantly, we also note that irrealis marker itself is subject to allomorphy. To mark the irrealis, the language offers a choice between a prenasalised stop and a nasal.

### 2.3 Naman

In neighbouring Naman, two sets of subject prefixes also index mood. In the paradigm for the majority of verbs, realis mood is unmarked for third singular subjects, but the irrealis prefix is *bë-*, while the impersonal subject markers in this language have the forms, *rë-* realis, and *rëbë-* irrealis, suggesting the shape *bë-* can be associated with unreal events. Like the Nefe'ei paradigms subject and mood marking is neither a straightforward concatenation of two prefixes, nor an unremarkable case of portmanteau morphemes. Some subject markers in themselves are ambiguous as to mood: first person inclusive duals and plurals *tër-* and *tët-*, excluded from the table, below are used with both moods (Crowley 2004, p.112). However for the rest of the paradigm, continuant initial realis prefixes undergo some change. Set out below are the relevant parts of the singular, dual and plural paradigms for the majority of verbs:

Table 3. Elements of the realis and irrealis paradigm in Naman.<sup>5</sup>

	realis	irrealis
singular		
1	në-	bë-
2	khë-	kë-
3	Ø-	bë-
imp	rë-	rëbë-
dual		
1 excl	mër-	bër-
2	khër-	kër-
3	rë-	bër-
plural		
1 excl	mët-	bët-
2	khët-	kët-
3	at-	bët-

Adapted from Crowley, (2004, p.112)

From the evidence of the third singular realis/irrealis contrast, it is possible that at an earlier stage of the language an irrealis marker with the shape *b(ë)-* existed. But what is the order in which these morphemes are attached? There appear to be two different sequences of morphemes. Clearly, the impersonal subject marker precedes the irrealis. However for the individuated subject markers it appears we cannot separate a person and a number feature as proposed for Neverver and Nefe'ei as the central vowel is constant throughout the irrealis paradigm. Whereas the irrealis marker is clearly to the right of the impersonal marker, *b(ë)-* appears to the left edge of the agreement + verb complex giving the order irrealis>agreement>verb. It would seem likely that one of the two competing orders would derive from the other. Before making any claims as to the original sequence we should continue examining data from the other languages of the north and centre of the island.

### 2.4 Tirax

Tirax, sometimes recorded as Mae after the major village of that language locale, also has two sets of portmanteau morphemes marking person and mood. Brotchie (2005) records them as the following paradigm:

<sup>4</sup> The Neverver data here is presented in Barbour's orthography, <b> represents a prenasalised bilabial stop.

<sup>5</sup> In the orthography of Naman, <ë> represents a central vowel, <b> represents a prenasalised stop, and <kh> represents the velar fricative. Also, a prenasalised postalveolar affricate is represented orthographically as <ɟ>.

Table 4. Person and mood paradigms for Tirax<sup>6</sup>

person	realis	irrealis
1 <sup>st</sup> sing	n(i)-	da-
2 <sup>nd</sup> sg	x(i)-	ba-
3 <sup>rd</sup> sg	i-	de-
1dl	nar-	dar-
2dl	xar-	bar-
3dl	r(i)-	der-
1pl	nas-	das-
2pl	xas-	bas-
3pl	s(i)-	des-

(adapted from Brotchie 2005, p.6, p.8)

Brotchie gives sentences that show that the form of the base is untouched by a change in mood marking:

Tirax

(3) N-van Lakatoro n-me Mae  
 1s.REAL-go Lakatoro 1s.REAL-come Mae  
 'I went from Lakatoro and came to Mae.'

(4) da-van Lakatoro, da-me lxén lain  
 1sg.IRR-go Lakatoro 1sg.IRR-come back home  
 'I will go to Lakatoro and then return home.'

(Brotchie 2005, p.22)

It is clear then, that the verb base does not mutate for *v-* initial verbs, an initial consonant that is highly likely to mutate elsewhere in Central Vanuatu. But we can also see that the irrealis series begins with a prenasalised stop which, excepting for the second person subjects, has assimilated to the place of articulation of the initial segment of the realis stem. This phonological process at the boundary of agreement and mood looks very similar to the mutation found on the next morpheme boundary to the right in the mutating languages such as Paamese. Furthermore we see that the irrealis marking stop is always at the left edge of the entire verb complex in Tirax, unlike Unua discussed below.

## 2.5 Unua

Unua shows a similar pattern to that of Nefe'ei. Disregarding a predictable vowel change (shown as 'V' in Table 5) conditioned by the first vowel the root, the set of subject prefixes for realis is as follows:

Table 5. Subject agreement paradigm for Unua realis verbs<sup>7</sup>

Person/number	subject pronoun	Agr (realis)
1sg	xani	no-
2sg	xai	u-
3sg	xini	i-
Dual 1 incl	rraru	rru-
Dual 1 excl	memru	mor-
dual 2	xamru	mur-
dual 3	raru	ru-
plural 1 incl	rrate	rrV-
plural 1 excl	xande	mVm-
plural 2	mende	mum-
plural 3	rate	rV-

(Adapted from Pearce 2005, p.2)

The irrealis marker in Unua takes the form *b-*, a prenasalised stop, but like the irrealis in Nefe'ei, it appears in slightly different positions with respect to the subject prefixes. This can be seen in the paradigm for 'eat (trans)'

Table 6. Irealis paradigm for Unua, 'to eat TRANS'

Person/number	irrealis-eat
1sg	ba-xani
2sg	bu-xani
3sg	bi-xani
Dual 1 incl	rru-b-xani
Dual 1 excl	mor-b-xani
dual 2	mur-b-xani
dual 3	ru-b-xani
plural 1 incl	rra-b-xani
plural 1 excl	mam-b-xani
plural 2	mum-b-xani
plural 3	ra-b-xani

(Adapted from Pearce, 2005, p.4)

In the singular forms the consonant /b/ marking irrealis is the leftmost morpheme of the verbal complex. It precedes the vowels that mark second and third person singular which suggests a morpheme order irrealis>subject agreement>verbal base. In the dual and the plural irrealis forms, however, the subject agreement morphology is on the left edge of the verbal complex, preceding the marker of the irrealis, i.e., subject agreement>irrealis>verbal base. Unua, like Naman, Neverver and Nefe'ei, appears to have two sequences of the morphemes. We have to assume that one order in these languages is derived from the other, and that given the languages are closely related that the original position of the irrealis marker was once shared. One analysis of the facts of the morpheme attachment here might be that irrealis was originally close to the left edge of the verbal base where it is found in the Neverver data and in most of the Unua paradigm. For the other languages, there has been movement leftward, making the irrealis appear at the left edge of the stem. We might propose for Unua, for example, that a process of metathesis has occurred. This

<sup>6</sup> In the Tirax data presented by Brotchie, the <b> and <d> represent prenasalised stops in bilabial and alveolar places of articulation respectively.

<sup>7</sup> The Unua data here is presented in the orthography proposed by Pearce. The orthograph <b> represents a prenasalised labial stop.

process changes the position of the irrealis consonant with respect to the vowel of the agreement morpheme, though in the duals and plurals the irrealis maintains its canonical position immediately preceding the base of the verb. I argue that we should understand the process of metathesis as moving the consonant leftward in the case of the singular Unua forms. In the original position between the agreement prefix and the verb root, the consonant can be syllabified as either part of the onset of the syllable containing the vowel of the verb stem, or as the coda of the vowel of the agreement prefix. I propose that the latter is the case, but metathesis moves it leftward to the onset of initial syllable. In the Unua paradigm, there are no other initial syllables where the onset is empty.

In the languages where there might be separate morphemes for person and number, the irrealis appears between them. However similar problems with sequences of consonants as found in Unua are resolved in different ways. In Tirax, there appears to be a merge of the two consonants that find themselves in the onset of the prefix vowel, though this analysis creates the problem of the third singular irrealis *de-*. We would expect a bilabial if Tirax once had a form of the marker cognate with those of the languages around them. In Naman we might suggest that the form of the irrealis is the single consonant /b/, which appears between the person and number morphemes. It is possible that impermissible clusters created in the onset in irrealis forms are reduced via merging. In Neverver two strategies are currently employed by speakers when creating irrealis forms. The allomorph *b(i)-* contains an optional vowel which ensures that the consonant of the irrealis prefix remains in the onset of a syllable. The alternative allomorph *m-* looks as if its part of a coda. Here the consonant might be undergoing dissimilation to allow permissible clusters in the coda as occurring in a plural context.

In these languages then we see that the position of irrealis marking is not uniform, and metathesis has shifted the morpheme or part of it towards the left edge of the verb complex in some languages, and processes of assimilation and merge have operated on segments of agreement and irrealis morphemes. This however is in contrast to the proposed history of the consonant mutation found in the languages of the other islands of central Vanuatu.

### 3. The mutating languages

It has been proposed that a morpheme marking realis rather irrealis is responsible for the change in the stem initial consonant in mutating languages. This suggests that instead of morphophonemic processes targetting elements near the left edge of the verb stem, a change in the verb-initial consonant can only result from processes that shift or merge elements to the right. In Nāti and Aulua where consonant initial alternations are attested, we must assume likewise that processes that result in rightward merges have also taken place. Nāti is an interesting example of this phenomenon, as unlike the well-known cases of realis mutations, the mutation in Nāti occurs in irrealis contexts.

#### 3.1 Nāti

The moribund language, Nāti, shows a pattern of mutation, and was the first language of Malakula in which this feature of Central Vanuatu languages was

noted. In this language there are two separate sets of person and tense prefixes, contrasting according to Crowley (1998, p.120) past and present on the one hand and the future on the other. In the non-singular forms, the future is discernable through the low vowel of the agreement affix. In the singular forms, realis first, second, and third persons *ni-*, *u-* and *i-* contrast with *na-*, *wa-* and *a-* respectively.

These prefixes are attached to the base. A segment initial mutation takes place in the verb when 'there is a preceding future tense prefix or when the verb carries the negative prefix *sa-* (with any tense marking on the verb)' (Crowley, 1998, p.120). That negation appears with both sets of prefixes suggests the mutation considered might be a straightforward realis/irrealis distinction. This mismatch between an irrealis base and realis agreement morphology Crowley explains by labelling the realis morpheme past/present markers. However evidence against such an analysis can be found in the Aulua data in 3.2 below. The table below sets up the segments which undergo mutation with their resultant form in Nāti.

Table 7. The root-initial consonants pairs<sup>8</sup>

root	future/negative root
v-	mp-
t-	nt-
r-	ntr-
w-	mpw-
ʔ-	ngk-
k-	ngk-

(Crowley, 1998, p.124)

In irrealis and negative contexts, the initial consonant of the verbal base is always nasal for mutating verbs. For roots with an initial [+continuant] consonant in the present/past all begin with a sequence of nasal + stop in the future. The outcome of the irrealis mutation for the glottal and velar initial realis verbs merge presumably as there is no glottal nasal. Though assimilation and merge are said to happen elsewhere in the language, Crowley (1998, p.109) argues against the sequence of a nasal and a homorganic stop being considered a unitary phoneme in this language.

Nāti

(5)a. Al-wiling  
3pl-come  
'They come/ came.'

(5)b. al-a-mpwiling  
3pl-fut-IRR.come  
'They will come.'

(6)a. i-'omp  
3sg.REAL-throw  
'He/she throws/threw.'

(6)b. 'a-ngkomp  
3sg-fut-IRR.throw  
'He/she will throw.'  
(Crowley, 1998, pp.124-125)

Here we see the pattern of central Vanuatu languages reversed. If we can equate the future forms of Nāti with the irrealis forms of other 'mutating'

<sup>8</sup> The digraph <ng> represents the velar nasal. Note that Crowley (1998: 109) argues that sequences of nasals and homorganic stops should be treated as clusters not as unitary phonemes.

languages we see that the mutation is in the reverse correlation. On Paama, Ambrym and Epi, irrealis is the base form, and realis encoded events contain the mutation. But here in a language of South Malakula, the mutation encodes irrealis events. While this may be the unexpected pattern elsewhere in Vanuatu, given the data from the languages of Central Malakula, it just might be the expected form on this island. If we propose that the assimilation of a future/irrealis marking morpheme with a nasal component along the lines of Nefe'ei *b<sup>w</sup>V-* or Naman *bē-* provoked the mutation we have a similar result here as we had in the languages of the centre of the island. What separates Nāti from the languages further north is that the process of assimilation and the loss of the marker works uniformly in one direction, i.e. progressively, assimilating to the initial consonant on the verbal base.

### 3.2 Aulua

Aulua spoken in coastal southeast Malakula too might be a language where a progressive assimilation of a nasal produced a mutation on the base. Recent fieldwork by the author in the Aulua locale has shown that for one class of verbs, there is indeed a mutation of the initial consonant of the verb stem in two environments, when the verb is encoding a realis event, and when the verb is negated. The mutation affects only verbs whose base form, i.e., the irrealis begins with the fricatives, /v/ and /h/, the stop, /t/ and the alveolar roll /r/:

#### Aulua<sup>9</sup>

- (7)a. Ni-ven Aserukh 'I will go to Aserukh.'  
1sg-IRR.goAserukh
- (7)b. ni-ben Aserukh 'I am going/went to Aserukh.'  
1sg-REAL.go Aserukh
- (8). i-ben su 'He/she has gone.'  
3sg-REAL.go perfect
- (9)a. ara-hahe nabo 'They will sing.'  
3pl-IRR.sing song
- (9)b. ara-qahe nabo 'They are singing/sang the song.'  
3pl-REAL.singsong
- (10)a. ara-tu 'They will stand.'  
3pl-IRR.stand
- (10)b. ara-du 'They are standing/stood.'  
3pl-REAL.stand
- (11)a. ni-han nedem 'I will eat the yam.'  
1sg-IRR.eat yam

- (11)b. ni-qan nedem 'I am eating/ate the yam.'  
1sg-REAL.eat yam
- (12) Ni-qan su 'I have eaten.'  
1sg-REAL.eat perfect
- (13)a. Nave t-i-rov 'The river will rise.'  
Water fut-3sg-IRR.run
- (13)b. Nave i-nrov 'The river is rising/rose.'  
Water 3sg-IRR.run

All the realis verbs begin with a prenasalised consonant. It seems the nasal was (part of a) morpheme indicating past tense or realis mood. It has since merged with the initial consonant of the verb producing the mutation. The resultant consonants are all prenasalised stops, with the exception of the prenasalised trill.

Aulua, then, fits with the pattern proposed for other mutating languages in that the mutation is caused by the progressive or rightward assimilation and merger of phonetic material of a morpheme associated with realis mood to the verb. Like the languages of Epi and Paamese, the direction and context of the mutation are the same. Nāti presents an interesting intermediate position in that the direction of phonological is the same, but the context is different. This time an irrealis morpheme is involved. This language seems to share a similar morpheme to the languages in the north/central part of the island, an irrealis morpheme reflecting an original morpheme with at least the consonant /<sup>w</sup>β<sup>w</sup>/, assuming the Nefe'ei labiovelarised form reflects the original consonant. A reflex of this morpheme is not attested in Aulua or the mutating languages east and south of Malakula. Excluding Nāti, the languages which have a morpheme for irrealis have only phonological processes that shift elements leftwards, not rightwards, which explains the absence of verb stem initial mutations in these languages. The shape of the 'central and northern Malakula' irrealis gives us evidence as to why Nāti does have the mutation for *irrealis* not the expected realis mood. Despite patterning like the northern languages in having an overt morpheme for irrealis it is like the languages that mutate verbal stems due to phonological processes working rightwards.

### 4. Negation

An examination of negation in these languages may provide further evidence to persuade us of the correctness of this argument. If negation also fills a slot between person/number features and the verb stem we may see progressive assimilation provoking mutation of the verb in N<sub>i</sub>ti, Aulua and the other 'mutating' languages of Paama and Epi. Alternatively, if negation patterns like the irrealis marker in the more northerly languages of Malakula, we can expect negation not to impact on the phonological shape of the verb, but possibly show some of the same complexities in interacting with the subject agreement morphology.

<sup>9</sup> In the Aulua orthography, the orthographs <h> and <q> represent velar segments, the former a fricative which is usually voiced and the latter a voiced prenasalised stop. The voiced alveolar stop is represented by <d> and the digraph <nr> represents a prenasalised retroflex trill, the counterpart to the plain trill <r>.

## 4.1 Negation in Aulua

In Aulua and Nāti we have seen mutation on the bases dependent on Mood and again they share this feature when it comes to negation. In Aulua there is a single series of agreement markers; these precede the negative marker *se-* which is immediately adjacent to the verb base. Verbs, however, must appear in the mutated form when with the negative *se-* is attached.

Aulua

(14)a. Ni-se-ben Aserukh  
1sg-NEG-REAL.go Aserukh  
'I am not going/ did not go/ will not go to Aserukh.'

(14)b. \*ni-se-ven Aserukh  
1sg-NEG-IRR.go Aserukh

Given that the realis form must be used with negated verbs, it seems that Aulua speakers might be attaching a realis reading to the mutated verb. The presence of the negative morpheme appears to rule out the use of the future marker *t-* which co-occurs with irrealis forms in third singular subject contexts only.

Aulua

(15)a. T-i-ven Aserukh  
FUT-3sg-IRR.go Aserukh  
'He/she will go to Aserukh.'

(15)b. \*T-i-se-ben Aserukh  
FUT-3sg-NEG-REAL.go  
'He/she will not go to Aserukh.'

The ungrammaticality of (15b) suggests that Aulua speakers are unable to interpret the mutated form as the irrealis. Because negation appears to attach to the realis base in Aulua, i.e., the mutated form, and negation cannot co-occur with the future marker, Aulua speakers now understand negated events to be 'real'. I propose that originally a negative morpheme provoked a mutation that produced homophonous verb forms to the realis mutation and speakers collapsed the two – making the future marker incompatible with negation.

## 4.2 Negation in Nāti

In Nāti negation is marked by the presence of two affixes, *sa-* intervenes between the subject agreement markers and the verb. Suffixed to the end of the verb is *-ve*. In Aulua, there is only one set of subject morphemes independent of the form of the base. In Nāti, there are two series of agreement markers. When forming a negative, however, the irrealis, i.e., the mutated verb form in this language is obligatory for the mutating class when the negative marker *sa-* precedes the verbal stem. This fact obtains regardless of the subject prefixes, realis or irrealis series, attaching to the negative morpheme, either of which is permissible in negated constructions in this language.

Nāti

(16) Wa-sa-metur-ve  
2sg:FUT-NEG-sleep-NEG  
'You will not sleep.'

(Crowley, 1998, p.122)

(17)a. i-temptemp  
3sg.REAL-defecate  
'He/she defecate(d).'

(17)b. i-sa-ntemptemp-ve  
3sg.real-NEG-IRR.defecate-NEG  
'He/she does/ did not defecate.'  
(Crowley, 1998, p.125)

The verb in (16) is of the non-mutating class. The negation appears with the first singular morpheme from the future series. Examples (17a and b) show that the mutating verb, 'defecate', appears in the mutated form in negative clauses independent of the mood associated with the agreement prefix. That is in (17b) we get a mood mismatch between realis agreement marker and the mutated irrealis verb stem. Because the event in (17b) appears to be marked as both realis and irrealis, I argue that it is safe to presume that the mutation on the verb is not marking irrealis at all. Instead of assuming that the mutation in either of these languages is required to create a particular mood reading of a negated event, I propose we understand the mutation to be actually independent of mood. Rather than there being a rule stating that in Aulua negated events are real events, or a Nāti rule - negated events must be marked irrealis, we should concentrate on the similarity between these languages; namely, a mutation is required in negated clauses.

What is not clear is why negation should provoke the same form of the base as the mutation provoked by the mood marking morphemes in Aulua and Nāti. The irrealis form in Nāti was provoked by the presence of the prenasalised stop of the irrealis morpheme. Likewise, the Aulua verb mutation was provoked by the merged realis morpheme which must have had a nasal element to it. Is there a phonetic explanation, then, for the mutation of the negated verb? Did the negative contain a nasal? Nasality provokes mutation in Aulua and likewise in Nāti. For both languages a further stage would have to obtain. The speakers have restricted the assimilation of the nasal element of the negative marker to the precisely the same class of verbs which mutate in the context of the mood marker.

## 4.3 Negation in the non-mutating languages

But what of the other languages of Malakula discussed above where mood markers appear to merge with agreement markers? In Naman, negation is marked by two distinct elements, a preverbal element of the shape *sē-*, *se-* or *sa-* intervenes between the subject prefix and the verbal base which is followed by the morpheme *-si* in intransitives.

Naman

(18) Kē-sē-vale-si  
2sg.irrealis-NEG-go-NEG  
'You will not come.'

(Crowley 2004 p.119)

Furthermore, Crowley gives evidence for the other part of our hypothesis, namely that the negative marker will not interact with the base of the verb, but may interact with the agreement morpheme. By combining the positive and negative examples below we can see that assimilations take place in the plural part of the paradigm:

Table 8. A partial paradigm, positive and negative, of the Naman verb *khël*, 'dig'

person	positive	negative
1.incl.pl	tëtkhël	tëjëkhëlsi
1.excl.pl	mëtkhël	mëjëkhëlsi
2.pl	khëtkhël	khëjëkhëlsi
3.pl	atkhël	ajëkhëlsi

Crowley (2004 p.120)

In these examples the combination of a morpheme final /t/ followed by /s/ is resolved as a prenasalised postalveolar affricate. The presence of prenasalisation in the affricate 'straddling' the boundary between the two morphemes is interesting as neither of the original morphemes exhibits prenasalisation.

What evidence is there of a (former presence of a) nasal element to the negative marker to provoke the mutation? In Unua, negation is often bipartite with the obligatory form *seb-* usually co-occurring with *rre* postposed after the verb. In negative verb forms, the primary negation marker appears adjacent to the root, though often separated by an epenthetic vowel.

Unua

(19) No-seb-[e]-kei rre kuri metmet tebeg  
 1sg-NEG-see NEG dog black all  
 'I did not see all the black dogs'

(20) Bu-seb-[e]-vrrarri  
 2sg.IRR-NEG-kill  
 'You should not kill.'

(Pearce, 2005, p.7)

With reference to negation, we can conclude that the languages investigated share a cognate morpheme. The secondary negative marker that appears to the right of the verb are independent innovations, but the prefixed negation marker in all these languages must descend from some kind of proto-Malakula form that contained a prenasalised stop most likely \*b or \*b<sup>h</sup>. While this consonant has been lost from the morpheme in many of the languages, it remains in a few, and its presence can be detected in the verb mutation in Nāti and Aulua

Crowley (1991) working with little material from Malakula apart from his own Nāti data and comparing it directly with the data from Paamese tentatively proposes that the Nāti system is a completely independent innovation perhaps with an irrealis prefix \**na-* as found in Paamese and Southeast Ambrym. We can now discount this proposal given the data provided for the central languages of the island. It seems more feasible now to propose that the irrealis morpheme in Nāti had a prenasalised (labiovelar?) labial consonant that provoked the mutation. Further Crowley again tentatively suggests that

What might have happened in Nāti is that the secondary root form completely lost its association with the realis (i.e., nonfuture) in the negative form of the verb, where both future and nonfuture appear with the same form of the root. The future/nonfuture switch could then possibly have taken place as some kind of reanalysis. (Crowley, 1991, p.215)

We now can uncouple the link between mood and negation that he proposes and suggest that the mutations in Nāti were independently caused by prefixes containing a nasal or prenasalised consonant. This lack of interdependence also obtains for Aulua. In this language the realis mutation is the result of the merger of \**ma* with the verbal root, while the mutation in the negative is caused by the reflex of the same marker as found in Nāti.

## 5. Conclusion

We have seen then that Aulua appears to be alone on Malakula (as far as we know) in showing the verb initial mutation in realis and negative contexts in the manner found in the nearby islands. The majority of (documented) languages of the centre and the north of the island do not show a change in form of the verbal base in these contexts, and in contrast show complexities of morpheme interaction at the juncture of mood and personal agreement markers. Where Aulua must have once shared a morpheme marking realis or tense with the other realis mutating languages of the central Vanuatu area, the other Malakula languages instead seem to share an irrealis marker. Nāti, however, seems to hold a middle ground, it shares the irrealis morpheme with the languages of the centre/north of the island, and yet also shares the progressive assimilation pattern that provokes a mutation on the verbal base in Aulua. It seems that the Malakula languages of this study fall into three groups. Group one, Unua, Tirax, Neverver, Nefe'ei, and Naman are non-mutating and share a reflex of an irrealis mood morpheme. Group three contains the single language Aulua, which shows progressive assimilation and mutation on the base for negative and realis contexts in the manner of the other islands of central Vanuatu. Group 2 contains the single language, Nāti, which shares aspects of group one and group 3 with regards to the irrealis morpheme and the direction of assimilation.

## Abbreviations

DIST:	distant irrealis prefix
FUT:	future tense
IRR:	irrealis mood
NEG:	negative
REAL:	realis mood

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## Exacting the hen's revenge: An initial enquiry into the nature of narrative in Aulua

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### Abstract

The text of the Aulua story *Nrisvarene tah neto vinpar* - 'the hen's story' is glossed and given a free translation. This text is one from a corpus of over 150 stories and other text types collected in the Aulua language, and is one of four versions of this particular story. The story belongs to the only named genre of Aulua narrative, *nethun*, which might best correspond to the English language genre of folktale. Features of Aulua narrative and discourse style such as the use of head-to-tail linkage of clauses and the borrowing of discourse particles from the creole language, Bislama, are highlighted as well as a proposal as to a format for the presentation of texts that will be useful for the widest possible audience.

### 1. Introduction

It is a commonplace of linguistic enquiry that language is rule governed. The rules of language, however, are not limited to the phonology or the grammar, but also organise language at the higher level of discourse. In documenting the Aulua language spoken in Malakula, the project requires more than the construction of a grammar and an account of the phonology, but an investigation of how language is used, or put together for different purposes is also necessary. While many linguists may be happy to gloss narratives and texts and then mine them for examples to furnish their grammar or their lexicography project, we should also encourage the analysis of narratives (among other genres) as linguistic objects. Not only can we discern discourse rules utilised in the construction and performance of a narrative, but stories can tell us something about how a community organises its identity through language. If culture and language are intimately tied together, then we can see how knowledge is reified through language and filtered through discourse conventions and passed on to others. For this reason too it is important to undertake the documentation of not only the endangered languages of Malakula but also the culture they encode. Should the intergenerational transmission of these languages fail, we cannot be sure that these stories and other traditional discourses and knowledge will be encoded in a new language.

<sup>1</sup> This research was made possible by funding from the Marsden grant UOW 305/VUW 311 2004-2007. The author would like to thank the storyteller Willy Makenzie for an excellent story and such an expert performance as well as all the other storytellers of the Aulua locale. My thanks also must go to Rosie Freza for her patience and excellent transcription work. In New Zealand I would like to thank the audience at the seminar version of this paper at Massey University, July 2005 for their feedback.



This paper is part of an ongoing examination of the two sides of narrative discourse: what are the rules governing the performance of narratives in Aulua? And how are narratives valued as elements of community identity?

Presented here is one of four versions of what appears to be a single narrative collected from four different Aulua speakers – *Nrisvarene tah neto vinpar* or 'the story of the hen'. The version glossed here was the most elaborate, and will serve here as an example of narrative discourse conventions. The various listeners of the story in all its versions rated this one the most highly and it clearly gave the audience a great deal of pleasure. Responses to other versions of this story were intriguing. Often they explicitly encoded by the expression, *iaviav*, - an accusation or at least exclamation that the narrator had lied. The paper presented here is a part of an ongoing investigation into the nature of Aulua narratives – why variant stories exist, and why orators can be considered to be 'lying' when deviating from either narrative convention or plotline.

## 2. The types of narrative in Aulua

Narrative discourses in this community can be divided into a number of types though not all types are named. The term *nrisvarene* is the nominalisation of the verb, *risvar* 'to talk, converse, or tell', a cover term which relates to conversations as well as any sustained monologue such as a performance of a speech, recitation of a history, or the telling of the only named genre of narrative, *nethun*. This term might best be translated as a 'light-hearted folktale or fable' intended to amuse more than instruct. This term, though, is more meaningful when contrasted with other narratives which cannot be labelled as *nethun*. Stories of clan origins, often the result of interactions between human and non-human entities such as an octopus, or a fish, as well as accounts of clan histories, and local histories in general, are considered to be true. Some stories which discuss the origins of local geographic features such as two offshore rocks are not considered *nethun*. At first pass, then, one might think that the difference between *nethun* and other types of *nrisvarene* might be the relative truth content of each type.<sup>2</sup> The clan origin stories and the accounts of geographical features are not distinguished from other local histories in the western sense of the term. However, the truth of *nethun* is variously asserted by storytellers and audience alike and as was mentioned above 'not being true' may be the cause of a rejection of a particular telling of a *nethun*.

Perhaps a pertinent definition of the difference of the *nethun* genre is one of copyright. Alongside other kinds of knowledge, certain types of *nrisvarene* have copyright conditions which restrict not who can hear a story, though these kinds of restrictions exist about knowledge passed to males through the circumcision rites and grade-taking activities, but who can tell the story. Clan narratives - both origin stories and accounts of their battles - can only be told by members of that clan. Most recent history, i.e., from the arrival of the missionaries in the late nineteenth century to the present has no clan

<sup>2</sup> The position of the popular genre of 'devil' stories is not clear. That is, these stories have an identifiable structure, but it is not clear how the truthfulness of these stories is judged.

ownership most likely because clans no longer live in enclaves, but live among one another in the main Aulua settlements. Larvitvit, for example, the largest conglomeration of villages is the home to nine clans who have all shared the same community history from missionary times to the present. The only other type of narrative that has no copyright restriction is the *nethun*. Anyone, male or female, young or old, from any clan can tell these tales. And it seems clear from the collection of narratives from all over the Aulua language locale that many of the same *nethun* are known by members of different clans. In fact some of the *nethun* are not restricted to Aulua speaking story tellers at all. The story of the rat and the octopus for example, collected a couple of times for this corpus is known in many areas of the Pacific and was even told in the Tayo creole of New Caledonia (Corne 1990). Closer to home, the story of the eel who punished those who ate his flesh is known elsewhere in Malakula and has been published in a trilingual Uripiv/English/French edition (Mackerras 2004).<sup>3</sup>

The stories that qualify as *nethun* come in a number of thematic types. Many of them seek to give an explanation of the physical characteristics of animals or the environment, for example the reasons why the owl has white feathers and only hunts at night, or why the dog and the cat are enemies<sup>4</sup>. The narrative analysed here however seems to resist being categorised as a thematic or instructive. The story actually seems rather unusual for a *nethun* as it explicitly involves human/animal interaction. While the origin of clan texts often involve interaction and indeed marriage between human and anthropomorphic animals this is not a feature of the *nethun* genre. Most *nethun* are set where animals interact in anthropomorphic ways with other animals and if humans exist at all, they exist as shadowy marginal figures. Yet here the hen communicates directly with humans. Despite its unusual plotline – a mother hen taking revenge on an old woman who stole and ate her eggs, this *nethun* displays many of the features that are typical of the narrative framework of an Aulua story and of the discourse conventions of the community.

## 3. Discourse and narrative conventions

The discourse features of storytelling in Aulua are of two types, structural features inside the narrative and features of performance in the Aulua language. Both types crossover from the performance of *nethun* into other types of *nrisvarene*. Two key elements found in all extended discourse genres in this language are clear opening sequences and closing formulae. Closure is a particularly salient element of oral discourse in Aulua and many conversations are completed with the phrase *sipa lobon sare nrisvarene* – 'thank you for the talk'. *Nethun* also have overt opening and closing sequences as do other types of narratives. Characteristically, they begin with a named title,

<sup>3</sup> This story is not considered to be a *nethun* as it explains a geographical feature - a house-shaped rock - which the eel turned into stone killing all those trapped inside. This geographical feature is near the Aulua village of Aserukh. The published English and French translations of the Uripiv version do not mention a specific site, though this may be an editorial decision.

<sup>4</sup> That a *nethun* exists with a cat protagonist testifies that this story tradition has continued since the introduction of the cat in missionary times.

usually employing the term *nrisvarene* rather than *nethun*. The title indexes the major character or characters, who are then immediately introduced. Often the speaker next asserts that the story has been told by the ancestors long ago, a strategy which aids in asserting the truth of the performance. *Nahal nrisvarene bohoh tahn masarab her tue tue bat varavar* – 'This is a story from the old men from a long long time ago' (line 1).

The *nethun* like other genres is concluded with some kind of closing clause – *stori imka eni* – 'the story finishes here.' A (once) distinctive feature of the *nethun* closing return is the expression, *kusve kusve*. Older speakers will only use this expression with this genre, though younger speakers may add it to any the closure of any narrative performance. This turn is shared by storyteller and listeners. The degree of gusto with which the audience deliver the phrase is a measure of their appreciation. Elders in the community suggested the function of the closing formula is to contain the story, providing a boundary over which the narrative world cannot spill into this one. A similar phenomenon was noted by the researcher in the dialect of Boiken spoken on Tarawai Island, Papua New Guinea, with the non-sequitur 'grandfather ate a ripe coconut, I ate a green one' ending certain types of stories.

While the opening and closing sequences provide a framework for the performance of the hen's story and other *nethun*, there are also some key motifs to the story. The song the chickens sing as they return to the village to exact revenge on the thieving old woman is an example of the embedding of lyrics in the performance. In the four versions of this tale collected no two songs were exactly alike. Although three shared the same melody, the words were slightly different, with older speakers incorporating older grammatical forms. Interestingly, one storyteller had an entirely different melody and sang the song in Burmbar, a neighbouring language (as identified by the transcriber). A number of stories have a song. They are intended to increase the drama through its repetition and the audience are free to join in.

Some major features of the narrative style of Aulua include the so-called 'head-to-tail linkage' (Crowley, 2004 p.194), and the use of Bislama discourse markers in sentence initial position and as co-ordinators. Also, the Aulua complementiser *ho* used as some kind of topic marker. Head-to-tail linkage involves the repetition of verbs to mark transitions from one event to the other and is a key feature in both Aulua and Bislama discourse style. In a sequence of sentences, verbs from earlier clauses are recycled to introduce new clauses. In the sequence of clauses below (lines 12-15 from the text), we can see how each clause is linked by the repetition of a verb (in bold):

Nabog ho ibies medu<sup>n</sup>adoh, ale **imebeloqot** anaqlohon vagan nahen. **Dobobeloqot** lahasni, *ale* tabaltarab inrogbose lahas ibies anaben **analev** medulnar neto finpar. **Ilevabene** anadoboqana. **Idoqana** ben ben, neto vinpar ibeloqot ben anabene analis medulna imesha.

'When she laid her eggs she got up and went (**walkabout**) to find some food. As she **walked about** like that, the old woman knew that she had laid eggs and went and **took** them. She **took** them and began to eat

them. While she was eating them all up, the hen was on walkabout and she returned and saw that the eggs had disappeared.'

In the first sentence, the lower clause verb *-beloqot*, 'to walkabout' is repeated in the sentence initial position of the next sentence. The final verb of this sentence, *-lev*, 'to take' is repeated in a different form as the first verb of the third sentence. The verb of the lower clause of this sentence, *-qan*, 'to eat' is repeated as the opening of the next sentence. Note also that the repeated verb may be followed by some kind of modifier such as *lahasni* 'like this' or the reduplicated realis verb *ben* which marks the duration of the action specified. This is also the position where it is possible to find *ho*, which can also introduce relative clauses; *Ibies ho ben ben ben ben ...* – 'She laid and laid and laid ...' (line 24). Here however, following a verb, its function seems to be one of marking a topic.

Another linking strategy available to Aulua narrators is the use of the same subject or echo subject prefix on verbs. This special piece of agreement morphology with the shape, *ana-*, can replace any of the subject agreement prefixes that are attached to a verb higher in the discourse. The same subject prefix then indicates that the subject of the verb to which it is attached has the same reference as the closest preceding verb with an individuated agreement marker. Chains of same subject marked verbs can stretch quite a long way through the text: *Nabog ho ibies medul her anabeloqot anaqul anabene analis medul her aradoh* – 'When she had laid her eggs, she went and walked about and returned and saw that her eggs had remained' (line 22). In this referential chain, the first verb is marked with third person singular *i-*, referring to the dropped subject, the hen. Subsequent verbs are marked with the same subject agreement prefix until the verb *aradoh* which has the new subject, the eggs.

Bislama discourse particles are a strongly salient feature of the text. In the initial position of the sentence we find *ale*. Like the linkage strategy discussed above, *ale* serves to link two clauses by explicitly marking the sequence of events. Crowley (2004, p.194) suggests the translation 'and then'. Clauses are often co-ordinated by Bislama, *be*, which seems to have replaced any native strategy of subordination.

#### 4. The nature of the glossed text

The text of *Nrisvarene tah neto vinpar* has been set out in the following way. The first line in bold represents the edited Aulua sentence in the orthography adopted by the Aulua community (see Paviour-Smith forthcoming) with clear borrowings from Bislama in italics. Below this, is the sentence segmented into morphemes. A hyphen separates morphemes which are easily demarcated, while a period joins the various meanings of a portmanteau morpheme together. Lined up below the segmented Aulua is the morpheme-by-morpheme gloss. A free translation is at the foot of each page. The text has been organised this way for a number of reasons. It seems appropriate to include an unannotated version of the text together with the morpheme-by-morpheme account as there is little in the way of published materials in this language for native speakers to use. What has been published is of a religious nature and is written in the somewhat inaccessible missionary orthography

(Tamtam 2004). Given that there is little opportunity for monolingual publishing in the Aulua language it is paramount that any publications be accessible to the community themselves. The decision to separate the free translation from each sentence was also due to considerations of audience. Given that little material has been published recently on Malakula culture, one would like to assume that eventually a collection of texts, narrative and descriptive, produced by members of the community themselves would be of significance to scholars of other disciplines such as anthropology, ethnobotany, sociology, and folklore and narratology studies. By organising the text with these separate audiences in mind it is hoped that the texts will be useful to more to more than just the linguistics readership.

The reader will note that there is an apparent inconsistency in the marking of mood in the glossing of Aulua verbs which warrants some explanation. Aulua verbs can be divided into two classes depending on their eligibility to undergo a mutation. Verbal roots with initial consonants drawn from the set /w, t, p and x/ in the irrealis forms begin with prenasalised voiced stops /<sup>h</sup>β, <sup>h</sup>δ, <sup>h</sup>ρ and <sup>h</sup>γ/ in realis and negative contexts. This pattern though common in the languages of other islands of central Vanuatu seems to be restricted to Aulua on Malakula (see Paviour-Smith this volume). For the purposes of glossing, then, only verbs of the mutating class are marked as realis or irrealis. The non-mutating verbal bases are neutral with respect to mood marking in this language and hence go unmarked in the text.

Elements enclosed in square brackets, i.e., [...], represent material inserted by the storyteller during the editing process. These insertions fill lacunae in the text where the recordings were not clear. Glosses which appear with question marks denote uncertain analyses.

## 5. The text: Nrisvarene tah neto vinpar - as told by Willie Makenzie

- (1) **Nahal nrisvarene bohoh tahn masarab her tue tue bat varavar.**  
 nahal nrisvar-ene bohoh tahn masarab her  
 DEM REAL-tell.NOM REAL.one POSS-GEN.3sg old.man PL  
 tue tue bat varavar  
 before REDUP long.time long.ago
- (2) **Iben lahasni ...**  
 i-ben lahas-ni  
 3sg-REAL.go like-this
- (3) **Neto vinpar bohoh idoh.**  
 neto vinpar bohoh i-doh  
 fowl hen REAL.one 3sg-REAL.live
- (4) **Ale, morkonahan hen, tabaltarab bohoh.**  
 Ale morkonahan hen tabaltarab bohoh  
 DIS near-appl she old.woman REAL.one
- (5) **Orodoh qortah, be tabaltarab inrogbose lahas neto vinbar idoh vea.**  
 oro-doh qortah be tabaltarab i-nrog-bose lahas  
 3dl-REAL.live together but old.woman 3sg-REAL.hear-know like  
 neto vinbar i-doh vea  
 fowl hen 3sg-REAL.live DEM?
- (6) **Neto vinpar inrogbose lahas tabaltarab bohoh idoh nahal.**  
 neto vinpar i-nrog-bose lahas tabal.tarab bohoh  
 fowl hen 3sg-REAL.hear-know like old.woman REAL.one  
 i-doh nahal  
 3sg-REAL.live DEM.here
- (7) **Orodobonrogbose rua ben ben.**  
 oro-dobo-nrog-bose-rua ben ben  
 3dl-INCH-hear-know-3dl REAL.go REDUP
- (8) **Tabaltarab iselah.**  
 tabal.tarab i-se-lah  
 old.woman 3sg-NEG-marry

### Free translation

This is a story from the old men from a long long time ago. It goes like this. Once there lived a fowl. And near her lived an old woman. They lived together. That is the old woman knew about the fowl. The fowl, likewise knew about the old woman. So they knew all about each and so life went on. The old woman was not married.

- (9) **Anetna isha.**  
 anet-na i-sha  
 child-IAP.3sg 3sg-not.exist
- (10) **Neto vinpar idoh benben ananrana "O mahavs nivies."**  
 neto vinpar i-doh ben ben ana-nran-a o mahavs  
 fowl hen 3sg-REAL.live REAL.go REDUP SS-think-3sg oh want  
 ni-vies  
 1sg-IRR.bear.children
- (11) **Ale anabies.**  
 ale ana-bies  
 DIS SS-REAL.bear.children
- (12) **Nabog ho ibies medulna anadoh, ale imebeloqot anaqlohon vagan nahen.**  
 nabog ho i-bies medul-na ana-doh i-me-beloqot  
 day C 3sg-REAL.bear egg.iap.3sg SS-REAL.stay 3sg-IMM-walk.about  
 ana-qlo-hon vagan nah-en  
 SS-look-APPL food POSS.ED-3sg
- (13) **Dobobeloqot lahasni, ale tabaltarab inrogbose lahas ibies anaben anlev medular neto finpar.**  
 dobo-beloqot lahas-ni, ale tabal-tarab i-nrogbose  
 INCH-walk.about like-this DIS woman-old 3sg-REAL.hear-know  
 lahas i-bies ana-ben ana-lev meduln-ar neto finpar  
 like 3sg-REAL.bear SS-REAL.go SS-take egg-PL fowl hen
- (14) **Ilevabene anadoboqana**  
 i-lev-a-bene ana-dobo-qan-a  
 3sg-take-3sg-DIR-come SS-INCH-REAL.eat-3sg
- (15) **Idoqana ben ben, neto vinpar ibeloqot ben anabene analis medulna imesha.**  
 i-do-qan-a ben ben neto vinpar i-beloqot  
 3sg-HAB-REAL.eat-3sg REAL.go REDUP fowl hen 3sg-walkabout  
 ben ana-bene ana-lis medulna i-me-sha  
 REAL.go SS-REAL.come SS-see egg 3sg-IMM-not.exist

She did not have children. The hen continued on and thought "Oh I would like to have children." So she laid eggs. When she laid her eggs she got up and went to find some food. As she walked about like that, the old woman knew that she had laid eggs and went and took them. She took them and began to eat them. While she was eating them all up, the hen was on walkabout and she returned and saw that the eggs had disappeared.

- (16) **"O ninrogbose tabaltarab.**  
 o ni-nrog-bose tabal.tarab  
 o 1sg-REAL.hear-know woman.old
- (17) **Tabaltarab hal iben anlev medluq her.**  
 tabal.tarab hal i-ben ana-lev medlu-q her  
 woman.old DEM.here 3sg-REAL.go SS-take egg-IAP1sg PL
- (18) **Corman ben ben ben ilisa ananrogbose lahas ho tilig anetna.**  
 corman ben ben i-lis-a ana-nrog-bose lahas ho  
 finally? REAL.go REDUP 3sg-see-3sg SS-REAL.hear-know like C?  
 t-i-lig anet-na  
 FUT-3sg-pick.up child-IAP.3sg
- (19) **Inrov, inrov den nuta hal tabe.**  
 i-nrov i-nrov den nuta hal tabe  
 3sg-REAL.run 3sg-REAL.run out.of place DEM.here bush
- (20) **Ale, inrov den nuta ho, anamedoh tabe, anabies.**  
 ale i-nrov den nuta ho ana-me-doh tabe  
 DIS 3sg-REAL.run out.of place C? SS-IMM-REAL.live bush  
 ana-bies  
 SS-REAL.bear.children
- (21) **Ibies anabies.**  
 i-bies ana-bies  
 3sg-REAL.bear.children SS-REAL.bear.children
- (22) **Nabog ho ibies medul her anabeloqot anaqul anabene analis medul her aradoh.**  
 nabog ho i-bies medul her ana-beloqot ana-qul  
 day C 3sg-REAL.bear egg PL SS-walkabout SS-return  
 ana-bene ana-lis medul her ara-doh  
 SS-REAL.come SS-see egg PL 3pl-REAL.stay
- (23) **"A bavohol nivies!"**  
 a ba-vohol ni-vies  
 ah times-IRR.one 1sg-IRR.bear-children

"Oh I know that old woman. That old woman has gone and taken all my eggs. She saw and knew that she would take all her children." She ran; she ran out of the village and into the bush. So she ran away from the place and went to live in the bush and laid eggs. She laid and laid and laid. When she had laid her eggs, she went and walked about and returned and saw that her eggs had remained. "Now I will have children!"

- (24) **Ibies ho ben ben ben ben ben ben ben ben analis ho anetna ibisoq.**  
 i-bies ho ben ben ben ben ben ben ben ben ana-lis  
 3sg-REAL.bear C? REAL.go REDUP SS-see  
 ho anet-na i-bisoq  
 C child-IAP.3sg 3sg-many
- (25) **Anetna aradobolobon analobon analobon.**  
 anet-na ara-dobo-lobon ana-lobon ana-lobon  
 child-IAP.3sg 3pl-INCH-be.big SS-be.big SS-be.big
- (26) **Imka ho anabalohona anetna her.**  
 i-mka ho ana-bal-ohon-a anet-na her  
 3sg-finish C? SS-call-APPL-3sg child-IAP.3sg PL
- (27) **Anabalohona anetna ho butea bene ananrisvar taher.**  
 ana-bal-ohon-a anet-na ho butea bene ana-nrisvar  
 SS-call-APPL-3sg child-IAP.3sg C all dir/REAL.come SS-REAL.talk  
 tah-er  
 POSS.GEN-3pl
- (28) **"Tabaltarab bohohol idoh vitia.**  
 tabal.tarab bohohol i-doh vitia  
 woman.old REAL.one 3sg-REAL.live down.there
- (29) **Mardoh vit, nibies.**  
 mar-doh vit ni-bies.  
 1pl.excl-REAL.live down 1sg-REAL.bear.children
- (30) **Mahavs nibies medul vit, be idobene anaqan medluq her**  
 mahavs ni-bies medul vit be i-do-bene  
 want 1sg.real-bear egg down DIS 3sg-INCH-REAL.come  
 ana-qan medlu-q her  
 SS-REAL.eat egg.IAP-1sg PL
- (31) **[Ninran] anarov den nut vit, nibene anadoh vel.**  
 [ni-nran] ana-nrov den vit ni-bene ana-doh  
 [1sg-think] SS-REAL.run out.of down 1sg-REAL.come SS-real.LIVE  
 vel  
 DEM.here

She laid and laid and laid eggs and saw that she had many children. More and more children grew bigger and bigger. When they had grown she called to her children. And she told called them and told them their story. "An old woman lives down there. The two of us lived down there, and I laid some eggs. I wanted to lay eggs down there, but she would come and eat them. So I thought about it and I ran away and come to live in here in the bush.

- (32) **Niburbies amudul, be [nevah ho idoh]**  
 ni-bur-bies amudul be [nevah ho i-doh]  
 1sg-real.IMM?-REAL.bear 2.pl but [thing C? 3sg-REAL.stay]
- (33) **Tartahal mahavs telblesa.**  
 tartahal mahavs tel.bles-a  
 today want 1pl.incl.hit-3sg
- (34) **Vavohol telsarih telblesbuhuna.**  
 va-vohol tel-sarih tel-bles-bu-hun-a  
 times-IRR.one 1pl.incl-descend 1pl.incl-hit-good.APPL-3sg
- (35) **Ale, ananrivia anade netra, de netra bipohol saher butea.**  
 Ale ana-nrivia ana-de netra bipohol sah-er butea  
 DIS SS-REAL.pull SS-REAL.cut wild.cane each for-3pl all
- (36) **Imka ho, arabene lahas nuta inren, anasarih, anasarihahan tabaltarab.**  
 i-mka ho ara-bene lahas nuta i-nren  
 3sg-finish C? 3pl-REAL.come like place 3sg-become.day  
 ana-sarih ana-sarih-ahan tabal.tarab  
 SS-descend SS-descend-appl woman.old
- (37) **Aradoh nuta inren anabete "Molvene vell!"**  
 ara-doh nuta i-nren ana-bete molvene vell!"  
 3pl-REAL.wait place 3sg-become.day SS-REAL.say 2.pl-IRR.come here
- (38) **Ibalohonara bene.**  
 i-balo-hon-ara bene  
 3sg-call-APPL-3pl DIR/REAL.come
- (39) **"Taem ho nihaha nabo bohohol niqah imca telsarahan netra.**  
 taem ho ni-hahe nabo bohohol niqah imca  
 time C 1sg-IRR.sing song REAL.one 1sg-REAL.sing 3sg-finish  
 tel-sarahan netra  
 1pl.throw-APPL wild.cane

So I just had you all, but she still is alive. Now I want for us to kill her. Soon we will go down there and kill her. So then she went and pulled out wildcane and cut it (to make spears), cutting for one for each of all of them. Then they came down at sunrise to kill the woman. They waited and when the sun rose she said "You all come now" She called them to her. When I sing a song, and finish the song we will throw our wildcane spears.

- (40) **Amudul her molsarahan netra tahmudul.**  
 amudul her mol-sar-ahan netra tah-mudul  
 you PL 2pl-throw-APPL wild.cane POSS.GEN-2pl
- (41) **Ale, anaqahe:**  
 ale ana-qahe  
 DIS SS-REAL.sing
- (42) **"Neto ibies tabe, araleva kis.**  
 neto i-bies vere ara-lev-a kis  
 fowl 3sg-REAL.bear.children village 3pl-take-3sg everything
- (43) **Neto ibies tabe, anabes netra "**  
 neto i-bies tabe ana-bes netra  
 fowl 3sg-REAL.bear.children bush SS-fashion? wildcane
- (44) **Ale her butea araduahan netra.**  
 Ale her butea ara-dua-ahan netra  
 DIS PL all 3pl-down-APPL wild.cane
- (45) **Araduahan netra tahe her, imca, arasarih qolemu.**  
 ara-dua-han netra tah-er her i-mca ara-sarih  
 3pl-throw-APPL wildcane POSS.GEN-3pl PL 3sg-finish 3pl-descend  
 qolemu  
 again
- (46) **Araduahana, aramana lahasni ben ben ben ben ben.**  
 Ara-dua-han-a ara-man-a lahas-ni ben ben ben ben  
 3pl-throw-APPL-3sg 3pl-make-3sg like-this REAL.go REDUP
- (47) **Arabene morkonahan nema tahn tabaltarab.**  
 ara-bene morkon-ahan nema tah-n tabal.tarab  
 3pl-REAL.come near-APPL house POSS.GEN-3sg woman.old
- (48) **Tabaltarab idoh ren nema taken ananroge asmaq her nahani her aradoporog nahal.**  
 tabal.tarab i-doh ren nema tah-en ana-nroge  
 woman.old 3sg-REAL.stay in house POSS.GEN-3sg SS-REAL.hear  
 asmaq her nahani her ara-do-poroq nahal  
 man PL now PL 3pl-HAB-be.noise here

You will throw your wildcane (spears). Then she sang. The hen laid her eggs in the village, they took all of them. The hen laid eggs in the bush, and fashioned wildcane (spears). So, all of them threw their wildcane spears. They threw them and then descended towards the village. They picked them up and threw them again and then descended over and over. They came near the old woman's house. The old woman was inside and heard the people making noise here.

- (50) **"Nevahni?"**  
 nevah-ni  
 what-this
- (51) **Ananrog qolemu neto iqahe -**  
 ana-nroge qolemu neto i-qahe  
 SS-REAL.hear again fowl 3sg-REAL.sing
- (52) **"Neto ibies tabe, araleva kis.**  
 neto i-bies vere ara-lev-a kis  
 fowl 3sg-REAL.bear.children village 3pl-take-3sg everything
- (53) **Neto ibies tabe, anabes netra"**  
 neto i-bies tabe ana-bes netra  
 fowl 3sg-REAL.bear.children bush SS-fashion? wildcane
- (54) **Tabaltarab iduavov ananroge ananrogbose aradobobalo nabo anabete neto.**  
 Tabal.tarab i-duavov ana-nroge ana-nrog-bose  
 woman.old 3sg.exit SS-REAL.hear SS-REAL.hear-know  
 ara-dobo-balo nabo ana-bete neto  
 3pl-INCH-call song SS-REAL.speak fowl
- (55) **Anaben lelhema taken anaqoroqor rien babitev butea anadoh lelhema.**  
 ana-ben lel-hema tah-en ana-qoroqor rien babitev butea  
 SS-REAL.go inside.house POSS.GEN-3sg SS-lock in door all  
 ana-doh lel-hema  
 SS-REAL.stay inside-house
- (56) **Anadoh benbenben ananroge araqah.**  
 ana-doh ben ben ben ana-nroge ara-qahe  
 SS-REAL.stay REAL.go REDUP SS-REAL.hear 3pl-REAL.sing
- (57) **Aradoh morkonahan nema taken.**  
 ara-doh morkon-ahan nema tah-en  
 3pl-REAL.stay near-APPL house POSS.GEN-3sg
- (58) **Neto vinpar ibete "Ale, moldu vel."**  
 neto vinpar i-bete ale mol-du vel  
 fowl hen 3sg-REAL.say DIS 2pl-REAL.stand here

"What's this!" And she heard the hen sing again "The hen laid eggs in the village, they took them all. The hen laid eggs in the bush, and they fashioned spears." The old woman went outside and hear and recognised knew they were calling, and the chicken was singing the song. She went inside her house and locked all the doors and stayed inside. She stayed inside and heard them singing. They came close to the house. The hen call out "Stop there".

- (59) **Aradu**  
Ara-du  
3pl-REAL.stand
- (60) **Neto vinpar iqahe imca arasarahana netra tahe.**  
neto vinpari-qahe i-mca ara-sara-han-a netra tah-er  
fowl hen 3sg-REAL.sing 3sg-finsih 3pl-throw-APPL-3sg netra  
POSS.GEN-3pl
- (61) **Aradu ren nema**  
ara-du ren nema  
3pl-REAL.stand on house
- (62) **Araben aramaramah nema araben qohore batih anetna bisoq**  
ara-ben ara-mar-marah nema ara-ben qohore batih  
3pl-REAL.go 3pl.REDUP.fly house 3pl-REAL.go around because  
anet-na bisoq  
child-IAP.3sg many
- (63) **Araben qohore; araben nema mor.**  
ara-ben qohore ara-ben nema mor  
3pl-REAL.go around 3pl-REAL.go house above
- (64) **Araben qelohte arakrasa nema imapupu.**  
ara-ben qelohte ara-krasa nema i-mapupu  
3pl-REAL.go side-IPP 3pl-pull-away house 3sg-break.REDUP
- (65) **Arabis arablesbuhun tabaltarab.**  
ara-bis ara-bles-bu-hun tabal.tarab  
3pl-REAL.enter 3pl-hit-good-APPL woman.old
- (66) **Stori imka eni. Kusve kusve.**  
stori i-mka eni  
stori 3sg-finish here

They stopped. The hen sang and then they threw their spears again. They stopped at the house. They went everywhere; they flew up on the house because they were so many. They went around the sounds and on the roof. They went and pulled at the house and it broke. They went inside and killed the old woman. That is the end of the story. Kusve kusve.

### Abbreviations

APPL	applicative, allows a verb to take an object or a remote object
C	complementiser
DEM	demonstrative
DIR	direction marker
DIS	discourse marker
FUT	future
IAP	inalienable possessive suffix

IMM	immediate aspect
INCH	inchoative aspect
IPP	impersonal possession marker, used for some part-whole constructions
IRR	irrealis
NEG	negation
NOM	nominaliser
PL	plural
POSS.ED	edible possession classifier
POSS.GEN	general possession classifier
REAL	realis mood, for events which are happening/have happened
REDUP	reduplication
SS	same or echo subject marker

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## The reflexes of Proto-Oceanic \*na in Unua.

Elizabeth Pearce

### Abstract

This paper investigates the reflexes of the Proto-Oceanic article \*na in the synchronic forms of nouns in Unua, a language of Malakula, Vanuatu. On the basis of the synchronic evidence, both from Unua and some neighbouring languages, along with 'top-down' input of available reconstructed noun roots, I claim that the key to the apparent variability in the synchronic manifestations of article accretion in Unua is most economically viewed as resulting from conditioned sound change and that it is only kin terms that have not otherwise been subject to article accretion.

### 1. Introduction<sup>1</sup>

The presence of accretions of an article \*na in the synchronic forms of nouns in Oceanic languages has been identified and discussed in a number of publications, including Crowley (1985), Ozanne-Rivierre (1992, 1995), Lynch (2001) and Lynch, Ross and Crowley (2002), as well as in works on individual Oceanic languages.<sup>2</sup> In this paper I undertake an examination of the outcomes with respect to the accretion of \*na in the synchronic forms of nouns in Unua, one of the two dialects of Unua-Pangkumu spoken in Southern Malakula, Vanuatu. My claim will be that, leaving aside the absence of article accretion on kin terms, the variant outcomes of article accretion in Unua are the result of phonologically conditioned change.

#### 1.1. Background

Following Lynch and Crowley (2001: 20) and Lynch et al (2002: 113), the languages of Malakula belong in the Nuclear Southern Oceanic (NSO) linkage of Southern Oceanic. However, at the present time we do not yet have accounts

<sup>1</sup> My thanks to the many Unua speakers who have so kindly given their time to work with me on their language. My thanks also to Terry Crowley, to John Lynch and to Martin Paviour-Smith for helpful comments on an earlier draft discussing material in this paper, to John Lynch for a number of helpful comments on points of detail in the present paper, and to Terry Crowley and to Ross Clark for pre-publication copies of manuscripts. All errors are my own. This research has been generously supported by a grant from Victoria University of Wellington, URF 20886, and by grant UOW 6663 of the Marsden Fund of New Zealand. This paper is to appear in Eades, Lynch and Siegel (forthcoming).

<sup>2</sup> \*Na is not the only reconstructed article to have survived in the form of noun accretions in Oceanic languages. See Lynch (2001) and Lynch et al (2002) on the full range of the reconstructed POc articles.

of the genetic relationships among the 39 distinct Malakula languages identified in Lynch and Crowley (2001).

The Unua data base of the present analysis was collected in a total of three months of field work carried out in 2003 and 2004 and encompasses about 1,500 items of vocabulary in all. This data base extends on (and includes corrections to) the Unua word list of some 300 items presented in Tryon (1976). My work on Unua is ongoing and the material that I present may be subject to future modification.

#### 1.2. The synchronic reflexes of \*na

##### 1.2.1. Distribution

Crowley (1985: 173) presents a four-way classification of Oceanic languages based on the degree to which they do or do not exhibit reflexes of the reconstructed articles \*na or \*a:

##### (1) Reflexes of \*na/\*a in Oceanic languages (from Crowley 1985: 173)

Type I: No reflexes.

Type II: \*Na or \*a fused to some nouns and residual.

Type III: Productive \*na or \*a marking of some nouns in which the reflexes are separable.

Type IV: \*Na or \*a occur as fully productive prefixes or free forms with all common nouns.

The precise functions of Proto-Oceanic (POc) \*na and \*a are rather obscure. Lynch et al (2002: 71) speculate that the two morphemes may have been contrasting at an earlier stage, but that the basis for the contrast was lost before the break-up of POc. Since Unua presents clear evidence for reflexes of \*na, and not for \*a, the discussion to follow will focus on the outcomes for \*na in Unua.

In Unua a large number of common nouns, but not all common nouns, bear a reflex of \*na. In terms of the categorization in (1), Unua therefore could belong to either Type II or Type III. In order to further refine the Type membership for Unua, we would need to determine if the article reflexes are residual or productive.

##### 1.2.2. Diachronic implications

Given the range in the synchronic forms across a variety of languages in different subfamilies of Southern Oceanic, both Crowley (1985: 185) and Lynch (2001: 242) suggest that the innovations with respect to the article reflexes are likely to have been fairly recent, occurring independently in low-level subgroups. In terms of the manifestations across Crowley's four Types shown in (1), Crowley (1985: 176) proposes that the Type IV category would represent a generalizing innovation with respect to Type III. He argues that similarities in the environments in which the article reflexes occur in Type III are to be viewed as evidence of shared retentions and that these similarities cannot be accounted for as reductions from the across-the-board manifestations found in Type IV. He concludes that in POc the \*na/\*a articles were applied as markers of a two-way noun class system.



We should note, however, that the 'two-way' system that is found in Type III has two sides to it. On the one hand, there are similarities in the specific environments in which a given noun root may occur with, or without, the original article attached. On the other hand, there are similarities in the types of nouns which bear the reflex of the article against those which do not. The first kind of similarity is broadly syntactic. In fact, Crowley (1985: 177) suggests that it is typified by the forms in Port Sandwich, described in Charpentier (1979), in which the \*na reflex is present on specific nouns unless another item with determiner function is present in the noun phrase of which the relevant noun is the head.

In the case of the similarity with respect to the particular *kinds* of nouns which bear the \*na reflex, the generalization that Crowley (1985: 184) comes to on the basis of the data he examines is that most [-animate] nouns bear the prefix, whereas most [+human] nouns do not. Crowley (1985: 185) then goes on to suggest that variability between languages within the Type III category as to the particular nouns that bear the reflex can be attributed to a loss of transparency in the semantic assignment (human/animate versus inanimate). The Type IV resolution can then be seen as one extreme outcome for an across-the-board loss of semantic transparency.

There are therefore two types of change in the postulated development from Type III to Type IV: (i) the dropping of the syntactic distinctions between the environments for the presence/absence of the article reflex; and (ii) the loss of transparency in the distinction between presence/absence of the reflex in terms of the semantic class. With the input of more data from more languages, a more detailed examination of this two-edged scenario of change should lead to a finer-grained account of the stages over which the changes took place, with a potential concomitant analysis of the routes along hypothesized subtrees of languages within the NSO grouping. The present account offers a contribution to such further analysis.

## 2. Reflexes of \*na in Unua

Although the form of the vowel in the outcomes of \*na prefixing in Unua is of considerable interest, especially because it appears to vary in unpredictable ways with cognate forms in Pangkumu given in Charpentier (1982),<sup>3</sup> we will not attempt here to uncover even the more broadly discernable regularities in the vowel shape.<sup>4</sup> Aside from a case of an observed consonant change in the outcomes, our focus will therefore be on the presence/absence of the accreted article, without regard to the vowel shape.

### 2.1. Distribution

In the present data set for Unua approximately one third of all the nouns forms begin /#nV../ (105 out of 299). However, among 20 single morpheme nouns

<sup>3</sup> Which may also include different root vowels.

<sup>4</sup> Crowley (2004a: 62-64) finds a similar difficulty in the comparison of vowels in Naman and Neve'ei. Lynch (2003) presents an analysis of variant low vowel dissimilation realizations in Vanuatu languages.

(including kin terms) applying to humans, only two *namar* 'chief' and *nati* 'child, son' have initial /#nV../ and, among 35 non-kin nouns to which the direct possession construction applies,<sup>5</sup> there is a total of five nouns which have initial /#nV../. On these figures for Unua, the reflex of \*na is least likely to be present on [+human] nouns (2/20) and somewhat unlikely on non-kin nouns which can be directly possessed (5/35).

A perspective on the variability between languages in the extent to which they give evidence of article accretion can be seen in the comparison of cognate forms in four Malakula languages in (2) (data from Crowley 2004a, 2004b, 2004c and Crowley and Musgrave 2004).<sup>6</sup>

(2)	Neve'ei	Unua	Naman	Tape	
a.	/nat-/	/nati-/	/netə-/	/netə-/	'child, son'
	/namdar/	/nami/	/numi/	/nənum/	'earthquake'
	--	/nesib/	/nesəb/	/nesip/	'knife'
	/nimin/	/nemen/	/nimin/	/nəmun/	'bird'
b.	/noto/	/nato/	/neto/	/tiu/	'chicken'
	/nesal/	/neser/	/nesel/	/sel/	'road, path'
	/nesne-/	/neteten/	/nesne/	/səni-/	'instestines'
c.	/nelebelem/	/nareb/	/lebeleb/	--	'mud'
	/netah/	/netes/	/deswe/	/tes/	'sea'
d.	/nebat-/	/bati-/	/bate-/	/pəti-/	'head'
	/nibite-/	/biton/	/bəcə-/	/bətə-/	'navel'
	/nubuah/	/bue/	/bues/	/buos/	'pig'
	/nemer/	/marit/	/mere/	/məre/	'eel'
	/nemeta-/	/mete-/	/meta-/	/məte-/	'eye'

On the basis of forms like those in (2), Crowley (2004b: 128) suggests that Naman falls between Neve'ei and Tape in the extent to which it shows reflexes of the \*na article. In effect, in Neve'ei the reflex of the article is lacking on only a small proportion of nouns, and these overwhelmingly have human referents or are body-part terms which enter into the direct possession construction. Although not so apparent from the data in (2), Tape also gives robust evidence of article accretion. For the items included in (2), Unua would appear to match most closely with Naman in the extent to which it now bears the reflex of the article.<sup>7</sup>

<sup>5</sup> Unua has only a basic two-way distinction between direct/indirect possession.

<sup>6</sup> In the Unua data, the bilabial trill /b/ and voiced stops /b/, /d/ and /g/ are prenasalized; and /rr/ represents a strongly trilled segment contrasting with /r/, which has its strongest realization as a flap.

<sup>7</sup> However, Crowley (2004b: 127) gives the following percentages of nouns with reflexes of \*na: Tape 38%, Naman 54% and Neve'ei 91%. The corresponding percentage for Unua at 35% (105/299) makes Unua look closer to Tape. However, since, as well as being calculated over different totals of nouns, these percentages are not calculated over the same sets of (cognate)

The short list of forms in (2), showing a greater proportion of body-part terms in (2d) is also suggestive of the (variable) division in the range of nouns to which the accretion applies in terms of their semantic categorization. From this data set, Unua must be classified either as Type II or Type III following the characteristics identified in (1).

Are we in a position to determine whether Unua should be classed as Type II or type III?

## 2.2. Synchronic status

The data set for Unua includes forms in which presence/absence of the accreted article is evidenced in contrasts between free forms having the reflex of the article against parallel forms lacking the reflex in compounds (3a) or in corresponding verb forms (3b).

(3)a. /nabet/	'post'	/bet moyman/	'centre post' ('post+man')
/naim/	'house'	/nutaim/	'village' ('place+house')
/nareb/	'mud'	/nue reb/	'Pangkumu River' ( 'river+mud')
/narog/	'laplap'	/rog rarer/	'process of making laplap'
/neser/	'road'	/maßren ser/	'other side of road' ( 'other+road')
/niye/	'stick/wood'	/yetßiy/	'walking stick' ( /-tßiytßiy/ 'hop')
		/ye bragot/	'cross-beam rafter'
		/ronye /	'leaves' (/raun/ 'leaf')
		/ßußenye/	'flower'
		/ßenenye/	'fruit' etc.
b. /narat/	'sweat'	/i-rat/	'3SG-sweat'
/naus/	'rain'	/i-us/	'3SG-rain'
/neriß/	'arrow'	/i-rße-i/	'3SG-shoot-TR'
/neres/	'grater'	/i-rse-i/	'3SG-grate-TR'
/neyetß/	'ant'	/i-yetßyetß/	'3SG-sting'

Although I believe that the root forms must be transparent, at least in the case of the compounds in (3a), it seems to me unlikely that either the dropping of initial /#nV-/ or the addition of an initial /#nV-/ are synchronically productive processes.<sup>8</sup> At best, it seems possible that noun roots of the pairs

nouns, they also can only be taken as very rough indications of the relative status of the languages with respect to the \*na outcomes. The inclusion of /#d../ initial nouns (discussed below in the text) in the Unua figures would have the effect of raising the percentage for Unua to 42% (128/299).

<sup>8</sup> Given the apparent lack of transparency in the shape of the vowel of the various /#nV-/ forms of nouns, the latter possibility (of the addition of the prefix) is even less plausible.

that are synchronically attested without the prefix could be used productively in new compounds. However, further testing of the possibilities is required before it can be determined whether Unua should be categorized as Type II or Type III.

## 3. Characterization of the synchronic outcomes

### 3.1. Phonological conditioning

In addition to the rough pairing of Unua with Naman as indicated in (2), these two languages also give evidence of one, and possibly two, shared phonological characteristics. In fact, I will be arguing that the basis for the variation in Unua in terms of non-kin term nouns which do or do not bear the reflex of the article is phonologically, rather than semantically determined. The proposal that I am going to develop is that the key to the distribution, at least for Unua, is to be found in the moraic structure of the nouns. Broadly speaking, noun forms with initial /#nV../ are synchronically bi-moraic and nouns of more than two morae do not have initial /#nV../.

Although Crowley (2004a: 67) suggests that the occurrence or not of the article reflex is inexplicable in Naman: "some nouns have inexplicably not undergone accretion of the original \*na", the basis for the proposal that I will develop was noted in Crowley (1985: 141) as a tendency (among others) for Paamese, as follows: "It is not possible to predict which nouns will fuse \*a in this way, but there is a stronger tendency for *disyllabic* [emphasis: EP], inanimate and morphologically free forms to undergo the change than other kinds of nouns." Although this may not be true for Paamese (or for Naman), my claim for Unua is that it is the phonological template of the noun that provides the predictive factor.

We first approach the examination of the moraic structures of Unua nouns through the consideration of a particular phonological process that is evidenced in the data for both Naman and Unua.

Crowley (2004a: 66) observes that article accretion of \*na on Naman roots historically beginning with /#t-/ is manifested in synchronic forms with initial /d-/. The same phonological effect is observed in Unua:

(4)	<i>Neve'ei</i>	<i>Naman</i>	<i>Unua</i>	
	/notaut/	/daut/	/daut/	'bushman'
	/netemah/	/demes/	/demetß/	'devil'
	/neteba?a-/	/dabaya/	/dabañon/	'belly'
	/neteli/	[mesel]	/dere/	'clam'
	/nebateteli/ ~	/(bat)netele/	/derre/	'axe'
	/neteli/			
	/netemav/	--	/damaß/	'castrated (pig)'
	/nutuyoi/	--	/duye/ ~ /suyut/	'(wood) grub'
	/notoytoyian/	--	/duyutyun/	'custom (story)'

With the forms in (4), Unua shows consistent application of the phonological change, /\*na-t./ > /d../. But this change does not apply across-the-board because there are many nouns in Unua which have initial /nVt../. However, with only a small number of exceptions which we will examine in section 3.3, these are synchronically bi-moraic forms:

(5)	<i>Neve'ei</i>	<i>Unua</i>	
	/netan/	/natan/	'ground'
	–	/naten/	'excrement'
	/nat-/	/nati-/	'child, son'
	/noto/	/nato/	'chicken'
	/netev/	/natoβ/	'sugar cane'
	–	/natu/	'shellfish'
	–	/neter/	'chain'
	/netah/	/netes/	'sea'

Comparison of the forms in (4) and (5) indicates that the /\*na-t./ > /d../ process has applied in Unua in nouns which in *Neve'ei* synchronically have more than two morae and that, where the process has *not* applied, the corresponding *Neve'ei* nouns are synchronically disyllabic/bi-moraic.<sup>9</sup> The same distributional contrast is in fact apparent also comparing the forms in (2a) with those in (2d) across a range of nouns with historical root initial segments other than /\*t../.

### 3.2. Syllable structure

Using evidence of reconstructed Proto-North-Central Vanuatu (PNCV) forms from Clark (2005), we can see that the variant phonological changes with respect to the reflexes of article accretion, or lack thereof, would have taken place after the loss of the final syllable of the PNVC root. Thus, the historical developments indicated in the selection of forms in (6) involved an intermediate stage in which the final root vowel was lost.

(6)	<i>PNCV</i>	<i>Unua</i>	
	*na + bue	/nabu/	'bamboo'
	*na + boŋi	/naboŋ/	'day'
	*na + bore	/nabor/	'dream'
	*na + bulu	/nabur/	'hole'
	*na + ika	/naiɣ/	'fish'
	*na + mwata	/namat/	'snake'
	*na + navo	/nanaβ/	'wave'
	*na + niu	/nani/	'coconut'
	*na + leba	/nareb/	'mud'

<sup>9</sup> In fact, with the PNCV reconstruction \*natu 'child' for /nati-/ (Clark 2005), the absence of a further /nV-/ increment in this case is also consistent with the suggested moraic template.

*na + tano	/natan/	'ground, soil'
*na + tovu	/natoβ/	'sugar cane'
*na + ura-ti	/naur/, /nau/	'vein'
*na + ?usa	/naus/	'rain'
*na + vila	/naβir/	'lightning'
*na + vula	/naβur/	'moon, month'
*na + kutu	/nayut/	'louse'
*na + manu-ku	/nemen/	'bird'
*na + ure	/nerur/	'island'
*na + sala	/neser/	'road'
*na + tasi	/netes/	'sea'
*na + zama	/netfem/	'outrigger'
*na + vatu	/neβet/	'stone'
*na + vose	/neβos/	'paddle'
*na + kadi	/nevetʃ/	'ant'
*na + namu-ki	/nonom /	'mosquito'
*na + damu	/norrom/	'yam'
*na + kabu	/noɣoβ/	'fire'

In the cases in (7), both where a final vowel of the PNCV root has been maintained in (7a),<sup>10</sup> and in the forms in (7b) which have retained two morae of the root (even if losing a final vowel), the article has not survived as an accreted prefix:

(7)	<i>PNCV</i>	<i>Unua</i>	
a.	*busa	/bison/*	'foam'
	*boe	/bue/	'pig'
	*labwe	/rabwen/*	'root'
	*dodo	/rroŋro/	'cloud'
	*rau	/raun/*	'leaf'
	*bani, kabu-a	/yaben/*	'wing'
	*kutu	/yutin/*	'seed'
b.	*bakewa	/baye/	'shark'
	*batavu	/betof/	'breadfruit'
	*buaqa	/βuag/	'taro'
	*qarai	/gere/	'flying fox'
	*manuka	/manug/	'sore'
	*maloku	/maroɣ/	'kava'
	*mwazoe	/matfo/	'star'

<sup>10</sup> The final /n/ of the asterisked Unua forms in (7a) is possibly a relic of an earlier 3SG direct possession marker (see section 3.4).

*manukona	/menkon/	'flying fox(black)'
*malava	/mereβ/	'twin'
*nanovi	/nano/	'yesterday'
*rakumwa	/rrayum/	'crab'
*visiko	/βisyon/	'flesh'
*kasuve	/yasuβ/	'rat'
*kabani	/yeben/	'sail'

From the data in (6) and (7) the reflex of \*na in the form of the /#nV../ prefix occurs only on nouns which retain only one mora of their PNCV root form. Nouns retaining longer roots lack a two-segment reflex of the historical article.

### 3.3. Testing the implications

Crucially, the hypothesis as to the role of moraic structure in synchronic reflexes of the article accretion, has two further implications: (i) there should be no nouns with initial /#nV../ having three or more morae; and (ii) there should be no monomoraic nouns.

In the data which is presently available, the following nouns of more than two morae have initial /#nV../:

(8) Unua	Neve'ei	Naman	
/naβuren/	/numur (sevay)/,	/yavən/	'friend'
	/yavən/		
/negeri-/	/nagalel-/	/galə-/,	'rib'
		/tʃigalə-/	
/neteten/	/nesne-/	/nesne-/	'intestines'
/noʝois/	/tenoah/	/noas/	'day before yesterday'
/noβauβ/	-	-	'duck'

On the count of 105 nouns having initial /#nV../ in the present data set, the five items shown in (8) with more than two morae represent a small proportion of the total of all nouns with initial /#nV../. One of the items in (8), /neteten/ 'intestines' is accounted for if reduplication applied in the root subsequent to article accretion, given PNCV \*tina?e 'intestines' (Clark 2005). The word /naβuren/ 'friend', for which we have no cognate evidence for the languages shown in (8), could be morphologically complex, including the possibility of a derivational suffix /-en/.<sup>11</sup> If these explanations go through, we remain then with three nouns which are unaccounted for out of the total.<sup>12</sup> I would contend

that it is reasonable to assume that some other quirks of fate are at work in the outcomes with these three exceptions (including the possibility of vernacular borrowings).

The following nouns in the data set have only one syllable:

(9) Unua	Neve'ei	Naman	
/daβ/	/nio/	-	'dew'
/nerr/	/netebevʔam/	-	'firefly'

In the case of /dav/ 'dew', Charpentier (1982) gives the corresponding form for Pangkumu as [ʔdaoβ]. Therefore we can take it that /dav/ was not a one-mora root at the time of the relevant article accretion change. This leaves us with the single form /nerr/ lacking the expected initial /#nV../.<sup>13</sup> It is reasonable to assume that this single exception does not invalidate the general hypothesis as to the mechanisms of change with respect to accretion of \*na.

Another apparently exceptional case that we need to consider however are the following /#V../ initial forms (/a/ is the only vowel which occurs in the data set as a noun-initial vowel):

(10) Unua	Neve'ei	Naman	
/abonj/	/nunu/	/nu/	'night'
/apu/	/bubu/	/bubu/	'grandparent'
/arrarr/	/noal/ 'trap'	-	'fish trap/net'
/arres/	/numur/	/moyot-/	'person'
/aut/	-	-	'shore'
/aβa/	/yava-/	/yavə-/	'older sibling'

In the case of /arres/ 'person' and /ava/ 'older sibling' we can assume the recent loss of the initial consonant as Charpentier (1982) gives corresponding Pangkumu forms with initial /#γ-/: [yares] ~ [yaris] 'man', [aφa] ~ [yβa] 'older sibling of the same sex'. The PNCV root given in Clark (2005) for /abonj/ 'night' is \*bogi from which derive also /nabonj/ 'day' and /-boj/ 'dark'. The word /aut/ 'shore' has the same reconstructed form as /naut/ ~ /nut/ 'place' < PNCV \*ʔatu (Clark 2005). It is possible that the initial /a/ of both /abonj/ and /aut/ is the reflex of an earlier preposition. The precise origin of the form /apu/ 'grandparent', which in any case is a kin term, is unclear given that, inspection of PNCV forms in (6) and (7) shows the retention of \*b in Unua as /b/ or /β/ and Clark (2005) gives PNVC \*bu=bu-a, \*tubu 'grandparent'. We remain with a very small number of exceptions to the general schema, which I contend once again are not in terms of their number sufficient to drop our general hypothesis as to the across-the-board role of the moraic make-up of words in the outcomes.

<sup>11</sup> The following verb forms are suggestive in this regard: /bur/ 'join' (PNCV \*bulu-ti 'associate, be friends with', Clark 2005) and /burbur/ 'meet'.

<sup>12</sup> John Lynch (personal communication 25/2/05) has informed me that comparative evidence indicates that the initial /#nV../ in 'rib', 'intestines' and 'day before yesterday' is indeed a reflex of the article. Clark (2005) gives PNCV \*ana-waRisa 'day before yesterday'.

<sup>13</sup> Charpentier (1982) gives [nambuer] 'firefly' for Pangkumu.

## 3.4. Semantic distinctions

Why should human-referring nouns and nouns which enter into the direct possession construction include relatively small numbers of forms with the /#nV../ prefix. The following range of possibilities come to mind:

- (11)(i) Nouns in the direct possession class were (usually) not preceded by \*na because specificity of reference was indicated by the (frequent) presence of a specifying possessor (cf. the categorization of the outcomes for Port Sandwich mentioned in section 1.2.2).  
 (ii) The common noun article was \*na with inanimates, but other classes of nouns had a different article (e.g., \*a).  
 (iii) Kin term nouns can have uses as vocatives and with vocatives there may not have been a preceding article.

We first consider nouns in the direct possession construction.

For at least in the case of singular possessors, the person of the possessor can be realized as suffix on the noun:

- (12)a. /baɲog/ 'my mouth'      b. /rresog/ 'my mother'  
       /baɲom/ 'your(SG) mouth'      /rresam/ 'your(SG) mother'  
       /baɲon/ 'his/her mouth'      /rresen/ 'his/her mother'

The contrasting indirect pronominal possession forms have two realizations, as follows:

- (13)a. /aβa sog/      b. /aβa se ɣina/ 'my older brother'  
       /aβa som/      /aβa se ɣai/ 'your(SG) older brother'  
       /ava sen/      /aβa se ɣini/ 'his/her older brother'

Direct possession nouns also have the following additional range of possible forms:

- (14)a. /rrese ɣina/      b. /ɣina rresog/ 'my mother'  
       /rrese ɣai/      /ɣai rresom/ 'your(SG) mother'  
       /rrese namar/      /namar rresen/ 'the chief's mother'  
       /rrese belis/      /belis rresen/ 'Belis' mother'

Although in the (14a) construction the final distinguishing consonant does not appear, the noun still maintains its final vowel. With the suffixation of the distinguishing consonant in the type shown in (12) and in (14b), the vowel may or may not be distinct according to person of the possessor.

Loss of an historical final syllable could have been inhibited by the meaning bearing function of the suffixes in the construction shown in (12). For this reason, it could be that direct possession nouns retain a two-syllable/mora structure and thus do not appear synchronically with an accreted /#na../ prefix.

On this account, direct possession nouns with initial /#nV../ either have historical roots beginning /#nV../ or else the historical roots were monosyllabic and the initial /#nV../ is a reflex of \*na. What is the evidence on this point? All of the direct possession nouns of the Unua set beginning /#nV../ are shown in (15).

(15)	Unua	Neve'ei	Naman	
	/naɲo-/	/noɲo-/	/noɲo-/	'face'
	/nati-/	/nat-/	/netə-/	'son'
	/nebe-/	/nedremwe-/	/nibə-/	'body'
	/nese-/	/nayase-/	/na:se-/	'chin'
	/neyse-/	/neyensa-/	/naŋsə-/	'name'

On the basis of this data set, there have been losses of medial vowels ('body', 'chin', 'name'), but no losses of final vowels.<sup>14</sup> The outcomes for \*na accretion are therefore as predicted.

From the point of view of the /\*na + t. > /#d../ process, we must also consider the effects for our phonological conditioning hypothesis with respect to synchronically /#t../ initial nouns. These nouns in Unua are all kin terms:

(16)	Unua	Neve'ei	Naman	
	/tasi-/	/tas-/ , /ɣava-/	/ɣavə-/	'(younger) brother'
	/teme-/ , /tata/	/teme-/	/tate-/ , /tavə-/	'father'
	/teβense-/	/tenemwe-/	/matarvarəɣ-/ ,	'husband'
			/niliəɣ-/	
	/tinβaβin/	/natneve-/	/netə-/	'daughter'

Two of the nouns in the direct possession set for Unua show the accretion with initial /#d../ and these are both non-kin terms:

(17)	Unua	Neve'ei	Naman	
	/dure-/	/netaʔa-/	/netre-/	'back'
	/dabaɲo-/	/netabaʔa-/	/dabaya-/	'belly'

On the comparison of the two sets of forms in (16) and (17), our conclusion must be that it is only kin terms that may be exempt from the effects of article accretion.<sup>15</sup>

Earlier in this section in (11) I offered some hypotheses as to why some classes of nouns may be distinguished from others with respect to the

<sup>14</sup> Although not evident from the forms listed in (15), following Clark (2005) the PNCV forms for both /naɲo/ and /nati-/ had initial \*nV (respectively, \*nako and \*natu).

<sup>15</sup> In this respect it is of interest to note the differing outcomes from the PNCV forms given in Clark (2005): \*tasi 'sea, salt water' > netes versus \*tasi 'younger same-sex sibling' > tasi.

presence/absence of article accretion. Since the evidence that we have seen from (15) and (17) does not exclude non-kin direct possession nouns from article accretion (11)(i), then we do not have support for our hypothesis that the presence of an accompanying possessor was an inhibiting factor for the historical use of the article before the noun and the subsequent accretion of that article.<sup>16</sup> However, the further two hypotheses (11)(ii) and (iii) (and others that may be envisaged) must remain as possibilities that might be further explored on a larger evidence base.

#### 4. Concluding discussion

With very few exceptions we have seen that the outcomes for \*na accretion in Unua are essentially to be accounted for as phonologically conditioned changes. According to our findings, except for kin terms, article accretion was implemented across all classes of nouns. The particular synchronic manifestations of article accretion in Unua are therefore the result of regular phonological change.

On the rough comparative evidence that we have seen, Naman would appear to have undergone changes similar to those which took place in Unua. Further investigation of article accretion in Naman is therefore of particular interest: How well does the account that we have proposed for Unua stand up in the light of more detailed comparisons with data from Naman? What might be said about any differences in the reflexes for cognates in the two languages? Further extension of the data base with a more detailed coverage of a larger number of languages should lead to additional refinements as to the particular implementations of the article accretion processes, to what extent they are phonologically, syntactically or semantically motivated.

Also, it is clear that historical changes involving syllable loss have implications with respect to stress placement and the reconstruction thereof. The present paper shows some of the effects of syllable loss in the Unua outcomes, but it leaves as a topic for another paper the analysis of the possible explanations for syllable loss in terms of stress placement with respect to hypotheses as to earlier stress templates, such as put forward in Lynch (2000).

A final point that may be added into the discussion concerns the question of timing. Lynch (2003: 397) considers that final vowel loss was a fairly recent process in Vanuatu languages – it had to take place after low vowel dissimilations. I have suggested here that the outcomes of article accretion as we see them in Unua must have been put in place after final vowel loss. The combining together of these suggestions leads to a three-stage hypothesis of diachronic change, ordered as: (I) low vowel dissimilation, (II) final vowel loss and (III) article accretion.

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<sup>16</sup> The tenor of this hypothesis could however be maintained under the view that some body-part terms may have semantic extensions in which uses they do not appear with possessors.

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