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《語言暨語言學》專刊甲種之十

達悟語：
語料、參考語法、及詞彙

**Yami Texts with Reference
Grammar and Dictionary**

何德華 (D. Victoria Rau)

董瑪女 (Maa-Neu Dong)

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前言

一本書的呈現是眾人智慧的結晶和許多機緣的組合，本書也不例外。1994 年初在教育部主辦之「臺灣南島民族母語研討會」上，董瑪女結識了何德華，並向她發出共同研究雅美語（現稱達悟語）的呼聲，這一項邀約開啓了往後二人研究團隊的漫漫長路。

董瑪女本身為達悟族人，在任職國立自然科學博物館人類學組以前，曾協助中研院民族所劉斌雄先生蒐集達悟語口傳文學與從事翻譯多年，出版過多篇達悟語口傳文學翻譯作品。何德華為康乃爾大學語言學博士，在進入臺中靜宜大學英文系（所）任教以前，曾追隨其指導教授 John Wolff 學習印尼、菲律賓語、撰寫博士論文《泰雅語法》、並編纂過菲律賓語教科書。

兩人的合作一路走來有許多研究生參與學習，貢獻他（她）們的力量。從 1994 年的秋天開始，何德華因主持國科會專題研究計劃「臺灣南島語社會語言調查：雅美語」（NSC 84-2411-H-126-001），召集靜宜大學外文研究所的八位研究生：關馥、陳慧萍、張靖儀、傅若瑋、白怡清、黃婷鈺、王芸婷、林佑容共同參與研究，在董瑪女的帶路下，赴蘭嶼開始達悟語的調查工作，同年恭逢《雅美語新約聖經》翻譯完成之奉獻典禮。

對於達悟語的社會現象和語言活力有所瞭解之後，我們接著展開一連串的語法研究、教材製作、詞典編纂、和語料編譯的工作。1998 年何德華在靜宜大學英文系碩士班開了一門「南島語言學專題」的課程，邀請董瑪女擔任母語發音人，引導研究生從學習達悟語的結構，作為認識南島語言的開端。該課程結束後，我們出版了《雅美語教材》一書（2000 年文鶴出版）。

1998-2000 年董瑪女連續兩年應行政院原住民族委員會委託與何德華共同主持「原住民族語言之語料與詞彙彙編」專題計劃，在「南島語言學專題」課程中培養之研究生歐龍生、楊曉芳、黃龍欽開始協助我們以 Shoebox 電腦軟體製作語料庫和從事詞典編纂的工作，同時我們也訓練達悟族人謝梅芳從事母語記音、協助電腦文書處理。

過去五年（2000-2005）何德華因執行國科會研究計劃：〈從雅美語的名物化看南島語言焦點系統的來源〉（NSC89-2411-H-126-015）、〈雅美語時貌情態詞的語法化研究〉（NSC90-2411-H-126-015）、〈台灣南島語言構詞語法相關議題之研究 (I)：雅美語構詞語法相關議題〉（NSC 91-2411-H-126-013-MD），及〈達悟語聲韻議題研究：重音、介音和重疊〉（NSC 93-2411-H-126-013），逐漸對達悟語之語

法結構有了較為清楚的認識。在此過程中研究生林孟穎、黃麗娟協助將語料庫轉換成 CD 和更容易使用的版本，張惠環、陳菁徽協助將 Shoebox 跟語料庫做線性連結，製作詞彙索引。

2002 年開始，由於中研院語言所研究人員計劃將原住民語料庫數位化，齊莉莎博士希望能有達悟語料加入，因而加速了我們編譯語料的步伐。何德華動員她的長子饒承恩 (Daniel E. Rau) 和另一半饒傑瑞博士 (Dr. Gerald A. Rau) 利用寒假期間義務加入英文翻譯的行列，將五十篇語料譯成英文草稿，以便做篩選、編譯的工作。同年秋天何德華與董瑪女應邀在蘭嶼達悟族語種子教師之「達悟語構詞句法研習會」上分享研究心得，感受到我們的研究成果正能補足達悟語言《教師手冊》編纂上的需求，因此也加快了我們將「達悟語參考語法」寫成專文出版的腳步。最後終於在張惠環、陳菁徽兩位研究助理的協助下，於 2003 年 6 月完成了《達悟語》一書初稿。

本書內容包括：達悟語參考語法、語料、詞彙、索引及附錄五部分，代表了作者十年來對達悟語研究心得之階段性成果。其中「達悟語參考語法」專為本書而作，內容已完全取代了《雅美語教材》一書中的「雅美語法大綱」。英文版是何德華於 2003-2004 年在美國明尼蘇達大學擔任訪問學者時完成，同年適逢 John Wolff 教授從康乃爾大學退休，因此該文獻給其南島語啟蒙恩師做為榮退賀禮。二十篇精選語料，選材自「原住民族語言之語料與詞彙彙編」專題計劃中之部分成果，經過作者重新修正、並為每一篇都加上中、英文的逐字、逐句翻譯。詞彙部分是根據二十篇語料所出現的詞彙，運用 Shoebox 軟體製作的版本，按照語根之字母順序排列，每一詞項下包含例句，中英對照，方便讀者查考。例句之英譯初稿仍是出自饒承恩 (Daniel E. Rau) 和饒傑瑞博士 (Dr. Gerald A. Rau) 的義務相助。索引則是運用 OCP (Oxford Concordance Program) 軟體製作，包括以英文為主查考達悟語和中文的字表、和用中文反查達悟語、和英文意義之字表。其中用中文反查的部分，是以漢語拼音作為排序方法，巧妙解決了以注音電腦排序的困難。最後的附錄為 364 個達悟語基本詞彙表，大致根據 Lawrence Reid (1971) 所編纂的 *Philippine Minor Languages: Word Lists and Phonologies* (University of Hawaii Press) 一書中所提供之菲律賓少數語言基本詞彙表製作，以便學界對應參考。

本書取名為《達悟語：語料、參考語法、及詞彙》是為了表達本書的著作理念和編排特色。二十篇精選語料是本書的核心，也是語言分析和教材編纂的基礎，我們把它放在本書的中間，即是反映語料在語言研究上的中心地位。根據語料所衍生出來的參考語法和詞彙、索引，分別以眾星拱月的姿態，一前一後的提

供互相參照的觀點，以便將語料充分襯托出來。本書之中文名稱選擇使用該民族之自稱“達悟”，而英文名稱仍延用 Yami 一詞，以方便國際南島語言學者搜尋、研究此一語言之用。此外，爲了讓語言學家、達悟語言教師、學習者、和母語使用者皆能從各自的背景和需要欣賞到達悟語言的奧妙，本書以中英文對照方式排列。

感謝何大安教授代表《語言暨語言學》期刊給予本團隊熱誠的出版邀約，並且請到最負責的學者來審查、提供我們修改意見。我們認真參酌審查意見，花了一年多的時間，終於在 2005 年 6 月完成最後修訂。我們最後要特別感謝李壬癸教授多年來對我們研究團隊的提攜和指導，在審查「原住民族語言之語料與詞彙彙編」專題計劃成果報告時，多次給予我們讚揚和鼓勵；謹將此書獻給我們最敬愛的臺灣南島語言學大師李壬癸教授，作爲迎接他 2006 年 9 月份七十大壽的賀禮。

何德華、董瑪女
2006 年 3 月

Preface

This book is a result of the authors' many years of collaboration, beginning in 1994 when we led a team of Providence graduate students to conduct a sociolinguistic survey of Yami on Orchid Island, generously supported by an NSC grant (NSC 84-2411-H-126-001). We were welcomed by local Yami Christians into their communities as we celebrated with them in the dedication of the newly translated Yami New Testament.

After Rau's initial trip to Dong's home Island, we began developing teaching materials (Dong & Rau 2000) for college level second language learners. We collected texts and word lists for projects supported by the Council of the Aboriginal Affairs (1998-2000), in preparation for a future dictionary, followed by several studies supported by the NSC projects on the linguistic structures of Yami (NSC89-2411-H-126-015, NSC90-2411-H-126-015, NSC91-2411-H-126-013-MD, NSC93-2411-H-126-013).

In 2002, in response to the need to digitize Austronesian language texts, Dr. Elizabeth Zeitoun of Academia Sinica invited us to prepare our Yami texts in conformity with the standardized interlinear translation format in both Chinese and English, to facilitate future incorporation of our texts into the developing on-line corpora. We accepted the call and recruited Mr. Daniel E. Rau and Dr. Gerald A. Rau to translate and edit fifty Yami texts (with Chinese translation) into English during their winter breaks. From this corpus we selected twenty texts to work out the detailed morpheme-by-morpheme glossary in both Chinese and English, forming the foundation of this book.

At the end of the same year, the authors were invited to give a workshop on Yami Morphosyntax to a group of Yami language teachers on Orchid Island. In response to the teachers' call for better training materials, the authors completed a draft of the Chinese version of the Reference Grammar, which was later revised for inclusion in this book. The English version of the grammar was translated and rewritten by the first author during the year (2003-2004) she spent at the University of Minnesota as a Visiting Scholar. The work was dedicated to her advisor, Prof. John Wolff, on his retirement from Cornell University.

With the skillful assistance of Ms. Ann Chang and Ms. Lilianne Chen, then linguistics graduate students at Providence University, we made the vocabulary for this book, using the Shoebox software to generate all the lexical entries and most of the examples from the twenty texts. We then revised or constructed suitable examples to illustrate each lexical entry. Mr. Daniel E. Rau and Dr. Gerald A. Rau once again volunteered their time to help us translate all the Yami examples from the Chinese

translation into English. We used the Oxford Concordance Program (OCP) software to produce a printout as the basis of the index. Readers can use the index two different ways, starting from English, or Chinese *Pinyin*, all listed in English alphabetical order.

The focus of this book is undoubtedly the twenty Yami texts, which are placed strategically in the center of this book, introduced by a reference grammar written in Chinese and English and followed by a vocabulary and a two-way index based on the texts exclusively, to symbolize the centrality of texts for linguistic analysis. All the information is presented in Chinese and English, allowing Yami language teachers and learners who may not be proficient in English and Austronesian linguists who may not be proficient in Chinese to have easy access to the materials presented in this book. To assist the reader, we have also included an Appendix containing 364 of the most commonly used Yami words, adapted from the word list provided in *Philippine Minor Languages: Word Lists and Phonologies*, edited by Lawrence A. Reid (1971, University of Hawaii Press). In the Chinese title and text we have chosen to use the term ‘Tao’ to refer to this language, in accordance with the preferred self-reference of the younger generation on Orchid Island. For the English title and text we retain the use of the term ‘Yami’ commonly used in English scholarship.

Finally, we would like to acknowledge Prof. Paul J.-K. Li’s advice and encouragement during the time we were collecting Yami texts and word lists, Prof. Dah-an Ho for his invitation to have our book published by the Journal of *Language and Linguistics*, and the two anonymous reviewers’ comments and suggestions. We took our reviewers’ opinions very seriously in the revision. All remaining errors are ours.

This work is dedicated to Prof. Paul J.-K. Li in celebration of his 70th birthday in September 2006.

D. Victoria Rau & Maa-Neu Dong
March 2006

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達悟語參考語法¹

1. 導論²

1.1 達悟語的親屬關係

達悟語是蘭嶼島上三千八百餘達悟族人之母語，也是臺灣的南島語言中唯一的菲律賓語，屬於巴丹語群 (Batanic)。古時巴丹群島 (Batanes) 為臺灣和呂宋島之間的踏板，達悟族從巴丹群島移居北上，定居蘭嶼島，與菲律賓北端之 Itbayaten, Ivatan, Babuyan 等語族往來關係密切。

1.2 達悟族名稱之由來

達悟族過去被稱為雅美 (Yami) 族。雅美名稱之由來，眾說紛紜。根據巴丹島傳說故事，常提到最北方的雅美 (dihami)，指的是從巴丹島移出，遷至最北的一支，因此「雅美」一詞的來源，較可靠的說法，應是巴丹人對移居至蘭嶼島人的稱呼，而該族群自稱為「達悟」(Tao)，即是“人”的意思。在行政院原住民委員會之臺灣南島語系族群簡介網站中，對達悟族之名稱，採取“雅美”和“達悟”名稱並列 (http://www.apc.gov.tw/indigene/about_indi/yame/yame_2.aspx)。本文採取當地人習慣之自稱來稱呼其語言為「達悟語」(circiring no tao)³。英文名稱則維持國際南島語言學界所習慣使用之名稱 Yami。

1.3 達悟族之文化

達悟族以捕魚，種植水芋、甘藷為生，其傳統地下屋建築、飛魚祭、新屋和新船落成禮、及對鬼靈的畏懼態度，在文化上獨樹一幟（蘭嶼：飛魚的故鄉 <http://vm.nthu.edu.tw/lanyu>）。目前有關達悟族之民族學研究，（中央研究院民族所

¹ 本文為國科會補助之專題研究計劃「臺灣南島語言構詞語法相關議題研究—雅美語構詞語法相關議題研究」(NSC91-2411-H-126-013-MD) 和「達悟語聲韻議題研究：重音、介音和重疊」(NSC 93-2411-H-126-013) 之研究成果之一，謹此向國科會致謝。

² 本導論部分內容改寫自何 (2000)，暨大電子雜誌第二期 (<http://emag.ncnu.edu.tw/>)。

³ 2002 年 11 月 1-2 日筆者在蘭嶼帶領「雅美語構詞句法」研習營，黃清文先生提出希望學界能以該族之自稱「達悟」族稱之。

社會所圖書館自建資料庫出版品目錄 <http://www.sinica.edu.tw/ioe/tool/library/index.html>), 涵蓋範圍極廣, 包括: 口傳文學、歌謠及詞彙之採集記音, 以及對喪葬、信仰、父隨子名的升級更名制, 社會組織、器物禮俗、屋宅、工作房慶典、大船文化等之描述 (參見本文末所附之參考文獻)。

2. 音韻系統及拼音原則⁴

2.1 輔音和元音

達悟語共有 20 個輔音, 4 個單元音, 4 個複元音。輔音 (表一之一)、元音 (表一之二) 音位分析及符號使用, 係參考土田滋等人 (1987)、李 (1992)、何 (2002a) 之研究, 及雅美語新約聖經 (1994) 之符號使用習慣。表中所列之音位以書寫符號表示。其相對之國際音標, 以下將有說明。

〈表一之一〉輔音音位表

	唇音	齒齶音	捲舌音	硬顎音	舌根音	小舌音	喉塞音
塞音	p, b	t	d		k, g		ʔ
鼻音	m	n			ŋ		
擦音	v		s, r			h	
邊音		l					
塞擦音				c, j			
顫音		z					
半元音	w			y			

〈表一之二〉元音音位表

	前	央	後
高	i		o
中		e	
低		a	

⁴ 本段部分內容改寫自董、何 (2000)《雅美語教材》。

達悟語書寫符號之詳細發音⁵：

/p, t, k/ 和 /b, d, g/ 為常見的清、濁塞音，唯 /d/ 為捲舌濁塞音，而 /k/ 在低元音 /a/ 之前後，發音部位會移至小舌位置，發成小舌清塞音 [q]，例如 kanakan [qanaqan] “小孩”。

/ʔ/ 為喉塞音 [ʔ]，具有辨義作用（李 1992:47-49），例如 manawey “漁法的一種” 和 man'awey “拋船的儀式” 唯一的差別在於後者有喉塞音。就發音而言，有時喉塞音會與小舌濁擦音 /h/ 產生變異，例如：mi'an'anan “信賴” 或 mihanhanan。但從動詞變化上則能清楚分辨 /ʔ/ 和 /h/，例如：ʔagnat “提起來” → to ʔagnata “就提起來”，但 hap “拿” → to ngapa “就拿”（參見表八）。

/m, n, ng/ 為常見的雙唇、齒齶、和舌根鼻音。/n/ 後若接高前元音 /i/ 時，則會顎化為硬顎鼻音 [ɲ]，例如 nizpi “錢”，maniring “說”。/ng/ 代表舌根鼻音 [ŋ]，用兩個符號代表一個發音，書寫時要與 /n-g/ 區分，後者為一個齒齶鼻音 /n/ 後接一個舌根濁塞音 /g/，中間用橫線隔開，例如 man-gazot “蘆葦割傷”。

/v/ 為唇齒濁擦音，年輕人則漸漸以清音 /f/ 取代（李，何 1989）。

/s/ 為捲舌清擦音 [ʃ]，但在高前元音 /i/ 之前，產生顎化現象，發成硬顎清擦音 [ʃ̟]，例如 siko “手肘”。

/r/ 為捲舌濁擦音 [ʀ]，雖然李 (1992) 建議採用 /z/ 代表此音，但當地習慣使用 /r/。

/h/ 為小舌濁擦音 [ħ]，例如 hap “拿”、makáteh “癢”、maréhmet “很重”。然而位於兩個非高元音中間之小舌濁擦音則逐漸流失，或以濁喉塞音 [ʔ] 取代，例如 vahay [vaħay] “房子” 唸作 [faay] 或 [faħay]，而 vehan [vəħan] “月亮” 唸作 [fəan] 或 [fəħan]。但在新約聖經中之借詞 hadilóya “哈利路亞”，/h/ 為喉塞清擦音。

/l/ 為邊音，但在高元音 /i/ 之前發成濁邊擦音 [ɫ]，例如 lila “舌頭”。

/c/ 為硬顎清塞擦音 [t͡ʃ̟]，原來是 /k/ 與高元音 /i/ 顎化的結果，但因為 /c/ 和 /k/ 在相同的語音環境下產生對比，例如：cimi “夾扁”，kizi “裂開”，已自成音位。

/j/ 為硬顎濁塞擦音 [d͡ʒ̟]，是 /d/ 與高元音 /i/ 顎化的結果，雖仍可分析為 /d/ 的同位音，但因為 /j/ 和 /c/ 對稱，出現頻率頗高，而且 /d/ 和 /j/ 出現對比，例如

⁵ 如果你想聽聽達悟語的發音，學幾句招呼語，及有關親屬稱呼、生活起居、自然環境、觀光旅遊的詞彙，請進入“蘭嶼曙光”網站 (<http://far.taiwan.gov.tw/lanyu/language/index.htm>)，由東清村謝來光發音。另外可參考本書作者的達悟語數位典藏網站 (<http://yamiproject.cs.pu.edu.tw/yami>) 和達悟語數位學習網站 (<http://yamiproject.cs.pu.edu.tw/learn>)。

pianooodi “唱歌（祈使）” bedbeji “綁上魚鉤（祈使）”，所以我們將它與 /d/ 分開書寫。

/z/ 為齒齶顫音 [ʃ]。李 (1992) 建議採用 /r/ 代表此音，但當地習慣使用 /z/。

/w, y/ 為常見的半元音。

/i/ 和 /a/ 分別為常見的前高元音和低元音。

/e/ 為中央元音 [ə]。

/o/ 為後高元音，其實寫成 /u/ 或 /o/ 皆可，當地人習慣用 /o/。在唇音後，發成後高鬆圓唇元音 [ɔ̹]，例如poyat “眼屎”，mavota “瞎”，momodan “鼻子”；在其他語音環境，則為 [o]。

複元音包括：/ay/, /aw/, /oy/, /iw/，例如mangay “去”，araw “太陽”，icoy “蛋”，mivaliw “變成”。其中 /ay/, /aw/ 在椰油，朗島，東清，野銀四部落有央化現象（李，何 1989），甚至移向高元音之位置 ay > əy > iy, aw > əw > uw，例如 mangay “去” 有的唸作 [maŋəy] 或 [maŋiy]；araw “太陽” 有的唸作 [aɔ̹əw] 或 [aɔ̹uw]。在漁人、紅頭則大致保留 /ay/, /aw/，但 /ay/ 在幾個詞彙中亦有央化現象，故而反映在拼字上，例如，alilikey “都很小”，manganiáhey “令人害怕的”。有趣的是，單元音 /i/ 在朗島，東清部落亦下降演變成複元音 [əy]，例如mi變成mey “去”。

經過上升或下降音變的複元音包括：/ey/, /ow/。其他因語根重疊產生複元音的現象，請參看注 12。

2.2 長輔音 (Long consonant)

朗島部落輔音有長短之分，試比較以下各組詞彙，有長短輔音之別：

達悟語詞	中文語意	達悟語詞	中文語意
opa	大腿	oppa	母雞
aming	阿們	amming ⁶	鬍子
kaliman	死吧	kalimman	第五個月

東清部落輔音亦有此現象，例如：attuw⁷ “海水”，mitattew “游泳”（李、何 1989）。

⁶ 此為朗島村的發音，為謝永泉先生所提供的例子，謹此致謝。其他部落的發音為amiying。

⁷ 紅頭村發音為attaw。其他長子音例子如：allag “運氣，緣份，命運”。

2.3 重音

重音大致落在最後一個音節上，但有些落在倒數第二音節等之其他音節，需個別標明，例如，masáray “很高興”，masasáray “<每個>都很高興”，mapasózi “很令人生氣”，i'óya “生氣”，mámiying “笑”，mamiyimiyingen “很愛笑”，malavlávin “很愛哭”。

重音具有辨義作用，例如 mapingsán “味道很棒的”，重音在最後音節，而 mapínsan “有條理的”，重音則落在倒數第二音節。

凡有前綴 tey- 開頭的詞彙，重音大致落在 tey- 的後面，如 teymá'oya'oyaen “最愛生氣的”，teymámiyimiyingen “最愛笑的”，teymápa'oya “最令人生氣的”。但 tey- 後面接數字時，重音落在末音節上（不另外標記），如：teyesa “每一單位分配一個”，teylilima “每一單位分配五個”，teywawao “每一單位分配八個”。

此外，最後音節的元音亦可拉長表示“只有、也是、又”等加強語氣的意思⁸，例如：asáa (<asa) “唯一”（參 9.1）。

2.4 音節結構

達悟語的核心音節結構為 (C)V(C)，沒有輔音群。但是 /i/ 和 /o/ 在非重音的情況（見注 9）以及在語根重疊時（見注 12），可分析為介音 /y/ 和 /w/，而有 CGVC 的音節結構。以下表二列舉達悟語根各種展開的音節型態。

〈表二〉達悟語根音節型態

音節型態	達悟語詞	中文語意
V	o	主格標記
VV	ai	腳
VVC	aon	拿出鍋裡的食物
VVCVC	aorod	前院
VC	am	呢、啊（主題標記）
VCV	ori	那個
VCVC	icoy	蛋
VCCV	agza	很快

⁸ 其他例子尚有 ko mangay do gáko. “我也是要去學校”，ko ji ákciin. “我也很餓”，ka pa kómaan. “你又要吃飯了！”

VCVV	adoa	二
VCVVC	avoag	雄的
VCCVC	abcil	饑荒
VCCVCVC	apnezak	早晨
VCVCVC	aganas	土石流
VCVCVCCVC	alibangbang	飛魚
VCCVCCV	aktokto	想法、意思
CV	da	他們（屬格）
CVC	bos	趕走動物的叫聲
CVV	tao	人
CVVC	kois	豬
CVCV	ráko	大
CVCVV	kadai	小米
CVCVCV	tatala	船
CVCVC	tawag	呼叫
CVCCVC	sipzot	打
CVCVVC	cilaos	穿洞
CVCVCCVCVCVC	balangbangapat	小毛蕨

2.5 粘著語根與獨立成詞時的音韻關係

達悟語有兩種粘著語根，一種為輔音群的粘著語根，如例 (A)；另一種為單音節和有介音的粘著語根，如例 (B)。在獨立成詞使用時，要加插元音音節。

凡有輔音群之粘著語根，會在字首加元音 **a-**（祈使句），或在第一個輔音後加元音 **e**（如果粘著語根的元音為 **o**，則加插的元音為 **o**），以避免輔音群現象產生。

(A) 輔音群的粘著語根

語根漢譯	粘著語根形式	字首 a- 之形式	加插元音 e(o) 之形式
用石頭砸人或動物	-bhes	abhes	behebehesan
堆疊	-dpon	adpon	midodponan
下去	-gcin	agcin	migegecin
擱置、放下	-ptad	aptad	mipetapetad

凡單音節之粘著語根，也有在字首加元音 a- 和不加 a- 之兩種形式，其變異似乎完全視詞彙和詞綴而定，有的與靜態動詞變化有關（見表六之二和表七之二），但相關規則尚待進一步研究。

(B) 單音節和有介音之粘著語根

語根漢譯	粘著語根形式	字首有 a- 之形式	字首無 a- 之形式
吃	-kan	akan “吃（祈使）” akanan “吃飯的地方”	koman（不及物動詞） kanen “食物” kakanan “盤子、口感”
洗衣服	-pis	apisan（及物動詞）	mipipis（不及物動詞） nipisan（及物動詞、已完成）
掃	-vias ⁹	aviasan（及物動詞）	mivias（不及物動詞） vivias “掃帚”
二	-doa ¹⁰	adoa “二”	ipidoa “兩次”

3. 達悟語的構詞原則

達悟語詞的結構展現南島語言黏著語 (Agglutinating language) 特色。常見之構詞法為詞綴法 (Affixation) 和重疊法 (Reduplication)。

3.1 詞綴法

構詞特色有下列三點：

- (1) 一個詞是由一個語根和多個詞綴組合而成。例如 ipivatvatek (i-pi-vate-vatek) “筆” 是由動詞語根 vatek “刻”，經過重疊 vate- 音節（即最前面的 CVCV-，C=輔音 V=元音）表示“動作頻繁”，再與動詞前綴 pi- 及表工具之前綴 i- 組合而成。由於倒數第三音節非重音，元音 e 脫落，所以 i-pi-vate-vatek 變成 i-pi-vat-vatek，於是，達悟語“筆”直譯為“常常用來刻（寫）的工具”。

⁹ 凡有i或o元音出現的語根，若i和o非重音節，亦可分析為介音，該語根可視為單音節，其他例子如 siam/syam “九”、ziak/zyak “話”、rios/ryos “洗澡”、boak/bwak “劈柴”、koat/kwat “燙”。

¹⁰ 同注 9。

- (2) 語根與詞綴結合之處容易切割，界限分明。例如 *nikacimoyan* (*ni-ka-cimoy-an*) “被雨淋了” 語根是 *cimoy* “雨”，前綴 *ni-* 表示“過去式、完成貌”，詞綴 *ka-...-an* 表示“不自主，被外力影響”。這些語根和詞綴彼此有相當大的獨立性，可自由拆卸與其他語根或詞綴組合。因此，詞綴 *ka-...-an* 與 *taci* “尿” 組合之後，就是 *ka-taci-an* “尿急” 之意。
- (3) 每一個詞綴僅有一個語法意義。例如，*nipakanan* (*ni-pa-kan-an*) “已-使-吃-處所”，是由語根 *-kan* “吃” 和三個詞綴所組成，每一個詞綴僅有一個語法意義：*ni-* “過去式、完成貌”，*pa-* “使役動詞”，*-an* “處所焦點”，因此直譯為“這是我已經餵過（動物）的地方，或已請某人吃過飯的地方”。

3.2 重疊法

重疊法大致可分為全體語根重疊、部分語根重疊、詞綴重疊、和 *Ca-* 重疊四種。全體語根重疊，即是將原語根重覆使用，例如 *rako-rako* “比較大”，*vato-vato* “石頭（複數）”，*tapi-tapi* “木板（複數）”，*baka-baka* “牛（複數）”，*lima-lima* “手（複數，局部的）”，*tao-tao* “別人、人類”，*sozi-sozi* “怒氣”。部分語根重疊還可按音節形態分成下列七種：1) *CV-*, 2) *CVCV-*, 3) *CVC-*, 4) *CVV-*, 5) *VCV-*, 6) *V-*, 7) *a-CCV-*（例子見表三）。

重疊法基本上可歸納成兩類：(1) 重疊一個音節和 (2) 重疊兩個音節，但重疊部分不含韻尾輔音 (*coda*)。名詞語根重疊表達複數、比較級、變化、分散、或玩具。動詞語根重疊表達動作重複、頻繁，或引申為工具。

〈表三〉達悟語部分語根重疊音節形態及例子

語根重疊音節形態	例子
<i>CV-</i>	<i>so-soli</i> “芋頭（複數）”， <i>to-tozok</i> “叉子”
<i>CVCV-</i>	<i>toko-tokon</i> “群山”， <i>ciri-ciring</i> “語言”， <i>zipo-zipos</i> “親戚們”
<i>CVC-</i>	<i>kag-kagling</i> “羊群”， <i>lak-laktat</i> “疾病、鼻涕” <i>sey-seyked-an</i> “停泊處”
<i>CVV-</i>	<i>koi-kois</i> “豬類”， <i>sao-saoli-in</i> “來來回回的”
<i>VCV-</i>	<i>ananak</i> (<i>ana-anak</i>) ¹¹ “孩子們”，

¹¹ 若因語根重疊，發生兩個元音 *a* 相連，則二合一，成爲一個元音 *a*。

	avavang (ava-avang) “玩具船” ， angangayan (anga-angay-an) “常去的地方” ， onewned ¹² (one-oned) “內心深處” ， avwavong (avo-avong) “影子” ， ovowvan (ova-ovan) “白髮” ， obowbotan (obo-obot-an) “糞坑、便所” ， ineynapo (ina-inapo) “祖先們”
V-	o-oyod-an “裝女人魚的盤子” i-irasan “槳架”
a-CCV- (粘著語根)	a-kdo-kdot-en “捏一捏” ， a-kbe-kbeng-en “按一按” ， a-dka-dkan-an “親吻” ， a-sle-slet-an “鎖上” ， a-sde-sdep-an “入口處”

詞綴重疊常見於 ni- (動詞詞綴之討論請見 6.3)。如果粘著語根以 a- 開頭，且動作已完成，則重疊前綴 ni- “已完成”，例如 (1)。

(1) 重疊 ni- 前綴 “已完成”

ni-ni-ahap “所有被拿走的” ， ni-ni-akot “所有被搬移的”
ni-ni-akan “所有被吃掉的” ， ni-ni-angayan “所有去過之處”

paN- 詞綴 “分佈” (N-變化請見 6.1.1) 有兩種重疊方式：可先與語根結合形成語幹後再重疊 (kapangotangotas) 或由語根先重疊後再與 paN- 詞綴結合形成語幹 (nipaniriciring)，例如 (2)。

(2) paN- 前綴 “分佈” 的語根重疊

ka-pa-ngota-ngotas < ka-paN-kota-kotas < ka- + paN- + kotas “然後一直採摘葉子”
ni-pa-niri-ciring < ni-paN-ciri-ciring < ni- + paN- + ciring “已經咒罵了”

¹² 若因語根重疊，發生兩個元音相連，而兩個元音皆非元音a時，會有如下複元音的變化：

eo → ow,ew: one-oned (想法,心裡) → onowned, onewned

ao → ow: ota-ota (嘔物) → otowta; ova-ovan (白髮) → ovowvan; opa-opag-en (搥打) → opowpagen;

ai → ey: ina-inapo (祖先) → ineynapo; isa-isanan (旅館) → iseysanan;

ila-ilamdram-en (試探) → ileylamdramen

oa → wa: avo-avong (影子) → avwavong

oo → ow: obo-obot-an (糞坑、便所) → obowbotan

Ca-重疊是將語首之輔音加上元音 a 之後重疊，多半用於數字（請見第 9 節），例如 (3)。以下所有例句均為中英對照，英文縮寫之意義，請參考本文末（附件一）之對照表。

- (3) ya pa-pira o ka-kteh mo?
 助動 Ca-疊-多少 主格 同-兄弟姐妹 你.屬格
 AUX Ca-RED-many NOM Co-sibling 2.S.GEN
 ya ra-roa¹³ sira kaka a mehakay.
 助動 Ca-疊-二 他們.主格 兄姐 繫 男人
 AUX Ca-RED-two 3.P.NOM older.sibling LIN male
 “你有幾個兄弟姐妹？”“我有兩個哥哥”
 ‘How many brothers and sisters do you have?’ ‘I have two older brothers.’

有關達悟語重疊現象之詳細分析，請參考 Rau & Dong (2005)。

4. 達悟語的語法特色

達悟語呈現臺灣南島語言及菲律賓語言常見的動詞“焦點”變化 (Focus) 特色，動詞的焦點反映出句中主語的語意角色，焦點分主事者 (Agent)、受事者 (Patient)、處所 (Location)、和工具/受惠者 (Instrument/Benefactive) 四種。表四顯示達悟語與古南島語和臺灣境內其他原住民語言類似焦點系統之對應。

〈表四〉南島語的焦點系統

	主事者焦點 (AF)	受事者焦點 (PF)	處所焦點 (LF)	工具/受惠者焦點 (IF/BF)
古南島語 PAN	*mu/-um-	*-en	*-an	*(i)Si-
阿美語 Amis	mi-, ma-, -um-	-en	-an	sa-
泰雅語 Atayal	-m-	-un	-an	s-
布農語 Bunun	m-, ma-	-un	-an	?is-
排灣語 Paiwan	-em-	-en	-an	si-
卑南語 Puyuma	-em-, ma-, mi-, m-	-ay, -aw	-an	-anay

¹³ roa是從doa “二” 衍生出來，/d/ 夾在兩個母音中間弱化成 /r/。

賽夏語 Saisiat	-om-, ma-, mi-	-en	-an	si-
賽德克語 Sediq	-um-	-un	-an	su-
鄒語 Tsou	mo, b-, mi-, m-, -m-	-a	-i	-eni
達悟語 Yami	m-/om-	-en	-an	i-

以下用語根 -kan “吃” 為例，呈現四種達悟語的焦點變化。請注意每一句達悟語的中文直譯，都可有一種對等關係存在（即 [A] = [B]）。

- (4) [k-om-an so wakay] [si Salang].
 <主焦>吃 斜格 地瓜 主格 人名
 <AF>eat OBL sweet.potato NOM PN
 “沙浪吃地瓜。直譯：[吃地瓜的] 是 [沙浪]”
 ‘Salang wants to eat a sweet potato.’
- (5) [kan-en na ni Salang] [o wakay].
 吃-受焦 他.屬格 屬格 人名 主格 地瓜
 eat-PF 3.S.GEN GEN PN NOM sweet.potato
 “地瓜給沙浪吃。直譯：[沙浪吃的] 是 [地瓜]”
 ‘Salang ate the sweet potato.’
- (6) [ni-akan-an na [o mogis ori] ni Salang].
 過去-吃-處焦 他.屬格 主格 米 那個 屬格 人名
 PA-eat-LF 3.S.GEN NOM rice that GEN PN
 “沙浪從那裡吃了一點飯。直譯：[沙浪從那裡吃了一點的] 是 [那飯]”
 ‘Salang ate some rice from there.’
- (7) [i-akan¹⁴ na ni Salang] [o among ya].
 工焦-吃菜 他.屬格 屬格 人名 主格 魚 這
 IF-eat 3.S.GEN GEN PN NOM fish this
 “這魚給沙浪吃。直譯：[給沙浪吃的] 是 [這魚]”
 ‘Salang took this fish and ate it.’

¹⁴ 前綴i和元音a連接時，變成介音，寫成yakan “吃菜”。

4.1 動詞焦點、時貌和情態變化

達悟語的動詞分一般形和變化形兩類，下列表五根據 Rau (2004, 2005) 的分析，呈現動詞焦點、時貌和情態變化的全貌。主事焦點和非主事焦點系統與不及物和及物動詞關係相對應。一般形動詞有動態、靜態之分，和未完成/已完成的區別。變化形動詞則有祈使和虛擬之分，而虛擬動詞也有動態、靜態之別。動詞變化的細節在第 6 節有詳細討論。

〈表五〉達悟語焦點、時貌和情態變化

陳述句（一般形）					非陳述句（變化形）		
主事焦點 （不及物）	動態	動態	靜態	靜態	祈使	虛擬	
	未完成	已完成	未完成	已完成		動態	靜態
	-om-	ni-om-			Ø-	N-	a-
	m-	ni-m-	ma-	ni-ma-	Ø-	N-	a-
非主事焦點 （及物）							
受事焦點	-en	ni-	ma-	ni-ma-	-i	N-...-a	a-...-a
處所焦點	-an	ni-...-an	ka-...-an	ni-ka-...-an	-i	N-...-i	a-...-i
工具焦點	i-	ni-...-i	i-ka-	ni-i-ka-	-an	N-...-an	a-...-an

以下第 5-7 節依據 Reid & Liao (2004) 所提供之菲律賓語的語法類型架構，從下列三部分詳細討論達悟語的語法結構：(一) 謂語結構的詞序，(二) 動詞子句結構，(三) 名詞組的結構。第 8-9 節討論達悟語的比較結構和數字。最後第 10 節討論達悟語 ka- 的用法。

5. 謂語結構的詞序

達悟語的基本詞序為謂語（新的訊息）放在句子的最前面，而謂語 (Predicate) 和主語 (Subject) 之間呈現一種對等關係 (A=B)。謂語可以分成名詞和動詞二類，以下分述。

5.1 名詞謂語

名詞謂語分成泛指分類、殊指分類和領屬三種。

5.1.1 泛指分類

表泛指分類的名詞謂語是以單一名詞來表達主語的類別。例如：

- (8) mapivatvatek o ya
 老師 主格 這個
 teacher NOM this
 “這是老師”
 ‘This is a teacher.’
- (9) dehdeh si Masaray.
 外地人 主格 瑪莎萊（人名）
 outsider NOM PN
 “瑪莎萊是外地人”
 ‘Masaray is an outsider (or foreigner).’

5.1.2 殊指分類

表殊指分類的名詞謂語以有定名詞來表達主語的類別。例如：

- (10) si Salang ko.
 主格 人名 我.主格
 NOM PN I.S.NOM
 “我叫沙浪”
 ‘I am Salang.’
- (11) o tawaz o ito
 主格 魚網 主格 那
 NOM net NOM that
 “那是魚網（有定）”
 ‘That is the fish net’

5.1.3 領屬關係

表領屬關係是殊指分類名詞謂語的一種，以屬格代名詞來修飾謂語的名詞。例如：

- (12) kagan ko si Likdem.
朋友 我.屬格 主格 李格登(人名)
friend 1.S.GEN NOM PN
“李格登是我朋友”
‘Likdem is my friend.’

5.2 動詞謂語

動詞謂語分“及物”和“不及物”動詞二類。及物動詞有兩個名詞補語，一為主事者 (Agent) 另一為受事者 (Patient)；不及物動詞只有一個名詞補語，當此補語的主詞為 actor 角色時，則為動態動詞，當此補語的主詞為 undergoer 角色時，則為靜態動詞。本節先討論含一個簡單動詞之子句中，其共同出現之名詞補語的相關位置。在下面第 6 節我們會討論包含兩個動詞謂語的子句結構。

5.2.1 不及物結構

達悟語不及物結構的動詞包含動態動詞中的主事者焦點動詞 (-om-, mi-, ma-, maN-, maka-, maci-)、和靜態動詞中的 ma- 動詞、和不自主動詞 ka-an (動詞詞綴會在以下第 6 節討論)。不及物結構中，多半只有單一之名詞補語。其一般詞序為動詞謂語在前，名詞補語在後。

5.2.1.1 單一名詞補語之不及物結構

- (13) om-oli ko simararaw.
主焦-回家 我.主格 中午
AF-go.home 1.S.NOM noon
“我中午回家”
‘I will go home at noon.’

- (14) má-bsoy ko na.
 靜態-飽 我.主格 已經
 SV-satiated 1.S.NOM already
 “我已經飽了（陳述過去）”
 ‘I was full already.’
- (15) ka-cimoy-an o kanakan.
 動綴-雨-動綴 主格 小孩子
 VF-rain-VF NOM child
 “小孩子被雨淋濕了”
 ‘The child is soaked (lit. got rained on).’

5.2.1.2 雙重名詞補語之不及物結構

有的不及物結構可有兩個名詞補語，一為主格，另一為斜格或處格（視動詞而定），此結構為作格語言¹⁵ (ergative languages) 中之反被動¹⁶ (antipassive) 結構。名詞補語的位置要看主格補語是名詞組還是代名詞而定。

5.2.1.2.1 主格補語為代名詞

若主格補語為代名詞時，會附加在動詞後，而其他補語則尾隨在後。

- (16) man-zaneg ka so alibangbang.
 主焦-煮 你.主格 斜格 飛魚
 AF-cook 2.S.NOM OBL flying.fish
 “你要煮飛魚”
 ‘You will cook flying fish.’
- (17) maka-kan ka so wakay?
 主焦.能-吃 你.主格 斜格 地瓜

¹⁵ 大部分菲律賓賓語為作格語言 (ergative language)，其不及物動詞的主詞和及物動詞的受詞在構詞的格位變化上是一致的。而受格語言 (accusative language)，例如英語，其不及物動詞的主詞和及物動詞的主詞在構詞的格位變化上是一致的。

¹⁶ 在受格語言 (accusative language) 之被動結構中，例如英語的被動句型，其原主動結構之主詞降為斜格（即為介繫詞by後之名詞組），變成一種不及物結構；而在作格語言 (ergative language) 中，也有將原受詞降為斜格的句型，也變成一種不及物結構，所以叫作反被動句型 (antipassive)。

AF.able-eat 2.S.NOM OBL sweet.potato

“你敢吃地瓜嗎？”

‘Are you able to eat sweet potatoes? (I bet you won’t).’

(18) ma-niring sira do tao am.

主焦-說 他們.主格 處格 人 呢

AF-speak 3.P.NOM LOC human PAR

“他們對人說”

‘They spoke to a person.’

5.2.1.2.2 主格補語為名詞組

若主格補語為名詞時，較常出現在句子的最後。

(19) ni-k-om-an so kadai o kanakan.

過去<主焦>吃 斜格 小米 主格 小孩

PA<AF>eat OBL millet NOM child

“小孩吃過小米”

‘The child ate millet’

(20) ma-niring jiaken si Akay.

主焦-說 我.處格 主格 祖父

AF-speak 1.S.LOC NOM Grandfather

“祖父對我說”

‘Grandfather said to me.’

5.2.2 及物結構

及物結構的動詞為非主事者焦點動詞 (-en, -an, i-)、能力動詞 ma- 與不自主動詞 ka-an 當及物動詞用。兩個名詞補語一為主事者 (Agent or actor macrorole)，一為受事者 (Patient or undergoer macrorole)。前者以屬格形式出現，而後者以主格形式出現。

5.2.2.1 雙重名詞補語之及物結構

名詞補語之出現位置會因是名詞或代名詞的形式而有所不同。

5.2.2.1.1 雙重名詞補語皆為名詞組

一般而言，屬格主事者出現在主格受事者之前：

- (21) ni-ka-miying no mehakay o mavakes a.
 過去.工焦-動綴-笑 屬格 男人 主格 女人 助
 PA.IF-VF-laugh GEN man NOM woman PAR
 “男人對女人（的行爲）覺得好笑”
 ‘The man laughed at the woman.’
- (22) kala-en no kankan o ino.
 找-受焦 屬格 小孩 主格 狗
 Look.for-PF GEN child NOM dog
 “小孩找狗”
 ‘The child looked for the dog.’

5.2.2.1.2 雙重名詞補語皆為代名詞

主事者屬格代名詞以附加語 (clitic) 形式，或稱作粘著形式（如表十三），緊跟在動詞之後，而受事者主格代名詞則是以自由形式 (independent or free form) 出現在句子最後。當句中有單音節的副詞附加語 (na “已經”，pa “仍，先”) 出現時，代名詞附加語一般排在 na 或 pa 之前。

- (23) pa-na-nala-en mo pa yaken.
 動綴-疊-等-受焦 你.屬格 先 我.主格
 VF-RED-wait-PF 2.S.GEN first 1.S.NOM
 “你先等我”
 “You will wait for me first.”
- (24) koan na imo?
 說 他.屬格 你.主格
 say 3.S.GEN 2.S.NOM
 “他怎麼跟你說？”
 ‘What did he say to you?’
- (25) kan-en namen pa ya.
 吃-受焦 我們.屬格.除 先 這

eat-PF 1.P.GEN.EXCL first this
 “我們先把這個吃完”
 ‘We will eat this up first.’

5.2.2.1.3 屬格代名詞和主格名詞組補語

一般詞序為主事者（屬格代名詞）在受事者（主格名詞組）之前。

(26) apis-an mo pa o ayob ko.
 洗-處焦 你.屬格 先 主格 衣服 我.屬格
 wash-LF 2.S.GEN first NOM clothes 1.S.GEN
 “你先幫我洗一下衣服”
 ‘You will wash my clothes first.’

(27) ma-kala ta o mogis nio?
 受焦.能-找 我們.屬格.含 主格 米 你們.屬格
 PF.able-find 1.P.GEN.INCL NOM rice 2.P.GEN
 “我們找得到你們的米嗎？”
 ‘Could we manage to find your rice?’

5.2.2.1.4 屬格名詞組和主格代名詞補語

主格代名詞（例如 imo “你”）出現在屬格名詞組（例如 ni ina mo “你母親”）之前時，會有表一致關係的屬格代名詞（例如 na “她”）緊跟在動詞後 (28a) 或出現在句首 (28b)，表動作正在進行。

(28) a. i-panci na imo ni ina mo.
 工焦-叫,告訴 她.屬格 你.主格 屬格 母親 你.屬格
 IF-summon,tell 3.S.GEN 2.S.NOM GEN Mother 2.S.GEN
 “你母親會來叫你”
 ‘Your Mother will call you.’

b. na i-panci imo ni ina mo.
 她.屬格 工焦-叫,告訴 你.主格 屬格 母親 你.屬格
 3.S.GEN IF-summon,tell 2.S.NOM GEN Mother 2.S.GEN
 “你母親在叫你”

‘Your Mother is calling you.’

5.2.2.2 三元補語的及物結構

當及物結構有三個補語時，除了如前述的雙重補語分別為屬格和主格以外，第三個補語為斜格或處格（視動詞而定），並且是無定的 (indefinite) 或部分的 (partitive)。動詞後補語若皆為名詞組形式，則出現位置自由不固定，若有代名詞，則代名詞出現在名詞組之前。例子 (30) 是達悟語的使動結構，使用詞綴 pa-（詳見第 6 節）。

- (29) ni-pa-nba na no tao o zaig na
 過去.工焦-動綴-砍 他.屬格 屬格 人 主格 斧頭 他.屬格
 PA.IF-VF-cut 3.S.GEN GEN person NOM ax 3.S.GEN
 so kayo.
 斜格 樹
 OBL tree

“人用他的斧頭砍了樹（無定或部分）”

‘The man cut a tree with his ax.’

- (30) i-pa-cita na do mavakes o karam no mehakay.
 工焦-使-看 他.屬格 處格 女人 主格 老鼠 屬格 男人
 IF-CAU-see 3.S.GEN LOC woman NOM mouse GEN man

“男人把老鼠給女人（無定）看”

‘The man showed (cause-to-see) the mouse to a woman.’

5.2.2.3 屬格主事者或主格主事者之代名詞一致標記

上述及物結構 (28)-(30) 例句已顯示，第三人稱屬格主事者需有代名詞一致標記（例如 na “他/她”）。其位置一般緊跟在動詞之後，或可移至句首，表示事件發生時間的接近或正在進行。以下分述不及物和及物結構中主格代名詞的一致標記。

5.2.2.3.1 不及物結構中之代名詞一致標記

因爲第三人稱主格代名詞一般都不會出現，所以只有第三人稱複數主格主事者有代名詞一致標記。

- (31) ni-t-om-aneK sira o kanakan.
過去<主焦>站 他們.主格 主格 小孩子
PA<AF>stand 3.P.NOM NOM child
“那些小孩曾站起來”
‘The children stood up.’

5.2.2.3.2 及物結構中之一致標記

代名詞一致標記，表示主事者的在前(例如 na “她”)，表示受事者的在後(例如 sira “他們”)；與其相對應的名詞組補語，以同樣的次序(主事者在前，受事者在後)排列在一致標記之後。

- (32) i-ka-rilaw na sira no ina da
工焦-動綴-同情 她.屬格 他們.主格 屬格 母親 他們.屬格
IF-VF-pity 3.S.GEN 3.P.NOM GEN Mother 3.P.GEN
o an-anak na
主格 疊-孩子 她.屬格
NOM RED-child 3.S.GEN
“母親很同情(憐憫、疼愛)她的孩子們”
‘Mother pitied her children.’

5.3 主題結構

主題結構是將言談篇章中已知訊息提前的結構。提前到句首當主題的有定名詞成分，必須與後接的主要子句中其中一個名詞補語相對應。主要子句中的主格受事者 (Patient or undergoer macrorole)、屬格主事者 (Agent or actor macrorole)、主格詞組中的屬格所有者 (possessor)、主要動詞、時間(參考 7.2.4) 和方位(參考第 8 節) 都可以提前當主題，只有屬格所有者 (possessor) 在主要子句中必須有回復代名詞 (resumptive pronouns) 的痕跡。

主題 (topic or theme) 與評論 (comment or rheme) 之間可用停頓或主題繫詞

(TOPIC LINKER) am “呢，啊” 連結。

5.3.1 主題化的不及物結構

主題在前，常爲了對照或比較：例如，

- (33) o rarakeh am om-lisna a, o kanakan am t-om-anek.
 主格 老人 呢 <主焦>坐 助 主格 小孩 呢 <主焦>站
 NOM old.person TOP <AF>sit PAR NOM child TOP <AF>stand
 “老人坐著，小孩站著”
 ‘The old person is sitting and the child is standing.’

- (34) o t-om-anek am kanakan a, beken a rarakeh.
 主格 <主焦>站 呢 小孩 助 不是 繫 老人
 NOM <AF>stand TOP child PAR NEG LIN old.person
 “要站著的是小孩而不是老人”
 ‘The one who is to stand is a child but not an old person.’

下例只有主要子句中的主格補語可以提前當主題，其他補語是無定的，不可以當主題。回復代名詞（如主要句子中的畫線部分）並非必要，其出現與否視語境而定。

- (35) a yaken rana am, mi ko pa mangotas
 助 我.主格 已經 呢 去 我.主格 先 主焦.採葉子
 PAR 1.S.NOM already TOP go 1.S.NOM first AF.collect.leaves
 so raon namen.
 斜格 姑婆芋 我們.屬格.除
 OBL wild.taro 1.P.GEN.EXCL
 “那我呢，我先去採姑婆芋葉好了”
 ‘As for me, I will go to pick up wild taro leaves first.’

主格詞組中之屬格所有者亦可提前當主題補語，在主要子句中必須要有回復附加語代名詞 (resumptive clitic pronouns) 的痕跡（如主要句子中的畫線部分）。

- (36) yaken rana ya am, ya ni-somlet
我.主格 已經 這 呢 助動 過去<主焦>卡住
1.S.NOM already this TOP AUX PA<AF>get.stuck
o lima ko.
主格 手 我.屬格
NOM hand 1.S.GEN
“我啊，剛才我的手卡住（在洞裡）了”
‘As for me, my hand got stuck (in the hole).’

5.3.2 主題化的及物結構

5.3.2.1 及物結構中屬格主事者的主題化

主要子句中的屬格主事者可以提前當主題，並且在主要子句中可以有回復代名詞 (resumptive pronouns) 的痕跡，例如 (37) 的 ko “我” 和 (38) 的 da “他們”。例 (38) 第三人稱複數屬格自由代名詞 nira 出現在指示詞 ori 之前，指涉 sira “他們”。有關代名詞和指示詞的系統，參考表 13 和表 11。

- (37) yaken rana am, ko mi ni-yokay si akay.
我.主格 已經 呢 我.屬格 去 過去.受焦-叫醒 主格 祖父
1.S.NOM already TOP 1.S.GEN go PA.PF-waken NOM Grandfather
“我啊，我剛才去把祖父叫醒了”
‘As for me, I just went to waken Grandfather.’
- (38) sira rana ori am,
他們.主格 已經 那個 呢
3.P.NOM already that TOP
da i-sibo o cinedkeran da nira ori a.
他們.屬格 工焦-上山 主格 大船 他們.屬格 他們.屬格 那個 助
3.P.GEN IF-start.off NOM big.boat 3.P.GEN 3.P.GEN that PAR
“他們啊，他們是為要建造大船而上山的”
‘As for them, they are going to the mountain for the purpose of building big boats.’

5.3.2.2 及物結構中主格受事者的主題化

主要子句中的主格受事者（例如 o wakay “地瓜”）可以提前當主題，因為是有定的。

- (39) o wakay ya am, na ni-ngotngot-an no karam.
 主格 地瓜 這 呢 它.屬格 過去-咬嚙-處焦 屬格 老鼠
 NOM sweet.potato this TOP 3.S.GEN PA-RED-nibble-LF GEN mouse
 “這地瓜呢，被老鼠吃過”
 ‘As for this sweet potato, it was nibbled on by a mouse.’

5.4 主事者居首之詞序

在會話中或陳述事情經過時，常出現主事者居首之詞序，表達事件之即時性。¹⁷

- (40) ka m-angay jino, mo keypong?
 你.主格 主焦-去 哪裡 你.屬格 親愛的
 2.S.NOM AF-go where 2.S.GEN dear
 “親愛的你要去哪裡？”
 ‘Where are you going, dear?’
- (41) na ni-yokay yaken ni apo ito a.
 他.屬格 過去.受焦-叫醒 我.主格 屬格 孫子 那個 助
 3.S.GEN PA.PF-waken 1.S.NOM GEN Grandson that PAR
 “是孫子把我叫醒的”
 ‘Grandson woke me up.’

¹⁷ 以下例子，凡主事者居首 (1a, 2a, 3a)，均有正在進行或剛剛完成的意思：

- (1) a. ko koman so wakay 我正在吃地瓜 (I am eating a sweet potato.)
 b. koman ko so wakay 我想要吃地瓜/我要吃地瓜 (選擇性) (I want to eat a sweet potato.)
 (2) a. ko koman rana so wakay 我在吃地瓜了 (I am eating a sweet potato already.)
 b. koman ko rana so wakay 我要吃地瓜了 (I am about to eat a sweet potato.)
 (3) a. ko nikoman rana so wakay 我剛剛吃過地瓜了 (I just ate a sweet potato.)
 b. nikoman ko rana so wakay 我曾吃過地瓜 (I have eaten a sweet potato.)

5.5 有疑問詞之疑問句的詞序

有疑問詞之疑問句詞序如同上述名詞謂語結構詞序，疑問詞謂語在前而主語在後，主語以名物化的形式出現，形成類似分裂句結構 (Cleft sentence)，例 (42)-(45)。

- (42) [ikongo] [o ya mo ni-ma-cita]?
什麼 主格 助動 你.屬格 過去-受焦.能-看
what NOM AUX 2.S.GEN PA-PF.able-see
“你看見的是什麼？”
‘What did you see?’
- (43) [sino] [o ya ni-k-om-an so kanen mo]?
誰 主格 助動 過去<主焦>吃 斜格 飯 你.屬格
who NOM AUX PA<AF>eat OBL food 2.S.GEN
“是誰吃了你的飯？”
‘Who ate your food?’
- (44) [wájin] [o na yan-an no anak ko]?
哪裡 主格 他.屬格 在-處焦 屬格 孩子 我.屬格
where NOM 3.S.GEN be.at-LF GEN child 1.S.GEN
“我的孩子在哪裡？”
‘Where is my child?’
- (45) [ápira] [o i-toro ko jimo a nizpi]?
多少 主格 工焦-給 我.屬格 你.處格 繫 錢
how.much NOM IF-give 1.S.GEN 2.S.LOC LIN money
“我要給你多少錢？”
‘How much money should I give you?’

時間疑問詞因時間之過去或未來之不同而有不同的結構，“過去何時”用名詞結構，如 (46)，而“未來何時”（分遠近）用動詞結構、主題提前，如 (47)-(48)。有關時間詞和距離遠近的關係，請看 7.2.4 的討論。連接詞 no 和 si “如果、當”也有距離遠近之分，no 表“看不見”，指過去或未來，si 表“看得見”，指近期。

- (46) noka-ngo o k-ai mo?
 過去-何時 主格 名綴-來 你.屬格
 PA-when NOM NF-come 2.S.GEN
 “你是何時來的？”
 ‘When was it that you came?’
- (47) sima-ngo am, m-ai ka?
 未來.近-何時 呢 主焦-來 你.主格
 future.near-when TOP AF-come 2.S.NOM
 “你何時要來（近期(可預期)/可知的未來）？”
 ‘When will you come (in the near future)?’
- (48) noma-ngo am, m-ai ka?
 未來.遠-何時 呢 主焦-來 你.主格
 future.far-when TOP AF-come 2.S.NOM
 “你何時要來（遠期(無法預期)/不可知的未來）？”
 ‘When will you come (in the future, invisible or uncertain)?’

6. 動詞子句結構

前面已討論過單一動詞謂語結構，本節要討論包含兩個動詞謂語的子句結構，還可分成有助動詞和無助動詞的兩種結構，以下分述。

6.1 有助動詞的動詞結構

助動詞出現在句首，會吸引附加代名詞 (second-order pronominal) 或附加副詞 (adverbial clitics) 緊跟在後，後頭出現的主要動詞分成兩類，一類是所謂依附動詞，或稱變化形動詞（參考 6.1.1），要有一致的時態動貌和及物變化（見表五），助動詞與動詞之間，直接銜接。另一類為一般形動詞，可有繫詞 *a* 做橋樑連結（參考 6.1.2-6.1.3）。

6.1.1 助動詞與動詞緊密銜接

達悟語助動詞包含表達否定或強調的 *ji* 和表達瞬間、延續、或質疑可能性的動貌語氣詞 *to* (*toda, today*)。助動詞與動詞緊密銜接時，後頭之主要動詞，會有固

定必用的 (obligatory) 屈折變化 (inflection)，即所謂的 N- 詞音位變化 (N-morphophonemics)，如表六所示。

〈表六〉助動詞 to 和 ji 後接語幹之詞音位變化

Stem beginning with (當語根以~音開始時)	Phoneme (音素)	Change to (會轉變為~)
[+alveolar] (齒齶音) 和 [+palatal] (硬顎音)	/s/, /t/, and /c/	/n/
[+labial] (唇音)	/p/	/m/
[+velar] (軟顎音)	/k/	/ng/= [ŋ]
[+vocalic] (元音)	/i/, /a/, and /o/	/ng/= [ŋ] + vowel

表六之一為動態動詞主事者焦點變化的例子，表六之二為靜態動詞變化的例子。有關動詞分類的相關討論，詳見 6.3.1、6.3.2 節。

〈表六之一〉助動詞 to 和 ji 後接動態動詞主事者焦點變化

Stem 語根	一般型	變化型
[+alveolar] (齒齶音)	<i>salap</i> ‘飛’	<i>nalap</i>
[+palatal] (硬顎音)	<i>ciwciw</i> ‘嚇跑、追逐’	<i>niwciw</i>
[+labial] (唇音)	<i>panta</i> ‘給’	<i>manta</i>
[+velar] (軟顎音)	<i>kan</i> ‘吃’	<i>ngan</i>
[+vocalic] (元音)	<i>isan</i> ‘過夜’	<i>ngisan</i>
	<i>ai</i> ‘來’	<i>ngai</i>
	<i>oli</i> ‘回家、返回’	<i>ngoli</i>

〈表六之二〉助動詞 to 和 ji 後接靜態動詞變化

一般型	變化型
<i>ma-cimoy</i> ‘下雨’	<i>a-cimoy</i>
<i>má-miyng</i> ‘笑’	<i>a-miyng</i>
<i>ma-téneng</i> ‘聰明’	<i>a-teneng</i>
<i>ma-viay</i> ‘活著’	<i>a-viay</i>

6.1.1.1 名詞組補語的位置

名詞組補語的位置與前述單一動詞結構相同。主要動詞的語幹因為有助動詞 to 或 ji 在前而有變化。

- (49) to nálap rana o tazokok.
 就 虛.飛 已經 主格 鳥名
 AUX SUB.fly already NOM bird.name
 “tazokok 鳥就飛走了”
 ‘Then the tazokok bird flew away.’

6.1.1.2 代名詞補語的位置

附加代名詞補語，如前所述，緊跟在第一個動詞之後，故而直接跟在助動詞之後。

- (50) to na níta yaken a.
 一直 他.屬格 虛.看.受焦 我.主格 助
 AUX 3.S.GEN SUB.see.PF 1.S.NOM PAR
 “他一直看著我”
 ‘He keeps looking at me.’

6.1.1.2.1 主要動詞為不及物動詞

主格附加代名詞一般出現在助動詞之後，但也會如前述主事者居首的詞序，因應時態變化，提前到句首，如 (53)。

- (51) to ka rana ng-isan do vahay namen.
 就 你.主格 已經 主焦.虛-過夜 處格 房子 我們.屬格.除
 AUX 2.S.NOM already AF.SUB-sleep.over LOC house 1.P.GEN.EXCL
 “你乾脆在我家過夜好了”
 ‘You might as well sleep over at our house.’

- (52) ji ka mi-yakan so among,
 否 你.主格 主焦-食物 斜格 魚
 NEG 2.S.NOM AF-food OBL fish
 ta m-ingen o velek mo.
 因為 靜態-痛 主格 肚子 你.屬格
 because SV-hurt NOM stomach 2.S.GEN
 “你不要吃魚，否則你會肚子痛”
 ‘Don’t eat fish as a side dish because your stomach will hurt.’
- (53) ko ji maka-itkeh.
 我.主格 否 主焦.能-睡
 1.S.NOM NEG AF.able-sleep
 “我睡不著”
 ‘I can’t sleep.’

6.1.1.2.2 主要動詞爲及物動詞

主要動詞除了有上述表六的語幹變化以外，若爲非主事者焦點者，還有以下固定必用的屈折變化（表七）。

〈表七〉助動詞 to 和 ji 後接動態動詞非主事者焦點之變化

非主事焦點 (NAF)	一般型	變化型	主格補語之語意
受事者焦點 (PF)	-en	-a	受事者
處所焦點 (LF)	-an	-i	處所、動態動詞發生原因
工具焦點 (IF)	i-	-an	工具、客體、受惠者、靜態動詞發生原因

以下表七之一爲動態動詞非主事焦點之變化，表七之二爲靜態動詞當及物動詞使用之變化，有關動態和靜態動詞的區別，以下 6.3.1、6.3.2 兩節會詳細討論。

〈表七之一〉助動詞 to 和 ji 後接動態動詞非主事者焦點之變化

Stem 語根	一般型	變化型
[+alveolar] (齒齦音)	<i>singkad-an</i> ‘看清楚’	<i>n-ingkaj-i</i>
	<i>a-spang-an</i> ‘遇到’	<i>a-n-pang-i</i>
	<i>i-toro</i> ‘給’	<i>n-oro-an</i>
[+palatal] (硬顎音)	<i>cita-en</i> ‘看’	<i>n-ita (=n-ita-a)</i>
[+labial] (唇音)	<i>a-pno-en</i> ‘裝滿’	<i>a-m-no-a</i>
[+velar] (軟顎音)	<i>i-kelaw</i> ‘驚奇’	<i>ng-elaw-an</i>
[+vocalic] (元音)	<i>itkeh</i> ‘睡’	<i>ng-itkeh</i>
	<i>amizing-en</i> ‘聽’	<i>ng-amizing-a</i>
	<i>onot-an</i> ‘跟隨’	<i>ng-onoc-i</i>

〈表七之二〉助動詞 to 和 ji 後接靜態動詞當及物動詞之變化

一般型	變化型
<i>ma-cita</i> ‘看見’	<i>a-cita (=a-cita-a)</i>
<i>ma-sinmo</i> ‘遇見’	<i>a-sinmo-a</i>
<i>ma-kala</i> ‘找到’	<i>a-kala (=a-kala-a)</i>
<i>ka-liman-an</i> ‘打死’	<i>a-liman-a</i>
<i>ka-teneng-an</i> ‘知道’	<i>a-teneng-i</i>

屬格附加代名詞一般出現在助動詞之後，但也會如前述主事者居首的詞序，提前到句首，如 (55), (57) 皆為疑問句。名詞補語的位置仍維持屬格在前，主格在後的次序。

- (54) to mo rana noró-an jiaken
 就 你.屬格 已經 虛.給-虛.工焦 我.處格
 AUX 2.S.GEN already SUB.give-SUB.IF 1.S.LOC
 o vonong ni Kaka.
 主格 份 屬格 兄姊
 NOM share GEN older.sibling
 “你就把我哥哥的那一分給我好了”
 ‘Just give to me my brother’s share.’

- (55) mo rana to ngolí -i?
你.屬格 已經 就 虛.回家-虛.處焦
2.S.GEN already AUX SUB.go.home-SUB.LF
“你怎麼這麼早就回家了?”
‘Why did you already come back home?’
- (56) ji mo ngala-a yaken,
否 你.屬格 虛.找-虛.受焦 我.主格
NEG 2.S.GEN SUB.look.for-SUB.PF 1.S.NOM
ta ko m-angay Jimorod.
因為 我.主格 主焦-去 紅頭村
because 1.S.NOM AF-go PLN
“你不要找我，因為我要去紅頭村”
‘Don’t look for me because I’m going to Jimorod.’
- (57) mo ji ngiop-i so asoy?
你.屬格 否 虛.喝-虛.處焦 斜格 湯
2.S.GEN NEG SUB.drink-SUB.LF OBL soup
“你為什麼不喝湯?”
‘Why don’t you drink soup?’

6.1.2 指示詞當助動詞

指示詞 *ya* “這個” 語法化 (grammaticalized) 當助動詞，有下列二種意義：(一) 表示時間地點的接近說話者，(二) 對發生的事件提供背景說明。指示詞 *ya* 後接之主要動詞沒有任何屈折變化。附加代名詞或單音節附加副詞 *na*, *pa* 緊跟在 *ya* 助動詞之後；多音節副詞 *rana* 則出現在單音節代名詞之後。

- (58) ya m-ai rana o kois nio.
助動 主焦-來 已經 主格 豬 你們.屬格
AUX AF-come already NOM pig 2.P.GEN
“你們的豬來了”
‘Your (pl.) pig has come.’

- (59) mo Ina, ya ko ni-maka-hap so panganpen.
 你.屬格 母親 助動 我.主格 過去-主焦.能-拿 斜格 狐狸
 2.S.GEN Mother AUX 1.S.NOM PA-AF.able-take OBL fox
 “媽媽，我捉到一隻狐狸”
 ‘Mother, I caught a fox.’
- (60) ya ko ma-omang rana no viniay.
 助動 我.主格 受焦.能-厭膩 已經 屬格 肉
 AUX 1.S.NOM PF.able-bored already GEN meat
 “我吃肉吃到厭膩了”
 ‘I am sick and tired of meat.’

6.1.2.1 多重助動詞結構

指示詞 ya 當助動詞出現在最前面，其他的助動詞 ji 或 to 在後。

- (61) ya ji ngian do sahad ori a.
 助動 強調 虛.在 處格 裡面 那個 助
 AUX EMP SUB.exist LOC inside that PAR
 “他一定在裡面”
 ‘He is definitely inside.’
- (62) ya to mipá-kdeng o cimoy.
 助動 一直 愈來愈-嚴重 主格 雨
 AUX AUX more-heavy NOM rain
 “雨愈下愈大”
 ‘The rain is becoming heavier.’

6.1.3 助動詞與動詞之間有繫詞 a 做橋樑

有些具有副詞狀態語意的動詞，例如：oyod “真的”、ala “可能”、apia “可以”，可出現在句首，當助動詞用，與後面的主要動詞之間，以繫詞 a 銜接。

- (63) oyod a ji ko a-viay ya
真的 繫 否 我.主格 虛.能-活 這
truly LIN NEG 1.S.NOM SUB.able-alive this
“我真的活不了嗎？”
‘Am I really not be able to survive?’
- (64) ala¹⁸ ma-ka-doa a kawan ko do ilaod.
可能 靜態-動綴-二 繫 年 我.主格 處格 台灣
maybe SV-VF-two LIN year 1.S.NOM LOC Taiwan
“我在台灣可能要待兩年”
‘I might stay in Taiwan for two years.’

6.2 無助動詞的多重動詞結構

以下分別討論趨向結構、連動結構和連續結構。

6.2.1 趨向結構

趨向結構是以動詞 *mangay* “去”（或 *kangay* “然後去”）直接與其他動詞連接，後面可以不用繫詞，而 *mangay* 動詞有逐漸虛化的趨勢，形式上簡化成 *mi*，而功能上類似助動詞，例如 (65)。

- (65) mi ko i-pa-cita do kararay ko.
去 我.屬格 工焦-使-看 處格 同伴 我.屬格
go 1.S.GEN IF-CAU-see LOC companion 1.S.GEN
“我拿去給我的同伴看”
‘I’ll show it to my companion.’

6.2.2 連動結構

連動結構是以繫詞 *a* 銜接以動詞為中心詞的句子補語。繫詞 *a* 源於古南島語 (Proto-Austronesian) 指示詞 **(n)a*，其功能在於引介附屬結構，除了連動結構以

¹⁸ 例 (64) *ala* “可能”的語尾 *a* 與繫詞 *a* 合併。

外，還可用來銜接形容詞子句（詳見 7.3）。連動結構之兩個動詞擁有共同的主格補語，例 (66) 的主格補語為“那女人”，而例 (67) 的主格補語為“拿給你吃的東西”，從語境中即可得知，不必標明出來。

- (66) ya ma-téneng a ma-ganam o mavakes ito.
 助動 靜態-聰明 繫 靜態-跳舞 主格 女人 那個
 AUX SV-intellegent LIN SV-dance NOM woman that
 “那女人很會跳舞”
 ‘That woman is good at dancing.’
- (67) i-toro ko jimo a kan-en mo.
 工焦-給 我.屬格 你.處格 繫 吃-受焦 你.屬格
 IF-give 1.S.GEN 2.S.LOC LIN eat-PF 2.S.GEN
 “我拿給你吃”
 ‘I’ll give you (that) to eat.’

6.2.3 連續結構

連續結構之前綴ka-，可能是從連接詞aka“和”語法化而來，與其他動詞共同出現時，不會放在第一個動詞的位置。前綴ka-與連續發生之事件的動詞語根¹⁹組合，形成一個類似名物化的結構（參考Rau 2002b）。代名詞一般出現在附加副詞na或pa前，如 (68a)，但第三人稱複數代名詞則出現在附加副詞na或pa之後，如例 (68b)。

- (68) a. k-om-an kamo pa, ka-ngay nio rana.
 <主焦>吃 你們.主格 先 然後-去 你們.屬格 已經
 <AF>eat 2.P.NOM first CON-go 2.P.GEN already
 “你們吃了飯再走”
 ‘You (pl.) eat first before you go.’

¹⁹ 有時ka-會與動詞語幹結合，如下例(68')：

- (68') ka-pi-to-toong na no piayo do tomok da.
 然後-動綴-疊-蓋 他.屬格 屬格 竹篩 處格 中柱 他們.屬格
 CON-VF-RED-cover 3.S.GEN GEN bamboo.sifter LOC pillar 3.P.GEN
 “然後找了一個竹篩到中柱後面把自己蓋起來”
 ‘Then he covered himself with a bamboo sifter behind a pillar.’

- b. k-om-an pa sira, ka-ngay da rana.
<主焦>吃 先 他們.主格 然後-去 他們.屬格 已經
<AF>eat first 3.P.NOM CON-go 3.P.GEN already
“他們吃了飯再走”
‘They eat first before they go.’

與 ka- 動詞（及物動詞）共同出現的主事者和受事者論元都用屬格，例如 (69)。不及物動詞除了主事者以外，如有其他論元則為斜格或處格（視動詞而定），例如 (70)。

- (69) ma-ngotas so raon a ka-ptad na nia,
主焦-採摘 斜格 姑婆芋葉 繫 然後-放下 他.屬格 它.屬格
AF-pick OBL wild.taro.leaf LIN CON-put.down 3.S.GEN 3.S.GEN
ika-doa na no raon am,
第二 它.屬格 屬格 姑婆芋葉 呢
OR-two 3.S.GEN GEN taro_leaf PAR
kotas-en na ka-ptad na nia.
採摘-受焦 他.屬格 然後-放下 他.屬格 它.屬格
pick-PF 3.S.GEN CON-put.down 3.S.GEN 3.S.GEN
“他採到了葉子 (raon) 並擱在原處，採到第二片葉子時也留在原採處”
‘They picked the first wild taro leaf, and then they put it down. As for the second wild taro leaf, after they picked it, they put it down.’

- (70) ya ni-k-om-an so wakay a,
助動 過去-<主焦>吃 斜格 地瓜 助
AUX PA-<AF>eat OBL sweet.potato PAR
na ka-kan pa so ovi a.
他.屬格 然後-吃 仍 斜格 山薯 助
3.S.GEN CON-eat still OBL yam PAR
“他吃了地瓜又吃山薯”
‘He ate a sweet potato, and then he ate a yam.’

以前綴 ka- 所引介的連續結構，若有助動詞 to 或 ji 出現，會形成一個類似名物化的結構 (Rau 2002b)，最後以名詞後綴 -an 結尾，換言之，不延續名詞詞綴 (circumfix) ka-an 會將下列括號中有助動詞之動詞結構包在其中，例如 (71)-(72)。

- (71) ni-mi-'oya-'oya [ka-to na rana ngay-an] a.
 過去-主焦-疊-生氣 然後-就 他.屬格 已經 虛.去-名綴 助
 PA-AF-RED-angry CON-just 3.S.GEN already SUB.go-NF PAR
 “他因為生氣而走了”
 ‘He was very angry and then he left.’
- (72) ji a-bo [ka²⁰-ji ko angsem-an]
 強調 虛-不 名綴-不 我.屬格 虛.生吃-名綴
 EMP SUB-no NF-NEG 1.S.NOM SUB-eat.raw.meat-NF
 so mata mo.
 斜格 眼睛 你.屬格
 OBL eye 2.S.GEN
 “我非生吃了你的眼睛不可”
 ‘I will definitely (lit. by no means not) eat your eyes.’

6.3 動詞形式

達悟語動詞一般型皆為衍生詞綴 (derivational)。動態動詞為菲律賓語式的焦點動詞 (-om-, mi-, ma-, maN-, maka-, maci-, -en, -an, i-)。靜態動詞詞綴包括：靜態動詞 (ma-)、能力動詞 (ma-)、和不自主動詞 (ka-an)。其他詞綴有：使役動詞 (pa-)、已完成動詞 (ni-)、和 ka- 動詞等數種。以下的討論以動態動詞和靜態動詞為主軸。

6.3.1 動態動詞

動態動詞有及物與不及物動詞之分，以下分述。

6.3.1.1 及物與不及物

及物結構的動詞為非主事者焦點動詞 (-en, -an, i-)、能力動詞 (ma-)、和不自主動詞 (ka-an) 作及物動詞用。兩個名詞補語中，一為主事者 (Agent or actor macrorole)，一為受事者 (Patient or undergoer macrorole)。前者以屬格形式出現，而後者以主格形式出現；不及物結構包含主事者焦點動詞 (-om-, mi-, ma-, maN-,

²⁰ 例 (72) 的 ka- 則為名詞前綴因為 ka- 前原有主格o，與ji abo的o合併（有關 ka- 的其他用法詳見第 10 節）。

maka-, maci-) 和與其共同出現之名詞補語, 不允許屬格主事者 (Genitive Agent) 出現。

6.3.1.1.1 不及物動詞

不及物動詞相當於主事者焦點, 詞綴基本上分成兩類: (1) -om-, (2) m-。以下就古南島語祖語詞綴形式在達悟語中的反映, 分別討論。

6.3.1.1.1.1 不及物動詞之詞綴

動態不及物動詞與其搭配的單一名詞補語必定是主格受事者 (Nominative Patient), 其他可有斜格或處格出現, 視動詞而定。以下主要討論一般型動詞, 有關變化型詞綴之對照表, 請參照表六、七。

6.3.1.1.1.1.1 古臺灣南島語以外之祖語 (PEF) 反映 UM 動詞

UM 動詞在達悟語的反映為 -om-, 常用於主事者焦點, 其語意表達動作的瞬間性 (punctual) 或開始 (inchoative)。以下分述 -om- 的兩種組合: (一) 主焦直接與語根組合, (二) 主焦與其他動綴組合。

6.3.1.1.1.1.1.1 主焦直接與語根組合

主事焦點 -om- 的組合有中綴、前綴兩種, -om- 遇到語根是以 s, t, k, g 開頭的輔音, 則 -om- 中綴加插在語根起首的輔音和元音之間, 遇到以 l, d, r, z 開頭的輔音, 則 -om- 可以是中綴或前綴 om-, 其他情況, 則 om- 為前綴。下列 UM 動詞例子 (一般型), 均由主焦詞綴 -om- 直接與語根組合, 語根在語意上可以是及物或不及物的。出現在助動詞 to 或 ji 後之變化形, 參考表六之一。

(73) UM 動詞:

s-om-alap “飛”, t-om-anek “站起來”, k-om-an “吃”,
g-om-cin “直落下去”, l-om-oas “出海”, d-om-ket “貼著”,
r-om-iag “吃早飯”, z-om-okzok “仆倒”, om-rateng “返抵家門”,
om-paopaong “起波浪”, om-bakbak “打”, om-alam “走路”,

om-'akad “走得快”，om-dada “昇起”，om-osok “斜坡下去”，
om-zagpit “踏上”，om-vilang “數，讀”，om-iop “喝湯”，
om-lolos “大叫”，om-nowaw “出膿”

6.3.1.1.1.1.2 主焦與其他動綴組合

主焦詞綴 -om- 可與其他語幹前綴 pi-, pa-, paN-, paka-, paci-，經同化刪減後而形成 mi-, ma-, maN-, maka-, 和 maci-，以下分述。

6.3.1.1.1.1.2.1 古臺灣南島語以外之祖語反映 MAG 動詞

MAG 動詞在達悟語中的反映為 mi-和 ma-，多僅有一個論元。mi- 表達延續 (durative) 和反身或互相 (reflexive/reciprocal) 之意。以下列舉主事焦點 mi- 動詞 (一般型)：

(74) mi-動詞：

mi-alalam “玩耍”，mi-moa “種植”，mi-palit “交換”，
mi-tatanek “站著”，mi-valiw “變成”，mi-yowyaw “漫遊”

以下試比較同一個語根與 -om- 或 mi- 動詞共同出現時，語意有所不同，mi-動詞有互相之意，例如 (75)：

(75) -om- 和 mi-動詞相較

-om-動詞	mi-動詞
k-om-alay 牽著某人的手	mi-kalay 互相牽手
k-om-alopkop 抱著	mi-kalopkop 互相擁抱
om-lolo 拖著走	mi-lolo 一前一後相隨

mi-動詞在名物化結構和其他非主事焦點結構中，都會出現 pi- 的詞綴，例如 (76)。

(76) 名詞或動詞有前綴 pi-：

pi-alalam-en “拿來玩”，pi-moamoan-an “果園”，pi-palit-en “互換”，

pi-tatanek-an “站立處”，pi-valiw-en“使變成”，pi-yowyaw-an “漫遊處”

助動詞 to 或 ji 後之變化形，前綴 pi- 維持不變，其他如表七的變化，例如 *to pi-alalam-a* “就拿來玩”。

ma- 動詞的例子有 ma-noma “先”，ma-ganam “跳舞”，ma-lalayo “跑”，ma-nanala “等”。在名物化結構和其他非主事焦點結構中，都會出現 pa- 的詞綴。而助動詞 to 或 ji 後之變化形，pa- 與前綴 pi- 一樣，維持不變，例如：*to na pa-nanala-a* “他一直等”。

6.3.1.1.1.1.2.2 古臺灣南島語以外之祖語反映 MANG 動詞

MANG 動詞在達悟語的反映為 maN-，常有兩個或三個論元，受事者以斜格出現。其語意表分佈 (distributive)，指在廣大時空中多人從事多重事件或活動。以下列舉主事焦點 maN- 動詞（一般型），例子如 (77)：

(77) maN-動詞：

mamnek (maN-bnek) “指定”，manba (maN-tba) “砍”，
manazang (maN-sazang) “買”，mangap (maN-hap) “拿”

maN- 動詞在名物化結構和其他非主事焦點結構中，都會出現 paN- 的詞綴，例如 (78)。

(78) 名詞或動詞有 paN-前綴：

pamnekan (paN-bnek-an) “指定的地方，先佔有權”，panban
(paN-tba-an) “砍的地方”，panazangan (paN-sazang-an) “買的地方”，
pangapan (paN-hap-an) “拿的地方”

maN- (paN-) 的 N- 表示鼻音，但發音部位不是固定的，要依語根開頭的發音不同而產生同化，以下表八為 maN- 的詞音位變化：

〈表八〉 maN- 的詞音位變化

Stem beginning with 當語根以~開始時	Phoneme 音素	Base form 基礎型式	Change to 會轉變為~	maN+Base form maN-+基礎型式
[+labial] 唇音	/p/	<i>pili</i>	/m/	<i>mamili</i> “選擇”
	/b/	<i>bedbed</i>		<i>mamedbed</i> “捆綁”
	/v/	<i>vono</i>		<i>mamono</i> “刺人眼睛”
[+velar] 軟顎音	/k/	<i>kaod</i>	/ng/	<i>mangaod</i> “搖槳”
[+uvular] 小舌音	/h/	<i>hap</i>		<i>mangap</i> “拿”
或 [+vocalic] 元音	或元音	<i>item</i>		<i>mangitem</i> “結合”
[+alveolar]	/t/	<i>tapang</i>	/n/	<i>manapang</i> “縫補”
齒齶音	/d/	<i>dokdok</i>		<i>manokdok</i> “敲擊”
	/s/	<i>sazab</i>		<i>manazab</i> “燒烤”
[+palatal] 硬顎音	/c/	<i>cila</i>		<i>manila</i> “撿食地上的東西”
Elsewhere 出現在 其他位置			maN-+Base form	
		<i>zogazoga</i>		<i>manzogazoga</i> “狂吠”
		<i>langi</i>		<i>manlangi</i> “收割小米”
		<i>'agnat</i>		<i>man'agnat</i> “提起來”
		<i>wagwag</i>		<i>manwagwag</i> “使荒廢”
		<i>gazot</i>		<i>man-gazot</i> “蘆葦割傷”
		<i>mama</i>		<i>manmama</i> “嚼檳榔”
		<i>nakenakem</i>		<i>mannakenakem</i> “想法”
		<i>ngo</i>		<i>manngo</i> “怎樣”
		<i>rahet</i>		<i>manraherahet</i> “說人壞話”

助動詞 *to* 或 *ji* 後之變化形，前綴 *paN-* 變成 *maN-*（如表六的變化），其他焦點詞綴則如表七的變化，例如 *to manazang-i* “就買”。

6.3.1.1.1.1.2.3 古臺灣南島語以外之祖語反映 MAKA 動詞

MAKA 動詞表能力、潛力 (abilitative, potential)，在達悟語中是由主事焦點詞綴 *-om-* 與語幹詞綴 *paka-* 組合而成。以下列舉 *maka-* 主事焦點動詞（一般型）。

(79) maka-動詞

maka-cita “看得見”，maka-mizing “聽得見”
maka-vonas “能赦免”，maka-pinan “抓得牢”
maka-teneng “得知”
maka-pía²¹ “很小心的(走)，輕聲細語的(說話)，慢慢的(吃)”

maka- 動詞在名物化和非主事焦點結構中會有 paka- 詞綴出現，如下例 (80)。

(80) 名詞或動詞有 paka- 前綴：

paka-citá-en “要看清楚”， paka-mizing-en “要注意聽”
paka-vonas-en “要赦免”， paka-pinán-an “要抓牢”
paka-teneng-an “要知道”， paka-pía-en²² “把...弄好，整/修理”

助動詞 to 或 ji 後之變化形，前綴 paka- 變成 maka-（如表六的變化），其他焦點詞綴如表七的變化，例如 *to makamizing-a* “就注意聽，就忽然聽到”。

6.3.1.1.1.1.2.4 古臺灣南島語以外之祖語反映 MAKI 動詞

MAKI 動詞表跟隨一起、互相、參與 (engage in)，在達悟語中的反映是由主事焦點詞綴 -om- 與語幹詞綴 paci- 組合而成的 maci-，一般型例子如下：

(81) maci-動詞：

maci-’eza “跟隨一起”， maci-vazay “跟人一起工作”
maci-vonong “參與分配”， maci-zakazakat “與人相殘”²³

maci- 動詞在名物化和非主事焦點結構中，會有 paci- 詞綴出現，如下例 (82)。

²¹ 重音在í，表示“慢慢的，很小心的弄”，但重音若在á，則表示“弄得非常好”。

²² 同註 21。

²³ 其他與 maci- 相關的前綴還包括 masi- “彼此互相”，例如masikakey “彼此相愛”，masika’óya “彼此仇視”。此外 maci- 還可與其他詞綴（例如paN-, pa-, ka-）組合成之語幹相結合，例如 macipangayongayo (maci-paN-kayo-kayo) “跟一群人一起去砍木柴”，macipaganaganam (maci-pa-gana-ganam) “跟一群人一起去跳舞”，macikazakat (maci-ka-zakat) “跟著一起去死”，macikararoa (maci-ka-ra-roa) “加入幫忙”。

(82) 名詞或動詞有 *paci-* 前綴：

paci-'eza-an “跟隨一起”， *paci-vazay-an* “跟人一起工作”
paci-vonong-an “參與分配”， *paci-zaka-zakat-an* “與人相殘”

助動詞 *to* 或 *ji* 後之變化形，前綴 *paci-* 變成 *maci-*（如表六的變化），其他焦點詞綴如表七的變化，例如 *to macivazay-i* “就跟人一起工作”。

6.3.1.1.2 及物動詞

及物動詞至少有兩個名詞補語，一為屬格主事者 (Genitive Agent or actor macrorole)，一為主格受事者 (Nominative Patient or undergoer macrorole)。

6.3.1.1.2.1 及物動詞之詞綴

達悟語焦點系統中，主事焦點 (Agent focus)，以主事者 (Agent) 為主詞 (pivot)，而受事 (Patient focus)、處所 (Locative focus)、工具、受惠焦點 (Instrument/Benefactive focus)，分別以受事者、處所、工具、受惠者為主詞。主要焦點變化一般型，如表九所示，變化形參見表七。

〈表九〉達悟語的焦點變化

主事者焦點 (AF)	受事者焦點 (PF)	處所焦點 (LF)	工具、受惠者焦點 (IF/BF)
<i>m-/-om-</i>	<i>-en</i>	<i>-an</i>	<i>i-</i>

以下討論非主事者焦點的幾種詞綴，形成及物動詞。

6.3.1.1.2.1.1 古臺灣南島語以外之祖語反映 EN 動詞

EN 動詞在達悟語中以 *-en* 形式出現，語意特徵為直接影響 (DIRECT AFFECT)，表示動作對受事者的影響全面且直接，而且動作之動貌為將要進行或正在進行，並未完成，例如 *kan-en* “正在吃或要吃”。達悟語表示過去式、已完成的動貌標記為 *ni-*，例如 *ni-akan* “已吃”，所以 *-en* 和 *ni-* 是互斥的。

6.3.1.1.2.1.2 古臺灣南島語以外之祖語反映 AN 動詞

AN 動詞在達悟語中以 -an 形式出現，語意特徵為局部影響 (LOCAL AFFECT)，表示動作對受事者的影響為部分、表面的、或對結果有影響，指事物移動的起點或終點，並用來引申為事情發生的原因。下例 (83) 比較 -an 動詞與 -en 動詞，前者的影響是部分、表面的，後者是整體、全面的。

(83) -an 動詞與 -en 動詞相較

-an 動詞	-en 動詞
akan-an “吃一些”	kan-en “吃掉”
inom-an “喝一些”	inom-en “喝光”
kodkod-an “刮一刮”	kodkod-en “刮掉”
akdot-an “捏一捏”	akdot-en “捏掉”

6.3.1.1.2.1.3 古臺灣南島語以外之祖語反映 I 動詞

I 動詞在達悟語中以 I- 形式出現，語意特徵為影響狀態 (MANNER AFFECT)，動作對受事者的影響為將其移動位置、拿來當工具、或與其他事物連上關係。此外，I 動詞的另一個語意特徵為受惠者 (BENEFICIARY AFFECT)，表示主格受事者 (undergoer macrorole) 為動作的受惠者。下例 (84) 為 I- 動詞一般型，表原因或感受：

- (84) i-lavi “因...而哭”，i-bakbak “因...而打”，i-k-ánig “因...而不好意思”
 i-kadkad “因...而抓癢”，i-ká-miyng “為...而笑”
 i-ka-zakat “因...而死”，i-pika²⁴-zazakat “使一個一個死掉”
 i-pika-nokanoka “使身體(多處)長瘡”

6.3.2 靜態動詞

靜態動詞亦可視為是一種被動形式，它是不及物動詞，與及物動詞之間有衍

²⁴ pika- 有逐漸、紛紛、全都之意。例如 imika-zazakat “全都死了”，mika-yokayokay “紛紛醒來”，ma-pika-raherahet “使弄得亂七八糟”。

生關係，而且主事者多半不顯示出來。

6.3.2.1 古臺灣南島語以外之祖語反映 MA 動詞

前述的 mi-, maN-, maka-, maci- 動詞都是 -om- 與 pi-, pa-, paN-, paka-, paci- 結合的結果。以主焦動詞形式出現時，以 m- 開頭，以名物化或非主焦形式出現時，以 p- 開頭。但靜態動詞 MA 卻沒有與任何 p- 開頭的詞綴有衍生關係，但可能與 ka- 有衍生關係（參 6.3.2.2）。其語意上有完成貌，表示已發生的事件影響到受事者目前的狀態，例子如下：

(85) MA 動詞：

ma-cimoy “下雨”，ma-sálit “很困難”，ma-rílaw “同情”，
ma-táva “很胖”，ma-téneng “聰明”，m-ámo “覺得難為情”，
ma-óyat “很有力氣、很勤勞”

6.3.2.1.1 表直接影響之潛力或能力

靜態動詞 MA 與非主事者焦點詞綴亦有衍生的關係。最常見的是表潛力或能力之 MA 動詞與受焦 EN 動詞之間的衍生關係。以下例句 (86) 為及物動詞，有主事者屬格“你”和受事者主格“鍋子”共同出現，而 (87) 為衍生出來的 MA 動詞，屬格主事者不出現，主格受事者“我挖的地瓜”做名詞補語。

(86) apno-en mo o vanga no wakay.
裝滿-受焦 你.屬格 主格 鍋子 屬格 地瓜
fill-PF 2.S.GEN NOM pot GEN sweet.potato
“用地瓜塞滿鍋子”
'Fill the pot with the sweet potatoes.'

(87) ya ma-pno do yala o ko
助動 靜態-滿 處格 籃子 主格 我.屬格
AUX SV-full LOC basket NOM 1.S.GEN
ni-kali a wakay.
過去.受焦-挖 繫 地瓜
PA.PF-dig LIN sweet.potato

“我挖的地瓜裝滿了籃子”

‘The basket is full of the sweet potatoes I dug.’

另一種詞綴 *ka-an* 則是表示“不自主的、或不幸的事件”。以下例句 (88) 為及物動詞，而 (89) 為衍生出來的 *ka-an* 動詞，屬格主事者不出現。

- (88) maká-gza ka, ta na imo adas-en.
 主焦.動綴-要快 你.主格 因為 他.屬格 你.主格 趕上-受焦
 AF.VF-fast 2.S.NOM because 3.S.GEN 2.S.NOM catch.up-PF
 “你走快一點，因為他快趕上你了”
 ‘(Walk) faster because he will catch up with you (soon).’

- (89) ko ka-das-an.
 我.主格 動綴-趕上-動綴
 I.S.NOM VF-catch.up-VF
 “我快要大便了（被“便急”趕上了）”
 ‘I am about to have a bowel movement (lit. I got caught up).’

其他靜態動詞詞綴尚有：*mapaka-*“假裝”，例如 *mapaka-toktoklay* “假裝跛腳”，*mapaka-ititkeh* “假裝睡覺”；*mala-*“有...的味道或模樣”，例如 *mala-kakagling* “有羊騷味”，*mala-ngépen* “暴牙”。*ma-...-in* “很愛...的”，例如 *ma-miyimíying-en* “很愛笑的”，*ma-lavilávi-in* “很愛哭的”。

6.3.2.1.2 靜態動詞 MA 重新分析為及物動詞

雖然靜態動詞一般都不會有主事者出現，但 MA 動詞和不自主動詞 KA-AN 也會發展出及物動詞的模式，有屬格主事者和主格受事者為補語。動詞語意表示潛力、能力，或動作已完成之意，受事者必須是不由自主的或是有可能受到影響。

- (90) ma-kala ta o mogis nio?
 能.受焦-找到 我們.屬格.含 主格 米 你們.屬格
 able.PF-find 1.P.GEN.INCL NOM rice 2.P.GEN
 “我們找得到你們的米嗎？”
 ‘Can we find your rice?’

- (91) ko ma-cita imo ya om-avang do aleleh.
 我.屬格 能.受焦-看到 你.主格 助動 主焦-搭乘 處格 車
 1.S.GEN able-PF 2.P.NOM AUX AF-load LOC car
 “我看見你上車”
 ‘I saw you getting in the car.’
- (92) ko ká-tenng-an imo.
 我.屬格 動綴-認識,知道-動綴 你.主格
 1.S.GEN VF-know-VF 2.S.NOM
 “我認識你”
 ‘I know you.’

6.3.2.2 古臺灣南島語以外之祖語反映 KA 動詞

達悟語的靜態 KA 動詞與表潛力或能力之 MA 動詞有衍生關係。因為 MA 靜態動詞的語根在形成及物動詞時，會有 ka- 語幹詞綴出現，以下例子是 ma- 和 i-ka- 動詞之對照：

- (93) ma-zakat “死掉” i-ka-zakat “使死的原因”
 má-miyng “笑” i-ká-miyng “覺得好笑”

另外 ma- 動詞和 ka- 動詞有事實 (realis) 和非事實 (irrealis) 的對照，前者有出於意願的意思，而後者則是非自願的。以下 (94a) 的動詞 ma-loit 表說話者可能是自己弄得很髒；而 (94b) 的動詞 ka-loit 則有非自願、不得已之意，因為弄得很髒是情非得已的：

- (94) a. ya ko má-snek, ta ya ko ma-loit
 助動 我.主格 靜態-羞怯 因為 助動 我.主格 動綴-髒
 AUX 1.S.NOM SV-embarrassed because AUX 1.S.NOM VF-filthy
 “我不好意思，因為我很髒。”
 ‘I was embarrassed because I was filthy.’
- b. ya ko má-snek do ya ko ka-loit.
 助動 我.主格 靜態-羞怯 處格 助動 我.屬格 動綴-髒
 AUX 1.S.NOM SV-embarrassed LOC AUX 1.S.GEN VF-filthy

“我因為很髒而覺得羞怯（弄得很髒是情非得已的）”

‘I was very embarrassed because I happened to get so filthy.’

6.4 存現動詞

存現動詞分為有主格名詞補語和沒有主格名詞補語兩類。前者還可分為“某人、某物在或不在”和“某人擁有或沒有某物”兩種，所擁有或存在之物為有定的，例 (95)-(98)；後者沒有主格名詞補語，所擁有或存在之物則是無定的，例 (99)-(100)。

- (95) ya m-ian do vahay da o mavakes.
助動 主焦-在 處格 房子 他們.屬格 主格 女人
AUX AF-be.at LOC house 3.P.GEN NOM woman

“女人在他們家”

‘The woman is at their house.’

- (96) abo rana o kanen.
不在 已經 主格 食物
no already NOM food

“食物沒有了”

‘The food is gone.’

- (97) ya m-ian o savong no tamek do makaves.
助動 主焦-有 主格 花 屬格 草 處格 女人
AUX AF-have NOM flower GEN grass LOC woman

“女人有花（花在女人處）”

‘The woman has the flower.’

- (98) ya abo o savong no tamek do mavakes.
助動 無 主格 花 屬格 草 處格 女人
AUX no NOM flower GEN grass LOC woman

“女人沒有花（花不在女人處）”

‘The woman does not have the flower. The flower is not at the woman’s place.’

- (99) ya m-ian so tao do vahay da.
助動 主焦-有 斜格 人 處格 房子 他們.屬格
AUX AF-have OBL human LOC house 3.P.GEN

“他們家有人”

‘There is someone in their house.’

(100) abo so kanen.

無 斜格 食物

no OBL food

“沒有食物[的人]”

‘(Someone who) has no food.’

6.5 祈使動詞

祈使句分肯定和否定兩類。凡不及物動詞則以語幹原形出現，例 itkeh! “睡覺”，而及物動詞的後綴變成 i-，如 (101)-(102)。祈使否定詞為 jia- “別”，例如 (103)-(104)。

(101) akan-i o wakay ito.

吃-受焦.祈使 主格 地瓜 那個

eat-PF.IMP NOM sweet.potato that

“把那地瓜吃掉！”

‘Eat up the sweet potato!’

(102) linas-i o rasay ko.

擦-處焦.祈使 主格 蓆子 我.屬格

wipe-LF.IMP NOM bamboo.mat 1.S.GEN

“麻煩你擦我的蓆子！”

‘Wipe off my bamboo mat!’

(103) jia pan-mama, ta ma-langa ka.

別 動綴-嚼 因 靜態-醉 你.主格

NEG.IMP VF-chew because SV-drunk 1.S.NOM

“別吃檳榔，否則你會醉！”

‘Don’t chew betel nut, otherwise you will get drunk!’

(104) jia apis-i o ayob ko.

別 洗-處焦.祈使 主格 衣服 我.屬格

NEG.IMP wash-LF.IMP NOM clothes 1.S.GEN

“別洗我的衣服！”

‘Don’t wash my clothes!’

6.6 使動結構 pa-

使動前綴 pa- 滋力非常強，幾乎可以直接加在所有的語根前，形成及物動詞 (pa-en, ipa-)，例如 (105)-(106)。不及物動詞使動結構包括 mapi-²⁵ 和 mapa-，例如 (107)-(108)。

- (105) pa-dket-en ko pa o ya ni-ma-zizi a vakong.
 使-粘貼-受焦 我.屬格 先 主格 助動 過去-靜態-撕破 繫 書,紙
 CAU-adhere-PF1.S.GEN first NOM AUX PA-SV-tear LIN book
 “我把撕破的書本貼一下”
 ‘I will first mend the torn book.’

- (106) mo i-pa-kan so manok nio o ri?
 你.屬格 工焦-使-吃 斜格 雞 你們.屬格 主格 那
 2.S.GEN IF-CAU-eat OBL chicken 2.P.GEN NOM that
 “那是你要餵雞用的嗎？”
 ‘Is that what you will use to feed your chickens’

- (107) no to nake-nakém-a o nizpi am,
 當 一直 疊-想-受焦.虛 主格 錢 呢
 if AUX RED-think-PF.SUB NOM money TOP
 ji mapi-ra-raten.
 強調 使-疊-不許
 EMP CAU-RED-forbid
 “如果一直想錢，它就會引人犯罪”
 ‘If (one) keeps thinking about the money, it will cause (one) to sin.’

- (108) ya ni-mapa-lavi so kanakan o mavakes.
 助動 過去-使-哭 斜格 小孩 主格 女人
 AUX PA-CAU-cry OBL child NOM woman
 “這女人弄哭了一個小孩”
 ‘The woman caused a child to cry.’

²⁵ mapi- 亦可與動詞或名詞語幹連接，形成名詞，意為“擁有(語幹)的人，從事(語幹)職業之人”，例如 mapiviniay “飼養動物的人(飼主)”，mapivatatek “老師”。

7. 名詞組結構

7.1 詞序

名詞組中常見的詞序為中心詞之前是定詞 (Determiner) 或分析成格位標記 (Case markers)，後面跟著其他成分。

7.2 定詞

達悟語的定詞(格位標記)系統分(一)一般名詞和(二)人名、親屬名詞兩者，後者還要分單複數。定詞的格位變化最多可有主格、屬格、處格、和斜格四種，詳見表十：

〈表十〉達悟語的定詞(格位標記)系統

	主格	屬格	處格	斜格
一般名詞前	o	no	do	so
人名、親屬前 單數	si	ni	ji	--
人名、親屬前 複數	sira	nira	jira	--

mina 與定詞連用，表示“過去、曾經、已故”之意，一定出現在名詞前面，例如 (109)-(110)。

- (109) si mina Paloy
 主格 已故 巴雷
 NOM late PN
 “已故之巴雷”
 ‘Late Paloy’

- (110) ma-láhet o mina vahay namen nokakoa.
 靜態-壞 主格 以前 房子 我們.屬格.除 很久以前
 SV-bad NOM PA house 1.P.GEN.EXCL before
 “我們以前的房子很不好”
 ‘Our house in the past was not very good.’

7.2.1 定詞系統之句法語意一致特徵

7.2.1.1 格位標記的一致性

以下的主題化結構中，被提前的主題為主格 *o*，後接的名詞一定是有定的。在主要子句中及物動詞之主事者為屬格 *no*，第三個論元為斜格 *so*，其後接的名詞一定是無定的，而做地點副詞的名詞組定詞為處格 *do*。

- (111) *o* *i-pi-vat-vatek* *rana* *ya* *am*,
主格 工焦-動綴-疊-刻 已經 這 呢
NOM IF-VF-RED-carve already this TOP
ni-pi-vat-vatek *na* *no* *mehakay*
過去.工焦-動綴-疊-刻 他.屬格 屬格 男人
PA.IF-VF-RED-carve 3.S.GEN GEN man
so *ngaran* *no* *mavakes* *do* *vakong*.
斜格 名字 屬格 女人 處格 紙
OBL name GEN woman LOC paper
“這筆是男人拿來寫過一個女人的名字在紙上的筆”
‘As for this pen, it was used by the man to write a woman’s name on the paper.’

7.2.2 一般名詞與人名親屬名詞

如表十所顯示，一般名詞與人名、親屬名詞要用不同的定詞 (*o*, *si* 或 *sira*)。無論人名或親屬名詞在被提及時都有定詞，如 *si*, *ni* 或 *ji* 在前；但在直呼時，前面不必加定詞 *si*，但可加第二人稱屬格代名詞 *mo* “你”，例如 *Ina* “媽媽！”或 *mo Ina* “你，媽媽！”，*Salang* “沙浪！”，*mo Salang* “你，沙浪！”，*Sinsi* “老師！”，*mo Sinsi* “你，老師！”。

7.2.3 有定與無定

不及物動詞的非主事者和及物動詞中主事者和受事者以外的論元，多為無定的，例如上述 (111) 斜格 *so* 後的名詞組是無定的。主格名詞則為有定的（有數字“一”出現的名詞組例外，詳見 7.2.5 的討論）。

7.2.4 距離的遠近

達悟語有一套指示詞（如表十一），在名詞組當中表示距離的遠近。所謂近 (PROXIMATE)，是指現在、可見、已知、接近、特指、事實、和活的事物；所謂遠 (REMOTE)，是指過去、看不見、不可知、遙遠、泛指、假設、或死的事物。指示詞的遠近與人稱（第一、第二、第三人稱）的遠近亦緊密相關。

〈表十一〉達悟語表距離遠近之指示詞

距離最近	主格（粘著）	主格（自由）	屬格	處格	斜格
第一人稱	ya	o ya	no nia	do jia	so sia
第二人稱	ori	o ri	no nang	do dang	so sang
第三人稱	ito	o ito	no nito	do jito	so sito
距離最遠				do koang	

下例之指示詞以自由形式出現在名詞組中做中心詞。o ya 較近，o ri 較遠，o ito 最遠，也分別指“接近我”、“接近你”、和“接近他”。

- (112) hap-en ko o ya, hap-en mo o ri a,
 拿-受焦 我.屬格 主格 這 拿-受焦 你.屬格 主格 那個.近 助
 take-PF 1.S.GEN NOM this take-PF 2.S.GEN NOM that.near PAR
 hap-en na o ito.
 拿-受焦 他.屬格 主格 那個.遠
 take-PF 3.S.GEN NOM that.far
 “我拿這個，你拿那個（近你），他拿那個（近他）”
 ‘I’ll take this. You’ll take that (close to you). He’ll take that (close to him).’

下例之指示詞以粘著形式放在名詞後做修飾成分：

- (113) ra-roa ka kanakan o mi-ava-avang
 疊-兩 連 小孩子 主格 主焦-疊-遊船
 RED-two CON child NOM AF-RED-row.a.boat
 do aarang ito am, to da
 處格 海邊停泊處 那個.遠 助 就 他們.屬格
 LOC moorage that.far PAR AUX 3.P.GEN

ngao-kaód-a o tatala da **ori** am
虛.疊-划-虛.受焦 主格 船 他們.屬格 那個.近 助
SUB.RED-row-SUB.PF NOM boat 3.P.GEN that.near PAR
“有兩個小孩子在那海上（較遠）遊船，他們划著那船（較近），一直划著”
‘Two children were rowing a boat in the ocean. They kept rowing.’

以下 (114)-(116) 例子分別顯示指示詞為主格、屬格、和斜格的變化。

- (114) kan-en ko o ya.
吃-受焦 我.屬格 主格 這
eat-PF 1.S.GEN NOM this
kan-en mo o ri,
吃-受焦 你.屬格 主格 那.近
eat-PF 2.S.GEN NOM that.near
kan-en na o ito.
吃-受焦 他.屬格 主格 那.遠
eat-PF 3.S.GEN NOM that.far
“我吃這個，你吃那個，他吃那個”
‘I’ll eat this. You’ll eat that. He’ll eat that.’
- (115) ya pía o kakanan no nia.
助動 好 主格 口感 屬格 這.屬格
AUX good NOM taste GEN this.GEN
ya pía o kakanan no nang?
助動 好 主格 口感 屬格 那.近.屬格
AUX good NOM taste GEN that.near.GEN
ya pía o kakanan no nito.
助動 好 主格 口感 屬格 那.遠.屬格
AUX good NOM taste GEN that.far.GEN
“這個（吃的）口感不錯（近我）。那個口感好不好（近你）？那個口感也不錯呢（近他）”
‘This (close to me) tastes good. Does that (close to you) taste good? That tastes good (close to him).’

- (116) akman so sia.
 像 斜格 這.斜格
 like OBL this.OBL
 akman so sang.
 像 斜格 那.近.斜格
 like OBL that.near.OBL
 akman so sito.
 像 斜格 那.遠.斜格
 like OBL that.far.OBL
 “就像我這個。就像你那個。就像他那個”
 ‘Like this (with me). Like that (with you). Like that (with him).’

以下例子顯示從最近到最遠 (do jia, do dang, do jito, do koang) 和人稱的關係。

- (117) am-lisna ka do dang a, am-lisna ko do jia,
 主焦-坐 你.主格 處格 那裡.近 助 主焦-坐 我.主格 處格 這裡
 AF-sit 2.S.NOM LOC there.far PAR AF-sit 1.S.NOM LOC here
 am-lisna si wari ta do jito.
 主焦-坐 主格 弟妹 我們.屬格.含 處格 那裡.遠
 AF-sit NOM younger.sibling 1.P.GEN.INCL LOC there.near
 “你坐那裡（近你），我坐這裡，妹妹坐那裡（近她）”
 ‘You sit there (close to you). I sit here. My sister sit there (close to her)’
- (118) mi ko do koang a m-itkeh.
 去 我.主格 處格 那裡.很遠 繫 主焦-睡覺
 go 1.S.NOM LOC there.very.far LIN AF-sleep
 “我去（離此處較遠）別處睡覺”
 ‘I’ll go there (very far from here) to sleep.’

此外，達悟語的時間詞亦有距離遠近的變化，如表十二：

〈表十二〉時間詞與距離遠近的關聯對應

遠 (過去)		近 (現在)		遠 (未來)	
nokango 過去何時		simango 現在/未來何時		nomango 未來何時	
nokakoa 很久以前		nokaikoa 不久之前	siciaikoa 現在	simaikoa 不久的未來	nomaikoa 很久以後
近 遠		nokacitoai na 剛才	siciatoai ya 此刻	citoai na 待會兒	
		nokaipisa 上次	siciaikoa ya 這次	sipisa 下次	noipisa 以後有機會時
		nokakoyab 昨日	siciaraw ya 今天	simaraw 明天	
		nokamnasavehan 上個月	do vehan ya 本月	simaksavehan 下個月	
上 下		nokapepezak 早上	siciapnezak ya 早上	sipnezak 明天早上	
		nokamararaw 中午	siciamararaw ya 中午	simararaw 今天中午	
		nokamakoyab 下午	siciamakoyab ya 下午	simakoyab 今天下午	
		nokamahep 昨晚	siciamahep ya 今晚	simahep 今天晚上	

7.2.5 特指與泛指

主格名詞都是有定的，但如果前面有數字“一”，至少也是特指（即說話者心中知道該名詞有特定的指涉），如例 (119)。

- (119) asa ka ciri-ciring da, ci-cilo-an ko
 一 連 疊-話 他們.屬格 疊-耳聞-處焦 我屬格
 one CON RED-word 3.P.GEN RED-hear-LF 1.S.GEN

do ili ta ya Jiranmlek ya am.
 處格 村莊 我們.屬格.含 這 東清村 這 助
 LOC village 1.P.GEN.INCL this PLN this PAR
 “還有一篇故事，也是在我們這個東清村裡聽到的故事”
 ‘There is one more story that is also a story we heard in Jiranmlek village.’

7.2.6 單複數

達悟語的人名、親屬名詞要分單複數（如表十），表示複數的定詞與表第三人稱複數之代名詞自由形式一樣，如 (120)。

(120) sira²⁶ ina aka nira kaminan.
 主格.複數 母親 連 屬格.複數 阿姨
 NOM.P Mother CON GEN.P Aunt
 “我母親他們和我阿姨他們”
 ‘My mother and my Aunt.’

達悟語的人稱代名詞（表十三）有單複數、格位變化、與自由粘著之分。

〈表十三〉達悟語的人稱代名詞

	主格（粘著）	主格（自由）	屬格（粘著）	屬格（自由）	處格（自由）
一單 “我”	ko	yaken	ko	niaken	jiaken
二單 “你”	ka	imo	mo	nimo	jimo
三單 “他”	ya	iya	na	nia	jia
一複-對話者 “我們”	namen	yamen	namen	niamen	jiamen
一複+對話者 “咱們”	ta, tamo, takamo	yaten	ta	niaten	jiaten
二複 “你們”	kamo, kanio	inio	nio	ninio	jinio
三複 “他們”	sia	sira	da	nira	jira

²⁶ sira+稱謂，用於提及親朋好友，其他例子如：sira kaka（我哥哥他們），sira kehakay（我的男性朋友們）。

代名詞的粘著形式已從原來僅有的後附加形式 (enclitic) 發展成前附加形式 (proclitic)，且與後附加形式並存，以區分時態。第三人稱單數代名詞形式原本不存在，但此空缺可用指示詞ya/iya²⁷ “這” 替代。

複數的其他表現方式包括有：(一) 在一般名詞前用複數定詞manga “各位”，稱呼對話者，例如manga maran “各位叔叔”，manga kehakay “各位(男性)朋友”，manga anak ko “我親愛的孩子們”²⁸，(二) 重疊該名詞首之音節²⁹，有“一群”的意思，例如ma-mavakes “婦女們”，ka-kanakan “一群小孩子”，(三) 用mi-, mala- 前綴與親屬稱謂相連，表示兩人或三人以上的親屬關係，如例子(121)-(122)，(四) 用斜格指示詞sia³⁰ 當主格複數粘著形式，如例子(123)。

- (121) m-ámiying sira mi-ina.
 主焦-笑 他們.主格 二人關係-母親
 AF-laugh 3.P.NOM group.of .two-mother
 “他們母子/女二人開心的笑”
 ‘The mother and her son/daughter (in a group of two) are laughing.’

²⁷ iya作為第三人稱單數主格自由形式的例子如下：

(a) iya rana am, tey-kákey na o among.
 他.主格 已經 呢 最-愛 他.屬格 主格 魚
 3.S.NOM already TOP very-like 3.S.GEN NOM fish
 “他呀，他最愛吃魚了”
 ‘As for him, he likes fish very much.’

ya 作為第三人稱單數主格粘著形式的例子如下：

(b) ya koman so wakay si Sozi.
 他.主格 <主焦>吃 斜格 地瓜 主格 人名
 3.S.NOM <AF>eat OBL sweet.potato NOM PN
 “si Sozi 在吃地瓜”
 ‘si Sozi is eating a sweet potato.’

²⁸ manga anak ko也可針對一個孩子而言，例如：ya aro o mo nimamong, manga anak ko. “你捕的魚很多，孩子！” (You caught a lot of fish, Son!)

²⁹ 參考 3.2 重疊法。

³⁰ sia的兩個用法歸納如下：(1) 當斜格，例如 koman ko so sia “我要吃這個”，zazasagan ta, kasongisongit ta sia, “我們踐踏他，然後咬他”，(2) 當第三人稱複數粘著代名詞：sia miyangay so katavatava. “他們一樣胖”。

- (122) ya api-pía tao sira mala-ina³¹.
 助動 疊-都很漂亮 人 他們.主格 三人關係-母親
 AUX RED-good-looking human 3.P.NOM group.of.three-mother
 “他們母子/女三人都很漂亮”
 ‘The mother and her sons/daughters (in a group of three) are all good-looking.’
- (123) to sia ma-la-láyo ori o mi-ina ori a.
 就 他們.主格 主焦-疊-跑 那個 主格 二人關係-母親 那個 助
 AUX 3.P.NOM AF-RED-run that NOM group.of.two-mother that PAR
 to ma-la-láyo sira om-oli am,
 就 主焦-疊-跑 他們.主格 主焦-回家 助
 AUX AF-RED-run 3.P.NOM AF-go.home PAR
 mapa-zeveng rana sira ori a.
 使-關上 已經 他們.主格 那個 助
 CAU-close already 3.P.NOM that PAR
 “他們母女倆開始用跑的回家，一直跑，進了家門以後，就趕緊把門關上”
 ‘The mother and daughter ran back toward home. They kept on running, and when they got home they closed the door.’

7.3 形容詞子句

形容詞子句修飾名詞，可分成動詞和“形容詞”兩類，以下分述。

7.3.1 動詞形容詞子句

動詞形容詞子句和名詞之間以繫詞 a 銜接，而形容詞子句之中心詞為動詞。例 (124) 為不及物動詞，在方括號之中的形容詞子句，以空缺代替 tazokok “鳥名”。例 (125) 為及物動詞，在方括號之中的形容詞子句，以空缺代替 wakay “地瓜”。例 (126) 仍為及物動詞，但有兩個以上的論元時，以空缺代替者必須是主格受事者。

³¹ 父子、女三人為malama (mala-ama)，父子、女二人則為mi-ama。

- (124) aro a tazokok a [om-oli do ili].
多 繫 鳥名 繫 主焦-回家 處格 村莊
many LIN bird.name LIN AF-go.home LOC village
“很多 tazokok 鳥回到村莊去”
‘(There are) many tazokok birds that went back to the village.’
- (125) [ko ni-pangay do vanga] a wakay.
我.屬格 過去.受焦-放 處格 鍋子 繫 地瓜
1.S.GEN PA.PF-put LOC pot LIN sweet.potato
“我放在鍋子裡的地瓜”
‘The sweet potato that I put in the pot.’
- (126) o [dengdeng-an namen so rahet] a vanga aka
主格 煮-處焦 我們.屬格.除 斜格 男人魚 繫 鍋子 連
NOM cook-LF 1.P.GEN.EXCL OBL fish.for.men LIN pot CON
no [pangay-an namen so rahet] a kakanan am,
屬格 放-處焦 我們.屬格.除 斜格 男人魚 繫 盤子 助
GEN put-LF 1.P.GEN.EXCL OBL fish.for.men LIN plate PAR
[i-panci namen] a raratan.
工焦-叫 我們.屬格.除 繫 器物名
IF-call 1.P.GEN.EXCL LIN utensil.name
“我們煮男人魚的鍋子和放男人魚的盤子，我們叫它 raratan”
‘The pots in which we cook rahet fish and the plates on which we put rahet fish are called raratan by us.’

7.3.2 “形容詞” 形容詞子句

達悟語沒有形容詞之獨特詞類，從下面括號中“形容詞”子句的例子可看出，這些在中文或英文翻譯上為形容詞的中心詞，不是名詞就是靜態動詞。

- (127) [rako] a vahay
大 繫 房子
big.one LIN house
“大房子”
‘A big house’

- (128) alibangbang a [ma-vaheng so panid]
 飛魚 繫 靜態-黑 斜格 翅膀
 flying.fish LIN SV-black OBL wing
 “黑翅飛魚”
 ‘Flying fish with black fins’
- (129) yaken o [ya ma-lavang] a ayob ori.
 我.主格 主格 助動 靜態-白 繫 衣服 那個
 I.S.NOM NOM AUX SV.white LIN clothes that
 “那件白色的衣服是我的”
 ‘Those white clothes are mine.’

7.3.3 形容詞子句與其修飾的名詞之間的相關位置

形容詞子句與其修飾的名詞之間的相關位置以中心詞在前為基本詞序。形容詞子句出現在被修飾的名詞之前為有標 (marked) 的限定用法 (restrictive)，而在被修飾的名詞之後為無標 (unmarked) 的修飾用法 (non-restrictive)。

- (130) ko ni-ma-cita o [ji á-kneng] a kanakan.
 我.屬格 過去-能.受焦-看 主格 否 虛-靜 繫 小孩子
 I.S.GEN PA-able.PF-see NOM NEG SUB-still LIN child
 “我看見了那個好動的（靜不下來）小孩”
 ‘I saw the child who cannot hold still.’
- (131) ko ni-ma-cita o kanakan a [ji á-kneng].
 我.屬格 過去-能.受焦-看 主格 小孩子 繫 否 虛-靜
 I.S.GEN PA-able.PF-see NOM child LIN NEG SUB-still
 “我看見了那個小孩很好動（靜不下來）”
 ‘I saw that child, who cannot hold still.’

7.3.4 形容詞子句之標記

形容詞子句一般會跟在繫詞 a 之後修飾前面的名詞。另外在數字和指人/物的名詞中間還有一種特別的繫詞 aka，原來是連接詞“和”，例如 wakay aka no soli “地瓜和芋頭” si Ama aka ni Ina “父親和母親”，但可當繫詞用，如例 (132)-(133)。有關數字之討論，請參考第九節。

- (132) na-nem aka tao o ika-ka-roa-n da
Ca-疊-六 連 人 主格 第-名綴-二-名綴 它們.屬格
Ca-RED-six CON human NOM OR-NF-two-NF 3.P.GEN
“十六（第二個十裡的六）人”
‘Sixteen (six of the second ten) people’
- (133) asa aka among
一 連 魚
one CON fish
“一條魚”
‘A fish’

8. 比較結構

當比較兩類人或物時，以連接詞 *aka* 相連，被比較的對象若為人名、親屬名稱，屬格用 *ni*，如例 (134)，被比較的若為代名詞，則用屬格代名詞自由形式，如 (135)，如比較一般名詞，則屬格用 *no*，如例 (136)。

- (134) ya ma-tava-tava si Ina aka ni Ama.
助動 靜態-疊-胖 主格 母親 連 屬格 父親
AUX SV-RED-fat NOM Mother CON GEN Father
“我媽媽比我爸爸胖”
‘Mother is fatter than Father.’
- (135) ya ko rak-rakeh aka nimo.
助動 我.主格 疊-老 連 屬格.你
AUX 1.S.NOM RED-old CON 2.S.GEN
“我年紀比你大”
‘I am older than you are.’
- (136) ya nar-naro o cinalolot aka no sisikod.
助動 疊-長 主格 長矛 連 屬格 木杖
AUX RED-long NOM spear CON GEN wooden.stick
“長矛比木杖長”
‘The spear is longer than the wooden stick.’

8.1 用重疊法表示比較級

表示名詞或靜態動詞之程度，也有重疊法和詞綴法兩類。語根前兩個音節重疊（*rako-rako* “較大的”）和去除語尾輔音之重疊（*ma-rehe-rahet* “較壞”）表示比較級。語根前一個音節重疊（*ma-le-léma* “都很懶惰”），則表示複數，如 (137) 對照及例子 (138)-(139) 所示。注意重音變化，以下特別標注之重音都在倒數第二音節，否則重音在最末音節。

(137) 比較級和複數之重疊法：

好 <i>apía</i>	較好 <i>a-pia-pia</i>	都很好 <i>a-pi-pía</i>
胖 <i>matáva</i>	較胖 <i>ma-tava-tava</i>	都很胖 <i>ma-ta-táva</i>
長 <i>anáro</i>	較長 <i>a-naro-naro</i>	都很長 <i>a-na-náro</i>
暗 <i>masári</i>	較暗 <i>ma-sari-sari</i>	都很暗 <i>ma-sa-sári</i>
髒 <i>malóit</i>	較髒 <i>ma-loi-loit</i>	都很髒 <i>ma-lo-lóit</i>
近 <i>másngen</i>	較近 <i>ma-snge-sngen</i>	都很近 <i>ma-sé-sngen</i>

(138) *ko ma-táva-tava aka ni Kaka.*
 我.主格 靜態-疊-胖 連 屬格 兄姊
 1.S.NOM SV-RED-fat CON GEN older.sibling
 “我比姊姊胖”
 ‘I am fatter than my older sister.’

(139) *namen ma-tá-táva sira kaka.*
 我們.主格.除 靜態-疊-胖 主格.複數 兄姊
 1.P.NOM.EXCL SV-RED-fat NOM.P older.sibling
 “我們姊妹們都很胖”
 ‘We sisters are all fat.’

8.2 用詞綴法表示比較級

詞綴法則包括下列常見的四種前綴：(一) 在靜態動詞 *ma-* 前加 *tey-*³² 前綴“非常、太”，例 (140)，(二) 將靜態動詞 *ma-* 前綴代換成 *ji a-* “非常”（原為靜態否定詞前綴，引申強調程度），例 (141)，(三) 直接在語根上加前綴 *mipa-* “愈來愈來

³² *tey-* 前綴亦可表方位，例如 *tey-laod* “下面”，*tey-rala* “靠裡面的”，*tey-ngato* “上方、上面”，*tey-rahem* “下方、下面”。

愈”，例 (142)，或mipipa- “更加的”，例 (143)，(四) 直接在語根上加前綴 ni- 形成名詞，並以屬格代名詞表示有定，例 (144)。

- (140) ko tey-má-tava rana.
我.主格 太-靜態-胖 已經
1.S.NOM too-SV-fat already
“我太胖了”
‘I am too fat.’
- (141) ya ji a-pía o kakanan na.
助動 強調 虛-好 主格 口感 它.屬格
AUX EMP SUB-good NOM taste 3.S.GEN
“（食物）口感很不錯哦”
‘The taste (of the food) is very good.’
- (142) ya rana mipa-pia o kakawan.
助動 已經 愈來愈-好 主格 天氣
AUX already become.more-good NOM weather
“天氣漸漸（愈來愈）好轉了”
‘The weather is getting better.’
- (143) ya ji a-golang a, ya mipipa-tava a.
助動 否 虛-瘦 助 助動 更加-胖 助
AUX NEG SUB-thin PAR AUX more.and.more-fat PAR
“他不變瘦，反而更胖了”
‘He is not thin but getting fatter.’
- (144) ni-apia na o yaken.
最好 它.屬格 主格 我.主格
most-good 3.S.GEN NOM 1.S.NOM
“我的最好”
‘Mine is the best.’

8.3 詞綴加重疊法表示比較級

表示比較級亦可用前綴 ka- 加上重疊之語根形成動詞，名詞補語用屬格，例 (145)：

- (145) ka-tava-táva no kois nio!
 非常-疊-肥 屬格 豬 你們.屬格
 very-RED-fat GEN pig 2.P.GEN
 “你們的豬這麼肥啊！”
 ‘How fat your pigs are!’

或直接在重疊語根上加前綴ikeyka-³³ “反而使之更” (=ika-+ika-)，例 (146)：

- (146) ike-yka-ve-vek da no aro a tao a
 工焦-疊-疊-拼命 他們.屬格 屬格 很多 繫 人 繫
 IF-RED-RED-make.an.effort 3.P.GEN GEN many LIN human LIN
 mi-limoang nia.
 主焦-傳揚 它.屬格
 AF-spread 3.S.GEN
 “那些人越是變本加厲地要張揚出去”
 ‘Those people tried even harder to spread it around.’

9. 談談數字

本節討論達悟語數字方面的用法。以下分別舉例如何數數、數人或物、數錢、和數時間。

9.1 數數

達悟語的基數從一到十之數字如下：

1	2	3	4	5	6	7	8	9	10
ása	dóa	tílo	ápat	líma	ánem	píto	wáo	síam	póo

十以上的數字以十進位法計算，例如“十一”是“在第二個十中之一”，“二

³³ ikeyka- 可直接加在語根上，例如ikeyka-rahet na “反而使他愈來愈壞”，ikeyka-pia na “反而使他愈來愈好”，ikeyka-niahey na “反而使它更害怕”，ikeyka-miying na “反而使他笑的更厲害”。

十二”是“在第三個十中之二”。凡十位整數以乘法表示，例如“六十”為“六個十”。

11	asa so ikaroa (a ngernan)	60	anem a ngernan
22	adoa so ikatlo	70	apito a ngernan
33	atlo so ikapat	80	awao a ngernan
44	apat so ikalima	90	asiam a ngernan
55	alima so ikanem	100	asa a poo

序數除了“第一”不以數字表示以外，其他數字均加前綴 *ika-*，序數從一到五之數字如下：

第一、首先	第二	第三	第四	第五	第六
nimanomá na	ikadoa na	ikatlo na	ikapat na	ikalima na	ikanem na

表倍數、次數時，數字加前綴 *ipi-*，方式如下：

一倍、一次	兩倍、兩次	三倍、三次	四倍、四次	五倍、五次	六倍、六次
ipisa	ipidoa	ipitlo	ipipat	ipilima	ipinem

表“僅有若干數量”時，延長最後一個音節的元音，方式如下：

僅有一個	僅有兩個	僅有三個	僅有四個	僅有五個	僅有六個
asáa	adoáa	atlóo	apáat	alimáa	anéem

表達“每一單位分配若干數量”時，數字前加前綴 *tey-*，數字本身則重疊字首的 CV-，但遇到數字以元音起首者，則元音變成 *e*，方式如下，例子見 (147)-(148)：

每一單位分配一個	每一單位分配兩個	每一單位分配三個	每一單位分配四個	每一單位分配五個	每一單位分配六個
teyesa	teydedoa	teytetlo	teyepat	teylilima	teyenem

- (147) *namen tey-epat aka among.*
 我們.屬格.除 每-四 連 魚
 1.P.NOM.EXCL each-four CON fish
 “我們每人分到四條魚”
 ‘We were allocated four fish.’

- (148) *sia tey-te-tlo so vanga.*
 他們.主格 每-疊-三 斜格 鍋子
 3.P.NOM each-RED-three OBL pot
 “他們每人分到三個鍋子”
 ‘They were allocated three pots.’

表“若干數量在一起”時，字首加前綴 *tey-*，數字則有 *Ca-* 重疊兩次，方式如下，例子見 (149)-(150)：

每兩個一組	每三個一組	每四個一組	每五個一組	每六個一組
<i>teyrararoa</i>	<i>teytatatlo</i>	<i>teypapapat</i>	<i>teylalalima</i>	<i>teynananem</i>

- (149) *tey-la-la-lima kamo a s-om-dep.*
 組-疊-Ca-五 你們.主格 繫 <主焦>進入
 group-RED-Ca-five 2.P.NOM LIN <AF>enter
 “你們五個五個一組進來”
 ‘Come in in groups of five.’

- (150) *namen tey-pa-pa-pito do asa aka mibetbet.*
 我們.屬格.除 組-疊-Ca-七 處格 一 連 漁船
 1.P.NOM.EXCL group-RED-Ca-seven LOC one CON fishing.boat
 “我們每七個人一組乘坐一艘漁船”
 ‘We have seven people to a fishing boat.’

9.2 數人/物

數字後有連詞 *aka* 當繫詞與被數的人/物銜接。但十進位的整數是以繫詞 *a* 連接。

1 人	asa aka tao	16 人	nanem aka tao o ikakaroan da
2 人	raroa aka tao	27 人	papito aka tao o ikakatloan da
3 人	tatlo aka tao	38 人	wawao aka tao o ikakapatan da
4 人	papat aka tao	49 人	sasiam aka tao o ikakaliman da
5 人	lalima aka tao	10 人	sasa a ngernan a tao
6 人	nanem aka tao	20 人	kakaroan a tao
7 人	papito aka tao	30 人	kakatloan a tao
8 人	wawao aka tao	70 人	kakapitoan a tao
9 人	sasiam aka tao	90 人	kakasiaman a tao
		100 人	asa poo a tao

9.3 數錢

數錢的單位有ngernan³⁴ “元”，poo³⁵ “十”，ranaw “百”，zivo “千”，laksa 萬，latos “十萬為一單位”。

1 元	asa a ngernan	30 元	atlo a poo	6 千元	anem a zivo
2 元	adoa a ngernan	70 元	apito a poo	7 萬元	apito a laksa
3 元	atlo a ngernan	90 元	asiam a poo	8 萬元	awao a laksa
4 元	apat a ngernan	100 元	asa a ranaw	9 萬元	asiam a laksa
16 元	anem a ngernan o ikaroa na poo	200 元	adoa a ranaw	10 萬元	asa a latos
27 元	apito a ngernan o ikatlo na poo	300 元	atlo a ranaw	20 萬元	adoa a latos
38 元	wao a ngernan o ikapat na poo	4 千元	apat a zivo	30 萬元	atlo a latos
20 元	adoa a poo	5 千元	alima a zivo	40 萬元	apat a latos

9.4 數時間

以下為數時間的方式：

³⁴ 在數人時，ngernan為“十”的意思。

³⁵ 在數人時，poo為“百”的意思。

一天	一個月	一年	有一次
kasa a araw	kasa a vehan	kasa a kawan	ipisa so ka-(動詞)

- (151) ko ka-sa araw do jia.
 我.主格 動綴-一 日 處格 這裡
 1.S.NOM VF-one day LOC here
 “我在這裡只待一天”
 ‘I am here for only one day.’

- (152) ipi-sa so ka-ngay namen mi-kazazap
 次-一 斜格 名綴-去 我們.屬格.除 主焦-摸索螃蟹
 time-one OBL NF-go 1.P.GEN.EXCL AF-search.for.crabs
 do mahep am.
 處格 晚上 呢
 LOC evening PAR
 “有天晚上，我們摸黑捉螃蟹”
 ‘Once we went to search for crabs in the dark.’

10. ka- 的用法

達悟語之 ka- 前綴出現次數頻繁，功能多元化，在本節中分成動詞和名詞詞綴兩部分詳論。

10.1 ka-當動詞詞綴

ka- 當動詞詞綴時，有下列五種用法：(一) 連續結構，表示“然後”（已於 6.2.3 節討論），(二) 比較結構，表示“非常”（已於 8.3 節討論），(三) 數字結構，表時間和數量（已於第 9 節討論），(四) 與動詞語根連接，表示“剛才”、“只”，如例子 (153)-(154)，(五) 將靜態動詞轉換成非事實語氣 (irrealis) 時，會有 ka- 語幹詞綴出現 (ma- 與 ka- 的關係，參看 6.3.2.2 節討論)，表達“假設、否定、非自願”之意，如例子 (155)。

(153) k-ai na am mi-’oya-’oya.
 剛才-來 他.屬格 呢 主焦-疊-生氣
 just.now-come 3.S.GEN PAR AF-RED-angry
 “他一來就生氣”
 ‘No sooner had he arrived than he got angry.’

(154) ka-kan mo a ji ka manotong?
 只-吃 你.屬格 繫 不會 你.主格 主焦.煮飯
 only-eat 2.S.GEN LIN NEG 2.S.NOM AF.cook
 “你只會吃，不會煮飯啊？”
 ‘Would you only eat but not cook?’

(155) ya ma-ngay do gako,
 他.主格 主焦-去 處格 學校
 3.S.NOM AF-go LOC school
 do³⁶ ya na ka-niahey no sinsi da ya om-bakbak jia.
 處格助動 他.屬格 動綴-擔心 屬格 老師 他們.屬格 助動 主焦-打 他.處格
 LOC AUX 3.S.GEN VF-worry GEN teacher 3.P.GEN AUX AF-hit 3.S.LOC
 “他勉強去學校，就因為怕老師打”
 ‘He would not have gone to school if he did not fear that their teacher would hit him.’

³⁶ 此處的do表原因，若代換成連詞ta“因為”，後接子句的動詞變成ma-niahey，表事實，例如：ya ma-ngay do gako, ta ya ma-niahey a bakbak-an no sinsi da. “他去學校，因為怕老師打”(He went to school because he feared that their teacher would hit him.)

另外，試比較以下(a)(b)兩句，前者有非自願、不得已之意(如，若非...，絕不...)，動詞用非事實ka-，而後者表自願，靜態動詞ma-變成及物動詞時用ka-。另外直接受詞的格位標記亦有不同，前者為屬格nimo，而後者為主格imo。

(a) ya ko m-ai do ya ko ka-rilaw nimo a ji a-voos.
 助動 我.主格 主焦-來 處格 助動 我.屬格 動綴-憐憫 你.屬格 繫 不 虛-敢一個人行動
 AUX 1.S.NOM AF-come LOC AUX 1.S.GEN VF-pity 2.S.GEN LIN NEG SUB-do.alone
 “我因同情你(怕你沒有安全感)，所以我才來陪你的(否則我是不會來的)。”
 ‘I would not come (to accompany you) if it were not for my concern about your lack of security.’

(b) ya ko m-ai, ta ya ko i-ka-rilaw imo a ji a-voos.
 助動 我.主格 主焦-來 因為 助動 我.屬格 工焦-動綴-憐憫 你.主格 繫 不 虛-敢一個人行動
 AUX 1.S.NOM AF-come because AUX 1.S.NOM IF-VF-pity 2.S.NOM LIN NEG SUB-do.alone
 “我來陪你因為我同情你沒有安全感(這是出於我的意願)”
 ‘I came (to accompany you) because I sympathized with your lack of security.’

10.2 ka-當名詞詞綴

ka- 當名詞詞綴時，有下列五種用法：(一) 表“同伴”³⁷，如例 (156)-(159)，(二) 與kman “像” 共同出現，表“如同...一樣”，如例 (160)-(162)，(三) 形成名物化結構，其中ka-to和ka-ji已於 6.2.3 節討論，(四) 以 ka- 加重疊語根形成專有名詞，表示以某種語根特徵命名的動物，例 (163)，(五) 以ka-an形成名詞，如例 (164)-(165)。

- (156) ya abo o ka-kteh ko.
 助動 無 主格 同-兄弟姐妹 我.屬格
 AUX no NOM Co-sibling 1.S.GEN
 “我沒有兄弟姐妹”
 ‘I have no brothers and sisters.’
- (157) ka-raray ko ya ni-mi-vat-vatek do ilaad.
 同-同伴 我.屬格 助動 過去-主焦-疊-寫 處格 臺灣
 Co-company 1.S.GEN AUX PA-AF-RED-write LOC Taiwan
 “這位是我在臺灣求學時的同學”
 ‘(This is my) classmate when (I) studied in Taiwan.’
- (158) ko ni-yakan o ka-sisi no among.
 我.屬格 過去.受焦-吃菜 主格 同-一半 屬格 魚
 1.S.GEN PA.PF-eat NOM Co -half GEN fish
 “我把半條魚吃掉了”
 ‘I ate up half of the fish.’
- (159) ka-kma si mina ama mo.
 同-像 主格 已逝 父親 你.屬格
 Co-like NOM late father 2.S.GEN
 “該死的！（像你已死的父親一樣）”
 ‘Damn! (You are like your late father).’

³⁷ 表同類、同屬性，亦可用前綴icia-，例如：icia-rarakeh “同為老人的”，icia-kakanakan “同為小孩的”，icia-mamavakes “同為婦女的”，icia-memehakay “同為男人的”，icia-tatao “同為人的”。

- (160) ya kman so zateb rana o ka-sir-sirem³⁸ na.
 助動 像 斜格 木炭 已經 主格 同-疊-黑 他.屬格
 AUX like OBL coal already NOM Co-RED-black 3.S.GEN
 “他如木炭一般黝黑”
 ‘He is as dark as coal.’
- (161) ya kman so tao-do-to so ka-pia-pia tao.
 助動 像 斜格 神 斜格 同-疊-好 人
 AUX like OBL god OBL Co-RED-good human
 “她美如天仙”
 ‘She is as beautiful as a goddess.’
- (162) ya kman jiaken so ka-tav-tava.
 助動 像 我.處格 斜格 同-疊-胖
 AUX like 1.S.LOC OBL Co-RED-fat
 “他跟我差不多胖”
 ‘He is as fat as I am.’

(163) ka- + 重疊語根 “以語根特徵命名的動物”

以語根特徵命名的動物	漢譯 (英譯)	語根	漢譯 (英譯)
ka-vokovokot	毛毛蟲 (worm)	vokot	背脊 (spine)
ka-lalavi	蟬 (cicada)	lavi	哭 (cry)
ka-gozagozang	蜥蜴 (lizard)	gozang	瘦 (thin)
ka-pozopozo	貝殼名 (clam)	pozo	顆粒的 (small round object with rough surface)

- (164) ka-gaga-n ko si Salang.
 同-逗笑-名綴 我.屬格 主格 沙浪 (人名)
 Co-giggle-NF 1.S.GEN NOM PN
 “沙浪是我的朋友”
 ‘Salang is my friend.’

³⁸ (160)-(162) 有 “強調程度”，或有 “如同，約如...” 的意思，例如：akma so ka-tav-tava “像...一樣胖”，akma so ka-pia-pia “像...一樣美，這麼美(好)”，akma so ka-sir-sirem “像...一樣黑，這麼黑”。

- (165) sia m-ian do ka-rako-an no wawa.
 他們.主格 主焦-在 處格 名綴-大-名綴 屬格 海
 3.PNOM AF-exist LOC NF-big-NF GEN sea
 “他們在大海的某處”
 ‘They are somewhere at the sea.’

11. 達悟語詞綴一覽表

本文結尾提供詞綴一覽表（表十四、表十五），將本文所提到的達悟語動詞詞綴（一般型和變化型對照）和其他詞綴摘要表列，以方便讀者參考查詢。

〈表十四〉達悟語動詞變化一覽表

詞綴名稱	一般型	變化型（to 或 ji 之後）
不及物動詞、主事者焦點	-om-/om-	N-
不及物動詞、主事者焦點	mi-	--
不及物動詞、主事者焦點	ma-	--
不及物動詞、主事者焦點	maN-	--
不及物動詞、主事者焦點	maka-	--
不及物動詞、主事者焦點	maci-/masi-/macika-/macipa-	--
不及物動詞、靜態動詞	ma-	a-
不及物動詞、不自主動詞	ka-...-an	a-...-i
及物動詞、非主事者焦點	pi-	--
及物動詞、非主事者焦點	pa-	--
及物動詞、非主事者焦點	paN-	maN-
及物動詞、非主事者焦點	paka-	maka-
及物動詞、非主事者焦點	paci-	maci-
及物動詞、非主事者焦點	-en	-a
及物動詞、非主事者焦點	-an	-i
及物動詞、非主事者焦點	i-	-an
及物動詞、能力動詞	ma-	a-...-a
及物動詞、不自主動詞	ka-...-an	a-...-a

〈表十五〉達悟語其他詞綴一覽表

詞綴	語意
icia-	同類的、同屬性的
ickeyka-	反而使...更...、反而使...愈來愈...
i-ka-	因...感受
ika-	序數
ipi-	倍數、次數
ji a-	否定、非常、確實
ka-	同伴、一樣、名物化、抽象名詞
ka-	然後、剛才、只有
ka-	將靜態動詞轉換成及物動詞之前綴
ka- (語根重疊)	非常
ka- (語根重疊)	以語根特徵命名之動物
ka-an	名詞
ma... (語根重疊) -in	很愛...的
mala-	有...味道或模樣
mapaka-	假裝
mapi-/mapa-/pa-en/ipa-	使役動詞
mapi-	從事...職業的人、擁有者
mi-/mala-	兩人或三人以上的親屬關係
mika-/mapika-/ipika-	全都是、紛紛的、逐漸的
mipa-	愈來愈...
mipipa-	更加的
ni-	過去式完成貌
ni- ... na	最高級
noka-	過去
noma-	未來(遠)
sicia-	現在
sima-	未來(近)
tey-	方位
tey-	非常、太
tey- (語根重疊)	每一單位分配若干數量、若干數量一起

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附錄一、英文縮寫對照表

英文縮寫	英文名稱	中文名稱
1	First person	第一人稱
2	Second person	第二人稱
3	Third person	第三人稱
AF	Agent focus	主事者焦點（主焦）
AUX	Auxiliary verb	助動詞
Ca-RED	Ca- reduplication	Ca-重疊
CAU	Causative	使役動詞
Co-	Company	名詞前綴，指“同伴”
CON	Conjunction	連詞
EMP	Emphasis	強調
EXCL	Exclusive	除對話者
FU	Future	未來
GEN	Genitive	屬格
IF	Instrumental focus	工具焦點（工焦）
IMP	Imperative	祈使
INCL	Inclusive	含對話者
LOC	Locative	處格
LF	Locative focus	處所焦點（處焦）
LIN	Linker or ligature	繫詞
NEG	Negation	否定詞
NF	Nominal affix	名詞詞綴
NOM	Nominative	主格
OBL	Oblique	斜格
OR	Ordinal number	序數
P	Plural	複數
PA	Past tense or perfective aspect	過去式、完成貌
PAR	Particle	助詞
PF	Patient focus	受事者焦點（受焦）
PLN	Place name	地名
PN	Personal name	人名
REC	Reciprocal	互相
RED	Reduplication	重疊
S	Singular	單數
SUB	Subjunctive or dependent verb form	虛擬動詞（變化型）
SV	Stative verb	靜態動詞
TOP	Topic linker	主題繫詞
VF	Verbal affix	動詞詞綴

A Grammar of Yami¹

1. Introduction

Yami is a Philippine Batanic language, spoken by 3,800 residents on Orchid Island in Taiwan. The name “Yami” was originally used by the Batanic people to refer to the group that had immigrated to the very north end of the Batanic Islands (Gonzalez 1966). The self-reference of the Yami people is *Tao* ‘human’ and their language is called *ciriciring no Tao* ‘human speech’. Although the younger generation of Yami prefers to be identified as *Tao* instead of *Yami*, this issue has not been without controversy. This paper will use the traditional name *Yami*, simply because previous studies on this language have used this name for academic research.

Previous studies on various parts of Yami grammar are listed chronologically as follows: Sheerer (1908), Asai (1936), Jeng (1981), Benedek (1987), Tsuchida et al. (1987, 1989), Li & Ho (1989), Ho (1990, 1993), Shih (1996), Chang (2000), Guo (1998), Dong & Rau (2000), Rau (2002ab, 2004, 2005) and Rau & Dong (2005). This paper is a comprehensive analysis of the Yami reference grammar, based on a much larger body of data, the result of many years of collaboration between the two authors.

2. Phonology & Orthography

2.1 Consonants and vowels

There are twenty consonants (Table 1), four vowels, and four diphthongs (Table 2) in Yami. All the symbols in the tables represent standard Yami orthography².

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² The Yami Christian Churches adopted an orthography used to translate the New Testament. Li (1992) proposed a different version as a preliminary attempt to standardize the Austronesian language alphabets in Taiwan. The Ministry of Education (MOE) of the Republic of China adopted a standardized version in 2002, based on the authors’ proposal, as a guideline for materials development. The Yami orthography adopted in this paper is the 2002 standardized MOE version of the Yami orthography.

Table 1: Classification of Yami consonants

	Labial	Alveolar	Retroflex	Palatal	Velar	Uvular	Glottal
Stop	p, b	t	d		k, g		ʔ
Fricative	v		s			h	
Nasal	m	n			ng		
Liquid		l	r				
Affricate				c, j			
Trill		z					
Glide	w			y			

Table 2: Classification of Yami vowels

	Front	Central	Back
High	i		o
Mid		e	
Low		a	
Diphthong	ay, aw, oy, iw (see footnote 6 for other derived diphthongs)		

The corresponding phonemes are explained as follows.

1. /p, t, k/ and /b, d, g/ are voiceless and voiced stops, respectively. /d/ is a voiced retroflex stop. /k/ becomes [q] preceding a low vowel, e.g., *kanakan* [qanaqan] ‘child’.
2. /ʔ/ is a glottal stop [ʔ], e.g., *man’awey* ‘throwing a boat up and down in a ceremony’ vs. *manawey* ‘a way of fishing’. There is a variation between the glottal stop and the uvular fricative among the younger generation, e.g., *mi’an’anan* ~ *mihanhanan* ‘trust’. But /ʔ/ and /h/ can be clearly distinguished in the following morphophonemic alternations: ʔagnat ‘lift’ → to ʔagnat-a ‘then lift something’; hap ‘take’ → to ngap-a ‘then take something’.
3. /m, n, ng/ are bilabial, alveolar, and velar nasals, respectively. /n/ is palatalized as [ɲ] if followed by /i/, as in *nizpi* ‘money’ and *maniring* ‘speak’.
4. /v/ is a voiced labiodental fricative. There is a sound change in progress to [f] among the younger generation (Li & Ho 1989).
5. /s/ is a voiceless retroflex fricative [ʂ]. It is palatalized as [ʃ] before the front vowel /i/, e.g., *siko* ‘elbow’.
6. /h/ is a voiced uvular fricative [ħ]. It frequently occurs in the syllable coda position, e.g., *makáteh* ‘itchy’, *maréhmet* ‘heavy’. When it occurs between two non-high vowels, this segment can be either syncopated or replaced by a voiced glottal stop

[ɰ], e.g. *vahay* [vaɰay] ~ [faay] ~ [faɰay] ‘house’, *vehan* [vəɰan] ~ [fəan] ~ [fəɰan] ‘moon’. But the /h/ in the borrowed word *hadilóya* ‘Hallelujah!’ is a voiceless glottal fricative.

7. /l/ and /ɽ/ are lateral and retroflex [ɽ], respectively. /l/ becomes a voiced lateral fricative [ɮ] before the front vowel /i/, e.g. *lila* ‘tongue’.
8. /c/ and /j/ are voiceless alveopalatal affricate [tʃ] and voiced palatal affricate [dʒ], respectively. Although they could be analyzed as palatalized allophones of /k/ and /d/ respectively, /c/ has developed into a phoneme by showing contrast with /k/, e.g., *cimi* ‘crush’ vs. *kimi* ‘split open’. /j/ has also developed a contrast with /d/, e.g., *bedbeji* ‘tie up a fish bait’ vs. *pianoanoodi* ‘Sing it!’. The high frequency of /j/ as a negative morpheme and a locative marker and its symmetry with /c/ also justify the use of a different symbol of representation, even though it is phonetically a palatalized /d/.
9. /z/ is an alveolar trill [ʀ].
10. /w, y/ are glides.
11. /i/ and /a/ are front vowel and low vowel, respectively.
12. /e/ represents a central vowel [ə].
13. /o/ represents a back vowel. It is raised to [ɔ] after a labial sound, e.g., *poyat* ‘eye secretion’, *mavota* ‘blind’, and *momotan* ‘nose’.
14. The nucleus of the diphthongs /ay/ and /aw/ is centralized, raised or monophthongized, beginning in the northern part of the island, Iraralay, and spreading to the east, Iranmilek and Ivalino (Rau et al. 1995), e.g., *mangay*: [maŋəy] ~ [maŋiy] ‘go’, *araw*: [aɰəw] ~ [aɰuw] ‘sun’. Only a few lexical items on the west coast, Imowrod and Iratay, have been affected by this change, such as *alilikey* ‘all very small’ and *manganidhey* ‘scary’. However, this sound change in the north has developed into a chain shift, in that the front vowel /i/ in some lexical items is lowered and diphthongized, e.g. *mi* ‘go’ becomes [məy].

2.2 Long consonant

The length of consonants is distinguished in Iraralay on the north coast, such as *opa* ‘thigh’ vs. *oppa* ‘hen’, *aming* ‘Amen!’ vs. *amming* ‘beard’, *kaliman* ‘Go to hell!’ vs. *kalimman* ‘the fifth month’. Ivalino on the east coast also has a gemminate consonant, e.g. *attaw* ‘sea water’,³ *mitattew* ‘swim’ (Li & Ho 1989).

³ The form is *attaw* ‘sea water’ in Imowrod dialect.

2.3 Stress

Stress is phonemic in Yami, e.g., *mapingsán* ‘tasty’ vs. *mapínsan* ‘organized’. The default (unmarked) stress is on the ultimate syllable. All other stress has to be marked individually, e.g., *masáray* ‘happy’, *masasáray* ‘every one is happy’, *mapasózi* ‘cause to be upset’, *i’óya* ‘angry at’, *mámiying* ‘laugh’, *mamiyimíyingen* ‘love to laugh’, and *malavlávin* ‘a cry baby’.

The prefix *tey-* ‘most’ attracts stress. Stress usually falls on the syllable following *tey-* ‘most’, such as *teymá’oya’oyaen* ‘become easily upset the most’, *teymámiyimíyingen* ‘one who loves to laugh the most’, and *teymápa’oya* ‘most upsetting’. But words with *tey-* ‘such and such an amount is allocated to each unit’ (e.g., *teylilima* ‘five for each’) have ultimate syllable stress (See 9.1).

The final syllable can also be lengthened to express ‘only, again, also’, such as *asáa* ‘the only one’ (< *ása* ‘one’).⁴

2.4 Syllable structure

The canonical syllable structure is (C)V(C). No consonant clusters are allowed except when the syllable onset contains a glide (CG)V(C). The vowels /i/ and /o/ are interpreted as glides /y/ and /w/, respectively, in roots when /i/ and /o/ are not stressed, e.g., *siam* [syam] ‘nine’, *ziak* [zyak] ‘word, speech’, *rios* [ryos] ‘bathe’, *boak* [bwak] ‘split wood’, and *koat* [kwat] ‘boiling hot’. Table 3 illustrates all the possible syllable types with examples.

Table 3: All possible syllable types in Yami

Consonant type	Yami	Gloss
V	o	Nominative case marker
V.V	ai	foot
V.VC	aon	take out food from a pot
V.V.CVC	aorod	front yard
VC	am	Topic marker
V.CV	ori	that
V.CVC	icoy	egg
VC.CV	agza	fast
V.CV.V	adoa	two

⁴ Other examples are as follows: *ko mangay do gáko*, ‘I am going to school, too;’ *ko ji ákciin*, ‘I’m also very hungry;’ *ka pa kómaan?* ‘You are going to eat again?’

V.CV.VC	avoag	male animal
VC.CVC	abcil	famine
VC.CV.CVC	apnezak	morning
V.CV.CVC	aganas	mud slide
V.CV.CVC.CVC	alibangbang	flying fish
VC.CVC.CV	aktokto	thought
CV	da	3PG, their
CVC	bos	sound made to chase an animal away
CV.V	tao	human
CV.VC	kois	pig
CV.CV	ráko	big
CV.CV.V	kadai	millet
CV.CV.CV	tatala	boat
CV.CVC	tawag	summon
CVC.CVC	sipzot	hit
CV.CV.VC	cilaos	make a hole
CV.CVC.CVC.V.CVC	balangbangapat	<i>Cyclosoeus acuminata</i>

2.5 Monosyllabic bound roots

There are two types of monosyllabic bound roots that undergo vowel epenthesis in word formation. Type A contains consonant clusters in the bound roots that violate the canonical syllable structure, e.g., *-bhes* ‘throw a stone at someone’, while Type B contains either a CVC bound root, e.g. *-kan* ‘eat’ or a bound root with a glide, e.g. *-vias* ‘sweep’. The Type A bound roots are either prefixed with *a-* in the imperative form, e.g., *a-gcin* ‘Go down!’ or inserted with the mid central vowel /e/ to derive new words in reduplication, e.g. *behe-behes-an* (< *-bhes*) ‘throw stones at someone’. However, if the root contains a round vowel /o/, the inserted vowel is also /o/ in reduplication, as in *mi-do-dpon-an* (< *-dpon*) ‘pile up’. The feature [+round] is observed in the vowel harmony. More examples for Type A roots are illustrated as follows:

Type A: Monosyllabic roots with consonant clusters

Gloss	Bound form	a-prefixation	Inserted /e/ or /o/ in reduplicated form
throw stone at someone	-bhes	a -bhes	behe-behes-an
pile up	-dpon	a -dpon	mi-do-dpon-an
go down	-gcin	a -gcin	mi-ge-gcin
put aside	-ptad	a -ptad	mi-peta-petad

Type B roots can be either prefixed with *a-* or without *a-*, depending on the type of roots and the type of transitive or intransitive affixes. The following examples illustrate the two subtypes of Type B roots.

Type B: Monosyllabic CVC roots or roots with a glide

Gloss	CVC bound root	<i>a</i> -prefixation	No <i>a</i> -prefixation
eat	<i>-kan</i>	<i>a-kan</i> ‘Eat!’ <i>a-kan-an</i> ‘place to eat’	<i>k-om-an</i> ‘intransitive verb’ <i>kan-en</i> ‘food’ <i>ka-kan-an</i> ‘plate, taste’
wash clothes	<i>-pis</i>	<i>a-pis-an</i> ‘transitive verb’	<i>mi-pi-pis</i> ‘intransitive verb’ <i>ni-pis-an</i> ‘transitive, perfective verb’
	Bound root with a glide		
sweep	<i>-vias</i>	<i>a-vias-an</i> ‘transitive verb’	<i>mi-vias</i> ‘intransitive verb’ <i>vi-vias</i> ‘broom’
two	<i>-doa</i>	<i>a-doa</i> ‘two’	<i>ipi-doa</i> ‘twice’

3. Morphology

The most common word formation processes in Yami are Affixation and Reduplication.

3.1 Affixation

Yami affixation manifests the three features characterizing Agglutinating Languages. (1) A word consists of a root and several affixes; (2) The root and affixes are relatively easily separated; and (3) Each affix generally has only one meaning. For example, *nipakanan* (< ni-pa-kan-an) ‘the place where an animal has been fed or the place where someone has been treated a meal’ is formed with the bound root *-kan* ‘eat’ and several clearly separated affixes, each having its own meaning, such as *-an* ‘location’, *pa-* ‘causative’, and *ni-* ‘perfective’.

3.2 Reduplication

There are four types of reduplication in Yami: Complete root reduplication, partial root reduplication, affix reduplication, and Ca- reduplication.

Complete root reduplication refers to the exact copy of the root being reduplicated,

such as *rako-rako* ‘bigger’ (< *rako* ‘big’), *vato-vato* ‘stones’, *tapi-tapi* ‘planks’, *baka-baka* ‘cows’, *lima-lima* ‘hands’, *tao-tao* ‘people, totem’, and *sozi-sozi* ‘anger, fuming’.

Partial reduplication of the root can be further classified into seven types according to its reduplicated syllable structure: 1) CV-, 2) CVCV-, 3) CVC-, 4) CVV-, 5) VCV-, 6) V-, 7) a-CCV-, as illustrated in Table 4. The seven types of syllable structure can be generalized as having two patterns: (1) reduplicating the first syllable of the root, and (2) deleting the coda of the second syllable of the root and reduplicating the remaining syllable. A noun root is reduplicated to express plurality, comparative degree, transformation, distribution, or toys, whereas a verb root is reduplicated to refer to a repeated action, frequent action, or a tool used frequently to carry out a certain action.

Table 4: Examples of partial reduplication of the roots

Syllable type	Examples
CV-	<i>so-soli</i> ‘taros’, <i>to-tozok</i> ‘fork’
CVCV-	<i>toko-tokon</i> ‘mountains everywhere’, <i>ciri-ciring</i> ‘language’, <i>zipo-zipos</i> ‘relatives’
CVC-	<i>kag-kagling</i> ‘a herd of goats’, <i>lak-laktat</i> ‘illness, nasal mucous’, <i>sey-seyked-an</i> ‘place where a boat is beached’
CVV-	<i>koi-kois</i> ‘pigs’, <i>sao-saolin-in</i> ‘back and forth’
VCV-	<i>ananak (ana-anak)</i> ⁵ ‘children’, <i>avavang (ava-avang)</i> ‘toy boat’, <i>angangayan (anga-angay-an)</i> ‘place one goes regularly’, <i>onewned (one-oned)</i> ⁶ ‘deep in the heart’, <i>obowbotan (obo-obot-an)</i> ‘place where one defecates’, <i>ineynapo (ina-inapo)</i> ‘ancestors’, <i>ovowvan (ova-ovan)</i> ‘gray hair’, <i>avwavong (avo-avong)</i> ‘shadows’
V-	<i>o-oyod-an</i> ‘plate for fish that women are allowed to eat’, <i>i-irasan</i> ‘oar rack’
a-CCV- (bound root)	<i>a-kdo-kdot-en</i> ‘pinch a little’, <i>a-kbe-kbeng-en</i> ‘press a little’, <i>a-dka-dkan-an</i> ‘kiss’, <i>a-sle-slet-an</i> ‘lock’, <i>a-sde-sdep-an</i> ‘entrance’

⁵ One of the identical vowels *a* is deleted.

⁶ When two vowels are juxtaposed in root reduplication, they are diphthongized as follows:

eo → ow, ew: *one-oned* ‘deep in the heart’ → *onowned*, *onewned*

ao → ow: *ota-ota* ‘vomit’ → *otowta*, *ova-ovan* ‘gray hair’ → *ovowvan*, *opa-opag-en* ‘pound, hit’ → *opowpagen*

ai → ey: *ina-inapo* ‘ancestors’ → *ineynapo*, *isa-isanan* ‘hotels’ → *iseysanan*, *ila-ilamdampen* ‘test, sound out’ → *ileylamdampen*

oa → wa: *avo-avong* ‘shadows’ → *avwavong*

oo → ow: *obo-obot-an* ‘place where one defecates’ → *obowbotan*

Affix reduplication occurs frequently with *ni-* and *paN-* (See Section 6.3 for detailed discussion of verbal affixes). In the following examples, *ni-* ‘perfective’ is reduplicated and added to bound roots prefixed with *a-*:

- (1) Reduplicated *ni-*
ni-ni-ahap ‘everything that has been taken away’
ni-ni-akot ‘everything that has been moved away’
ni-ni-akan ‘everything that has been eaten’
ni-ni-angayan ‘everywhere that one has been to’

There are two ways for the *paN-* prefix ‘distributed’ (See Section 6.1.1 for the morphophonemics of N-) to be reduplicated and prefixed to the root. The prefix *paN-* can be first added to the root *kotas* ‘pick leaves’ to form a new stem *pangotas*. The new stem is reanalyzed as *pa-ngotas* and the root, *ngotas*, undergoes further CVCV- partial reduplication, as in *pa-ngota-ngotas*. The prefix *ka-* ‘then, afterwards’ is then added to the reduplicated stem to form *ka-pa-ngota-ngotas* ‘then one keeps picking leaves’, as in (2i). The second way is to first partially reduplicate the CVCV- of the root *ciring* ‘word’ to form the new stem *ciri-ciring* ‘words, language’. Then prefix *paN-* is added to the new stem to form another new stem *pa-niri-ciring*. Finally the prefix *ni-* ‘perfective’ is added to form *ni-pa-niri-ciring* ‘already cursed’, as in (2ii).

- (2) *paN-* reduplication
 (i) *ka-pa-ngota-ngotas* < *ka-pa-ngotas* < *ka-* + *paN-* + *kotas* ‘then one keeps picking leaves’
 (ii) *ni-pa-niri-ciring* < *ni-paN-ciri-ciring* < *ni-* + *paN-* + *ciring* ‘already cursed’

In *Ca-* reduplication, the first consonant of the root is copied and followed by the vowel /a/, as in *pa-pira* ‘how many’. It usually occurs in numbers (See Section 9) to indicate plurality, as shown in (3). The list of abbreviations used to gloss the following Yami examples can be found in the Appendix.

- (3) *ya pa-pira o ka-kteh mo?*
 AUX Ca-RED-many NOM Co-sibling 2.S.GEN
ya ra-roa⁷ sira kaka a mehakay.
 AUX Ca-RED-two 3.P.NOM older.sibling LIN male
 ‘How many brothers and sisters do you have?’ ‘I have two older brothers.’

⁷ *raroa* is derived from *doa* ‘two’. /d/ is weakened into /t/ intervocalically.

A detailed, alternative analysis of Yami reduplication can be found in Rau & Dong (2005).

4. Syntax

As a Philippine language, Yami displays the typical Philippine “focus” system. The verb form changes to reflect the semantic role of the “Subject” of the sentence: Agent, Patient, Location, and Instrument/Benefactive. A sentence structure can be analyzed as composed of a Predicate followed by a Subject. The relationship of the two components represents an equation A= B.

In the following examples (4)-(7), the bound root *-kan* ‘eat’ is affixed in four different ways to reflect the semantic role of the “Subject”: *k-om-an*, *kan-en*, *akan-an*, and *i-akan*. Read the literal translation of each example to see how the equation relationship is represented.

- (4) [*k-om-an so wakay*] [*si Salang*].
 <AF>eat OBL sweet.potato NOM PN
 ‘Salang wants to eat a sweet potato. (lit.) The one who wants to eat a sweet potato is Salang’
- (5) [*kan-en na ni Salang*] [*o wakay*].
 eat-PF 3.S.GEN GEN PN NOM sweet.potato
 ‘Salang ate the sweet potato. (lit.) What Salang ate was the sweet potato’
- (6) [*ni-akan-an na [o mogis ori] ni Salang*].
 PA-eat-LF 3.S.GEN NOM rice that GEN PN
 ‘Salang ate some rice from there. (lit.) What Salang ate a little bit from there was rice’
- (7) [*i-akan*⁸ *na ni Salang*] [*o among ya*].
 IF-eat 3.S.GEN GEN PN NOM fish this
 ‘Salang took this fish and ate it. (lit.) What was given for Salang to eat was this fish.’

4.1 Tense, aspect, and mood morphology

In a recent typological survey of the Philippine languages, Reid & Liao (2004)

⁸ Prefix *i-* followed by the stem initial vowel *a* can be written as *ya* orthographically, as in *yakan* (*i-akan*) ‘eat side dishes’.

insightfully analyzed the focus affixes as intransitive and transitive affixes. To facilitate cross-linguistic comparison, we present the Yami system of pivot (or subject), mood and aspect in Table 5 with Ross' (1995) terms juxtaposed.

Table 5: Yami pivot, mood and aspect morphemes (adapted from Rau 2004, 2005)

Indicative					Non-indicative		
AF (Actor) Intransitive	Dynamic	Dynamic	Stative	Stative	Imperative (Atemporal)	Subjunctive (Projective)	
	Neutral	Perfective	Neutral	Perfective		<i>Dynamic</i>	<i>Stative</i>
	<i>-om-</i>	<i>ni-om-</i>			Ø-	N-	a-
	<i>m-</i>	<i>ni-m-</i>	<i>ma-</i>	<i>ni-ma-</i>	Ø-	N-	a-
NAF Transitive							
PF (Undergoer)	<i>-en</i>	<i>ni-</i>	<i>ma-</i>	<i>ni-ma-</i>	<i>-i</i>	N-...-a	a-...-a
LF (Location)	<i>-an</i>	<i>ni-...-an</i>	<i>ka-...-an</i>	<i>ni-ka-...-an</i>	<i>-i</i>	N-...-i	a-...-i
IF, BF (Instrument)	<i>i-</i>	<i>ni-...-i</i>	<i>i-ka-</i>	<i>ni-i-ka-</i>	<i>-an</i>	N-...-an	a-...-an

Yami verbs divide into indicative and non-indicative forms. All verbs are either dynamic or stative (See Section 6.3). The indicative verbs are either neutral or perfective. Perfective verbs, marked with the prefix *ni-*, have past time reference and are anterior. Unlike most of the languages of the Northern Philippines, which require focus affixation prior to infixation of <in> (Reid 1992:77), Yami demonstrates an innovation of the morpheme order *ni-om-*. Neutral verbs are used typically with either present or future time reference. Tense neutralization occurs in discourse where the neutral tense form is used for a past event, similar to what is described in Reid (1971) for some Northern Philippine languages.

The non-indicative verbs distinguish between imperative and subjunctive forms. The imperative forms are used exclusively in commands. The subjunctive forms are preceded by the auxiliary verbs *ji* “not” and *to* “then” (See section 6.1.1). The non-indicative subjunctive forms further distinguish dynamic verbs from stative verbs. The dynamic verbs are all preceded by *N-*. The set of rules of morphophonemics of *N-* is presented in Tables 6-7.

In the following paragraphs, the organization of the grammar basically follows Reid & Liao's (2004) typological framework of the Philippine languages to facilitate comparisons. We begin with the word order of predicational constructions, followed by

the structure of verbal clauses and the structure of noun phrases. Sections 8-9 contain discussion of the compative construction and numbers. Section 10 discusses the use of the prefix *ka-*.

5. Word Order of Predicational Constructions

The basic word order in Yami is a Predicate (new information) followed by a Subject (old information). Predicates can be subclassified as Nominal and Verbal Predicate Clauses.

5.1 Nominal predicate clauses

There are three types of Nominal Predicate Clauses: Classificational, Identificational, and Possessive.

5.1.1 Classificational

In Classificational Nominal Predicate Clauses, the Predicate contains only a generic noun to represent the classification of the Subject. In (8) and (9), the Predicates contain *mapivatvatek* ‘teacher’ and *dehdeh* ‘outsider’, respectively.

- (8) *mapivatvatek ko*
 teacher 1.S.NOM
 ‘I am a teacher.’
- (9) *dehdeh si Masaray.*
 outsider NOM PN
 ‘Masaray is an outsider (or foreigner).’

5.1.2 Identificational

In Identificational Nominal Predicate Clauses, the Predicate contains a definite NP to identify with the Subject. In (10) and (11), the definite NPs are marked by the determiner *si* for personal pronouns and *o* for common nouns.

- (10) *si Salang ko.*
 NOM PN 1.S.NOM
 ‘I am Salang.’

- (11) *o tawaz o ito*
 NOM net NOM that
 ‘That is the fish net.’

5.1.3 Possessive

In Possessive Nominal Predicate Clauses, the noun of the Predicate is modified by a genitive pronoun, such as *kagagan ko* ‘my friend’ in (12).

- (12) *kagagan ko si Likdem.*
 friend 1.S.GEN NOM PN
 ‘Likdem is my friend.’

5.2 Verbal clauses

Verbal clauses are divided into two types: transitive and intransitive. A transitive verb generally has two nominal complements. One is the Agent and the other the Patient. Their corresponding macroroles are “actor” and “undergoer”. An intransitive verb contains only one nominal complement. If the macrorole of this complement is an “actor”, the intransitive verb is a dynamic verb; however, if the macrorole of this complement is an “undergoer”, the intransitive verb is a stative verb.

5.2.1 Intransitive constructions

Intransitive constructions usually contain only a single complement. The verb precedes the nominal complement. Yami intransitive verbs include: dynamic verbs with the traditionally called AF (Agent Focus) affixes (*-om-*, *mi-*, *ma-*, *maN-*, *maka-*, *maci-*), stative *ma-* verbs, and involuntary *ka-...-an* verbs. A detailed discussion of all verbal affixes can be found in Section 6. In (13)-(15), the single complement *ko* ‘I’ or *o kanakan* ‘the child’ is in the Nominative case.

5.2.1.1 Single complement intransitive clauses

- (13) *om-oli ko simararaw.*
 AF-go.home 1.S.NOM noon
 ‘I will go home at noon.’
- (14) *má-bsoy ko na.*
 SV-satiated 1.S.NOM already

- ‘I was full already.’
 (15) *ka-cimoy-an o kanakan.*
 VF-rain-VF NOM child
 ‘The child is soaked (lit. got rained on).’

5.2.1.2 Double complement intransitive constructions

Some intransitive constructions contain double complements. One is in the Nominative case, while the other is in either Oblique or Locative cases depending on the verbs. This construction is called antipassive in ergative languages. The order of the complements in relation to the verb varies depending on whether they are a Nominative pronoun or a full noun phrase.

5.2.1.2.1 With a nominative pronoun

The Nominative pronoun follows the verb, while the other complement is placed after the verb. In (16) and (17), the Nominative pronoun *ka* ‘you’ follows the verb. The NP preceded by the determiner *so* in Oblique case follows the Nominative pronoun. In (18), the verb is followed by the Nominative pronoun *sira* ‘they’. The complement preceded by the determiner *do* in the Locative case is placed at the end.

- (16) *man-zaneg ka so alibangbang.*
 AF-cook 2.S.NOM OBL flying.fish
 ‘You will cook flying fish.’
 (17) *maka-kan ka so wakay?*
 AF.able-eat 2.S.NOM OBL sweet.potato
 ‘Are you able to eat sweet potatoes? (I bet you won’t).’
 (18) *ma-niring sira do tao am.*
 AF-speak 3.P.NOM LOC human PAR
 ‘They spoke to a person.’

5.2.1.2.2 With a nominative full noun phrase

A Nominative full NP is placed at the end of the sentence, such as *o kanakan* ‘the child’ and *si Akay* ‘Grandfather’ in (19) and (20).

- (19) *ni-k-om-an so kadai o kanakan.*
 PA<AF>eat OBL millet NOM child

- ‘The child ate millet’
 (20) *ma-níring jiaken si Akay.*
 AF-speak 1.S.LOC NOM Grandfather
 ‘Grandfather said to me.’

5.2.2 Transitive constructions

Transitive verbs include those traditionally called PF (Patient Focus), LF (Locative Focus), and IF (Instrumental Focus) verbs with *-en*, *-an*, *i-*, respectively, potential *ma-* verbs and involuntary *ka-...-an* verbs with expressed “actor”. One of the two complements in the transitive constructions should be the Agent or actor macrorole, while the other is the Patient or undergoer macrorole. The Agent is marked with the Genitive case, while the Patient is marked with the Nominative case.

5.2.2.1 Two-complement transitive constructions

5.2.2.1.1 With two nominal complements

The Genitive Agent occurs before the Nominative Patient in a two complement transitive construction. In (21), *no mehakay* ‘by the man’ precedes *o mavakes* ‘the woman’. Similarly, in (22), *no kanakan* ‘by the child’ precedes *o ino* ‘the dog’.

- (21) *ni-ka-miying no mehakay o mavakes a.*
 PA.IF-VF-laugh GEN man NOM woman PAR
 ‘The man laughed at the woman.’
 (22) *kala-en no kanakan o ino.*
 Look.for-PF GEN child NOM dog
 ‘The child looked for the dog.’

5.2.2.1.2 With two pronominal complements

The enclitic Genitive pronoun (Table 13) as the Agent immediately follows the verb, while the Nominative free pronoun as the Patient occurs at the end of the sentence. In (24), the enclitic Genitive pronoun *na* ‘by him’ occurs before the free form *imo* ‘you’. When the monosyllabic enclitic adverbs *na* ‘already’ or *pa* ‘still, yet’ occur in the transitive constructions with two pronominal complements, the enclitic Genitive pronouns precede the adverbs. The Genitive enclitic pronoun *mo* ‘by you’ as in (23), and *namen* ‘by us but not including you’, as in (25), precede the adverb *pa*.

- (23) *pa-na-nala-en mo pa yaken.*
 VF-RED-wait-PF 2.S.GEN first 1.S.NOM
 ‘You will wait for me first.’
- (24) *koan na imo?*
 say 3.S.GEN 2.S.NOM
 ‘What did he say to you?’
- (25) *kan-en namen pa ya.*
 eat-PF 1.P.GEN.EXCL first this
 ‘We will eat this up first.’

5.2.2.1.3 With pronominal genitive and full noun nominative complements

The pronominal Genitive complement usually precedes the full noun Nominative complement. In (26), *mo* ‘by you’ precedes *o ayob ko* ‘my clothes’. In (27), *ta* ‘by us including you’ precedes *o mogis nio* ‘your rice’.

- (26) *apis-an mo pa o ayob ko.*
 wash-LF 2.S.GEN first NOM clothes 1.S.GEN
 ‘You will wash my clothes first.’
- (27) *ma-kala ta o mogis nio?*
 PF.able-find 1.P.GEN.INCL NOM rice 2.P.GEN
 ‘Could we manage to find your rice?’

5.2.2.1.4 With full noun genitive and pronominal nominative complements

If the pronominal Nominative complement occurs before the full noun Genitive complement, an obligatory Genitive pronoun indicating agreement with the full noun Genitive complement must occur either after or before the verb depending on the tense/aspect of the verb. In (28a, b), *na* ‘by her’ functions as a cataphoric pronoun, referring to *ni ina mo* ‘your mother’. The Genitive pronoun *na* ‘by him’ occurs after the verb in (28a) to indicate the future tense, but before the verb in (28b) to indicate the progressive aspect.

- (28) a. *i-panci na imo ni ina mo.*
 IF-summon,tell 3.S.GEN 2.S.NOM GEN mother 2.S.GEN
 ‘Your Mother will call you.’
- b. *na i-panci imo ni ina mo.*
 3.S.GEN IF-summon,tell 2.S.NOM GEN mother 2.S.GEN

‘Your mother is calling you.’

5.2.2.2 Three-complement transitive constructions

If there are three complements in the transitive constructions, the first two complements should be in the Genitive and the Nominative cases. The third complement is in either the Oblique case, as *so kayo* ‘with an ax’ in (29), or the Locative case, as *do mavakes* ‘to a woman’ in (30), depending on the verbs. The semantic of the third complement should be either indefinite or partitive. The order of the noun phrase complements after the verb is generally free. In (29) the Genitive noun phrase complement is ordered before the Nominative noun phrase complement, whereas in (30), the order of these two complements is reversed.

(29) *ni-pa-nba na no tao o zaig na so kayo.*
PA.IF-VF-cut 3.S.GEN GEN person NOM ax 3.S.GEN OBL tree
‘The man cut a tree with his ax.’

(30) *i-pa-cita na do mavakes o karam no mehakay.*
IF-CAU-see 3.S.GEN LOC woman NOM mouse GEN man
‘The man showed (cause-to-see) the mouse to a woman.’

5.2.2.3 With pronominal agreement marking of genitive and nominative arguments

As indicated in (28)-(30), the pronominal agreement marker *na* ‘by her/him’ always precedes the other noun phrase complements. Its word order in relation to the verb depends on the tense/aspect of the verb. In the following, we discuss the agreement marking in intransitive and transitive constructions, respectively.

5.2.2.3.1 Intransitive constructions with agreement marking

Since there is no form for the third person singular Nominative pronoun in Yami, only the third person plural Nominative Agent will serve as an agreement marker. In (31), *sira* ‘they’ agrees with the Nominative noun phrase complement *o kanakan* ‘the children’.

(31) *ni-t-om-anek sira o kanakan.*
PA<AF>stand 3.P.NOM NOM child
‘The children stood up.’

5.2.2.3.2 Transitive constructions with agreement marking

A pronominal agreement marker that marks the Agent precedes the one that marks the Patient. The corresponding noun phrase complements are ordered in the same way: Agent before Patient. In (32), *na* ‘by her’ agrees with *no ina da* ‘by their mother’ and *sira* ‘they’ agrees with *o anak na* ‘her children’.

- (32) *i-ka-rilaw na sira no ina da*
 IF-VF-pity 3.S.GEN 3.P.NOM GEN mother 3.P.GEN
o an-anak na
 NOM RED-child 3.S.GEN
 ‘Mother pitied her children.’

5.3 Topicalized constructions

Topicalized constructions refer to the raising of one of the constituents of the sentence to the beginning of the sentence as topic. A topic, by definition, has to be definite. If the raised pronominal topic is the Patient-undergoer, Agent-actor, or the possessor of the Nominative NP, there must be a trace of the resumptive pronoun of the raised constituent left in the matrix sentence. There is a pause or more commonly a Topic Linker *am* between the topic or theme and the comment or rheme.

5.3.1 Topicalized intransitive constructions

One of the functions of topicalization is to compare and contrast information, as shown in (33)-(34):

- (33) *o rarakeh am, om-lisna a, o kanakan am, t-om-anek.*
 NOM old.person TOP <AF>sit PAR NOM child TOP <AF>stand
 ‘The old person is sitting and the child is standing.’
- (34) *o t-om-anek am, kanakan a, beken a rarakeh.*
 NOM <AF>stand TOP child PAR NEG LIN old.person
 ‘The one who is to stand is a child but not an old person.’

In the following example (35), the Nominative complement *yaken* ‘I’ is topicalized in its free form with the resumptive clitic pronoun *ko* ‘I’ left in the sentence. The Oblique complement is by definition indefinite and hence cannot be topicalized.

- (35) *a yaken rana am, mi ko pa mangotas*
 PAR 1.S.NOM already TOP go 1.S.NOM first AF.collect.leaves
so raon namen.
 OBL wild.taro 1.P.GEN.EXCL
 ‘As for me, I will go to pick up wild taro leaves first.’

In the following example (36), the possessor of the Nominative NP is topicalized.

- (36) *yaken rana ya am, ya ni-s-om-let o lima ko.*
 1.S.NOM already this TOP AUX PA<AF>get.stuck NOM hand 1.S.GEN
 ‘As for me, my hand got stuck (in the hole).’

5.3.2 Topicalized transitive constructions

5.3.2.1 Transitive constructions with topicalized genitive agent

When the Genitive Agent is topicalized, it appears in its free form and leaves a trace of the resumptive clitic pronoun in the matrix sentence. In (37), *yaken* ‘I’ is topicalized with its resumptive pronoun trace *ko* ‘by me’. In (38), *sira* ‘they’ is topicalized with its resumptive pronoun trace *da* ‘by them’. The free genitive pronoun *nira* ‘their’ followed by the deictic *ori* ‘that’ also refers to the topicalized *sira* (See Table 13 for pronouns and Table 11 for deictics).

- (37) *yaken rana am, ko mi ni-yokay si Akay.*
 1.S.NOM already TOP 1.S.GEN go PA.PF-waken NOM Grandfather
 ‘As for me, I just went to waken Grandfather.’
- (38) *sira rana ori am,*
 3.P.NOM already that TOP
da i-sibo o cinedkeran da nira ori a.
 3.P.GEN IF-start.off NOM big.boat 3.P.GEN 3.P.GEN that PAR
 ‘As for them, they are going to the mountain for the purpose of building a big boat.’

5.4.2.2 Transitive constructions with topicalized nominative patient

The Nominative Patient, *o wakay* ‘the sweet potato’ in (39), can be topicalized because it is definite. But since there is no third person singular free form in Yami, no resumptive pronoun is found in (39).

- (39) *o wakay ya am, na ni-ngotngot-an no karam.*
 NOM sweet.potato this TOP 3.S.GEN PA-RED-nibble-LF GEN mouse
 ‘As for this sweet potato, it was nibbled on by a mouse.’

5.4 Agent initial word order

In conversations and narrative style, the Agent occurs in initial word order to indicate the progressive aspect or the recent past, as in (40)-(41). The younger generation (under forty years of age) prefers the SVO order, probably due to language contact with Chinese (Rau 2002a).⁹

- (40) *ka m-angay jino mo keypong?*
 2.S.NOM AF-go where 2.S.GEN dear
 ‘Where are you going, dear?’
- (41) *na ni-yokay yaken ni Apo ito a.*
 3.S.GEN PA.PF-waken 1.S.NOM GEN Grandson that PAR
 ‘Grandson woke me up.’

5.5 Word order of WH-questions

In WH questions, the WH Predicate precedes the Subject, as the order of the nominal predicate clauses, discussed in 5.1. The Subject contains a nominalized clause led by the nominative determiner *o*. In (42)-(48), the question words *ikongo* ‘what’, *sino* ‘who’, *wajin* ‘where’, and *apira* ‘how many/much’ are in initial word order.

- (42) *[ikongo] [o ya mo ni-ma-cita]?*
 what NOM AUX 2.S.GEN PA-PF.able-see

⁹ The conditions which bring about fronting of pronominal arguments are not only age-related but have a linguistic orientation. However, an extensive study on word order variation is beyond the scope of this paper. More examples are provided as follows to showcase the correlation between pronominal fronting and proximity (progressive or recent past). Examples (1a), (2a), and (3a) with Agent occurring in sentence initial position indicate either progressive or recent past.

- (1) a. *ko koman so wakay.* ‘I am eating a sweet potato.’
 b. *koman ko so wakay.* ‘I want to eat a sweet potato.’
- (2) a. *ko koman rana so wakay.* ‘I am eating a sweet potato already.’
 b. *koman ko rana so wakay.* ‘I am about to eat a sweet potato.’
- (3) a. *ko nikoman rana so wakay.* ‘I just ate a sweet potato.’
 b. *nikoman ko rana so wakay.* ‘I have eaten a sweet potato.’

- ‘What did you see?’
- (43) [sino] [o ya ni-k-om-an so kanen mo]?
 who NOM AUX PA<AF>eat OBL food 2.S.GEN
 ‘Who ate your food?’
- (44) [wájin] [o na yan-an no anak ko]?
 where NOM 3.S.GEN be.at-LF GEN child 1.S.GEN
 ‘Where is my child?’
- (45) [ápira] [o i-toro ko jimo a nizpi]?
 how.much NOM IF-give 1.S.GEN 2.S.LOC LIN money
 ‘How much money should I give you?’

Time question words distinguish the past (*nokango*) from the future (*simango* and *nomango*). The conjunctions *no* ‘when (remote, invisible)’ and *si* ‘when (proximal, visible)’ prefixed with *ma-* ‘non-past’ and *ka-* ‘past’ further differentiate past and future (near and far). Following the past time question Predicate, a nominalized structure is used in the Subject, as in (46). The future time question (proximal or remote), on the other hand, is topicalized and followed by the verbal Predicate, as in (47)-(48). The relationship between time words and proximity will be discussed in 7.2.4.

- (46) *noka-ngo o k-ai mo?*
 PA-when NOM NF-come 2.S.GEN
 ‘When was it that you came?’
- (47) *simango am, m-ai ka?*
 future.near-when TOP AF-come 2.S.NOM
 ‘When will you come (in the near future)?’
- (48) *nomango am, m-ai ka?*
 future.far-when TOP AF-come 2.S.NOM
 ‘When will you come (in the future, invisible or uncertain)?’

6. Structure of Verbal Clauses

We have discussed verbal clauses with single verbs in 5.2. In this section, we discuss constructions with more than one verb. Verbal clauses with two verbs distinguish between two types: (1) no dependent verbs are required, and (2) dependent verbs are required.

6.1 Constructions with auxiliary verbs

Auxiliary Verbs in sentence initial position attract second-order pronominal and adverbial clitics. The main verb is dependent (or in the subjunctive form, Tables 6-7) following the closely bound auxiliary verbs, whereas it is in the indicative form following the less closely bound auxiliary verbs. Auxiliary verbs can be connected with the following main verbs either with or without the LINKER *a*.

6.1.1 Closely-bound auxiliary verbs

Yami auxiliary verbs include *to* (or *tada*, *todey*) ‘then, suddenly, continuously, impossible’ and *ji* ‘negation or emphatic’. These auxiliary verbs are closely bound to the following main verbs and hence cause obligatory inflection of the main verbs. The inflection is guided by the so-called N- morphophonemics, as illustrated in Table 6. The beginning Coronal segments /s/, /t/, /c/ of the main verb are changed to /n/, while the Labial /p/ and the Dorsal segment /k/ and vowels are changed to /m/ and /ng/, respectively.

Table 6: N-morphophonemics after auxiliary verbs *to* and *ji*

Stem beginning with	Phoneme	Change to
[+alveolar] and [+palatal]	/s/, /t/, and /c/	/n/
[+labial]	/p/	/m/
[+velar]	/k/	/ng/= [Ç]
[+vocalic]	/i/, /a/, and /o/	/ng/= [Ç] + vowel

Tables 6.1 and 6.2 provide examples of dynamic intransitive verbs and stative verbs, respectively, to illustrate the N- morphophonemics of the main verbs following the auxiliary verbs. Detailed verbal classification will be discussed in 6.3.1 and 6.3.2.

Table 6.1: Examples of inflections of dynamic intransitive verbs

Feature of the initial segment	Root	Inflected form after <i>to</i> or <i>ji</i>
[+alveolar]	<i>salap</i> ‘fly’	<i>nalap</i>
[+palatal]	<i>ciwciw</i> ‘scare away, chase’	<i>niwciw</i>
[+labial]	<i>panta</i> ‘give’	<i>manta</i>
[+velar]	<i>kan</i> ‘eat’	<i>ngan</i>
[+vocalic]	<i>isan</i> ‘stay overnight’	<i>ngisan</i>
	<i>ai</i> ‘come’	<i>ngai</i>
	<i>oli</i> ‘go home, return’	<i>ngoli</i>

Table 6.2: Examples of inflections of stative verbs

Stative verbs	Inflected form after <i>to</i> or <i>ji</i>
<i>ma-cimoy</i> ‘rain’	<i>a-cimoy</i>
<i>má-miyng</i> ‘laugh’	<i>a-miyng</i>
<i>ma-téneng</i> ‘intelligent’	<i>a-teneng</i>
<i>ma-viay</i> ‘alive’	<i>a-viay</i>

6.1.1.1 Clauses with full noun complements, headed by auxiliary verbs without a ligature

The word order of the full noun complements is the same as that in single verb constructions. The verb inflection of the main verb *nalap* (< *salap*) ‘fly’ in (49) follows N-morphophonemics.

- (49) *to nálap rana o tazokok.*
 AUX SUB.fly already NOM bird.name
 ‘Then the tazokok bird flew away.’

6.1.1.2 Clauses with pronominal complements, headed by auxiliary verbs without a ligature

The enclitic pronominal complement follows the first verb of the sentence, i.e., the auxiliary verbs. In (50), the Genitive Agent *na* ‘by him’ immediately follows the auxiliary verb *to* ‘continuously’.

- (50) *to na níta yaken a.*
 AUX 3.S.GEN SUB.see.PF 1.S.NOM PAR
 ‘He keeps looking at me.’

6.1.1.2.1 With an intransitive ‘main’ verb

The Nominative enclitic pronominal complement usually occurs after the auxiliary verbs, as in (51)-(52). But the Agent can be raised to the front of the sentence, following the Agent initial word order (Section 5.4), as in (53).

- (51) *to ka rana ng-ísan do vahay namen.*
 AUX 2.S.NOM already AF.SUB-sleep.over LOC house 1.P.GEN.EXCL
 ‘You might as well sleep over at our house.’

- (52) *ji ka mi-yakan so among,*
 NEG 2.S.NOM AF-side.dish OBL fish
ta m-ingen o velek mo.
 because SV-hurt NOM stomach 2.S.GEN
 ‘Don’t eat fish as a side dish because your stomach will hurt.’
- (53) *ko ji maka-itkeh.*
 I.S.NOM NEG AF.able-sleep
 ‘I can’t sleep.’

6.1.1.2.2 With a transitive ‘main’ verb

Transitive verbs following the auxiliary verbs *to* or *ji* (Table 7) have a different verb inflectional pattern than intransitive verbs (Table 6). The *-en*, *-an*, and *i-* affixes are changed to *-a*, *-i*, and *-an*, respectively.

Table 7: Verb inflections of transitive verbs

Corresponding “Focus”	Transitive Affixes	Inflectional Affixes
(PF)	-en	-a
(LF)	-an	-i
(IF)	i-	-an

Tables 7.1 and 7.2 provide examples to illustrate the inflectional forms for transitive verbs and stative verbs functioning as transitive verbs. The detailed discussion of verb classification is postponed until Sections 6.3.1 and 6.3.2.

Table 7.1: Inflections of transitive verbs after *to* or *ji*

Feature of the initial segment	Transitive verbs	Inflected form after <i>to</i> or <i>ji</i>
[+alveolar]	<i>singkad-an</i> ‘see clearly’	<i>n-ingkaj-i</i>
	<i>a-spang-a</i> ‘meet’	<i>a-n-pang-i</i>
	<i>i-toro</i> ‘give’	<i>n-oro-an</i>
[+palatal]	<i>cita-en</i> ‘look at’	<i>n-ita (=n-ita-a)</i>
[+labial]	<i>a-pno-en</i> ‘fill’	<i>a-m-no-a</i>
[+velar]	<i>i-kelaw</i> ‘surprise’	<i>ng-elaw-an</i>
[+vocalic]	<i>itkeh</i> ‘sleep’	<i>ng-itkeh</i>
	<i>amizing-en</i> ‘listen to’	<i>ng-amizing-a</i>
	<i>onot-an</i> ‘follow’	<i>ng-onoc-i</i>

Table 7.2: Inflections of stative verbs functioning as transitive verbs after *to* or *ji*

Stative verbs functioning as transitive verbs	Inflected form after <i>to</i> or <i>ji</i>
<i>ma-cita</i> ‘see’	<i>a-cita</i> (=a-cita-a)
<i>ma-sinmo</i> ‘come across’	<i>a-sinmo-a</i>
<i>ma-kala</i> ‘find’	<i>a-kala</i> (=a-kala-a)
<i>ka-liman-an</i> ‘kill’	<i>a-liman-a</i>
<i>ka-teneng-an</i> ‘know’	<i>a-teneng-i</i>

In (54) and (56), the enclitic Agent follows the initial auxiliary verbs. In the two yes-no questions in (55) and (57), the Agent is raised to the front to indicate immediacy or recency of the event.

- (54) *to mo rana noró-an jiaken*
 AUX 2.S.GEN already SUB.give-SUB.IF 1.S.LOC
o vonong ni Kaka.
 NOM share GEN older.sibling
 ‘Just give to me my brother’s share.’
- (55) *mo rana to ngól-i?*
 2.S.GEN already AUX SUB.go.home-SUB.LF
 ‘You already came back home? Why did you already come back home?’
- (56) *ji mo ngala-a yaken,*
 NEG 2.S.GEN SUB.look.for-SUB.PF 1.S.NOM
ta ko m-angay Jimowrod.
 because 1.S.NOM AF-go PLN
 ‘Don’t look for me because I’m going to Jimowrod.’
- (57) *mo ji ngiop-i so asoy?*
 2.S.GEN NEG SUB.drink-SUB.LF OBL soup
 ‘You don’t want to drink soup? Why don’t you drink soup?’

6.1.1.2.3. Deictics as auxiliary verbs

The deictic *ya* ‘this’ can occur in the sentence initial position as an auxiliary verb to serve one of two functions: (1) It indicates the proximity of time and location of the action in relation to the interlocutor; (2) It serves as the background marker in narrative discourse, providing descriptive background of the story. The main verb following *ya* does not undergo any verbal inflection, as in (58~60). Enclitic pronouns and monosyllabic adverbs *na* and *pa* are ordered after *ya*. Disyllabic adverb *rana* ‘already’ is ordered after monosyllabic pronouns, as in (60).

- (58) *ya m-ai rana o kois nio.*
 AUX AF-come already NOM pig 2.P.GEN
 ‘Your (pl.) pig has come.’
- (59) *mo Ina, ya ko ni-maka-hap so panganpen.*
 2.S.GEN Mother AUX 1.S.NOM PA-AF.able-take OBL fox
 ‘Mother, I caught a fox.’
- (60) *ya ko ma-omang rana no viniay.*
 AUX 1.S.NOM PF.able-bored already GEN meat
 ‘I am sick and tired of meat.’

6.1.1.2.4 Constructions with sequences of auxiliary verbs

Ya is ordered in front of *ji* or *to* in constructions with sequences of auxiliary verbs, as shown in (61) and (62).

- (61) *ya ji ngian do sahad ori a.*
 AUX AUX SUB.exist LOC inside that PAR
 ‘He is definitely inside.’
- (62) *ya to mipá-kdeng o cimoy.*
 AUX AUX gradually-heavy NOM rain
 ‘The rain is becoming heavier.’

6.1.2 Less-closely-bound auxiliary verbs

The verbs, such as *oyod* ‘truly’, *ala* ‘maybe’, or *apia* ‘permitted’, can occur in sentence initial position, functioning as auxiliary verbs. But these less-closely-bound auxiliary verbs are connected with the following main verbs with the linker *a*.

- (63) *oyod a ji ko a-viay ya*
 truly LIN NEG 1.S.NOM SUB.able-alive this
 ‘Am I really not be able to survive?’
- (64) *ala¹⁰ ma-ka-doa a kawan ko do ilaod.*
 maybe SV-VF-two LIN year 1.S.NOM LOC Taiwan
 ‘I might stay in Taiwan for two years.’

¹⁰ The word final vowel /a/ of *ala* is merged with the linker *a*.

6.2 Constructions with multiple verbs

In the following section, we discuss three types of verbal constructions with multiple verbs: (1) directional verb constructions, (2) serial verb constructions, and (3) sequential constructions with *ka-*.

6.2.1 Directional verb construction

Directional verb *mangay* (or *kangay*) ‘go’ can be connected directly with another verb without the linker *a*. In addition, *mangay* is further reduced to *mi*, functioning similar to an auxiliary and behaving almost like the deictic *ya* ‘this’, as illustrated in (65).

- (65) *mi ko i-pa-cita do kararay ko.*
Go 1.S.GEN IF-CAU-see LOC companion 1.S.GEN
‘I’ll show it to my companion.’

6.2.2 Serial verb constructions

In serial verb constructions, all serial verbs after initial verbs are connected by the linker *a*, and share the same Patient or undergoer. The shared Patient in (66) is *o mavakes ito* ‘that woman’, whereas in (67), the shared Patient is understood from the context and thus is not expressed.

- (66) *ya ma-téneng a ma-ganam o mavakes ito.*
AUX SV-intelligent LIN SV-dance NOM woman that
‘That woman is good at dancing.’
- (67) *i-toro ko jimo a kan-en mo.*
IF-give 1.S.GEN 2.S.LOC LIN eat-PF 2.S.GEN
‘I’ll give you (that) to eat.’

6.2.3 Sequential construction with *ka-*

The prefix *ka-*, probably derived from the conjunction *aka* ‘and’, is added to the stem of the verb, meaning ‘and then such and such happens’. The bound pronominal complements occur before the adverbs *na* or *pa*, as in (68a). The third person plural free pronoun occurs after the adverbs *na* or *pa*, as in (68b).

- (68) a. *k-om-an kamo pa, ka-ngay nio rana.*
 <AF>eat 2.P.NOM first CON-go 2.P.GEN already
 ‘You (pl.) eat first before you go.’
- b. *k-om-an pa sira, ka-ngay da rana.*
 <AF>eat first 3.P.NOM CON-go 3.P.GEN already
 ‘They eat first before they go.’

Both the Agent and Patient arguments co-occurring with the transitive sequential verb *ka-* are in the Genitive case, as shown in (69). The Agent of the intransitive sequential verb is also in the Genitive case, but the other arguments are in either Oblique or Locative cases depending on the verbs, as shown in (70).

- (69) *ma-ngotas so raon a ka-ptad na nia.*
 AF-pick OBL wild.taro.leaf LIN CON-put.down 3.S.GEN 3.S.GEN
ika-doa na no raon am
 OR-two 3.S.GEN GEN taro_leaf PAR
kotas-en na ka-ptad na nia.
 pick-PF 3.S.GEN CON-put.down 3.S.GEN 3.S.GEN
 ‘They picked the first wild taro leaf, and then they put it down. As for the second wild taro leaf, after they picked it, they put it down.’
- (70) *ya ni-k-om-an so wakay a,*
 AUX PA-<AF>eat OBL sweet.potato PAR
na ka-kan pa so ovi a.
 3.S.GEN CON-eat still OBL yam PAR
 ‘He ate a sweet potato, and then he ate a yam.’

If the auxiliary verbs *to* or *ji* occur in the sequential construction, the prefix *ka-* is added to the auxiliary verbs and the following dependent verb is formed with the suffix *-an* added to the verb root. This construction in parentheses in (71) and (72) was previously analyzed as a nominalized construction in Rau (2002b).

- (71) *ni-mi-'oya-'oya [ka-to na rana ngay-an] a.*
 PA-AF-RED-angry CON-just 3.S.GEN already go-SUB PAR
 ‘He was very angry and then he left.’
- (72) *ji a-bo [ka-ji ko angsem-an] so*
 EMP SUB-no CON-NEG 1.S.NOM eat.raw.meat-SUB OBL
eye 2.S.GEN
mata mo.

‘I will definitely (lit. by no means not) eat your eyes.’

6.3 The form of verbs

Yami verbs can be classified into dynamic verbs and stative verbs, corresponding to the verb classifications of Philippine languages, proposed by Reid & Liao (2004). Dynamic verbs include: (1) intransitive verbs with affixes such as *-om-*, *mi-*, *ma-*, *maN-*, *maka-*, and *maci-*, and (2) transitive verbs with affixes such as *-en-*, *-an-*, and *i-*. Stative verbs include stative *ma-*, potential *ma-*, and involuntary *ka-an* verbs. Other derivational verb affixes include causative *pa-* (Section 6.6), perfective *ni-* (Section 6.3.1.1.2.1.1), and polysemous *ka-* (Section 10). The following discussion focuses on the distinction between dynamic and stative verbs.

6.3.1 Dynamic verbs

6.3.1.1 Transitive vs. Intransitive

Transitive verbs occur with two arguments, one Genitive Agent and the other Nominative Patient. Intransitive verbs occur with one Nominative Patient, but no Genitive Agent is allowed.

6.3.1.1.1 Intransitive verbs

6.3.1.1.1.1 Intransitive verbs with affixation

In the following paragraphs, we only discuss the indicative forms of the verbs. The inflectional subjunctive forms were presented in Tables 5, 6 and 7.

6.3.1.1.1.1.1 Reflexes of PEF **-um-/*mu-/*m-*

The Yami reflex of the Philippine UM verb infix (PEF **-um-/*mu-/*m-*) is *-om-*, or traditionally called the AF affix, expressing punctual or inchoative actions.

6.3.1.1.1.1.1.1 Reflexes on historically underived verbs

Dynamic intransitive affix *-om-* is inserted between the initial consonant and vowel of the roots whose initial consonant is /s/, /t/, /k/, or /g/. If the initial consonant of the roots is /l/, /d/, /r/, or /z/, *-om-* can be either an infix or a prefix *om-*. Otherwise, *-om-* is prefixed to the roots, which can be semantically transitive or intransitive. The following

examples in (73) illustrate the indicative form of the UM verbs. The subjunctive forms of the dynamic intransitive verb were presented in Table 6.1

(73) UM verbs

<i>s-om-alap</i> 'fly'	<i>t-om-anek</i> 'stand up'	<i>k-om-an</i> 'eat'	<i>g-om-cin</i> 'go down vertically'
<i>l-om-oas</i> 'go out to the sea'	<i>d-om-ket</i> 'adhere'	<i>r-om-iag</i> 'eat breakfast'	<i>z-om-okzok</i> 'fall flat'
<i>om-'akad</i> 'walk fast'	<i>om-alam</i> 'walk'	<i>om-bakbak</i> 'hit'	<i>om-dada</i> 'rise, hoist'
<i>om-lolos</i> 'shout'	<i>om-nowaw</i> 'ooze pus'	<i>om-osok</i> 'go down on a slant'	<i>om-iop</i> 'drink soup'
<i>om-paopaong</i> 'build waves'	<i>om-rateng</i> 'arrive'	<i>om-vilang</i> 'count, read'	<i>om-zagpit</i> 'step on'

6.3.1.1.1.1.2 Reflexes on historically derived verbs

The infix *-om-* can combine with other stem-forming prefixes *pi-*, *pa-*, *paN-*, *paka-*, and *paci-* to form the following dynamic intransitive prefixes: *mi-*, *ma-*, *maN-*, *maka-*, and *maci-*.

6.3.1.1.1.1.2.1 Reflexes of PEF *maR-

The Yami reflexes of the Philippine MAG verb prefix (PEF *maR-) are *mi-* and *ma-*. Verbs with *mi-* usually occur with one argument to express durative or reflexive/reciprocal actions. Examples of *mi-* verbs are provided in (74).

(74) *mi-* verbs

<i>mi-alalam</i> 'play'	<i>mi-moa</i> 'plant'	<i>mi-palit</i> 'exchange'
<i>mi-tatanek</i> 'stand'	<i>mi-valiw</i> 'become'	<i>mi-yowyaw</i> 'stroll about'

Now, compare the semantic differences between the *-om-* verbs and the *mi-* verbs in (75).

(75) *-om-* vs. *mi-* verbs

<i>-om-</i> verbs	<i>mi-</i> verbs
<i>k-om-alay</i> 'hold someone's hand'	<i>mi-kalay</i> 'hold each other's hand'

<i>k-om-alopkop</i> ‘carry something’	<i>mi-kalopkop</i> ‘embrace each other’
<i>om-lolo</i> ‘drag something’	<i>mi-lolo</i> ‘follow each other’

The *pi-* prefix will emerge in their transitive counterparts or nominalization of the *mi-*verbs, as shown in (76).

(76) Noun or transitive verb with prefix *pi-*:

<i>pi-alalam-en</i> ‘play with something’	<i>pi-moamoan-an</i> ‘orchard’	<i>pi-palit-en</i> ‘exchange’
<i>pi-tatanek-an</i> ‘place where one stands’	<i>pi-valiw-en</i> ‘transform’	<i>pi-yowyaw-an</i> ‘place where one strolls about’

The subjunctive forms of the transitive verbs with *pi-* after the auxiliary verbs *to* or *ji* basically follow the pattern presented in Table 7, except that the prefix *pi-* remains unchanged, e.g., *to pi-alalam-a* ‘then take something and play with it’.

Verbs with *ma-*, such as *ma-noma* ‘do first’, *ma-ganam* ‘dance’, *ma-lalayo* ‘run’, *ma-nanala* ‘wait’, also usually occur with one argument. The *pa-* prefix will emerge in their transitive counterparts, or as nominalization of the *ma-* verbs, and remains unchanged after the auxiliaries *to* or *ji*, e.g., *to na pa-nanala-a* ‘then he kept waiting’.

6.3.1.1.1.1.2.2 Reflexes of PEF *maN-

The Yami reflex of the Philippine MANG (*maN-) verb prefix is *maN-*. The *maN-* verbs usually co-occur with two or three arguments. The Patient is in the Oblique case. The *maN-* verbs refer to distributive activity, i.e., with many people carrying out multiple activities in wide time and space. Example (77) illustrates the *maN-* verbs in the indicative form.

(77) *maN-* verbs

<i>mamnek</i> (< maN-bnek) ‘appoint’	<i>manba</i> (< maN-tba) ‘fell’
<i>manazang</i> (< maN-sazang) ‘buy’	<i>mangap</i> (< maN-hap) ‘take’

The *paN-* prefix will emerge in their transitive counterparts or nominalization of the *maN-* verbs, as shown in (78).

(78) Noun or transitive verb with prefix *paN-*:

<i>pamnekan</i> (paN-bnek-an) ‘designated place, squatter’s rights’	<i>panban</i> (paN-tba-an) ‘place where one felled’
--	--

<i>panazangan</i> (paN-sazang-an) 'place where one bought'	<i>pangapan</i> (paN-hap-an) 'place where one took'
---	--

The capital N- in *maN-* (*paN-*) represents the concept of archiphoneme in that the nasal sound is not fixed but assimilates to the feature of the segment following it. Table 8 shows the morphophonemics of *maN-*. N- is assimilated to the initial segments /p/, /b/ or /v/ of the following root to become /m/; N- is assimilated to /k/, /h/, or vowels to become /ng/; N- is assimilated to /t/, /d/, /s/, or /c/ to become /n/. Elsewhere, the initial segment remains unchanged, while N- becomes /n/.

Table 8: Morphophonemics of *maN-*

Feature	Phoneme	Base form	Change to	maN + Base
[+labial]	/p/	<i>pili</i>	/m/	<i>mamili</i> 'choose'
	/b/	<i>bedbed</i>		<i>mamedbed</i> 'tie'
	/v/	<i>vono</i>		<i>mamono</i> 'poke eyes'
[+velar] or [+vocalic]	/k/ /h/ or any vowel	<i>kaod</i> <i>hap</i> <i>item</i>	/ng/	<i>mangaod</i> 'row a boat' <i>mangap</i> 'take' <i>mangitem</i> 'combine'
[+alveolar]	/t/ /d/ /s/	<i>tapang</i> <i>dokdok</i> <i>sazab</i>	/n/	<i>manapang</i> 'sew' <i>manokdok</i> 'knock, beat' <i>manazab</i> 'roast'
[+palatal]	/c/	<i>cila</i>		<i>manila</i> 'pick up food scraps to eat'
Elsewhere			maN- + Base	
		<i>zogazoga</i>		<i>manzogazoga</i> 'bark wildly'
		<i>langi</i>		<i>manlangi</i> 'harvest millet'
		<i>'agnat</i>		<i>man'agnat</i> 'lift'
		<i>wagwag</i>		<i>manwagwag</i> 'abandon'
		<i>gazot</i>		<i>man-gazot</i> 'reed cut'
		<i>mama</i>		<i>manmama</i> 'chew betel nut'
		<i>nakenakem</i>		<i>mannakenakem</i> 'think'
		<i>ngo</i>		<i>manngo</i> 'how'
		<i>rahet</i>		<i>manraherahet</i> 'criticize, speak evil of'

The subjunctive forms after the auxiliary verbs *to* or *ji* follow the pattern in Table 7. The prefix *paN-* becomes *maN-* (Table 6), e.g., *to manazang-i* 'then buy'.

6.3.1.1.1.1.2.3 Reflexes of PEF *maka-

The Yami reflex of Philippine MAKA verb prefix (*maka-) is *maka-*, derived from *-om-* combined with *paka-*. It expresses ability and potential. Examples of *maka-* verbs are shown in (79).

(79) *maka-* verbs

<i>maka-cita</i> ‘can see’	<i>maka-mizing</i> ‘can hear’
<i>maka-vonas</i> ‘can remove’	<i>maka-pinan</i> ‘can grab’
<i>maka-teneng</i> ‘get to know’	<i>maka-pía</i> ‘do carefully and slowly’, ¹¹

The *paka-* prefix will emerge in their transitive counterparts or nominalization of the *maka-* verbs, as shown in (80).

(80) Noun or transitive verb with prefix *paka-*:

<i>paka-citá-en</i> ‘must see clearly’	<i>paka-mizíng-en</i> ‘must listen carefully’
<i>paka-vonas-en</i> ‘must remove’	<i>paka-pinán-an</i> ‘must grab tightly’
<i>paka-teneng-an</i> ‘must know’	<i>paka-piá-en</i> ‘do well, fix’, ¹²

The subjunctive forms after the auxiliary verbs *to* or *ji* follow the pattern in Table 7. The prefix *paka-* becomes *maka-* (Table 6), e.g., *to makamizing-a* ‘then listen carefully, hear something all of a sudden’.

6.3.1.1.1.1.2.4 Reflexes of PEF *maki-

The Yami reflex of Philippine MAKI verb prefix (*maki-) is *maci-*, derived from *-om-* combined with *paci-*. It expresses the concepts of engaging in an activity or following along with someone to do something. Examples of *maci-* verbs are shown in (81).

¹¹ The following pair contrasts in meaning: *makapía* (penultimate stress) ‘do something slowly and carefully’ vs. *makapia* (ultimate stress) ‘do something nicely and well’.

¹² The following pair, similar to footnote 11, also contrasts in meaning depending on whether the stress is on *i* or *a*: e.g., *pakapíæn* ‘must do something slowly and carefully’ vs. *pakapiáæn* ‘must do something nicely and well.’

(81) *maci-* verbs

<i>maci-'eza</i> 'follow along with someone'	<i>maci-vazay</i> 'engage in work with someone'
<i>maci-vonong</i> 'engage in distribution'	<i>maci-zakazakat</i> 'engage in killing' ¹³

The *paci-* prefix will emerge in their transitive counterparts or nominalization of the *maci-* verbs, as shown in (82).

(82) Noun or transitive verb with prefix *paci-*:

<i>paci-'eza-an</i> 'follow along someone'	<i>paci-vazay-an</i> 'engage in work with someone'
<i>paci-vonong-an</i> 'engage in distribution'	<i>paci-zakazakat-an</i> 'engage in killing'

The subjunctive forms after the auxiliary verbs *to* or *ji* follow the pattern in Table 7. The prefix *paci-* becomes *maci-* (Table 6), e.g., *to macivazay-i* 'then engage in work with someone'.

6.3.1.1.2 Transitive verbs

A transitive verb has at least two nominal complements. One is the Genitive Agent or actor macrorole and the other is the Nominative Patient or undergoer macrorole.

6.3.1.1.2.1 Transitive verbs with affixation

The Yami transitive affixes *-en*, *-an*, and *i-* are traditionally analyzed as PF (Patient focus), LF (Locative focus), and IF/BF (Instrument/Benefactive focus), respectively, in the Philippine focus system. For ease of comparison, Table 9 lists the four major focus affixes in Yami and its corresponding classifications in Reid and Liao's typological framework. Their inflectional pattern was presented in Tables 5 and 7.

¹³ A closely related prefix *masi-* expresses reciprocity, e.g., *masikakey* 'love one another', *masika'oya* 'hate one another'. The prefix *maci-* can be combined with other derivational prefixes, such as *paN-*, *pa-*, and *ka-* to form the following words: *macipangayongayo* (*maci-paN-kayo-kayo*) 'follow a crowd to split wood', *macipaganaganam* (*maci-pa-gana-ganam*) 'follow a crowd to go dancing', *macikazakat* (*maci-ka-zakat*) 'follow along to die', *macikararoa* (*maci-ka-ra-roa*) 'go to help someone'.

Table 9: Yami focus affixes

(AF)	(PF)	(LF)	(IF/BF)
Dynamic Intransitive	Transitive	Transitive	Transitive
m-/om-	-en	-an	i-

6.3.1.1.2.1.1 Reflexes of PEF *-ən

The Yami reflex of the Philippine EN verbs suffix (*-ən) is *-en*, referring to the direct and complete effect of the action on the Patient. The tense/aspect of *-en* verbs usually indicates future tense or progressive aspect and hence is imperfective, e.g., *kan-en* ‘eating or will eat’. The perfective marker in Yami is *ni-*, e.g., *ni-akan* ‘ate or have eaten’.

6.3.1.1.2.1.2 Reflexes of PEF *-an

The Yami reflex of the Philippine AN verb suffix (*-an) is *-an*, referring to the partial, superficial or consequential effect of the action on the Patient. It also refers to the source or goal of a movement. As a metaphorical extension, it can refer to the cause of an action. Compare the *-an* verbs with the *-en* verbs in (83). The effect on the former is partial whereas that on the latter is total.

(83) Comaprison beteen *-an* verbs with *-en* verbs

<i>-an</i> verbs	<i>-en</i> verbs
<i>akan-an</i> ‘eat some’	<i>kan-en</i> ‘eat up’
<i>inom-an</i> ‘drink some’	<i>inom-en</i> ‘drink up’
<i>kodkod-an</i> ‘scrape’	<i>kodkod-en</i> ‘scrape off’
<i>akdot-an</i> ‘pinch’	<i>akdot-en</i> ‘pinch out’

6.3.1.1.2.1.3 Reflexes of PEF *?I-

The Yami reflex of the Philippine I verb prefix (*?I-) is *i-*, expressing the following meanings: (1) conveyence of an object, (2) a tool used to carry out an action, (3) a cause or feeling due to an action, or (4) the beneficiary of an action. The following examples of I- verbs in (84) refer to causes or feelings.

(84) *I-verbs*

<i>i-lavi</i>	<i>i-bakbak</i>	<i>i-kadkad</i>
---------------	-----------------	-----------------

‘cry because ...’	‘hit because...’	‘scratch the itch because...’
<i>i-k-ánig</i> ‘embarrassed because...’	<i>i-ká-miyng</i> ‘amused because...’	<i>i-ka-zakat</i> ‘killed because’
<i>i-pika</i> ¹⁴ - <i>zazakat</i> ‘cause to die one by one’	<i>i-pika-nokanoka</i> ‘cause to grow boils in many parts of the body’	

6.3.2 Stative verbs

Stative verbs are intransitive. The only complement of stative verbs is the Patient or undergoer.

6.3.2.1 Reflexes of PEF *ma-

The Yami reflex of the Philippine MA verbs (*ma-) is *ma-*. The stative *ma-* verbs, as opposed to the dynamic intransitive verbs, do not have any derivational relationship with *p-* forms. As discussed previously, all dynamic intransitive verb affixes, such as *mi-*, *ma-*, *maN-*, *maka-*, and *maci-*, are the result of the combination of *-om-* with *pi-*, *pa-*, *paN-*, *paka-*, and *paci-*, respectively. That is why the *p-* forms reappear in nominalization or the transitive counterparts of the intransitive verbs. Although *ma-* verbs are not derivable from *p-* forms, they might be related to the *ka-* verbs, as all the stative verbs in (84) are prefixed with *ka-*. This will be further discussed in Section 6.3.2.2. The examples in (85) indicate the major semantics of *ma-* verbs, expressing the perfect aspect or relating the relevance of the event to the current state.

(85) *ma-* verbs:

<i>ma-cimoy</i> ‘rain’	<i>ma-sálit</i> ‘difficult’	<i>ma-óyat</i> ‘strong, industrious’
<i>ma-táva</i> ‘fat’	<i>ma-téngeng</i> ‘intelligent’	<i>ma-rilaw</i> ‘sympathetic’
<i>m-ámo</i> ‘embarrassed’		

¹⁴ *pika-* also means ‘gradually, one after another, or affecting the whole group’, e.g., *mika-zazakat* ‘all died’, *mika-yokayokay* ‘wake up one after another’, *ma-pika-raherahet* ‘cause total chaos’

6.3.2.1.1 Potential direct affect statives

Stative *ma-* verbs have a derivational relationship with the transitive verbs, most commonly with the *-en* verbs. In (86)-(87), the stative verb *mapno* ‘full’ has its transitive counterpart *apnoen* ‘fill’. Both the Agent and the Patient occur in the transitive clause (86), but only the Patient occurs in the stative clause (87).

- (86) *apno-en mo o vanga no wakay.*
 fill-PF 2.S.GEN NOM pot GEN sweet.potato
 ‘Fill the pot with the sweet potatoes.’
- (87) *ya ma-pno do yala o ko*
 AUX SV-full LOC basket NOM 1.S.GEN
ni-kali a wakay.
 PA.PF-dig LIN sweet.potato
 ‘The basket is full of the sweet potatoes I dug.’

Another stative verb affix *ka-an* expresses involuntary, negative or unfortunate events. The stative *ka-an* verb in (89), *kadasan* ‘caught up with the urge to have a bowel movement’, also has its transitive counterpart in (88), *adasen* ‘catch up’.

- (88) *maká-gza ka, ta na imo adas-en.*
 AF.VF-fast 2.S.NOM because 3.S.GEN 2.S.NOM catch.up-PF
 ‘(Walk) faster because he will catch up with you (soon).’
- (89) *ko ka-das-an.*
 1.S.NOM VF-catch.up-VF
 ‘I am about to have a bowel movement (lit. I got caught up).’

Other Yami stative affixes include (1) *mapaka-* ‘pretend’, e.g., *mapaka-toktoklay* ‘pretend to limp’, *mapaka-ititkeh* ‘pretend to sleep’, (2) *mala-* ‘taste or look like’, e.g., *mala-kakagling* ‘gamey flavor, taste like lamb, or smell like goat’, and *mala-ngépen* ‘bucktoothed’, and (3) *ma-...-en* ‘love to do such and such’, e.g., *ma-miyimíying-en* ‘love to laugh’, *ma-lavláv-in* ‘a cry baby’.

6.3.2.1.2 Statives with expressed actors

Stative verbs can be reanalyzed as transitive verbs, with both the Agent and Patient co-occurring with the verbs, expressing ability, potential or perfectivity, as illustrated in the following examples (90)-(92).

- (90) *ma-kala ta o mogis nio?*
 able.PF-find 1.P.GEN.INCL NOM rice 2.P.GEN
 ‘Can we find your rice?’
- (91) *ko ma-cita imo ya om-avang do aleleh.*
 1.S.GEN able-PF-see 2.P.NOM AUX AF-load LOC car
 ‘I saw you getting in the car.’
- (92) *ko ká-tenng-an imo.*
 1.S.GEN VF-know-VF 2.S.NOM
 ‘I know you.’

6.3.2.2 Reflexes of PEF *ka-

The Yami reflex of the Philippine KA verb prefix (*ka-) is *ka-*, referring to a stative verb. The prefix *ka-* in *ika-* will appear in transitive verbs formed with the stative MA verbs, as illustrated in (84) and repeated in (93).

- (93) Comparison between MA verbs and IKA verbs

MA verbs (Stative)	IKA verbs (Dynamic transitive)
<i>ma-zakat</i> ‘die’	<i>i-ka-zakat</i> ‘killed because’
<i>má-miyng</i> ‘laugh’	<i>i-ká-miyng</i> ‘amused because’

The KA verbs have derivational relationships with MA verbs in the distinction of mood. The MA verbs are realis whereas the KA verbs are irrealis. In (94a), the speaker had some control over the fact that he was filthy, and he felt embarrassed because of it. But in (94b), the speaker had no control over the situation and would not have felt embarrassed if he had not gotten so filthy.

- (94) a. *ya ko má-snek, ta ya ko ma-loit*
 AUX 1.S.NOM SV-embarrassed because AUX 1.S.NOM VF-filthy
 ‘I was embarrassed because I was filthy.’
- b. *ya ko má-snek do ya ko ka-loit.*
 AUX 1.S.NOM SV-embarrassed LOC AUX 1.S.GEN VF-filthy
 ‘I was very embarrassed because I happened to get so filthy.’

6.4 Existential verbs

Existential verbs contain two types: (1) with a Nominative complement and (2) without a Nominative complement. The former has two meanings: (1) someone or

something exists or does not exist, as in (95)-(96) and (2) someone has or does not have something, as illustrated in (97)-(98). The latter, on the other hand, does not have a definite Nominative complement; therefore, the complement led by the Oblique case *so* is indefinite, as shown in (99)-(100).

- (95) *ya m-ian do vahay da o mavakes.*
 AUX AF-be.at LOC house 3.P.GEN NOM woman
 ‘The woman is at their house.’
- (96) *abo rana o kanen.*
 no already NOM food
 ‘The food is gone.’
- (97) *ya m-ian o savong no tamek do makaves.*
 AUX AF-have NOM flower GEN grass LOC woman
 ‘The woman has the flower.’
- (98) *ya abo o savong no tamek do mavakes.*
 AUX no NOM flower GEN grass LOC woman
 ‘The woman does not have the flower. The flower is not at the woman’s place.’
- (99) *ya m-ian so tao do vahay da.*
 AUX AF-have OBL human LOC house 3.P.GEN
 ‘There is someone in their house.’
- (100) *abo so kanen.*
 no OBL food
 ‘(Someone who) has no food.’

6.5 Imperative verb forms

Imperative verb forms, used in imperative sentences, distinguish the affirmative from the negative. The intransitive affirmative imperative form is the verb root itself, e.g. *itkeh!* ‘Sleep!’ whereas the transitive affirmative imperative form has the suffix *-i*, as in (101)-(102). In the negative imperative sentence, the imperative form is preceded by the negative marker *jia*, as in (103)- (104).

- (101) *akan-i o wakay ito.*
 eat-PF.IMP NOM sweet.potato that
 ‘Eat up the sweet potato!’
- (102) *linas-i o rasay ko.*
 wipe-LF.IMP NOM bamboo.mat 1.S.GEN
 ‘Wipe off my bamboo mat!’

- (103) *jia pan-mama, ta ma-langa ka.*
 NEG.IMP VF-chew because SV-drunk 1.S.NOM
 ‘Don’t chew betel nut, otherwise you will get drunk!’
- (104) *jia apis-i o ayob ko.*
 NEG.IMP wash-LF.IMP NOM clothes 1.S.GEN
 ‘Don’t wash my clothes!’

6.6 Causative *pa-*

The causative prefix *pa-* is very productive. It can be added directly to a verbal root to form a transitive verb, as *pa-en* or *ipa-* in (105)-(106) or form an intransitive verb, as *mapi*¹⁵ or *mapa-* in (107)-(108).

- (105) *pa-dket-en ko pa o ya ni-ma-zizi a vakong.*
 CAU-adhere-PF 1.S.GEN first NOM AUX PA-SV-tear LIN book
 ‘I will first mend the torn book.’
- (106) *mo i-pa-kan so manok nio o ri?*
 2.S.GEN IF-CAU-eat OBL chicken 2.P.GEN NOM that.
 ‘Is that what you will use to feed your chickens?’
- (107) *no to nake-nakém-a o nizpi ya am, ji mapi-ra-raten.*
 If AUX RED-think-PF.SUB NOM money this TOP EMP CAU-RED-forbid
 ‘If (one) keeps thinking about the money, it will cause (one) to sin.’
- (108) *ya ni-mapa-lavi so kanakan o mavakes.*
 AUX PA-CAU-cry OBL child NOM woman
 ‘The woman caused a child to cry.’

7. Structure of Noun Phrases

7.1 Word order

The common word order in a Noun Phrase is: Determiner - Head Noun - Other Constituents.

7.2 Determiners

Yami determiners (traditionally called case markers) distinguish common nouns

¹⁵ *mapi-* can be added to a verbal root or a noun root to form an agentive noun, e.g., *mapi-viniay* ‘someone who raises animals’, *mapi-vatvatek* ‘teacher’.

from personal names and kinship terms. The latter further distinguishes singular and plural forms. Determiners manifest four case differences: Nominative, Genitive, Locative, and Oblique, as shown in Table 10.

Table 10: Case distinctions in Yami determiners

Preceding:	Nominative	Genitive	Locative	Oblique
Common nouns	<i>o</i>	<i>no</i>	<i>do</i>	<i>so</i>
Singular personal names and kinship terms	<i>si</i>	<i>ni</i>	<i>ji</i>	--
Plural personal names and kinship terms	<i>sira</i>	<i>nira</i>	<i>jira</i>	--

7.2.1 Syntactic and semantic agreement features of determiner systems

7.2.1.1 Case-marking agreement features

In topicalized constructions, the raised topic is Nominative and definite. In the matrix sentence, the full noun Agent of the transitive verb is Genitive and preceded by *no*, while the third argument is preceded by the Oblique determiner *so* and is indefinite. The place adjunct is preceded by the Locative determiner *do*, as illustrated in (109).

- (109) *o i-pi-vat-vatek rana ya am,*
 NOM IF-VF-RED-carve already this TOP
ni-pi-vat-vatek na no mehakay
 PA.IF-VF-RED-carve 3.S.GEN GEN man
so ngaran no mavakes do vakong.
 OBL name GEN woman LOC paper
 ‘As for this pen, it was used by the man to write a woman’s name on the paper.’

7.2.2 Common vs. Personal

As indicated in Table 10, determiners distinguish between common nouns and personal names/kinship terms and are obligatory in reference. In vocative forms, no determiners are allowed, but a second person Genitive pronoun *mo* ‘you’ is optionally placed in front of the personal names/kinship terms, e.g., *Ina* ‘Mother!’ or *mo Ina* ‘You, Mother!’, *Salang* ‘Salang!’ or *mo Salang* ‘You, Salang!’

Deceased persons and places or things that no longer exist are preceded by *mina* ‘late, past’, as illustrated in (110)-(111).

- (110) *si mina Paloy*
 NOM late PN

‘Late Paloy’

- (111) *ma-láhet o mina vahay namen nokakoa.*
 SV-bad NOM past house 1.P.GEN.EXCL before
 ‘Our former house was not very good.’

7.2.3 Definite vs. Indefinite

As discussed previously, the Agent and the Patient of a transitive verb and the Patient of an intransitive verb are always definite. The other arguments in verbal clauses are usually indefinite, as in (109) previously. Although Nominative Patient is always definite, the noun phrase with the number ‘one’ is an exception and will be discussed in Section 7.2.5.

7.2.4 Proximate vs. Remote

Yami deictics (Table 11) form a continuum of distance. The relatively proximate deictics refer to present, visible, known, near, specific, real, and living things, whereas the relatively remote deictics refer to past, invisible, unknown, far, non-specific, hypothetical, or dead things. The distance that a deictic refers to also interacts with the person of a pronoun, with the first person being the most proximate, second person less proximate, and third person the most remote.

Table 11: Yami deictics in relation to distance

Proximate end	Nominative (enclitic)	Nominative (free)	Genitive	Locative	Oblique
First person	<i>ya</i>	<i>o ya</i>	<i>no nia</i>	<i>do jia</i>	<i>so sia</i>
Second person	<i>ori</i>	<i>o ri</i>	<i>no nang</i>	<i>do dang</i>	<i>so sang</i>
Third person	<i>ito</i>	<i>o ito</i>	<i>no nito</i>	<i>do jito</i>	<i>so sito</i>
Remote end	-	-	-	<i>do koang</i>	-

In the following example (112), the Nominative deictic free form occurs as the head of the Noun Phrase.

- (112) *hap-en ko o ya, hap-en mo o ri a,*
 take-PF 1.S.GEN NOM this take-PF 2.S.GEN NOM that.near PAR
hap-en na o ito.
 take-PF 3.S.GEN NOM that.far
 ‘I’ll thake this. You’ll take that (close to you). He’ll take that (close to him).’

In (113), the Nominative bound forms occur after the noun head.

- (113) *ra-roa ka kanakan o mi-av-avang*
 RED-two CON child NOM AF-RED-row.a.boat
do aarang ito am, to da
 LOC moorage that.far PAR AUX 3.P.GEN
ngao-kaód-a o tatala da ori am
 SUB.RED-row-SUB.PF NOM boat 3.P.GEN that.near PAR
 ‘Two children were rowing a boat in the ocean. They kept rowing.’

In the following examples, the Nominative (114), Genitive (115), and Oblique (116) deictics are illustrated. *O ya* ‘this (close to me)’ is placed at the proximate end of the distance continuum, while *o ri* ‘that (close to you)’ is somewhat remote, and *o ito* ‘that (close to him/her)’ is placed at the remote end of the continuum.

- (114) *kan-en ko o ya.*
 eat-PF 1.S.GEN NOM this
kan-en mo o ri,
 eat-PF 2.S.GEN NOM that.near
kan-en na o ito.
 eat-PF 3.S.GEN NOM that.far
 ‘I’ll eat this. You’ll eat that. He’ll eat that.’
- (115) *ya pía o kakanan no nia.*
 AUX good NOM taste GEN this.GEN
ya pia o kakanan no nang.
 AUX good NOM taste GEN that.near.GEN
ya pía o kakanan no nito.
 AUX good NOM taste GEN that.far.GEN
 ‘This (close to me) tastes good. Does that (close to you) taste good? That (close to him) tastes good.’
- (116) *akman so sia.*
 like OBL this.OBL
akman so sang.
 like OBL that.near.OBL
akman so sito.
 like OBL that.far.OBL
 ‘Like this (with me). Like that (with you). Like that (with him).’

The following examples (117)-(118) illustrate the use of deictics from the nearest to the farthest distance, ie., *do jia* → *do dang* → *do jito* → *do koang*, and their interactions with personal pronouns.

- (117) *am-lisna ka do dang a, am-lisna ko do jia,*
 AF-sit 2.S.NOM LOC there.far PAR AF-sit 1.S.NOM LOC here
am-lisna si wari ta do jito.
 AF-sit NOM younger.sibling 1.P.GEN.INCL LOC there.near
 ‘You sit there (close to you). I sit here. My sister sits there (close to her)’
- (118) *mi ko do koang a m-itkeh.*
 go 1.S.NOM LOC there.very.far LIN AF-sleep
 ‘I’ll go there (very far from here) to sleep.’

Yami time expressions also distinguish distance, as do deictics in space. Table 12 illustrates time words in relation to space. P and R stand for Proximate and Remote, respectively. U and D refer to Up and Down, respectively.

Table 12: Yami time expressions in relation to space

Remote (Past)		Proximate (Present)			Remote (Future)
	<i>nokango</i> ‘when (past)’		<i>simango</i> ‘when (present, recent future)’		<i>nomango</i> ‘when (remote future)’
	<i>nokakoa</i> ‘a long time ago’	<i>nokaikoa</i> ‘a short while ago’	<i>siciaikoa</i> ‘now’	<i>simaikoa</i> ‘near future’	<i>nomaikoa</i> ‘a long time later’
P R		<i>nokacitoai na</i> ‘just now’	<i>siciatoai ya</i> ‘right now’	<i>citoai na</i> ‘a moment later’	<i>noipisa</i> ‘sometime in the future’
		<i>nokaipisa</i> ‘last time’	<i>siciaikoa ya</i> ‘this time’	<i>sipisa</i> ‘next time’	
		<i>nokakoyab</i> ‘yesterday’	<i>siciaraw ya</i> ‘today’	<i>simaraw</i> ‘tomorrow’	
		<i>nokamnasavehan</i> ‘last month’	<i>do vehan ya</i> ‘this month’	<i>simaksavehan</i> ‘next month’	
	<i>nokamnasawan</i> ‘last year’	<i>siciawan ya</i> ‘this year’	<i>simaksakawan</i> ‘next year’		

U		<i>nokapnezak</i> 'a previous morning'	<i>siciapnezak ya</i> 'morning' (now)	<i>sipnezak</i> 'tomorrow morning'	
		<i>nokamararaw</i> 'a previous noon'	<i>siciamararaw ya</i> 'noon' (now)	<i>simararaw</i> 'this noon' (later in day)	
D		<i>nokamakoyab</i> 'a previous afternoon'	<i>siciamakoyab ya</i> 'afternoon' (now)	<i>simakoyab</i> 'this afternoon' (later in day)	
		<i>nokamahep</i> 'a previous night'	<i>siciamahep ya</i> 'evening' (now)	<i>simahep</i> 'tonight'	

7.2.5 Specific vs. Non-specific

Nominative full nouns are definite unless the number 'one' *asa* precedes the noun. In that case, the noun phrase is still specific albeit indefinite, as in (119).

- (119) *asa ka ciri-ciring da, ci-cilo-an ko*
 one CON RED-word 3.P.GEN RED-hear-LF 1.S.GEN
do ili ta ya Jiranmilek ya am.
 LOC village 1.P.GEN.INCL this PLN this PAR
 'There is one more story that is also a story we heard in Jiranmilek village.'

7.2.6 Singular vs. Plural

Yami personal names and kinship terms distinguish number, as shown in Table 10. The plural determiner has the identical form as the third person plural pronoun free form *sira*, as in (120).

- (120) *sira*¹⁶ *Ina aka nira Kaminan.*
 NOM.P Mother CON GEN.P Aunt
 'My mother and my Aunt.'

Yami personal pronouns distinguish number, case and bound vs. free forms, as

¹⁶ *sira* + kinship term refers to relatives who are not addressees, e.g., *sira kaka* 'my brother and his group', *sira kehakay* 'my friend and his group'.

illustrated in Table 13.

Table 13: Yami personal pronouns

	Nominative (Bound)	Nominative (Free)	Genitive (Bound)	Genitive (Free)	Locative (Free)
1S	<i>ko</i>	<i>yaken</i>	<i>ko</i>	<i>niaken</i>	<i>jiaken</i>
2S	<i>ka</i>	<i>imo</i>	<i>mo</i>	<i>nimo</i>	<i>jimo</i>
3S	<i>ya</i>	<i>iya</i>	<i>na</i>	<i>nia</i>	<i>jia</i>
IPEXCL	<i>namen</i>	<i>yamen</i>	<i>namen</i>	<i>niamen</i>	<i>jiamen</i>
IPINCL	<i>ta, tamo, takamo</i>	<i>yaten</i>	<i>ta</i>	<i>niaten</i>	<i>jiaten</i>
2P	<i>kamo, kanio</i>	<i>inio</i>	<i>nio</i>	<i>ninio</i>	<i>jinio</i>
3P	<i>sia</i>	<i>sira</i>	<i>da</i>	<i>nira</i>	<i>jira</i>

The bound pronouns have developed from exclusively enclitics to variations between proclitics and enclitics to reflect tense/aspect differences. Although there is no form for the third person singular pronoun, this gap has been filled by the proximal deictic *ya/iya*¹⁷ ‘this’.

There are many ways to mark plurality for common nouns, including (1) placing the plural determiner *manga* before common nouns in vocative forms, e.g., *manga maran* ‘dear uncles’, *manga kehakay* ‘dear (male) friends’, ‘*manga anak ko* ‘my dear children’,¹⁸ (2) reduplicating the initial CV- of a common noun, e.g., *ma-mavakes* ‘many women’, *ka-kanakan* ‘many children’, (3) prefixing *mi-*, *mala-* to kinship terms to express the relationship between two or more people, e.g., *miina* ‘mother and son/daughter (in a group of two)’, *malaina* ‘mother and sons/daughters (in a group of three)’, as shown in examples (121)-(122), (4) Using Oblique deictic *sia*¹⁹ to refer to the

¹⁷ An example of *iya* ‘he’ as a third person singular nominative free pronoun is illustrated in (a):

(a) *iya rana am, tey-kakey na o among.*
3.S.NOM already TOP very-like 3.S.GEN NOM fish
‘As for him, he likes fish very much.’

Ya ‘he’ as a third person singular nominative bound pronoun is illustrated in (b):

(b) *ya koman so wakay si Sozi.*
3.S.NOM <AF>eat OBL sweet.potato NOM PN
‘Si Sozi is eating a sweet potato.’

¹⁸ *manga anak ko* is also used to address a single child, e.g., *ya aro o mo nimamong, manga anak ko.* ‘You caught a lot of fish, Son!’

¹⁹ The following examples illustrate the two functions of *sia*: (1) as an oblique deictic, e.g., *koman ko so sia* ‘I want to eat this.’ *zazasagan ta, kasongisongit ta sia,* ‘We will step on (her) and bite her.’ (2) as a third person plural nominative bound pronoun: e.g., *sia miyangay so*

Nominative third person plural bound pronoun ‘they’, as shown in (123).

- (121) *m-ámiying sira mi-ina.*
 AF-laugh 3.P.NOM group.of.two-mother
 ‘The mother and her son/daughter (in a group of two) are laughing.’
- (122) *ya api-pía tao sira mala-ina.*²⁰
 AUX RED-good-looking human 3.P.NOM group.of.three-mother
 ‘The mother and her sons/daughters (in a group of three) are all good-looking.’
- (123) *to sia ma-la-láyo ori o mi-ina ori a.*
 AUX 3.P.NOM AF-RED-run that NOM group.of.two-mother that PAR
to ma-la-láyo sira om-oli am,
 AUX AF-RED-run 3.P.NOM AF-go.home PAR
mapa-zeveng rana sira ori a.
 CAU-close already 3.P.NOM that PAR
 ‘The mother and daughter ran back toward home. They kept on running, and when they got home they closed the door.’

7.3 Relative clauses

Relative clauses can be divided into verbal and “adjectival” relative clauses. The head constituent of the former is a dynamic verb while the latter is either a noun or a stative verb.

7.3.1 Verbal relative clauses

The verbal relative clauses, in parentheses in the following examples, are connected to the head nouns by the linker *a*. In example (124), there is a zero pronominal trace in the relative clause to refer to the head noun *tazokok* ‘tazokok bird’. Similarly, in (125), there is a zero pronominal trace in the relative clause to refer to the head noun *wakay* ‘sweet potato’. In (126), the zero pronominal trace must refer to the Nominative Patient if there are two arguments.

- (124) *aro a tazokok a [om-oli do ili].*
 Many LIN bird.name LIN AF-go.home LOC village
 ‘(There are) many tazokok birds that went back to the village.’

katavatava. ‘They are equally fat.’

²⁰ Other examples include: *malama (mala-ama)* ‘father and son or daughter in a group of three’, *mi-ama* ‘father and son or daughter in a group of two’.

- (125) *[ko ni-pangay do vanga] a wakay.*
 1.S.GEN PA.PF-put LOC pot LIN sweet.potato
 ‘The sweet potato that I put in the pot.’
- (126) *o [dengdeng-an namen so rahet] a vanga aka*
 NOM cook-LF 1.P.GEN.EXCL OBL fish.for.men LIN pot CON
no [pangay-an namen so rahet] a kakanan am,
 GEN put-LF 1.P.GEN.EXCL OBL fish.for.men LIN plate PAR
[i-panci namen] a raratan.
 IF-call 1.P.GEN.EXCL LIN utensil.name
 ‘The pots in which we cook rahet fish and the plates on which we put rahet fish are called raratan by us.’

7.3.2 ‘Adjectival’ relative clauses

Yami does not possess a distinctive adjective word class. In the so-called “adjectival” relative clauses, the head constituents are either nouns or stative verbs. In the following examples (127)-(129), all the adjectival relative clauses are in parentheses.

- (127) *[rako] a vahay*
 big.one LIN house
 ‘A big house’
- (128) *alibangbang a [ma-vaheng so panid]*
 flying.fish LIN SV-black OBL wing
 ‘Flying fish with black fins’
- (129) *yaken o [ya ma-lavang] a ayob ori.*
 1.S.NOM NOM AUX SV.white LIN clothes that
 ‘Those white clothes are mine.’

7.3.3 Position of relative clauses in relation to their head nouns

The relative clauses are ordered after their modified head nouns as the basic order. If the relative clause occurs before the modified noun, it is restrictive and marked, as shown in (130). On the other hand, if the relative clause is ordered after the head noun, it is non-restrictive and unmarked, as shown in (131).

- (130) *ko ni-ma-cita o [ji á-kneng] a kanakan.*
 1.S.GEN PA-able.PF-see NOM NEG SUB-still LIN child
 ‘I saw the child who cannot hold still.’

- (131) *ko ni-ma-cita o kanakan a [ji á-kneng].*
 1.S.GEN PA-able.PF-see NOM child LIN NEG SUB-still
 ‘I saw that child, who cannot hold still.’

7.3.4 Relative clause marking

A relative clause is usually connected with the following modified head noun by the linker *a*, as discussed previously. Another linker *aka*, which can be used to link numbers with nouns, as illustrated in (132)-(133), is derived from the conjunction *aka* ‘and’, e.g. *wakay aka no soli* ‘sweet potato and taro’, and *si Ama aka ni Ina* ‘Father and Mother’. Yami numbers will be discussed in Section 9.

- (132) *na-nem aka tao o ika-ka-roa-n da*
 Ca-RED-six CON human NOM OR-NF-two-NF 3.P.GEN
 ‘Sixteen (six of the second ten) people’
- (133) *asa aka among*
 one CON fish
 ‘A fish’

8. Comparative Constructions

The conjunction *aka* is used to connect the comparator and the compared. If the NP following the conjunction is a personal name or a kinship term, the determiner is the Genitive *ni*, as in (134), otherwise, *no* is used, as in (136). If the compared is a pronoun, it should be in the Genitive free form, as in (135).

- (134) *ya ma-tava-tava si Ina aka ni Ama.*
 AUX SV-RED-fat NOM Mother CON GEN Father
 ‘Mother is fatter than Father.’
- (135) *ya ko rake-rakeh aka nimo.*
 AUX 1.S.NOM RED-old CON 2.S.GEN
 ‘I am older than you are.’
- (136) *ya naro-naro o cinalolot aka no sisikod.*
 AUX RED-long NOM spear CON GEN wooden.stick
 ‘The spear is longer than the wooden stick.’

8.1 Comparatives with reduplication

There are two different types of reduplication to express comparatives of the nouns or stative verbs: (1) reduplication of the first two syllables of the root, e.g., *rako-rako* ‘bigger’, and (2) deletion of the root final (coda) consonant, followed by reduplicating the remaining syllable of the root, e.g., *ma-rehe-rahēt* ‘worse’. But reduplication of the first CV- of the root expresses plurality, e.g., *ma-le-léma* ‘all lazy’. A comparison between comparatives and plurality is illustrated in (137). The stem of plurality is stressed in the penultimate syllable, whereas the comparative is stressed in the last syllable. More examples are provided in (138)-(139).

(137) Comparisons of comparatives with plurality reduplication

Stem	Comparative	Plurality
<i>apía</i> ‘good’	<i>a-pia-pia</i> ‘better’	<i>a-pi-pía</i> ‘all good’
<i>matáva</i> ‘fat’	<i>ma-tava-tava</i> ‘fatter’	<i>ma-ta-táva</i> ‘all fat’
<i>anáro</i> ‘long’	<i>a-naro-naro</i> ‘longer’	<i>a-na-náro</i> ‘all long’
<i>masári</i> ‘dark’	<i>ma-sari-sari</i> ‘darker’	<i>ma-sa-sári</i> ‘all dark’
<i>malóit</i> ‘dirty’	<i>ma-loi-loit</i> ‘dirtier’	<i>ma-lo-lóit</i> ‘all dirty’
<i>másngen</i> ‘near’	<i>ma-snge-sngen</i> ‘nearer’	<i>ma-sé-sngen</i> ‘all near’

- (138) *ko ma-tava-tava aka ni Kaka.*
 1.S.NOM SV-RED-fat CON GEN older.sibling
 ‘I am fatter than my older sister.’

- (139) *namen ma-ta-táva sira kaka.*
 1.P.NOM.EXCL SV-RED-fat NOM.P older.sibling
 ‘We sisters are all fat.’

8.2 Comparatives with affixation

There are four common affixation processes to express comparatives: (1) prefix *tey-*²¹ ‘very, too’ to stative *ma-* verbs, as shown in (140), (2) replace *ma-* with *ji a-* (originally the negative prefix for stative verbs) to indicate emphatic ‘very’, as in (141), (3) add *mipa-* to the stative root to express ‘getting more and more’, as in (142), or *mipipa-* to express ‘getting even more’, as in (143), and (4) add *ni-* to the root to form a noun, modified by a Genitive pronoun to indicate superlative, as in (144).

²¹ The prefix *tey-* also indicates direction, e.g., *tey-laod*, ‘below’, *tey-rala* ‘close to the inside’, *tey-ngato* ‘above’, and *tey-rahem* ‘underneath’.

- (140) *ko tey-má-tava rana.*
 1.S.NOM too-SV-fat already
 ‘I am too fat.’
- (141) *ya ji a-pía o kakanan na.*
 AUX very SUB-good NOM taste 3.S.GEN
 ‘The taste (of the food) is very good.’
- (142) *ya rana mipa-pia o kakawan.*
 AUX already gradually-good NOM weather
 ‘The weather is getting better.’
- (143) *ya ji a-golang a, ya mipipa-tava a.*
 AUX NEG SUB-thin PAR AUX more.and.more-fat PAR
 ‘He is not thin but getting fatter.’
- (144) *ni-apia na o yaken.*
 most-good 3.S.GEN NOM 1.S.NOM
 ‘Mine is the best.’

8.3 Comparatives with both reduplication and affixation

Comparatives can also be formed by prefixing *ka-* after reduplicating the entire root, as in (145). Alternatively, the root can be partially reduplicated and prefixed with a reduplicated prefix *ikeyka-*²² ‘getting even more’ (=ika-+ika), as in (146). The single complement is in the Genitive case.

- (145) *ka-tava-táva no kois nio.*
 very-RED-fat GEN pig 2.P.GEN
 ‘How fat your pigs are!’
- (146) *ike-yka-ve-vek da no aro a tao a*
 IF-RED-RED-make.an.effort 3.P.GEN GEN many LIN human LIN
mi-limoang nia.
 AF-spread 3.S.GEN
 ‘Those people tried even harder to spread it around.’

²² *ikeyka-* can be directly added to a root to form expressions as follows, e.g., *ikeyka-rahét na* ‘make it even worse’, *ikeyka-pia na* ‘make it even better’, *ikeyka-niahey na* ‘make it even more scary’, *ikeyka-miying na* ‘make it even funnier’.

9. Numbers

9.1 Counting numbers

The Yami cardinal numbers from one to ten are presented as follows:

1	2	3	4	5	6	7	8	9	10
<i>ása</i>	<i>dóá</i>	<i>tílo</i>	<i>ápat</i>	<i>líma</i>	<i>ánem</i>	<i>pító</i>	<i>wáo</i>	<i>síam</i>	<i>póo</i>

Numbers above ten are expressed “in fraction”. In other words, eleven is literally one out of the second ten, and twenty-two is two out of the third ten, as shown in the following left column. Multiples of ten, on the other hand, are expressed with the number followed by the linker *a*, and the unit of ten “*ngernan*”, as presented in the following right column.

11	<i>asa so ikaróa (a ngernan)</i>	60	<i>anem a ngernan</i>
22	<i>adoa so ikatilo</i>	70	<i>apito a ngernan</i>
33	<i>atlo so ikapat</i>	80	<i>awao a ngernan</i>
44	<i>apat so ikalima</i>	90	<i>asiam a ngernan</i>
55	<i>alima so ikanem</i>	100	<i>asa a poo</i>

Ordinals are prefixed with *ika-* except for ‘the first’, which is expressed differently, as follows:

First	Second	Third	Fourth	Fifth	Sixth
<i>nimanoma na</i>	<i>ikadoa na</i>	<i>ikatlo na</i>	<i>ikapat na</i>	<i>ikalima na</i>	<i>ikanem na</i>

Multiples are formed with *ipi-*, as follows:

Once	Twice	Three times	Four times	Five times	Six times
<i>ipisa</i>	<i>ipidoa</i>	<i>ipitlo</i>	<i>ipipat</i>	<i>ipilima</i>	<i>ipinem</i>

The concept for ‘only so and so much’ is expressed by lengthening the final vowel of the numbers in either open or closed syllables, as follows:

Only one	Only two	Only three	Only four	Only five	Only six
<i>asáa</i>	<i>adoáa</i>	<i>atilóo</i>	<i>apáat</i>	<i>alimáa</i>	<i>anéem</i>

The concept that ‘such and such an amount is allocated to each unit’ is expressed by prefixing *tey-* to the numbers, as follows. If the number begins with a vowel, the

vowel is reduced to /e/, but if the number begins with a consonant, the initial CV- is reduplicated, as illustrated in (147)-(148):

One for each	Two for each	Three for each	Four for each	Five for each	Six for each
<i>teyesa</i>	<i>teydedoa</i>	<i>teytetlo</i>	<i>teyepat</i>	<i>teylilima</i>	<i>teyenem</i>

(147) *namen tey-epat aka among.*

1.P.NOM.EXCL each-four CON fish

‘We were allocated four fish.’

(148) *sia tey-te-tlo so vanga.*

3.P.NOM each-RED-three OBL pot

‘They were allocated three pots.’

The concept of ‘in a group of such and such a number’ is expressed by prefixing *tey-* to the reduplicated root. The reduplication of the initial Ca- syllable is done twice, as in *tey-ra-ra-roa* ‘two in a group’, as follows. More examples are provided in (149)-(150).

Group of two	Group of three	Group of four	Group of five	Group of six
<i>teyrararoa</i>	<i>teytatatilo</i>	<i>teypapapat</i>	<i>teylalalima</i>	<i>teynananem</i>

(149) *tey-la-la-lima kamo a s-om-dep.*

group-RED-Ca-five 2.P.NOM LIN <AF>enter

‘Come in in groups of five.’

(150) *namen tey-pa-pa-pito do asa aka mibetbet.*

1.P.NOM.EXCL group-RED-Ca-seven LOC one CON fishing.boat

‘We have seven people to a fishing boat.’

9.2 Counting humans, animals, or objects

Numbers are connected with the counted animate or inanimate beings by the conjunction *aka*. For multiples of ten, the linker *a* is used, as follows.

Counting numbers of people			
1	<i>asa aka tao</i>	16	<i>nanem aka tao o ikakaroan da</i>
2	<i>raroa aka tao</i>	27	<i>papito aka tao o ikakatiloan da</i>
3	<i>tatlo aka tao</i>	38	<i>wawao aka tao o ikakapatan da</i>
4	<i>papat aka tao</i>	49	<i>sasiam aka tao o ikakaliman da</i>
5	<i>lalima aka tao</i>	10	<i>sasa a ngernan a tao</i>

6	<i>nanem aka tao</i>	20	<i>kakaroan a tao</i>
7	<i>papito aka tao</i>	30	<i>kakatloan a tao</i>
8	<i>wawao aka tao</i>	70	<i>kakapitoan a tao</i>
9	<i>sasiam aka tao</i>	90	<i>kakasiaman a tao</i>
		100	<i>asa poo a tao</i>

9.3 Counting money

The units for counting money include: *ngernan*²³ ‘a single digit’, *poo*²⁴ ‘ten, a double digit’, *ranaw* ‘a hundred’, *zivo* ‘a thousand’, *laksa* ‘ten thousand’, and *latos* ‘a hundred thousand’, as follows:

\$1	<i>asa a ngernan</i>	\$30	<i>atlo a poo</i>	\$6,000	<i>anem a zivo</i>
\$2	<i>adoa a ngernan</i>	\$70	<i>apito a poo</i>	\$70,000	<i>apito a laksa</i>
\$3	<i>atlo a ngernan</i>	\$90	<i>asiam a poo</i>	\$80,000	<i>awao a laksa</i>
\$4	<i>apat a ngernan</i>	\$100	<i>asa a ranaw</i>	\$90,000	<i>asiam a laksa</i>
\$16	<i>anem a ngernan o ikaroa na poo</i>	\$200	<i>adoa a ranaw</i>	\$100,000	<i>asa a latos</i>
\$27	<i>apito a ngernan o ikatlo na poo</i>	\$300	<i>atlo a ranaw</i>	\$200,000	<i>adoa a latos</i>
\$38	<i>wao a ngernan o ikapat na poo</i>	\$4,000	<i>apat a zivo</i>	\$300,000	<i>atlo a latos</i>
\$20	<i>adoa a poo</i>	\$5,000	<i>alima a zivo</i>	\$400,000	<i>apat a latos</i>

9.4 Counting time

The following are examples of how to count time:

One day	One month	One year	Once
<i>kasa a araw</i>	<i>kasa a vehan</i>	<i>kasa a kawan</i>	<i>ipisa so ka-(verb)</i>

Notice the prefix *ka-* in (151) is a verbal prefix but a nominal prefix in (152). We will discuss the uses of *ka-* in Section 10.

- (151) *ko ka-sa araw do jia.*
 I.S.NOM VF-one day LOC here
 ‘I am here for only one day.’

²³ In counting people, *ngernan* means ‘ten’.

²⁴ In counting people, *poo* means ‘one hundred’.

- (152) *ipi-sa so ka-ngay namen mi-kazazap do mahep am.*
 time-one OBL NF-go 1.P.GEN.EXCL AF-search.for.crabs LOC evening PAR
 ‘Once we went to search for crabs in the dark.’

10. Prefix *ka-*

Yami prefix *ka-* is polysemous and multifunctional. The following discussion summarizes two major divisions of the use of the prefix *ka-*.

10.1 *Ka-* as a verbal prefix

Ka- as a verbal prefix has the following five meanings:

- (1) In sequential constructions, *ka-* is added to the sequential verb to mean ‘and then’, e.g., *ka-kan* ‘then eat’ (as discussed in Section 6.2.3).
- (2) In comparative constructions, *ka-* means ‘very’, e.g., *ka-tavatáva* ‘very fat’ (as discussed in Section 8.3).
- (3) In counting, *ka-* is prefixed to express the amount of time, e.g., *kasa a kawan* ‘something takes one year’ (as discussed in Section 9).
- (4) *Ka-* can be prefixed to verbal roots to indicate ‘just now or only’, as illustrated in (153)-(154). The single complement of the intransitive verb is in the Genitive case.
- (5) When a stative *ma-* verb becomes an irrealis verb, the prefix *ka-* will re-emerge to indicate its derivational relationship with a stative verb (Section 6.3.2.2), as in (155).

- (153) *k-ai na am, mi-’oya-’oya.*
 just.now-come 3.S.GEN PAR AF-RED-angry
 ‘No sooner had he arrived than he got angry.’

- (154) *ka-kan mo a ji ka manotong?*
 only-eat 2.S.GEN LIN NEG 2.S.NOM AF.cook
 ‘Would you only eat but not cook?’

- (155) *ya ma-ngay do gako,*
 3.S.NOM AF-go LOC school
do²⁵ ya na ka-niahey no sinsi da ya om-bakbak jia.

²⁵ The locative marker *do* ‘because’ is followed by the irrealis verb form *ka-niahey*. If *do* is replaced by the conjunction *ta* ‘because’, the following verb will be in the realis form *ma-niahey*, e.g., *ya ma-ngay do gako, ta ya ma-niahey a bakbak-an no sinsi da*. ‘He went to school because he feared that their teacher would hit him.’ For further discussion of irrealis *ka-* in Austronesian languages, see Blust (2003). Compare the following pair of sentences (a)

LOC AUX 3.S.GEN VF-worry GEN teacher 3.P.GEN AUX AF-hit 3.S.LOC
 ‘He would not have gone to school if he did not fear that their teacher would hit him.’

10.2 *Ka-* as a nominal prefix

Ka- as a nominal prefix has the following five meanings:

- (1) *Ka-* is added to nominal or verbal roots to express ‘company’²⁶, ‘co-’, as in (156)-(159).

(156) *ya abo o ka-kteh ko.*

AUX no NOM Co-sibling 1.S.GEN

‘I have no brothers and sisters.’

(157) *ka-raray ko ya ni-mi-vat-vatek do ilaad.*

Co-company 1.S.GEN AUX PA-AF-RED-write LOC Taiwan

‘(This was my) classmate when (I) studied in Taiwan.’

(158) *ko ni-akan o ka-sisi no among.*

1.S.GEN PA.PF-eat NOM Co-half GEN fish

‘I ate up half of the fish.’

(159) *ka-kma si mina ama mo.*

Co-like NOM late father 2.S.GEN

‘Damn! (You are like your late father).’

- (2) Abstract nouns formed with *ka-* and reduplicated roots co-occur with *kman* ‘like’ to express ‘as ... as’, as in (160)-(162).

and (b). The irrealis *ka-* verb in (a) indicates non-volitional action or subjunctive mood, whereas the transitive verb in (b) is volitional and factive.

The patient is genitive following the irrealis verb in (a), but nominative following the realis verb in (b).

(a) *ya ko m-ai do ya ko ka-rilaw nimo a ji a-voos.*

AUX 1.S.Nom AF-come LOC AUX 1.S.GEN VF-pity 2.S.GEN LIN NEG SUB-do.alone

‘I would not come (to accompany you) if it were not for my concern about your lack of security.

(b) *ya ko m-ai, ta ya ko i-ka-rilaw imo a ji a-voos.*

AUX 1.S.NOM AF-come because AUX 1.S.GEN IF-VF-pity 2.S.NOM LIN NEG SUB-do.alone

‘I came (to accompany you) because I sympathized with your lack of security.’

²⁶ Another prefix expressing ‘sharing the same fate or feature, being fellow so and so’ is *icia-*, e.g., *icia-rarakeh* ‘fellow senior citizens’, *icia-kakanakan* ‘fellow children’, *icia-mamavakes* ‘fellow women’, *icia-memehakay* ‘fellow men’, and *icia-tatao* ‘fellow people’.

- (160) *ya kman so zateb rana o ka-sire-sirem²⁷ na.*
 AUX like OBL coal already NOM Co-RED-black 3.S.GEN
 ‘He is as dark as coal.’
- (161) *ya kman so tao-do-to so ka-pia-pia tao.*
 AUX like OBL god OBL Co-RED-good human
 ‘She is as beautiful as a goddess.’
- (162) *ya kman jiaken so ka-tav-tava.*
 AUX like 1.S.LOC OBL Co-RED-fat
 ‘He is as fat as I am.’

- (3) *Ka-* prefixed with auxiliaries *to* or *ji* to form a nominalized construction with *kato* and *kaji* has been discussed in Section 6.2.3.
- (4) *Ka-* is prefixed to reduplicated roots to form proper nouns, referring to animals named after the attributes signified by the roots, as in (163).

(163) *ka-* + reduplicated roots ‘animals named after certain features’

Animal names	Gloss	Root	Gloss
<i>ka-vokovokot</i>	worm	<i>vokot</i>	spine
<i>ka-lalavi</i>	cicada	<i>lavi</i>	cry
<i>ka-gozagozang</i>	lizard	<i>gozang</i>	thin
<i>ka-pozopozo</i>	clam	<i>pozo</i>	small round object with rough surface

- (5) The circumfix *ka-an* is used to form common nouns, as in (164)-(165).

- (164) *ka-gaga-n ko si Salang.*
 Co-giggle-NF 1.S.GEN NOM PN
 ‘Salang is my friend.’
- (165) *sia m-ian do ka-rako-an no wawa.*
 3.P.NOM AF-exist LOC NF-big-NF GEN sea
 ‘They are somewhere at sea.’

11. Summary of Affixes in Yami

Two lists of Yami affixes are provided here for ease of reference. Table 14 lists all the major verbal inflections. Table 15 is a glossary of all the other derivational affixes

²⁷ *akma so* (reduplicated form)-root refers to comparison ‘as...as’ in (160)-(162). *akma so katva-tava* ‘as fat as’, *akma so ka-pia-pia* ‘as beautiful as’, *akma so ka-sir-sirem* ‘as dark as’.

discussed in this paper.

Table 14: Major Yami verb inflection

Name of verbal affix	Indicative form	Subjunctive form (or dependent form) after auxiliary verbs <i>to</i> or <i>ji</i>
Dynamic intransitive	<i>-om-/om-</i>	<i>N-</i>
Dynamic intransitive	<i>mi-</i>	--
Dynamic intransitive	<i>ma-</i>	--
Dynamic intransitive	<i>maN-</i>	--
Dynamic intransitive	<i>maka-</i>	--
Dynamic intransitive	<i>maci-/masi-/macika-/macipa-</i>	--
Stative	<i>ma-</i>	<i>a-</i>
Stative	<i>ka-...-an</i>	<i>ka-...-i</i>
Dynamic	<i>pi-</i>	--
Dynamic	<i>pa-</i>	--
Dynamic	<i>paN-</i>	<i>maN-</i>
Dynamic	<i>paka-</i>	<i>maka-</i>
Dynamic	<i>paci-</i>	<i>maci-</i>
Transitive	<i>-en</i>	<i>-a</i>
Transitive	<i>-an</i>	<i>-i</i>
Transitive	<i>i-</i>	<i>-an</i>
Stative functioning as transitive	<i>ma-</i>	<i>a-...-a</i>
Stative functioning as transitive	<i>ka-...-an</i>	<i>a-...-a</i>

Table 15: Yami affixes with their meanings

Affix	Gloss
<i>icia-</i>	follows such and such who share the same features or fate
<i>ikeyka-</i>	even more so
<i>ika-</i>	feel such and such because ...
<i>ika-</i>	ordinal number
<i>ipi-</i>	multiple number
<i>ji a-</i>	negation or emphatic
<i>ka-</i>	company, as...as, abstract noun
<i>ka-</i>	and then, just now, only
<i>ka-</i>	stative verb prefix reappearing in forming transitive verbs
<i>ka-</i> (reduplicated root)	very
<i>ka-</i> (reduplicated root)	animals named after certain features

<i>ka-an</i>	common noun
<i>ma...-en</i>	love to do such and such
<i>mapaka-</i>	pretend to be such and such
<i>mapi-</i>	do such and such as an occupation
<i>mi-/mala-</i>	kinship relationships in a group of two or three
<i>mika-/mapika-/ipika-</i>	all, gradually, one by one
<i>mala-</i>	taste or look like...
<i>mipa-</i>	getting more and more...
<i>mipipa-</i>	even more...
<i>mapi-/mapa-/pa-en/ipa-</i>	causative verbal affixes
<i>ni-</i>	perfective
<i>ni- ... na</i>	superlative
<i>noka-</i>	past
<i>noma-</i>	future (remote)
<i>sicia-</i>	present
<i>sima-</i>	future (proximal)
<i>tey-</i>	direction
<i>tey-</i>	very, too
<i>tey-</i> (reduplicated root)	amount allocated to each unit

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Appendix: List of Abbreviations

1	First person	NEG	Negation
2	Second person	NF	Nominal affix
3	Third person	NOM	Nominative
AF	Agent focus	OBL	Oblique
AUX	Auxiliary verb	OR	Ordinal number
Ca-RED	Ca- reduplication	P	Plural
CAU	Causative	PA	Perfective aspect
Co-	Company	PAR	Particle
CON	Conjunction	PF	Patient focus
EMP	Emphasis	PLN	Place name
EXCL	Exclusive	PN	Personal name
FU	Future	REC	Reciprocal
GEN	Genitive	RED	Reduplication
IF	Instrumental focus	S	Singular
IMP	Imperative	SUB	Subjunctive
INCL	Inclusive	SV	Stative verb
LOC	Locative	TOP	Topic linker
LF	Locative focus	VF	Verbal affix
LIN	Linker		

Tales of two Diphthongs of an Indigenous Minority Language¹

D. Victoria Rau^a, Hui-Huan Ann Chang^a and Maa-Neu Dong^b

^aProvidence University, Taiwan

^bNational Museum of Natural Science, Taiwan

Abstract

This study investigated the phonological variation and sound change in the Yami diphthongs (ay) and (aw) (e.g., *mangay* ~ *mangey* “go”, *araw* ~ *arow* “day, sun”), a Philippine language spoken on Orchid Island, 60 kilometers southeast of Taiwan. Previous studies (Rau & Chang 2006, Rau & Dong 2006) found that the two diphthongs were undergoing vowel raising on the island with an isogloss separating the more progressive northeast from the more conservative southwest. However social factors were not discussed and thus no interpretation of vowel raising was provided.

This study examined both linguistic and social factors accounting for vowel raising, with a goal of interpreting the indexical meanings of sound change in the two diphthongs on the island. The data were 20 narratives taken from a Yami corpus (<http://yamiproject.cs.pu.edu.tw/yami>), 10 narratives from Dong & Rau (1999, 2000), and word list elicitation collected in 1995.

Our results from VARBRUL analyses confirmed that vowel raising is a geographical feature and that the rates of change have formed a clear isogloss separating the northeast from the southwest varieties. However vowel raising of (ay) has progressed slightly faster than that of (aw). The preceding segments of (ay) and (aw) favoring raising are mainly determined by the feature of [continuant]. For both diphthongs, [+continuant] favors raising whereas [-continuant] disfavors it. There was stylistic variation with more raising in narrative style than in word list reading. Vowel raising was preferred by males; however, young females seem to have surpassed young males in adopting this feature in narrative style, a phenomenon corresponding to the social mobility of women. Perhaps vowel raising has ceased to be a gender marker and shifted to an ethnic identity marker.

1. Introduction

Sociolinguistic studies on phonological variation in post-insular island communities have found male islander identity in the nucleus change of (ay) and (aw). Labov’s seminal work on linguistic change in progress on the island of Martha’s Vineyard (1963, 1972) has established a paradigm of sociolinguistic variation. He correlated centralization of the (ay) and (aw) diphthongs with social factors (i.e., identity, occupation, age and ethnicity) and linguistic factors, and predicted real time changes from apparent time data collection.

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Several studies on variation of (ay) and (aw) in the last decade have focused on moribund dialects, such as Ocracoke Island and Smith Island, North Carolina (Wolfram & Schilling-Estes 1995, 1996; Schilling-Estes 1996, 1997; Schilling-Estes & Wolfram 1997; and Wolfram, Hazen & Schilling-Estes 1999). The islanders of Ocracoke are known as ‘hoi toiders’ (their pronunciation of ‘high tiders’), turning [ay] into [oy], and [aw] into [ay], such as *hice* ‘house’ and *dine* ‘down’. The backing of [ay] to [oy] is a social stereotype, a feature commonly associated with the islander, whereas the glide fronting of [aw] to [ay] remains a social indicator because there is no stylistic variation among the islanders. As a social stereotype, the backing of [ay] to [oy], as in ‘hoi toiders’, was shared mostly by middle aged male speakers having a strong identity with the island (Schilling-Estes 1997). The young women on the island, in contrast, preferred the standard variant [ay] (Schilling-Estes & Schrider 1996). Among the Lumbee Indians in the Outer Banks of North Carolina, (ay) is raised, e.g. [roId] ‘ride’, and (aw) is glide-fronted, and/or raised, e.g. [saInd] or [seInd] ‘sound’.

Although most of the work on (ay) and (aw) variation has been done on English dialects, similar sound change patterns have also been found in indigenous minority languages. In Rau & Chang’s (2006) investigation on the sound change of (ay) and (aw), a nucleus raising and fronting was identified from [ay] to [ey] ~ [iy] for (ay) and from [aw] to [ow] ~ [uw] for (aw), respectively. The change has also spread from word final position (e.g., *mangay* ‘go’, *araw* ‘day, sun’) to environments such as a-i and a-o across morpheme boundaries (e.g. *asa keyli* ‘one village’ (< *asa ka- ili*), *makowbot* ‘go out’ (< *maka-obot*)). A chain shift has also occurred whereby the peripheral high front vowel [i] in verbal prefixes *mi-* and *pi-* and suffix *-i* is shifting to the diphthong [ey].

The results of the previous study revealed that the nucleus raising rule was an innovation in Yami and had progressed faster and longer in (ay) than in (aw). In addition to linguistic factors, only geographical differences were found to be significant. Social factors were excluded from the discussion because they were not found to be significant. However, we observed that (ay) and (aw) had moved beyond the stage of indicators and had developed into sociolinguistic variables because the conservative forms were still used in Bible translation whereas raising was clearly observed in spoken data, but the stylistic variation was not investigated empirically before.

The goal of this study was to test the preliminary observations proposed in Rau & Chang (2006) and provide a plausible interpretation of the indexical meanings of nucleus raising of the two diphthongs by examining linguistic, stylistic and social factors, based on data extracted from a Yami corpus. Using better data from a Yami corpus, this paper aims to answer the following questions: (1) how preceding environments, social factors (i.e., age, gender) and region account for vowel raising of the two diphthongs on Orchid Island, and (2) whether there is stylistic variation to confirm that vowel raising of the two diphthongs is a vernacular feature.

2. The Yami Speech Community

Yami is a Philippine language in the Austronesian family, spoken by the indigenous people on Orchid Island (*Lanyu* in Chinese), a small offshore island southeast of Taiwan and at the northern tip of the Batanes Province of the Philippines. Politically, the island belongs to Taiwan, R.O.C.

Yami constitute 93% of the 3007 residents on the island (Rau 1995). Almost half of

the population is either above 50 or below 20 years old. Young adults usually seek employment in Taiwan. Yami people above 60 years of age are mostly monolingual in Yami, whereas those below 20 consider Mandarin Chinese their L1 and Yami their L2, as of Chen's sociolinguistic survey in 1995 (Chen 1998). Young adults code-switch between Yami and Chinese in communication.

There are six villages on the island: Imowrod, Iratay, Yayo, Iraralay, Iranomilek and Ivalino, moving clockwise from the southwest to the northeast coast, as shown in Figure 1.

In and near Imowrod are the airport, post office, clinic, and a hotel. Right across from Imowrod at the opposite side of the island is Ivalino, where the Lanyu Nuclear Waste Plant is located. The administrative center of the island is at Yayo, where a hotel and a secondary school can be found. Iraralay and Iranomilek are further away from the government offices and tend to better preserve the Yami language. However, all villages have primary schools with Mandarin Chinese as the only medium of education. Recently, with the development of tourism, an increasing number of remodeled homes have been opened for room and board for tourists, especially along the more scenic beaches on the northeast coast.



Figure 1. Geographic description of Lanyu (adapted from <http://google.earth.com>)

Iraralay is the only community of the six villages on the island where children still

use Yami for daily interaction. Although Yami has been offered as an elective in elementary school since 1998, it is gradually being replaced by Mandarin Chinese. Among the junior high school students on Orchid Island, 60% either believed Yami would die eventually or were uncertain about the fate of the language (Rau, 1995).

Adult speakers use both Chinese and Yami in daily communication. The medium of education in schools is exclusively Chinese. Yami is used primarily in Christian church services and traditional ceremonies. Translation of the New Testament of the Bible into Yami was completed in 1995. There is a locally run radio station on the island, managed by a Christian organization, broadcasting programs in Chinese and Yami.

Three different orthographies have been proposed for Yami, all based on Roman alphabets, but no consensus has been reached. One is used in the newly translated Bible, developed in collaboration between SIL missionaries and local pastors from Iranomilek and Iraralay, whose speech represents the northeastern variety. The second was proposed by Prof. Paul Li (1992), based on the more conservative Imowrod dialect in the southwest, in an effort to standardize the writing systems of all Austronesian languages in Taiwan. The third was jointly developed by Dong and Rau during our collaboration. It is currently gaining ground as our team is actively documenting the language (Rau & Yang 2005). Except for teaching of Yami language in primary and secondary schools and teacher training workshops, Yami orthography is not in general use by anyone in the speech community. The community has various degrees of literacy in Chinese (95%) while the most educated (less than 1%) are also literate in English (Rau, 1995).

The two Yami dialects, Iraralay and Imowrod are mutually intelligible with some lexical differences and systematic vowel changes (Rau & Dong, 2006). One of the most noticeable linguistic features that distinguish the two varieties is nucleus raising of the two diphthongs (ay) and (aw).

3. Data and Sample

The data of this study consist of 20 narratives taken from a Yami corpus from the Digital Archive of Yami Language Documentation (<http://yamiproject.cs.pu.edu.tw/yami>), 10 narratives from Dong & Rau (1999, 2000), and word list elicitation collected during a 1995 field trip. The 20 narratives were collected by Yami interviewers from the same villages as the interviewees while the 10 narratives were recorded by our research team members composed of eight Chinese female graduate students. All the narratives were transcribed by the third author. The word list elicitation was a translation of Chinese into Yami, recorded and transcribed by a trained Chinese female graduate student on the team and carefully checked by the first author. The original word list comprises a long list of basic vocabulary in Yami, but only the words containing word final (ay) and (aw) were extracted for this study for comparison with those in the narrative style.

The narrative data were contributed by 21 speakers, whose demographic distribution is represented in Table 1. Only region, age and gender were coded; social class was not considered². The six villages were represented by a range of 2 to 6 speakers each. The

² We did not code for social class due to (1) an emic perception of Yami as an egalitarian society, whose level of achievement was measured by culturally specific values, and (2) problem with comparability of this construct in different communities. The first author created an index of social class based on one's occupation, income, education, and style of housing in a study on phonological variation of Atayal (Rau

age as of year 2000 was divided into two groups with 9 old (equal to or above 55 years old) and 12 young (below 55 years old) participants, ranging from age 36 to 75. There were 11 females and 10 males.

Table 1. Speaker demographic characteristics (narrative style)

Participants	Region	Age	Gender
1. HMJ	Iranomilek	69	M
2. JXY	Iranomilek	49	F
3. HLL	Iranomilek	54	F
4. WJY	Iranomilek	66	M
5. XQR	Iranomilek	74	F
6. HYE	Iranomilek	58	F
7. LJL	Yayo	53	M
8. WRD	Yayo	75	M
9. WQY	Yayo	58	F
10. ZZJ*	Imowrod	54	M
11. SFS*	Imowrod	59	M
12. XQM	Imowrod	54	F
13. ZDS	Ivalino	47	M
14. ZQL*	Ivalino	48	F
15. LSZ	Iraralay	39	F
16. LYL*	Iraralay	45	F
17. GJP	Iraralay	36	M
18. ZSX	Iratay	64	F
19. DGY	Iratay	53	M
20. DYC	Iratay	51	M
21. SSL	Iratay	70	F

The sample of speakers who provided the word list reading style consists of 22 speakers whose demographic characteristics are shown in Table 2. The six villages were represented with a range of 2 to 7 speakers each. The group was divided into 9 old (equal to or above 55 years old) and 13 young (below 55 years old) participants, with an age range from 40 to 77 as of the year 2000. Gender was equally divided.

Table 2. Speaker demographic characteristics (word list style)

Participants	Region	Age	Gender
1. WXY	Iraralay	40	F
2. LYL*	Iraralay	45	F
3. ZNY	Yayo	56	F
4. YZW	Yayo	50	M
5. HDH	Iranomilek	59	M
6. XJH	Iranomilek	63	F
7. XJY	Iratay	51	F

2000), another indigenous language in Taiwan. However the four levels identified in that study could not be considered equivalent to the construct of social class usually found in variationist studies.

8.	SLZ	Iratay	47	M
9.	SSY	Iratay	45	M
10.	ZSH	Iratay	55	M
11.	ZYJ	Iratay	51	F
12.	ZZJ*	Imowrod	54	M
13.	SFS*	Imowrod	59	M
14.	LZ	Imowrod	77	M
15.	LXS	Imowrod	53	M
16.	LDY	Imowrod	56	F
17.	ZXM	Imowrod	41	F
18.	STM	Imowrod	47	M
19.	LLM	Ivalino	76	M
20.	XWY	Ivalino	69	F
21.	ZLH	Ivalino	51	F
22.	ZQL*	Ivalino	48	F

Only the four speakers marked with an asterisk behind their initials contributed data for both narrative and word list reading styles. The four speakers came from three villages with one above 55 and three below 55 years of age. The gender of the sample was equally distributed. The results of word list elicitation were compared with those of the narrative style.

4. Circumvention of the variables

The variables of diphthongs in this study were restricted to word final (ay) and (aw), such as *volay ~ voley ~ voliy* “snake” and *araw ~ arow ~ aruw* “sun”. GOLDVARB 2001 (Robinson, Lawrence & Tagliamonte 2001) was used for the VARBRUL analysis with the assistance of Tagliamonte’s (2006) manual as a guide for step-by-step procedures. Application of the rule includes all raised, fronted or monophthongized variants, e.g., *voley ~ voliy* “snake” and *arow ~ aruw* “sun”. Non-application of the rule refers to the conservative non-raised (ay) and (aw).

The independent variables include one internal factor group and three external factor groups. The linguistic and social factors that were coded include:

1. Preceding environments

- i = high front vowel (e.g., *maviay* ‘alive’, *makaniaw* ‘taboo’)
- a = central vowel (e.g., *kangaay* ‘usual’)
- o = back high vowel (e.g., *isaboay* ‘lift’, *mitotoaw* ‘out’)
- h = uvular fricative (e.g., *vahay* ‘home’)
- d = retroflex stop (e.g., *adaday* ‘all, full’, *midadowdaw* ‘very sad’)
- t = alveolar stop (e.g., *miatay* ‘pass by’, *attaw* ‘sea’)
- p = labial stop (e.g., *cinapay* ‘vegetable’, *yapapaw* ‘miss’)
- s = retroflex fricative (e.g., *rasarasay* ‘bottom board’, *kazisaw* ‘cursing’)
- k = velar stop (e.g., *mehakay* ‘male’, *manakaw* ‘steal’)
- z = alveolar trill (e.g., *vazay* ‘thing’, *nivozaw* ‘leave’)
- r = retroflex liquid (e.g., *kararay* ‘companion, friend’, *mararaw* ‘noon’)
- l = alveolar liquid (e.g., *awalay* ‘Ouch!’, *iyaipasalaw* ‘swallow’)
- n = alveolar nasal (e.g., *aonay* ‘long time’, *meynaw* ‘strong fishy taste’)

m = labial nasal (e.g., *pangamay* ‘cursing’, *tazmamaw* ‘illusion’)
 ng = velar fricative (e.g., *nongay* ‘move forward’)

2. Region: Northeast (Yayo, Irannokilek, Iraralay, Ivalino) and Southwest (Imowrod, Iratay)

3. Age: old (equal to or above 55) and young (under 55)

4. Gender: male and female

The data extracted from the narratives for analysis include 685 tokens of (ay) and 202 tokens of (aw).

The word list representing formal citation style includes the following words:

(ay): *anay* ‘sand’, *atay* ‘liver’, *mehakay* ‘male’, *miray* ‘to lie down’, *mivazay* ‘to work’, *mangay* ‘to go’, *vahay* ‘house’, *volay* ‘snake’, *wakay* ‘sweet potato’

(aw): *araw* ‘sun’, *araraw* ‘every day’, *maraw* ‘day’, *pakaw* ‘shoulder’, *zagaw* ‘neck’

Since only a small number of speakers provided comparable data for comparison of styles and the demographic distribution was not balanced, we did not include style as a factor group for our initial VARBRUL analyses. However, we did include a comparison of styles in the second stage of our analysis to determine if (ay) and (aw) variables show any stylistic variation.

5. Results

The results of the first question on how preceding environments, social factors (age, gender) and region account for vowel raising of the two diphthongs on Orchid Island are shown in Table 3. All the independent variables, except for age, were selected to account for diphthong raising, which followed the same constraint rankings for the internal factor group. The more continuant the preceding segment the more conducive environment it is for raising. Furthermore, region had the greatest influence on the variation, followed by preceding environments and gender based on the differences of range of the probability weights for each linguistic variable.

Table 3. Phonological variation of (ay) and (aw)

Factor groups	Nucleus raising	
	Probability weight (ay)	Probability weight (aw)
	N (%)	N (%)
Villages		
Northeast	.83	.81
	382/426 (89%)	102/127 (80%)
Iranomilek	213/220 (97%)	42/52 (76%)
Yayo	129/138 (93%)	47/48 (97%)
Iraralay	19/22 (86%)	4/4 (100%)
Ivalino	21/46 (46%)	11/23 (47%)
Southwest	.07	.08
	42/259 (16%)	8/75 (10%)
Iratay	35/215 (16%)	4/46 (4%)
Imowrod	7/44 (16%)	4/29 (13%)
Range	76	73

Age		
young (<55)	[NS] 178/251 (70%)	[NS] 39/82 (47%)
old (55+)	[NS] 246/434 (56%)	[NS] 71/120 (59%)
Gender		
male	.65 243/324 (75%)	.60 69/118 (58%)
female	.37 181/361 (50%)	.36 41/84 (48%)
Range	28	24
Preceding environments		
vowel/semivowel i,o,h,y	.85 88/111 (79%)	.67 13/23 (56%)
Consonant [+continuant] (r,l,d,z,s,v)	.64 65/92 (70%)	.57 62/103 (60%)
Nasal [-continuant] (n,m,N)	.38 182/327 (55%)	No data ³
Consonant [-continuant] (p,k,g,t,d)	.36 89/155 (57%)	.36 35/76 (46%)
Range	49	31
Total	424/685 (62%)	110/202 (54%)
Input probability	.69	.54

5.1 Internal and external factors

Our results confirmed that vowel raising was a geographical feature and that the clear distinction of the probability weights formed an isogloss, separating the northeast from the southwest varieties. Table 3 shows that the four northeastern villages favored vowel raising in (ay) and (aw) at .83 and .81 respectively. The two southwestern villages retained the conservative, non-raised (ay) and (aw) with very low probabilities of raising at .07 and .08 respectively.

The input probability weights indicate the raising of (ay) was slightly more frequent than that of (aw) at .69 and .54, respectively, and thus (ay) raising is interpreted as more progressive than (aw) raising.

The factors in the internal factor group displayed almost the same constraint hierarchy, determined by the feature of [continuant]. For both diphthongs, the preceding segment with the feature of [+continuant] favored raising whereas that of [-continuant] disfavored it.

Gender was selected as a significant factor. It shows that males preferred raising, whereas females did not favor it for both (ay) and (aw).

³ There is only one token *meynaw* “strong fishy taste” in this environment and thus it was excluded from analysis.

Since age was not selected as significant in the step-up and step-down procedures due to interactions with other social factors, several cross-tabulations were conducted to compare the relationship among age, gender and region. In the following paragraphs, we will discuss the two variables separately.

5.1.1 (ay)

As shown in Table 4 and Figure 2, (ay) raising was clearly a geographical feature in the northeast of the island (90% vs. 16%). Although the older people in the northeast had a higher percentage of raising (95%) than the younger people (84%), it is not statistically significant.

Table 4. (ay) raising: region by age

	Northeast	Southwest	Total
Old (55+)	212/224 (95%)	34/210 (16%)	246/434 (57%)
Young (55-)	170/202 (84%)	8/49 (16%)	178/251 (71%)
Total	382/426 (90%)	42/259 (16%)	424/685 (62%)

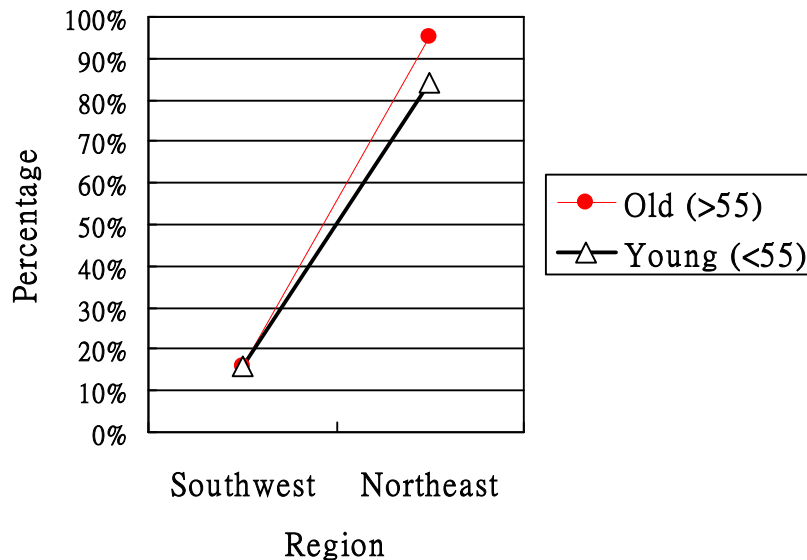


Figure 2. (ay) raising: region by age

More males preferred (ay) raising than did females (75% vs. 50%), as shown in Table 5 and Figure 3. Vowel raising for (ay) in narrative style was more frequent among men than women in both areas.

Table 5. (ay) raising: region by gender

	Northeast	Southwest	Total
Female	162/191 (85%)	19/170 (11%)	181/361 (50%)
Male	220/235 (94%)	23/89 (26%)	42/259 (84%)
Total	382/426 (90%)	243/324 (75%)	424/685 (62%)

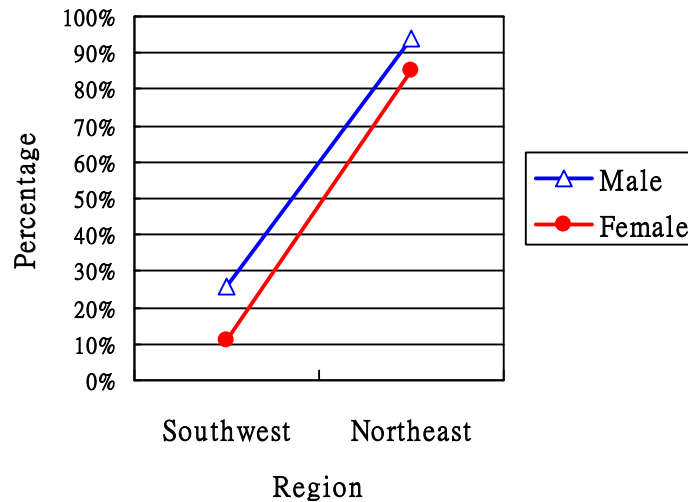


Figure 3. (ay) raising: region by gender

However, when age was cross-tabulated with gender, a surprising pattern emerged. Younger females (78%) seem to have surpassed younger males (62%) in adopting this feature, as indicated in Table 6. The interaction between gender and age is shown in Figure 4. This interesting development will be discussed in Section 6.

Table 6. (ay) raising: gender by age

	Females	Males	Total
Old (55+)	74/224 (33%)	172/210 (82%)	246/434 (57%)
Young (55-)	107/137 (78%)	71/114 (62%)	178/251 (71%)
Total	181/361 (50%)	243/324 (75%)	424/685 (62%)

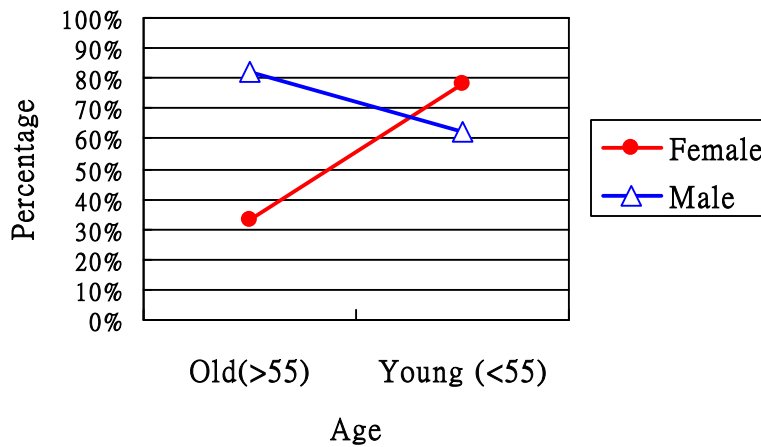


Figure 4. (aw) raising: age by gender

5.1. 2 (aw)

A similar pattern correlated with social factors was found in (aw). As shown in Table 7 and Figure 5, (aw) raising was also favored by the northeast side of the island. Although old people had a slightly higher rate of raising than did the young people in the northeast (84% vs. 74%), it was not statistically significant.

Table 7. (aw) raising: region by age

	Northeast	Southwest	Total
Old (>55)	67/80 (84%)	4/40 (10%)	71/120 (59%)
Young (<55)	35/47 (74%)	4/35 (11%)	39/82 (48%)
Total	102/127 (80%)	8/75 (11%)	110/202 (54%)

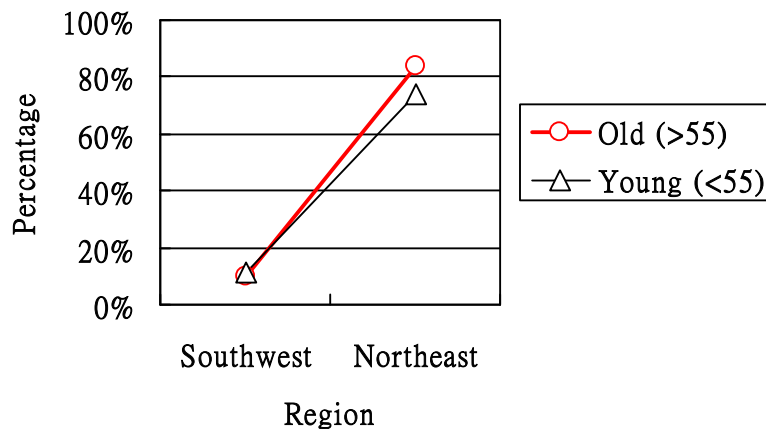


Figure 5. (aw) raising: region by age

Table 8 and Figure 6 also show (aw) raising was favored more by males than did females (58% vs. 49%). Similar to (ay) raising, (aw) raising in narrative styles was also used more frequently by men than by women in both areas.

Table 8. (aw) raising: region by gender

	Northeast	Southwest	Total
Female	40/55 (73%)	1/29 (3%)	41/84 (49%)
Male	62/72 (86%)	7/46 (15%)	69/118 (58%)
Total	102/127 (80%)	8/75 (11%)	110/202 (54%)

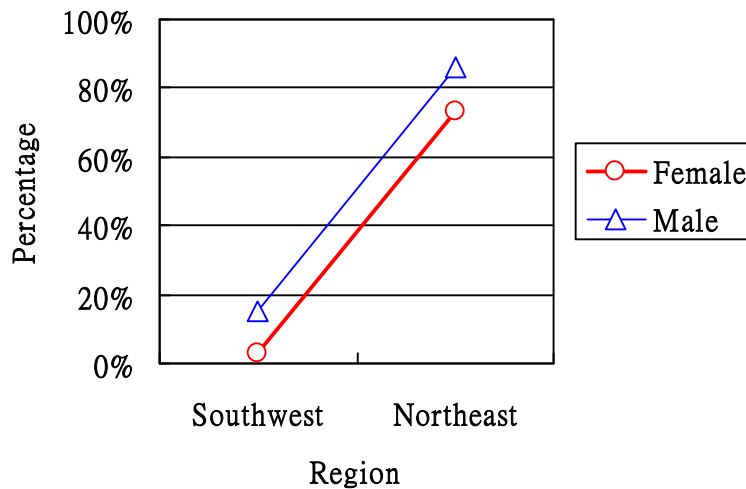


Figure 6. (aw) raising: region by gender

However, once age was cross-tabulated with gender, young females (68%) seem to have surpassed young males (33%) in adopting this feature, as indicated in Table 9. The interaction between gender and age is shown in Figure 7. This interaction between age and gender in (aw) raising is the same as that in (ay) raising and will be discussed further in Section 6.

Table 9. (aw) raising: age by gender

	Old (>55)	Young (<55)	Total
Female	18/50 (36%)	23/34 (68%)	41/84 (49%)
Male	53/70 (76%)	16/48 (33%)	69/118 (58%)
Total	70/120 (59%)	39/82 (48%)	110/202 (54%)

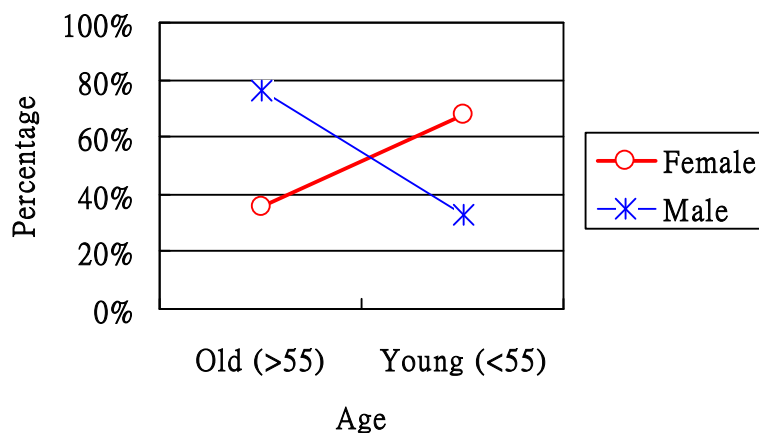


Figure 7. (aw) raising: age by gender

5.2 Stylistic variation

The second stage of our analysis presented the results of word list reading in the two diphthongs and compared the results of the four speakers who had data for both word list reading and narrative styles to answer the question of whether the two diphthongs indicate stylistic variation.

The results of raising in word list style are presented in Table 10. The numbers 1, 0/1, and 0 indicate the percentages of raising are high (60~100%), mid (40-60%), and low (0~40%), respectively. Among the four villages in the northeast region, three (Iraralay, Yayo, Iranomilek) indicate high rate of raising of (ay), followed by Ivalino in the mid range between 40-60%. The two villages in the southwest region indicate a low rate of raising.

There is also a clear implicational scale between the two diphthongs in that (ay) raising is progressing faster than (aw). In other words, if a speaker indicates a high level of raising in (aw) by being assigned the number 1, she should also display a high level of raising in (ay), but not vice versa.

Table 10. Raising in word list reading style

Name	Region	Age	Gender	ay	aw
WXY	Iraralay	40	F	1	1
LYL*	Iraralay	45	F	1	1
ZNY	Yayo	56	F	1	1
YZW	Yayo	50	M	1	1
HDH	Iranomilek	59	M	1	1
XJH	Iranomilek	63	F	1	0
LLM	Ivalino	76	M	0/1	0
XWY	Ivalino	69	F	0/1	0
ZLH	Ivalino	51	F	0	0
ZQL*	Ivalino	48	F	0	0
SSY	Iratay	45	M	0	0
SLZ	Iratay	47	M	0	0
XJY	Iratay	51	F	0	0
ZYJ	Iratay	51	F	0	0
ZSH	Iratay	55	M	0	0
ZXM	Imowrod	41	F	0	0
STM	Imowrod	47	M	0	0
LDY	Imowrod	56	F	0	0
LXS	Imowrod	53	M	0	0
ZZJ*	Imowrod	54	M	0	0
SFS*	Imowrod	59	M	0	0
LZ	Imowrod	77	M	0	0

Table 11 shows the results of the four speakers who had data for both word list reading and narrative styles. Except for the speaker LYL, a young woman in the Iraralay region who had 100% raising in the word list reading style for both (ay) and (aw), the rest of the speakers had more raising in the narrative style but showed no raising categorically in word list reading. The results confirmed that the two diphthongs had moved from indicators to variables because there was a stylistic difference.

Table 11. Comparison between styles for (ay) and (aw)

Name	Region	Age	Gender	ay		aw	
				word list	narrative	word list	narrative
LYL*	Iraralay	45	F	100%	67%	100%	100%
ZQL*	Ivalino	48	F	0	87%	0	48%
ZZJ*	Imowrod	54	M	0	71%	0	20%
SFS*	Imowrod	59	M	0	45%	0	0

6. Discussion

The most important finding of this paper is that although vowel raising was a regional vernacular feature and was generally preferred by men, young women (below 55 years old) on the island were in lead in the development of this feature in narrative style. A young woman in the northeast region even exceeded her own rate of raising in the narrative style by using categorical raising in word list style. Unfortunately, as an endangered language, we could not find enough capable speakers under 30 to serve as participants, thus sound change in progress could not be tested.

Our data show that the phenomena of (ay) and (aw) raising might have began as cases of change from below (the level of consciousness) but have gradually developed into cases of change from above (the level of consciousness) because native speakers were aware of this variation and even commented on it. As shown in the different input probability weights in Tables 3 and 10, (ay) raising was probably progressing further than (aw) raising in terms of change from above.

In the following excerpt (1), a middle aged man from Iraralay comments on the variation between *ivey* and *ivay*, while discussing the importance of the *ivey* fish caught in the evening.

(1)

o ivey iya am,
 NOM⁴ fish.name this TM
i-panci d(a) ori no kadoan l-ili a ivay koan da,
 IF-call 3PG that GEN other RED-village LIN fish.name say 3PG
mi-angay ori aka no ivey,
 AF-same that and GEN fish.name
ta yamen Jiraraley am,
 because 1PNEXCLF village.name TM
i-panci namen a ivey,
 IF-call 1PGEXCL LIN fish.name
sira do Jimowrod a Jiratey am,
 3PNOM LOC village.name LIN village.name TM
i-panci da ivay,
 IF-call 3PG fish.name

⁴ Abbreviations: 1PGEXCL = first person plural genitive exclusive, 1PNEXCLF= first person plural nominative exclusive free, 3PNOM = third person nominative, 3PG = third person genitive, GEN= genitive, IF = instrumental focus, LIN = linker, LOC = locative, NOM = nominative marker, RED= reduplication, TM = topic marker

“*Ivey* is called *ivay* in other villages. But it has the same meaning as *ivey*. We in Iraraley call it *ivey*, whereas those in Imowrod and Iratey call it *ivay*.”

As shown in excerpt (1), the word final (ay) indicates variation. The speaker draws the distinction between his raised pronunciation of *ivey* and the non-raised *ivay* in the other two villages, i.e., *Imowrod* and *Iratey*. Notice in his reference to *Iratey*, he uses his raised variant [ey], although the speakers from that non-raising area would refer to their own village as *Iratay*.

As vowel raising has shifted to the status of change from above, it is natural for young women to adopt this non-stigmatized feature, in the same way as New Zealand women who were involved in the non-stigmatized on-going sound change of the front vowels (Maclagan, Gordon & Lewis 1999). Similar to Haeri’s (1994) study on the female speakers of Cairene Arabic (Haeri 1994) who increased palatalization in the word list style, our study also found a young female in Iraralay who increased vowel raising in the formal style. However, due to a small number of speakers who provided comparable data, this speculation awaits further confirmation.

It is also reasonable to infer that vowel raising is a vernacular feature, as the percentages increased in the narrative style and decreased in the word list reading style. As many sociolinguistic studies have found that young women are often the innovators of sound changes that are not stigmatized, but tend to be conservative in sound changes or with stable sociolinguistic variations that are stigmatized (Labov 1990, 1994), we have shown that young women on Orchid Island are the innovators of vowel raising, using the vernacular feature more than men. This probably indicates that young women on the island are gaining visibility and power, commensurate with the status enjoyed by traditional men. As the language and culture of Yami are dying on the island with a language shift to Chinese and increasing dependence on tourism, the traditional division of labor and role expectations of males and females are no longer clear-cut. In fact, the number of women has surpassed that of men in taking up important roles in schools and civil services on the island, although politics is still mostly the domain of males.⁵ Following Eckert’s (1989) interpretation, women’s roles in the community would explain why young females were in the lead in the indigenous community.

Being a vernacular feature, the vowel raising rule may not have been stigmatized but rather served as a positive identity marker, as explained in Eckert (2000: 227). Vowel raising of the two diphthongs on Orchid Island started as a regional and male feature but was indexed with positive social meanings as young women began to surpass young men in adopting this vernacular feature.

7. Conclusion

This study has provided another interesting case of diphthong raising in post-insular island communities. Using data from our Yami corpus, we found that region, preceding environments and gender could account for vowel raising of the two diphthongs on Orchid Island. We also confirmed that vowel raising was indeed a vernacular feature because whereas the narrative style promoted vowel raising, word list reading inhibited it.

Our results confirmed that vowel raising was primarily a geographical feature and that the rates of change had formed a clear isogloss separating the northeast from the

⁵ The four candidates of a recent Township Chief election were all males.

southwest varieties. Although vowel raising of (ay) and (aw) followed the same constraint rankings for the internal factor group, determined by the feature of [continuant], vowel raising of (ay) had progressed slightly faster than that of (aw).

There was stylistic variation with more raising in narrative style than in word list reading. Although vowel raising was preferred by males, young females seem to have surpassed young males in adopting this feature in narrative style, a phenomenon corresponding to the social mobility of women. Perhaps vowel raising has ceased to be a gender marker and shifted to an ethnic identity marker.

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Ipiminaminasi Greetings

Sompo (So) and Masaray (Ma) are college classmates. After they had just graduated in June, Sompo took Masaray on a trip to Orchid Island. When they get to Sompo's home, they greet her mother.

1. Reading:

1. So: ina kong.

Good morning, mom!

2. In: ákokay, kagagan mo o ito?

Hello! Is this your friend?

3. So: nóhon, si kavakes ya.

Yes, she is my female friend.

4. Ma: kókay, kaminan kong.

Nice to meet you.

5. In: kókay, ka apía tao.

Hello. You are very beautiful.

6. Ma: ya abo, ya apiápia tao si kavakes am.

Oh, no, my (female) friend (pointing to Sompo) is more beautiful than I.

7. In: ya magága si kavakes mo.

Your friend is very outgoing!

8. So: nona, ya ji agága o ri, o ri ya ko ngaranan jia si Masaray.

She is indeed very outgoing, so I call her si Masaray (meaning very happy)

9. In: ya pa malavayo sira ina na?

Are her parents still very young?

10. So: nohon, ya pa ji alaváyo sira ina na.

Yes, her parents are indeed still very young.

11. So: mi ko ipiyowyaw si kavakes an.

I'm taking my friend out.

12. In: nohon, ángay kamo, manga ovay.

Ok, go ahead, darlings.

13. Ma: mi namen rana an.

Good bye!

14. In: nohon.

Ok.

ngaran ko Self-Introduction

Meeting Sampo's (So) female cousin on her father's side, Kanigan (Ka), on the road, Masaray (Ma) introduces herself.

1. Reading:

1. Ka: kaka kong, nokango o kai mo ya?
Hey, cousin, when did you come?
2. So: ko nimai nokakyab.
I just got here yesterday.
3. Ka: kagagan mo o ito?
Is that your friend?
4. So: nohon.
Yes.
5. Ka: sino o ngaran na?
What's her name?
6. Ma: kókay, si Masaray ko, kararay na yaken ni Sampo
do ilaod a nimivatvatek.
Hello, I'm si Masaray, Sampo's college classmate in Taiwan.
7. Ka: si Kanigan ko, ka mównay do irala?
I'm si Kanigan. Will you be in Orchid Island for long?
8. Ma: ala makasa aka piweywalam.
Probably for about a week.
9. Ka: ya apira o kakteh mo?
How many brothers and sisters do you have?
10. Ma: ya doa o kakteh ko, si kaka a mehakay am, kisat,
si wari a mavakes am, ya pa mivatvatek.
I have two siblings, a brother who is a cop and a sister
who is still studying in school.
11. Ka: ori-i, a imo am, ikong o vazay mo?
Oh. What about you, what do you do?
12. Ma: ko ji átenngi pa, ala mapivatvatek ko so kanakan.
I don't know yet. Perhaps I will teach in elementary school.
13. Ka: kamo mangay jino?
Where are you guys going?
14. So: namen mangay Jiayo.
We are going to Jiayo.
15. Ka: ning, makapía kamo an!
Oh, have fun!

sira kaminan Family Members

When they arrive at the house of si nan Maoyong (Sn), Sampo's (So) aunt, she introduces the family, which includes the grandmother, the husband, and two sons si Maoyong (Mo) and Mateneng (Mt).

1. Reading:

1. So: akay kong, akes kong, kaminan kong, maran kong, sira kaka kong, wari ciong!
Good morning, grandpa, grandma, auntie, uncle, cousins!
2. akókay, apo kong.
Good morning, my grandson.
anak kong.
Good morning, child.
Mo: wari ciong
Good morning, younger cousin.
Mt: kaka kong
Good morning, older cousin.
3. So: Kamo pa ji nimangay do takey?
Did you not go into the mountains yet?
4. Sn: namen mamahamaha pa, ta namen kateyka pa niromiag.
We just finished breakfast, so we are resting a little.
5. Ma: kokay kamo!
Hello, everyone!
6. So: si kavakes ya, ko nirara a mai do pongso ta a ya milingalingay.
This is my college classmate. I invited her to come tour our island.
7. Sn: kókay, kaminan na yaken ni Sampo, o ya am, si ina, o ya am, si ama, kadoan ko do vahay ya.
Hello, I'm Sampo's aunt. This is my mother-in-law, my father-in-law, and this is my husband.
8. Mo: kókay, si Maoyong ko, ko mapivatvatek so ciriciring no tao do .
Hello, I'm Maoyong, and I teach the Yami language in the local junior high school.
9. Mt: yaken am, si Mateneng ko, ko mivazay do gokosio.
I'm si Mateneng, and I work in the local township office.
10. Mo: lisna kamo jito, kamo na niromiag? romiag kamo pa an?

Please, have a seat. Have you eaten breakfast yet? Do you want some breakfast?

11.So: ciahá, tá namén mábsoy rana.

No thank you, we are full.

Koman Eating breakfast

Mom (In) called sompo (So) and masaray (Ma) to breakfast. Then, masaray and sompo went to Jiayo again, this time to visit Orchid Island Junior High School.

Reading:

1. In: ariag kamo rana si kavakes mo.
Bring your friend over for breakfast.
2. So: ikong o riagen ta?
What's for breakfast?
3. In: nitjipan a wakay aka no among.
Peeled sweet potatoes and fish.
4. Ma: nge, apia kanen o wakay.
Mm, sweet potato is good!
5. In: na makan ni kavakes mo o wakay?!
Your friend dares to eat sweet potato?!
6. So: nona, na ji akéyan o sosoli.
She likes taro too.
7. In: makásoy ka, ta mákcin ka an.
Eat some more, or you will go hungry.
8. Ma: nohon, ayoy, ya apia o asoy no among.
Ok, thank you. The fish soup is very good!
9. In: ya apia si kavakes mo, ya makakákan.
Your friend isn't picky with food. That's great.
10. So: nge, ya ji apia o ri.
Yeah, she's pretty good.
11. In: kamo mangay jino siciaraw ya?
Where are you going today?
12. So: namen mangay do Jiayo.
We are going to Jiayo.
13. In: ning.
Oh.

mangay do gako Visiting a school

Maoyong (Mo) was waiting at school to introduce Sompo (So) and Masaray (Ma) to the school.

Reading:

1. Ma: o ya gako nio, ya aráko!
Is this your school? It's huge!
2. So: wo, ya aro o ya mibozo.
Oh, there are a lot of people playing basketball.
3. Mo: sia miwalam am, ori da ipibozo,
They have a break right now, so they are playing basketball.
4. Ma: asio ya makakárang sira o karoan da ito?
Why are some of them so tall?
5. Mo: 高中 sira o karoan da ori.
Some of them are high school students.
6. Ma: wo, ya mian do jia so 高中!
Oh, there is a high school here too!
7. So: wajin o ya mo pangananaoan so ciriciring no tao?
Where is your classroom for teaching the Yami language?
8. Mo: o ito jito, o katanged na ori am, da piveyvatekan.
It is over there, next to the carving classroom.
9. Ma: kamo papira a sinsi do gako?
How many teachers does this school have?
10. Mo: namen sikaroa a ngernan.
twenty.
11. Mo: oya o ko pangananaoan so ciriciring no tao.
This is my classroom for the Yami language.
12. Ma: ya apía o gako nio, ya abo o ya ji ngiangian.
Not bad. Your school has all the facilities it needs.
13. So: sia apiapia o kanakan siciaikoa ya aka niamen
nokakoa.
Children now are much better off than we were back then.

do pivatvatkan In the classroom

Teacher Maoyong (Mo) gave students (學1, 學2) a test during the Yami language class.

Reading:

1. Mo: citoai na am, pisikingen ko inio, ya mian so nio ji atenngi?
I am going to give you a test, so do you have any questions before we start?
2. 學1: mo sinsi, ngongyod a tao si Paloy ang?
Teacher, is si Paloy a real person?
3. Mo: iya rana ori am, beken a ngongyod a tao ori, ala niamaog da a kavavatanen ori.
Him? He isn't a real person, just part of a story.
4. Mo: ciana, misiking takamo rana, pangay kamo rana o vakong nio do kabang nio.
Ok, we are going to start the test, so put your books in your book bags.
5. 學1: ana, mamood ko pa jimo so ipivatvatek an?
Hey, would you lend me a pencil?
6. 學2: nohon, apey.
Ok, here.
7. 學1: wo, ya malas ya ko nivatvatkan, apia ya?
Oh, I wrote something wrong. What do I do?
8. 學2: oya jia so ipangongopas.
Here's an eraser.
9. Mo: kamo manngo dang, jia kamo pizeziak, no mian so ji nio átenngi am, pataneken nio o lima nio.
What are you doing? Don't talk. If you do not understand something, raise your hand and ask?
10. 學1: mo sinsi, /kamen/ oya an? no /yamen/ oya?
Teacher, is this /kamen/ or /yamen/?
11. Mo: wo, ya malas ko nivatvatkan, o manoyong am /yamen/.
Oh, my mistake, the correct form is /yamen/.
13. 學1: mo sinsi, ko na nimateyka a nivatvatkan.
Teacher, I'm finished.
14. Mo: toroan jiaken a kangay mo rana do pantaw.
Hand it in, and then you can leave.

Kagagan Meeting friends

Sompo (So) and Masaray (Ma) go to the local township office to look for Mateneng (Mt), Sompo's younger cousin. They make plans to go out to a karaoke and meet his friends Masaray (Mg, female), Likdem (Li, female), and Mangday (Md, male).

Reading:

1. So: ka maymai jia a mianoanood?
Do you sing here often?
2. Mt: ji abo, no ya mian so ya manci niaken am, o ri ko yai.
No, I only come when my friends invite me.
3. Ma: ikong nio vazay no ya mahep?
What do you do for fun during the night?
4. Mg: maneysavat do keysakan.
Go catch crabs at the sea, of course.
5. Md: manita so 電視, no tomakatakaw am, mangay do 網咖.
Watch TV, sometimes I go to a netcafe.
6. Li: makawakawalam a minom so saki.
Talk and drink.
7. Ma: cigyan o zakzaka mo.
Wow, your necklace is beautiful.
8. Li: mo ikákza? ipamareng ko imo so asa an?
Do you like it? Do you want me to make one for you?
9. Ma: ji ka makamo.
How could I accept that?
10. So: Mateneng, pianoanoodi.
Sing, Mateneng?
11. Ma: ya apia o ngoso mo, pianoanood pa.
You have a nice voice. Sing another song.
12. Md: ow, ya na máhep, mi ko na an, ta pasoikan ko pa
o aleleh ko so aneng.
Oh, it's late, and I still need to get gas! I need to go.
13. Ma: si abo o vazay namen am, mi namen kalaen imo an?
We'll go see you when we have time.

Ili At the village

Sompo (So) and Masaray (Ma) ride a motorcycle toward Jiraralay.

Reading:

1. So: omavang ta do aleleh a mangay do Jiraralay an.
Let's take a car to Jiraralay.
2. Ma: ya atlo rana o ya ko niangayan a ili, ikongo pa ili
o ya ko ji niangayan?
I have been to three different villages now. What villages
have I still not visited?
3. So: Imaorod aka no Ivalino, aka no Iranmilek.
There are still three villages left: Imaorod, Ivalino,
and Iranmilek.
4. Ma: waranay! vahay da o ya maráhem ito?
Oh, are those structures that go deep into the ground their
houses?
5. So: nohon, o ri o ngongyod a vahay namen a tao.
Yes, that is the traditional Yami house.
6. Ma: ji ánnget o mitkeh do dang?
Isn't it hot to sleep in there?
7. So: no mánnget am, ya ji ngian so tagakal ito, aka no
makarang a 'itkehan.
When it is hot, you can sleep on the porch or in the workhouse.
8. Ma: ya masazówsaw do tagakal, ya apia A pilingalingayan.
It is cool on the porch, and there is a good view.
9. So: wo, ya macimoy, apia ya?
Oh, it's raining. What do we do?
10. Ma: to ta rana ngisan do jia an?
We can spend the night here.
11. So: nohon; mi ta kalaen si Mangday a kaisan ta do dang.
Ok, let's go find Mangday and spend the night with him.

Misan Staying in a rooming house

It rained in the evening, and many tourists went to the rooming house run by Mangday (Md) in Iraralay. At this time, Sompō (So) and Masaray (Ma) also walked into the rooming house.

Reading:

1. 客1: ya pa mian so isanan?
Are there any more rooms?
2. Md: kamo papira?
How many people?
3. 客1: namēn tatlo a mavakes, ya raroa o mehakay.
There are five of us, three women and two men.
4. 客2: apira ngernan do kasa a ahēp?
How much does it cost per night?
5. Md: teylilima a ranaw o teysa aka tao.
It is five hundred NT dollars per person.
6. 客2: ya macivilang o kanen do Alima a ranaw?
Does that include meals?
7. Md: nohon.
Yes.
8. 客1: simango am koman?
When do we eat?
9. Md: si anem aka vatvatek.
Six o'clock.
10. 客1: wajin na yanan no kareyan?
Where is the restroom?
11. Md: ori do kaozi, o parioriosan am, ori do kawanan;
Oya am, kagi no 'itkehan nio.
It's to the left. The bathroom is to the right. This is your room key.
12. Ma, So: Mangday, kehakay kong.
Good evening, Mangday.
13. Md: wo, kamo nikacimoyan, to kamo na ngisan jia an?
Oh, you're soaked. You should stay here for the night.
14. Ma, So: nohon.
Sure.

takey aka no wawa Natural environment

In the morning on the second day, Mangday (Md) went with Somp and Masaray to Iranmilek, admiring the scenery on the way.

Reading:

1. So: ay, ya arako o araw, mangotas ta so raon, ta raong ta an.
ah, the sun is too strong. Let's pick some wild taro leaves to shield us from the sun.
2. Md: mo Masaray, apey oya.
Here, Masaray, this leaf is for you.
3. So: tolang iya mo ipangap, yaken am?
Why do you only pick one for her? What about me?
4. Ma: wo, ya makarang o tokon, nitomanang ka rana do dang?
Oh, the mountain is so high. Have you climbed that mountain before?
5. Md: nge, nimaciheza ko ji ama a nimanengeh so tatala.
Yeah, I once went to cut planks for boats with my father.
6. Ma: nimanokzos ka rana so omowmalalam?
Have you hunted before?
7. Md: ji abo a, kapangahahap namen saon am.
No, we only go fishing.
8. Ma: a ka mateneng a mangahahap?
Then do you know how to fish?
9. Md: nonan, ko ji ateneng a mitawaz, a mangna so among.
Of course, I know how to fish with nets as well as with fishing poles.
10. Ma: ori i, kateneteneng mo.
Really. You're awesome.
11. So: Masaray, cita pala o kakawan ito, ya kmi ikongo?
Hey, Masaray, look and tell me, what does that coral reef look like?
12. Ma: taon, sino ya makateneng jia.
I don't know. Who knows?
13. Md: ya kmi genggang.
It's like a battle cruiser.
14. Ma: nohon, ya kmi genggang.
Oh! It really does look like a navel vessel.

kakawan Weather

Because it is hot and humid, Sompo (So) and Msaray (Ma) went swimming together. Masaray finally personally experienced the rapid weather changes of Orchid Island.

Reading:

1. Ma: ay, ya mátdong o kakawan.
Ah, it is so humid today.
2. So: mi ta miawawat.
Let's go swimming.
3. Ma: ta ko nimapalolo so ipiawawat ko.
I didn't bring my swimming suit.
4. So: to ka miabtan so aligned a abtan am.
You can just wear your shorts.
5. Ma: ya mademdem o cinalab do jito, wo, ya micicilat rana, mi ta na an.
The clouds are very dark over there. Oh, that was lightning. Let's go.
6. So: ya matakzes, ta ya mikadey, ya mian so kakawan ya an?
Weird, there's thunder. Is there a typhoon around?
7. Ma: key, malalayo ta, ta to na nao yaten no cicilat.
Hurry, let us run, or else we will be hit by lightning.
8. So: ay, rako a cimoy, ayoy ta makaranes ta na.
Ah, it is raining so hard. Fortunately we are home already.
9. Ma: nonan.
Yeah.
10. So: cita pala do Jiteywan ito, ya mavalang a ya mikalapoto o araw.
Look at Little Orchid Island; there is sun on one side and rain on the other.
11. Ma: nohon, ásio o kakawan do irala ya.
Yeah, the weather on Orchid Island is strange.
12. So: ana, oito, ya mirarangirang do wawa.
Hey, look, there is a rainbow over the ocean.
13. Ma: nohon, cigyan, ya apia citaen.
Oh, it is so beautiful!

Mikangin Typhoon is coming

The typhoon came. Masaray (Ma) and sompo (So) heard on the Orchid Island radio station about the typhoon, and asked mother (In) whether she had prepared extra flashlights.

Reading:

1. 播音員: kókay kamo manga keypong, inio rana am, mi nio pa aralaen o tatala nio a pasdepen do kamaligan, ta ya kmi maráhet o langolangoy no kakawan am, manginanawa o tatalo nio a iziod no wawa; kapakapia nio so vahay nio a amamaoten, ta isalaw na no pagpag an, azimanen nio o wawa no mangay kamo do keysakan ta manginanawa kamo an, o ri rana o ya ko ipanci manga keypong, kókay kamo.

Good morning, folks. I hereby warn all folks that the weather is not good (there is a typhoon), so everyone should pull their boats into his boathouse, so that they won't be washed away. Also, strengthen your houses so they aren't blown away by the strong winds. When going to the seaside, watch out for big waves in order to avoid danger. That is the end of this broadcast.

2. Ma: wo, rako a wawa a na pasibsiblaken do igang, ya makarang a ya apia citaen.
Oh, it is so beautiful when the giant waves break upon the rocks.
3. So: ina, ya mian so taro aka no dingki?
Mom, do you have candles and a flashlight?
4. In: kongoen mo?
What do you want to do?
5. So: yavat si toda hesep o apoy simahep.
Just in case the power goes out tonight, so we have something ready.
6. In: ya ji abo, mi ka pa manazang an.
No, would you go out and buy some?
7. 播音員: o ya ko ipanci manga keypong am, na niasap no wawa o rarahan Jikarahem, ya kaji makasongan sia a pangonongan; o rarahan do Jizakazang am, ya na nitapinoan no tana no tokon, ji kamo angay do ya mikadoa rarahan ori, ta manginanawa kamo an, o ri rana ya ko ipanci.

This is a road report. The road through the tunnel is filled with water and cannot be used. Also, there are mudslides around Tiger Head Hill on the road, so folks should not try to go along those two roads, for it could be dangerous. This is the end of the broadcast.

8. Ma: ya mapárek o ranom, apia ya?
The water is muddy. Now what?
9. So: mi ta mapataza so kakanan do tozan tehed, ta pavanavanawan ta am, piveraveran ta an.
Let us get some buckets to catch the rainwater from the

gutters to use for washing hands and dishes.
10.Ma: a, ya abo rana o apoy(zampo), paciscisi o taro.
Uh oh, the power went out. Light the candles.

rayon Flying fish season

When Masaray (Ma) went to Orchid Island during the hottest days of summer, she asked Sompo (So) which season had the best weather for tourism.

Reading:

1. Ma: ikongo a vehavehan niapia na yai do irala a ipilingalingay?
What month should a tourist come to Orchid Island?
2. So: niapia na o rayon saon am.
During the season of the flying fish, of course.
3. Ma: ta ikong?
Why is that?
4. So: ji árekmeħ a ji ánnget, manao o kakawan.
It isn't too hot, nor too cold; the weather is just right.
5. Ma: maráhet o teyteyka?
Is it not good in the summer?
6. So: ta ikarahet na, kateymánnet na, kateyáro no angin am.
It isn't that it is not good. It is just too hot and there are many typhoons.
7. Ma: manngo do amian?
What about in the winter?
8. So: ji árekmeħ, teymácimocimoyin pa a.
It is very cold, and it rains too often.
9. Ma: ikongo o iyan no libangbang sio?
In what season are there flying fish?
10. So: do rayon.
During the season of the flying fish, of course!
11. Ma: apia o kakanan no libangbang?
Are flying fish tasty?
12. So: ta ikarahet na, tarek pa o apia na a teyápia yakan.
Pretty good, especially flying fish eggs. Those are the best.
13. Ma: **ori i**, sipisa am, mai ko do rayon, kapiakan ko
so apia no libangbang.
Really? Then I want to come during flying fish season next time so I can eat flying fish eggs.

vahay no tao Visiting a traditional house

Sompo (So) and masaray (Ma) went to Ivalino to see sompo's friend, sinanmagaga (Mg). Si nan magaga took them to see his mother's traditional house.

Reading:

1. Ma: ya masári o sahad, ko ji ácita imo mo Sompo.
It is so dark in here. I can't see you, sompo.
2. So: oya ko do jia, cijia na!
I'm right here, come on.
3. Ma: ánanay o oo ko!
Ow, my head, it hurts!
4. Mg: makalógod ka, ta ya mavéveh o sesdepan.
Keep your head low because it is a little lower at the entrance.
5. Ma: apía rana, ko na makacita?
Ok, I can see now.
6. Mg: o ya pa mo kasdep do vahay no tao?
Is this the first time that you've entered a traditional Tao house?
7. Ma: nohon, ya ji miangay o kaparengan no vahay do ilaod aka no vahay do irala.
Yeah, Orchid Island houses and Taiwan houses are structurally different.
8. Mg: nonan, ya ji ániaheyan o angin a manapoat so vahay, am o ri na ikaráhem no na kaparengan no vahay namen a tao ya.
Of course. Because we are afraid that the typhoon will blow away the house, our traditional houses are built very deep into the ground.
9. Ma: ori i, ya ji meybebneng o ranom no ya macimoy ang?
Oh, I see. Does it not flood when it rains?
10. Mg: ji ngian so rarahan no ranom; ángay kamo do tagakal, ta ka'oban kamo do jia.
There is a gutter. Why don't you go to the porch? If you stay here, you'll be overwhelmed by the smoke.
11. Ma: ko kadasan, ya mian so kareyan do jia?
I need to go to the bathroom. Is there not a bathroom?
12. So: ji abo, yangay ko imo do kareyan do ahas.
Nope. I'll take you to a trash dump far away.

do tagakal On the porch

Si nan magaga (Mg) took sompo (So) and masaray (Ma) to chat at her father (Am) and mother's (In) house.

Reading:

1. So: cita pala ito, ya aboata o cinalab do angit.
Look, there are no clouds in the sky.
2. Ma: ya mahedhed o vehan, ya aro o mata no angit pa.
The moon is round, and there are so many stars.
3. So: mi nan (=mo ina ni) Magaga, mi tamo jira ina mo a maciwalam an.
Magaga's mom, can we go and talk to your mother?
4. Mg: nohon, am citoai na ta marios ko pa an.
Ok, but hold on, I need to get a bath first.
5. In: ya teyrahēt si nan Manaik ito, na todey botbota o nipaneveng ko do piawan ta. 錄音 Ko pinaneveng
I can't stand si nan Manaik. She pulled up the taro that I planted on the border.
6. Am: tang a, panevengan am makongo, na pangzan jia?
Eh, what is wrong with planting there? How can she hog this whole area?
7. In: "ya mo pamemenen do akawan namen o piawan ta," koan na.
She said (to me), "If you do that, you will move the border into our field."
8. Mg: mo ina, ya ararako rana o asi no wakay ko, mi ta pala simaraw an.
Mom, my sweet potatoes are big now. Can we go dig them up tomorrow?
9. In: ya rana makapira vehan a, kakeykeykai na mamno?
You've only had them for so long, and they are already grown?
10. Am: noipisa am, pehzaen na pa yaken ni ama na ni apo a miciklap.
Next time, let us ask our son-in-law to take us fishing.
11. Ma: apia kapacihza ko jinio?
Can I go with you?
12. Mg: ji makaniaw, adan a macihza o mavakes do mehakay a mangahahap.
That is taboo; women are not allowed to go fishing with the men.
13. So: sipisa am mangay ta maneysavat do keysakan.
We can go catch crabs at the seaside next time.

meyngen o ngepen Tooth ache

Because of a long history of chewing betel nut, si apen Magaga (Pg) had four broken teeth. The pain was so much that her daughter, si inan Magaga (Mg), took her to pull out her teeth. They are now waiting to have false teeth put in.

Reading:

1. Pg: simango am pangayan ta o ngepen ko?
When can they put in my false teeth?
2. Mg: "makadoa vehan pa," koan na no koysang.
The dentist said two more months.
3. Pg: kownownay na.
That long?
4. Mg: nonan, kapanmama mo, manngo ori, ya mikaktekteb so ngepen ang.
Yeah. It's your own fault for chewing betel nut. Look, your teeth were all breaking one by one.
5. Pg: ta ikamamaen na, beken a kanen o ya na nikapodpod a.
They didn't break from the betel nut, it was from the meals.
6. Mg: wo, ya to zezak o ngepan mo a na nivera no koysang.
Oh, the dentist washed your teeth so clean.
7. Pg: to mancian.
No, what are you talking about.
8. Mg: nonan, akmi zateb nokakoa sio, am siciaikoa ya am, ya to maniray.
Really! They were as dark as coal before, and now they are so white they shine.
9. Pg: si pangayan rana o ngepen ko am, apia o kapanmama ko rana?
If I get false teeth, can I continue to chew betel nut?
10. Mg: si "manmama ko" koan mo am, ji ko rana pangayio ngepen mo.
If you say "I want to chew betel nut," then I will not let you get false teeth.
11. Pg: a maviay ko a ji rana manmama.
How can I live without chewing betel nut?
12. Mg: mo ji ngbeywani o adoa laksa a loiten mo.
Twenty thousand dollars! Can you bring yourself to get them dirty?

mangay do koysang Go to the hospital

Si apen Magaga (Pg) got sick, so she went to the hospital for a check up. Before the doctor (Ko) checked on her, the nurse asked her to sit down for a while and wait.

Reading:

1. 護: akes kong, ikongo mo `ingen?
Hello, grandma. What is wrong?
2. Pg: ya meyngen oo ko a ya omazidangdang.
I have a headache and a fever.
3. 護: nimai ka rana do jia a nimanita so `ing`ingnen?
Have you been here before for a check up?
4. Pg: nonan, ji ko na nimai, mo keypong.
Of course, I have been her before, dear.
5. 護: aney o 健保卡 mo aka no alima poo, omlisna ka pa jia an, citoai na am, ipanci ko imo an.
Give me your health insurance card and 50NT. Sit here, and we will call you in a while.
6. 護: mo akes, cijia na, ta imo rana.
Grandma, come here, it's your turn.
7. Ko: ka makapira araw rana ya niomazidangdang?
How many days have you had a fever?
8. Pg: nokakyab o keyngen no oo ko, kaotowta ko.
I just got a headache yesterday, and started to throw up.
9. Ko: ikong pa mo `ingen?
What else is uncomfortable?
10. Pg: ko mapala, ya meyngen o tetehnan ko.
I am coughing, and have a sore throat.
11. Ko: citoai na am, tozoken na imo no 護士, kapanta ko nimo so kosozi an. si mangay ka rana am, minom ka so cinoat a, kapamahamaha mo, ta o ri o ikakeykai mo a mapia an.
The nurse will give you a shot in a second. I will give you some medicine. After you go back, drink lots of hot water, rest a lot, and you will get better very soon.
12. GA: nohon, ayoy.
Ok, thank you.

ya mian so avang The shipped goods are coming

Every Tuesday and Saturday, the boat brings a shipment of goods. Sampo (So) and masaray (Ma) went to Jiayo to pick up items.

Reading:

1. Ma: ya mian so avang, ya mian dang so pzapzatan nio?
Hey, a boat. Do they have anything for you?
2. So: taon; ala ya na mian o niparara na ni wari a mogis
aka no yakan namen.
I don't know. Maybe the rice and vegetables that my brother sent are here.
3. Ma: mi ta pala citaen?
Let's go see.
4. So: oya rana o ngaran no mogis namen aka no yakan namen.
Our goods (rice and vegetables) are on the list.
5. Ma: kongoen ta ya yangay do vahay nio?
How will we get the goods to your house?
6. So: mamood ta so otobay.
Let's go rent a motorcycle.
7. Ma: mavang ta o ya marehmet a mogis ito?
The rice is so heavy. Can we really carry it?
8. So: **mi ta mikala so a aleleh pavangan ta sia.**
Let's go find a car to ship it then.
9. Ma: do jino o mi ta pikalaan so aleleh?
Where will we find a car?
10. So: **o ito so tozako, mi ta pala ipanci.**
There is a truck there; let's go talk to him about it.
11. So: apira o ngina no teysa alavat a mogis?
How much does it cost for one shipment of rice?
12. †: **asa ranaw o teysa alavat a mogis.**
One hundred dollars per bag.

macikavang Catch a ride

On the way home, they met an old woman (Ra) heavily burdened by what she carried on her back. Sompo (So) asked the truck owner (車) to pull aside and pick up the old woman.

Reading:

1. So: paseyked pa, ta makarilaw o rarakeh ito.
Stop (the truck) for a moment, I feel bad for that old woman.
2. 車: akes kong, avang do jito.
Hello grandma, c'mon up and have a seat.
3. Ra: ji kamo makamo, manga ovay.
I couldn't do that, darlings.
4. So: ciaha, makasi ka ya marehmet so rara.
Don't think about it. Carrying something that heavy must be very hard work (you poor thing).
5. So: pasakayi pa, ta ya ko ji anat o rara ni akes ta.
I can't pick up the old lady's things. Help me.
6. 車: 'awan pa yaken mo akes, ta pasakayin ko o rara mo.
Grandma, move over a second. I'm going to put your stuff in.
7. Ra: ji kamo makasnek ya, manga keypong.
Thank you everyone (I feel so bad about this).
8. 車: makapia ka omlisna, ta pasongayin ko rana.
Sit tight. I'm going to start driving.
9. Ra: pakasen nio yaken do jia an, ta mi ko pa do ora namen.
Can you drop me off here? I want to go check on our taro fields.
10. 車: ji mo ngapa o rara mo, ciaha ta to ko rana angayan do vahay nio.
Don't take the basket. I'll send it directly to your house.
11. Ra: a ji ka makanig; no komoan am, to mo pazomtada do tagakal namen an, apo kong.
How could I ask you to do that? How about this; just drop it off at our porch. Thank you, grandson.
12. 車: ciaha.
You're welcome.

omavang do sikoki Taking a plane

At the end of si Masaray's (Ma) tour of Orchid Island, she decided to take the old grandfather, si apen Magaga (Ga), back to Taiwan for a tour. At the airport, the lady at the desk (服) helped them register, check in their baggage, get through the security (檢), etc.

Reading:

1. Ma: ko mapadket so ngaran.
I want to register my name (reserve seats).
2. 服: ya apira mo padketen?
How many seats do you want?
3. Ma: ya adoa.
Two.
4. 服: simango o mo padketen?
What day do you want them for?
5. Ma: siciaraw ya.
For today.
6. 服: apey o ngaran nio aka no kipo nio, angayan kamo o pzazatan nio do jito ta pararaen.
Here are your tickets and IDs. Please take your luggage over there for shipment.
7. 檢: ya apira o pzazatan nio?
How many pieces of luggage do you have?
8. Ma: ya tlo.
Three pieces.
9. 檢: aney, mo akay, o mo `aviten ori ta pararaen.
Grandfather, give me that thing in your hand to ship.
10. Ga: ciaha, ta to ko na `avita.
It's ok, I'll carry this.
11. 檢: ikongo ya mipipi do katawtao mo ori? pacitan pala?
What do you have that keeps ringing? Take it out please.
12. Ga: ipimamaman ko.
It is my betel nut knife.
13. 檢: aney, ta itoro ko do mapagozit do sikoki,
si makaranes kamo do Taito am, itoro da jimo.
Give it to me, and I'll hand it to the pilot. When you reach Taitung, he will give it back to you.

mangahahap Go fishing

The husband of si nan Magaga, si aman Magaga (Ma), took his father-in-law (Am) on a motor boat to little Orchid Island to fish. Si apen Tokasen (To) and si apen Lalitan (La) along with others went for deep-sea fishing.

Reading:

1. Ma: mi ta Jimanacid a miciklap, mo ama an?
Dad, can we go fishing at Jimanacid?
2. Am: mi ta do tatala an, no mangay ta do mibekbek?
Should we take the row boat of the motor boat?
3. Ma: mangay ta do mibekbek.
Let's take the motor boat.
4. Am: raraen ta sira maran mo si apen Lipaog aka ni apen Tokasen aka ni apen Lalitan an?
Can you go ask your uncles si apen Lipasag, si apen Tonasen, and si apen Lalisan to go with us?
5. To: Wo, oito sira do teylaod.
Oh, look, there is a bunch of fish out south.
6. La: nohon, wara ya ciklapan ta am.
Oh, that's great. There are fish for fishing.
7. Am: bedbeji o pangnan ta, manga anak ko.
Child, tie the bait to the fishing hooks.
8. Li: sidongey kamo pa yaken a mapasakay sia.
Everyone, help me pull the fish in.
9. To: key kamo, pasakayin takamo pa do tatala.
Hurry, let's pull it in together.
10. La: ya marawa koan mo.
You think it is that easy to reel in?
11. To: si m'okso rana do wawa, mo kaji macikararoan.
If you don't help now, it will get away.
12. Li: beken o among ito o rakepen mo a, mo rakpan so ai ko.
We are here to catch fish; why are you holding my foot?
13. Ma: nio ji rakepa o among a, kamo makongo dang a ya mireyrake-ep.
Why are you not fishing, and instead wrestling over there?
14. Am: asio kamo ya, ji ngbeywani ori a ya nim'okso rana do wawa.
You people...Look, the fish have all gotten away. What a waste.

raheta aka no oyod Fish for men and fish for women

Magaga (Ma), Sompo's (So) niece, has lived in Taiwan for many years. This time, she returns to see her folks, and goes to Ivalino with Sompo to see the fishermen come back to port with a good catch.

Reading:

1. Ma: wo, ya aro o among da.
Oh, they caught a lot of fish.
2. So: ala da nitawazan ori, ta na karo no among da.
They probably used a fishnet; that's why they have so many.
3. Ma: mi ta pala citaen.
Let's go see.
4. So: ya aperah o oyod a ya aroaro o rahet.
There are very few oyod; there are a lot more rahet.
5. Ma: ikong o rahet aka no oyod?
What are oyod and rahet?
6. So: rahet am yakan no mehakay a, oyod am yakan no mavakes a among.
Rahet is the fish for the men, and oyod is the fish for the women.
7. Ma: apia miyakan o mavakes so rahet?
Can women eat the rahet fish?
8. So: beken, o mehakay o apia miyakan so oyod.
No, only men can eat oyod fish.
9. Ma: ta ikong o?
Why is that?
10. So: nimapo nokakoa a, na katoda angayan siciaikoa ya.
It has been that way before, and it has been passed down through today.
11. Ma: nio pitareken o dengdengan so oyod aka no rahet?
Do you cook oyod and rahet in different pots?
12. So: nonan, o kakanan a pangayan so among am, akman saon so sang am.
Yeah. Even the plate that it is served on is the same way (on separate plates).
13. Ma: ikong o ngaran no pangayan so rahet a kakanan?
What is the plate that the rahet is served on called?
14. So: o pangayan so rahet a kakanan am, ipanci namen a raratan.
The plate that the rahet is put on, we call it raratan.
15. Ma: ori i, ko na katenggan, ta pangayan so oyod a kakanan am, ipanci nio a ooyodan.
Oh, then I know. The plate the oyod is put on must be called ooyodan.
16. So: nohon, ka mateneng, am o ngongyod a ngaran na am, nanatnganan.
Yup, you are very smart. However, it is really called nanatnganan.

kois no tao Miniature pigs

Magaga (Ma) and Sampo (So) arrived at Jiramilek and saw a group of Orchid Island miniature pigs. The pig owner was herding the pigs so that they didn't block the road.

Reading:

1. Pi: Bos, ya nio yazat do rarahan ya?
Go away! Why are you blocking the road?
2. Ma: Waranay o kois da, ya kmi tao a ya macikeyan jira.
Hey, those pigs are so cute! They are just like humans, following their owner.
3. So: ala sia mabwang jira am, ori da ipacikeyan jira ori.
It is probably because they are very familiar with their owner, so they follow him around.
4. Ma: ya mian so vahay no kois da ito?
Do those pigs have a pigsty?
5. So: ta ikabo na.
How could they not have one?
6. Ma: Da katenngan o vahay da no ya mapikois sira ang?
How do they know the pig owner's house?
7. So: no da teyka sira nipakan am, sia macilolo do ya mapikois sira a moli, am ori da ipakateneng jia ang.
Every time the owner feeds them, they follow the owner home, so they know his house.
8. Ma: asio malangongoy o koikois do irala ya? ya magogolang pa a, ya alilikey pa a.
Why do pigs on Orchid Island all have sharp snouts and why are they so small and skinny?
9. So: da ipikeykoskos o ngongoy da am, ori da ikalangongoy; no sia makcin am, da tototoen o amaot a, da kasaway a miyoyowyaw a mikala so kanen da am, ori da ikagogolang nira.
They dig with their snouts, so they are sharper. When they are hungry, they jump over the walls to escape and look for food, so they are thinner.
10. Ma: inaoy no manazang so lilikey a kois a yalalam.
I want to get a pig for a pet.
11. So: sapopoen mo a omavang do sikoki?
You want to carry it on the plane?
12. Ma: ori o ikarahet na an.
That is what makes it so hard.

koman so ciai Eating logans

The old man (Ra) took his grandson (Po) to pick longans in the mountains. Three children (Ka) went to play in the mountain and saw the old man cutting down the tree, so they hid and secretly ate the longans.

Reading:

1. Ra: ayoy, ta mazasa ka rana, ta makarilaw si apo a ya makcin ito.
Great! I finally cut you (longan tree) down, or else my grandson would starve.
2. Ka: wa, aro a ciai, wara ya akanan tamo am.
Wow, so many longans! Yay, I can eat longans.
3. Ra: ji ka toda angan manga apo ko, ta abo o yoli ta.
Grandson, don't keep eating, or else we will have none to take back home.
4. Po: nohon.
Ok.
5. Ra: ya ka pa ji absoy ori, na kaji mamnoan no aomas ta ang?
Are you still not full? Why does the bag not seem to fill up with longans?
6. Po: me... me
6. Ka: si ipanci mo pala yamen ji akay mo, ta
6. Ka: si ipanci mo pala yamen ji akay mo, ta
(to da pasilasilapi no tatlo aka kanakan ori)
If you dare tell your grandfather about us, we will...(the three children glare at him menacingly as a warning)
8. Ra: asio ya ji apno o aomas ta ya no ya asa tnggeh a ciai?
What is going on? Why is the fruit of one tree not enough to fill just one bag?
9. Po: sino ya ya makateneng jia?
How should I know?
10. Ra: ya na karo no asi na no katangara ko sia ori am, Asio ya apereh rana ya?
When I looked at the tree, there seemed to be a lot of fruit. Why did it become so little upon picking?
11. Ka: ayoy ta mabsoy tamo rana ori, ha ha ha.
Great, we are finally full, hahaha.
12. Ra: a inio ori manga vankas o ya nikoman so ciai a, ya nio ipataretarek ya, to rana mimin so ciai namen!
Oh, so it was you bastards, eating all of my longans. How could you do that!
13. Ka: key, malalayo tamo rana!
Hurry, everybody run!

aney o ango ko Give back my pandanous fruit

Two boys on their way home, si Sekez (Se) and si sidongen (Si), stole the ango (pandanous fruit) that the girl (Va) was carrying on her back.

Reading:

1. Se: mo kehakay,
 Hey, man.
2. Si: ikong o?
 What's up?
3. Se: mi ta apen o ango do yala no mavakes ito an.
 Let's go get that ango that that girl is carrying on her back, ok?
4. Si: nohon.
 sure.
5. Se: mi ko apen a, ipalayo mo an.
 I'll go get it, hand it to you, and you run with it.
6. Se: kavakes kong!
 Hello (girl)!
7. Va: ya mo ipangasi, mo mina Sekez, ko imo iciapaw a sirsirngen, mo pangamay.
 Who are you greeting, damn Sekez. I'm not paying any attention to you.
 (likodan na sira am, to na ngatkata ni Sekez o ango a apen a.
 As soon as she turned her back, sekez took the ango.)
8. Va: mo apan so ango ko mo mina Sekez?! Aney!
 Sekez! Why did you take my ango, give it back!
 (to na sira niowciowa no kekezdas na.
 and so she took her sickle and chased them)
9. Si: key, ta na yowyawen yaten.
 Hurry, she's chasing us!
10. Va: si mai kamo pala simaraw, ji ko inio
- When you come tomorrow, just you wait, I'll will...
11. Se: si mapis na yaten am, to ta rana rakepa,
 kasangasangab ta sia, kazazasag ta jia an.
 If she chases us, we will pick her up, bite her, and step on her.
12. Si: nohon.
 Ok.
 [On the second day, the girl sent to find si Sekez to debate with him. Si Sekez was so scared that he went to ask for help from his grandfather.]
13. Va: to mo ngapi so ango ko nokakyab, mo kavazat?
 Damn it, why did you steal my ango yesterday?
14. Se: Mo akay, ya da pacilimanan yaken.
 Grandpa, someone is trying to hurt me!
15. Kay: Sino ya maciliman jimo, ta miarap namen.
 Who is trying to hurt you? I'll kill that person.

man'acing¹ so kois Tying up pig's feet

Sekez (Se), sidongen (Si) and their partners (Ke) were bored, so they decided to tie up pig's feet. However, they were pulled along the ground by the pig and were scraped all over. On the way back home, they met a group of people making boats (Va). When they got home, their father (Am) and mother (In) chewed them out.

Reading:

1. Se: tamo miwalam siciaraw ya manga kehakay a, mi tamo man'acing so korang an.
Dear friends (male classmates), today is a holiday, so let's go tie up pig's feet.
2. Ke: nohon.
Sure.
3. Se: inio rana manga kehakay am, mi niotoyoen o kois a, yaken rana am pinanan ko o 'a'acing an.
You people, go chase the pigs out. I will tie the pig up.
4. Si: wo, ya mirarala o oo mo, mo kehakay,
Oh, (my friend), your head is bleeding.
5. Kel: apia o katawtao mo a ya nimiciasazisazingodngod ya?
What do we do? You are scraped up all over the place.
6. Val: ya nimakong o ri, manga koynio, sino ya na nipacilimanan ya?
Hey, children, what did he do? Who did he fight with?
7. Ke2: na nipakedked do lima na o 'a'acing a, miratateng am, na to lololoa no korang a, ya na kato nikkiknozan do vatovato am kayokayo ang.
He tied the rope that he tied the pig's feet with on his hand, and then he was pulled along the ground by the pig. He hit rocks and pieces of wood.
8. Val: a ya maviay o ya na nilolo no korang?
To still be alive after being pulled by a pig, that is a most fortunate thing in this unfortunate event.
9. Ke2: nonan, no ya nimiciavacivaci o tototoang na am, ji abo na kaviay a.
Yeah, if his limbs were all broken, then he would not be alive.
10. Val: ori o pia no ji meywalam.
Haha, it's his own fault for fooling around like that.
11. In: ya nio ikalovot do vahay namen ya manga keypong?
Why are you all gathered here, dear children?
12. Si: ya abo rana na o na kapiapian ni kehakay, ta ya na nilolo no korang a, na kapiciasazisazingodngod.
Our (male) friend just got dragged all over the place by a pig and is all scraped up.
13. In: tang a, imo pa sio mo pihahavoada a ji meywalam, apia o akma sang.
Oh my, my baby, why are you so hyperactive. Does it really feel good to be so injured?

14.Am: cita pala o katawtao mo ito a ya maloit a, mi ta ariosen imo.

Look at how dirty you are. Let's go, I'll give you a bath.

15.In: ipangap ta si alikey so viniay, ta makasi a ya nimizaza an.

Our child is heavily injured. Should we kill a pig or sheep to alleviate his shock?

Notel: man'acing is a game that people who were born before the 40s liked to play when they were young. They would tie a lasso and place it on the ground, and when the pig stepped into it, they would pull hard, and the pig would flip over. The person holding the rope would proceed to play a game of tug of war with the pig to see who was stronger.

nisomlet o lima My hand is stuck in a hole

Somengha (So) and Mateneng (Ma) went to catch crabs by the seaside. Mateneng put her hand into the hole to look for crabs, and found that she could not pull it out. Fortunately, an old woman (Ra) came just in time and helped free her.

Reading:

1. So: ya arako o keysakan, mi ta maneysavat.
The tide is low. Lets go to the seaside and catch crabs.
2. Ma: nohon.
Sure.
3. So: ka manngo dang, mo kaji milisan?
What are you doing over there? Why aren't you moving?
4. Ma: ya nisomlet o lima ko, a ko ji owyot.
My hand is stuck, and I can't take it out.
5. So: ipamingit ko o lima mo an?
May I help you pull your hand out?
6. Ma: tosia, ta meyngen, mo ji acita ito a ya to bazangbang a ya omlipad.
No, it will hurt! Can't you see that it is already red and swelling?
7. So: kongoen ta so ajin a oyoten, mi ko pala mikala so tao do ili an.
Then how will we get it out? Should I go to the village to get someone to help?
8. Ma: ya mehnep rana ito am, apia ko ya, ji abo o kaviay ko si mipehnep ya, awalay.
The tide is rising. What do I do? If the tide rises, then I'm dead! Ah!
9. Ra: sino o ito, ya mipeypatotog a ya migogowgaw, mi ko Pala jia. "to-lok o atang mo!"
Who is that, feeling around in the hole with her butt held so high? "I will [poke] your butt!"
10. Ma: wo, mo kazakat! ayayaya o lima ko ya meyngen; ayoy ta maoyot ko rana o lima ko.
Ow, I'm going to die! Ahh, my hand hurts! Thank you, I finally pulled my hand out.
11. Ra: ka nimatakzes mo koymo?
Are you crazy, rascal?
12. Ma: ayoy mo kaminan, ta no ka abo a ya nitomolok jiaken am, ji abo o ko kapakaoyot so lima ko a ya nisomlet do vavahay ito, ayoy, mo kaminan, ta mai ka.
Thank you, auntie. If you hadn't used your finger power, then my hand would still be stuck in the hole. Auntie, thank you for arriving just in time.

nikaroan da a rarakeh Leaving an old man stranded

Two young people, Sekez (Se) and Sidongen (Si), rowed out in their boat to play. They met an old person (Ra) who wanted to take advantage of them to get a free ride to Jiahaod to fish. Then, they rowed off and left the old man stranded.

Reading:

1. Ra: manga koynio, sijia kamo pala.
Hey, children, come over here for a second.
2. Se: ana, na ipanci yaten no rarakeh ito, mi ta pala an.
Hey, the old guy is calling us. Let's go over and see what he wants.
3. Ra: inio rana manga koynio am, pasngen kamo jia o
tatala nio, kapazagpit nio jaken, ta mi takamo
Jiahaod a mamasil an.
Move the boat over here and let me get in. Do you want to go to Jiahaod to fish?
4. Si: oyo-od?! nehed, mi ta an, ta pa ji nimangay do dang.
Really?! Should we go? Why don't we go? We haven't been there before.
5. Se: ay, ya teymasagpaw o rarakeh ya, inaoy no pa'oksoen do wawa.
Oh, this old man is so heavy. I really want to push him into the sea.
6. Si: oya rana Jiahaod, agcin rana mo akay.
Grandpa, we are at Jiahaod. You can get off now.
7. Se: key anong, mangay ta rana, ta mangazicin a ya ji mangaod, ya ta ikazikna.
Hurry, let's go. That was so annoying; he didn't even help row, and let us do all the hard work and get tired.
8. Si: nohon, a mi ta rana, ta to macikavang pa jiaten.
Ok, let's go, or else he will get on our boat again.
9. Ra: ana, manga koynio, kamo rana toda angay, nio na ji ngahapa yaken?
Hey, kids, why are you leaving? Aren't you going to give me another ride?
10. Se: saon jimo am, mangazicin ka ya manzikna a ya ji mangaod.
We don't care. We hate you. You don't even row, and make us so tired.
11. Ra: a makongo ko so wajin ya? mawat ko pa do kacian ori manga koynio!
Then what about me? The island is so far away; how can I swim back, children?
12. Se: tes mo ori, kakey mo a mangay do Jiahaod.
It's your own fault! You're the one who wanted to go to Jiahaod.
13. Ra: manga koynio, ahapey kamo yaken, kamo teyrahhet ya.
Hey, brat! Come back and pick me up! You are so bad!
14. Se: tes na ori, apia pa jia ori.

It's his own fault; he brought it on himself.

manazang so yakan

The meat, fruit, and vegetable vender (Za) went to Iranmilek where si nan Miaven (Ma) bought from him to prepare a feast for her returning kin. Si Mivovo was also waiting for his truck.

Reading:

1. Mi: ya na nimai o pananazangan so yakan a aleleh?
Is the vender here?
2. Ma: taon, mi ta pala citaen, ta ala ya na mian ang?
I don't know; let's go look. Maybe he came already.
3. Za: ikong mo sazangan?
What do you want to buy?
4. Ma: ya mian so vayo a among?
Do you have fresh fish?
5. Za: ji ngian, apira o apen mo?
Yeah, how many do you want?
6. Ma: atlo (aka among).
Three fish.
7. Za: manazang ka so viniay aka no manok?
Do you want pork or chicken?
8. Ma: pantan yaken so adoa aka opa no manok aka no apat
a gagay a viniay.
Give me two chicken legs and four slabs of pork.
9. Za: voovoong aka no asiassi no kayo am?
(Do you want) any fruit and vegetables?
10. Ma: ya manlanget o vazacinok ya?
Are these oranges sour?
11. Za: ji apia-a, ji aganinam, akan pala ya?
They are good, very sweet. Try this one.
12. Mi: me, ya maganinam, anem o apen ko.
Oh, they are sweet. I want six.
13. Za: asa, doa, tilo, apat, lima, anem.
One, two, three, four, five, six.
14. Mi: apira o ngina na?
How much?
15. Za: ananengan ko pala an, ya manao a asa ranaw.
Let me weigh them. One hundred dollars.
16. Mi: wo, kasingasingat na? tosia, ji ko nazangi.
Oh, that expensive? Nevermind then, I'm not getting them.
17. Ma: apira o kalovotan na no ko nisazangan a iyakan?
How much do my groceries cost?
18. Za: ya asiam a poo o ikapat na ranaw.
Three hundred ninety dollars.

kankanen no mamili so kanen Pregnant women's food

Si Misang (Mi) asked her mother about what they needed to take into account when they were pregnant in the past.

Reading:

1. Mi: ikong o ji da yakanan a among no mamili so kanen?
What fish can't pregnant women eat?
2. An: ji angan so aporon, ta makatatapi so oo a, ji angan so koskosi ta makapapala.
You can't eat the aporon fish, because the child's head will become flat. You can't eat koskosi fish either, or the child will cough easily.
3. Mi: a o mehakay no mamili so kanen am?
What about the pregnant woman's husband then?
4. An: o mehakay na am, ji miyakan so keketan, ta makagegetget so zagaw.
Her husband cannot eat keketan fish, because the child would have strips on its neck.
5. Mi: no ikapira am mangtekteb so awaz?
How many months into the pregnancy do you start making the stomach bib?
6. An: no ikanem am, ori o ipangtekteb rana so awaz, kai na no mangdes a omades so velek a; kapawaz na sia do katawtao, kapanba no mehakay so kawalan.
Six months in, you start to make the stomach bib. The midwife helps to massage the stomach and fit the bib on the woman's stomach. Then, the husband goes to cut the bamboo.
7. Mi: kongoen o kawalan ang?
What is the bamboo for?
8. An: parengen da lolay no kanakan, aka no sisikod no nimian do sanggi a sesngahan da.
It is for making the baby's crib and the staff for the woman that has just given birth, called the sesngahan (for warding off evil spirits).
9. Mi: ikong o itoro do mangdes a tangdan da?
What do you give to the midwife as payment?
10. An: sosoli aka no among, no abo o among am, kois nojia kagling.
Taro and fish, and if you don't have fish, pork or lamb is fine also.
11. Mi: ikong o yakan da no mownged?
What does the woman who gave birth eat?
12. An: viniay o yakan da, no ikapat da vehan rana am, ori o ipiyakan da rana so cinapay, aka no koskosi aka no peyret sira.
They can eat meat; four months after the birth they can eat taro leaves, koskosi fish, escargots, etc.

Reading

1. o nimanoma do pongso ta ya a tao nokakoa am, sira mina Paloy, aka nira mina Ozamen, aka nira Pacilalaw. Sira rana ori am, ji sia mingongoyod pa a tao, ta somavik sira a tao.

About the earliest humans on this island, there were si Paloy, si Ozamen, si Pacilalaw, etc. These people, though, were not real people, for some of the things they thought or did were not like normal people.

2. Sira Paloy rana ya am, ji sia hakakaw, ta ji sia ateneng a omhakaw, so ikabo no kanen da, to sia nginonginom so sazowsaw am ranom, ori o ikaviay da nira ori am, iyangay_ da nira mina Paloy ya.

Now, Si Paloy and that group, they did not work in the fields because they did not understand agriculture, and therefore they did not have food. They lived by drinking the wind and water. This was the life of si Paloy's group.

3. Si Paloy rana ya am, tomezgek do wawa a koman so binedbed no mankakteh na; to miveyvoak a mazakat, ori ji na pa mingongyoji a tao.

Now, si Paloy would always dive into the ocean to eat his nephews' fishing bait. Every time he died, his body was shattered, so he is not a real human.

4. Si Pacilalaw rana ya am, a no macita na o sapopoen na a katabtabngen a anak na am, to na ag'ig'ita a dengdengen a kayakan na nia, ori si Pacilalaw ya.

About Si Pacilalaw, when he saw that the child he was holding in his arms was fat and cute, he would cut it to pieces, cook it, and eat it. This was what happened with Si Pacilalaw.

5. Si mina Ozamen rana ya am, kainom na saon so ranom am, asio o nihakawan na. no tomakatakaw am, mangamangay milolay do obo no kaciaian a.

And si Ozamen, this was a person who only drank water to survive. He didn't have a field. Sometimes, he would go swing on the swings under the longan trees.

6. a no mangay sira miyoyowyaw do takey am, no maniring o kadoan jira am, "ji ko angay, ta ji ko ngarói o anak ko" koan da am, "to mo rana patovoza do mazavang am" koan no karoan da, am ori o iyangay da nira no nimanoma do pongso ta ya a tao nokakoa.

Sometimes, when a group of them went into the mountains and one said, "I can't go because I can't leave my child unattended," the others would say, "Then throw him/her into a bucket." This was the way of the earliest people on the

island.

si Paloy 的故事 A story about Mr. Paloy

Reading

1. si Paloy rana ya am, matazak a tao am, somasomagpian o kamoimoingan na; ji hakaw a kapiyowyaw na, amian so raroa aka mankakteh na pehzehzaen na.
Concerning si Paloy, he was born looking like an idiot. He didn't know how to plant, and only knew how to play. He had two nephews who followed him around.
2. "mi tamo mangalolog so vato, ta pialalaman tamo, si mowyat kamo am, ori o ipakahap nio sia, am no si malma kamo am, ori o ji nio makahapi sia" koan na.
"Let's go up in the mountain and play a game of rolling the stones. If you are strong, then you will catch it, but if you don't have any strength (are lazy), then you will not catch it."
3. mangay sira do tokon am, manmanma si Paloy a mangay do teyngato, kapangalolog na so rako a vato a, macita da no mankakteh na o maloalolog a rako a vato am, to sira misiay, someyked am, mi da pinanan a, "namen rana nimahap, mo maran" koan da, "ori a, kowyowyat nio?!" koan na ni Paloy a.
When they got into the mountains, si Paloy was the first to push the boulder. When the nephews saw such a big rock rolling down the mountain, they jumped to the side. When the boulder stopped, they went over and held their hands on it, saying, "Uncle, we caught it." "Really? Wow, you people are good! (so strong, so hard working)"
4. mangay sira rana o mankakteh na do teyngato am, mangalolog sira so rakrako pa vato a, maloalolog do kananmaen ni Paloy am, ji na 'awana, ta "ala matazapia ko ya" koan na am, to na rana pitapia si Paloy a, kazakat na.
It was his nephews' turn, and they rolled an even bigger boulder down the hill. When the boulder rolled to where si Paloy was, he thought, "I can catch this, no problem," and therefore stood there without moving. The boulder rolled over him, squishing and killing him.
5. mazakat am, akpehen da o tototoang na, kapangay da sia do alilin a, katoyotoyon da sia; ikatlo na araw am, mi da citaen am, nimaviay rana si Paloy a, omlisna rana a mazngaznga a miseysorod a.
After he died, they picked up his bones and put them into the millet cellar and prayed for him. After three days, when they went to see him, he was sitting up, alive, and was smiling while combing his hair.
6. kadadayan na so araraw am, "mi tamo minom so ranom Jirakoayo", "inomen nio o katay na ya, inomen ko o katay na ya, sino jiaten o manmanma makeymin sia" koan na.

After a few days, he said, "Let us go to Jirakoayo River to drink water." "You drink this half, and I'll drink that half. Let's see who finishes first."

7. "meymin ta ya" koan no mankakteh na am, mangay o asa aka tao jira do ingato a, kapavoyog da so karakoan na do inomen no maran da.

His nephews said, "How can we drink so much water?" So one of them went to the upstream and diverted some of the water to where their uncle was supposed to drink.

8. "mo pa jeymin o vonong mo, mo maran, ta ya namen rana teyka o vonong namen" koan da; "kakeykeykai nio" koan na am, ori a kainom na misasakeb a.

They said, "Uncle, why haven't you finished drinking your portion?" We already finished our portion." He said, "Wow, you drink so fast!" and he continued to lie there and drink.

9. to miparako o lotoy na am, ji pa amtad a minom a, mabsoy rana am, minom pa, miratateng am, "pa-hab" koan no lotoy na a nizombak, do kaji na amtadan a minom do ikalotoy na rana; His stomach grew bigger and bigger, but he continued to drink water. He was full, but he still continued to drink water. Suddenly, his stomach exploded with a loud "Pop!" Because he was already full, yet he continued to drink water.

10. miratateng am, akman sang a, akpehen da o tototoang na yangay do alilin a, ikatlo na araw am, maviay rana, kahezaheza da rana miyowyaw a, mangay mivovo a.

Just like before, his nephews picked up his bones and put them into the millet cellar. When they went to see him on the third day, he was alive again, and so they went swimming and to catch foxes.

mikehnep Big flood tide

Reading

1. ipisa so kapiwalam da no mamli so kanen aka no asa
aka rarakeh a mavakes am, to da cita o wawa a to miparai
a omoyot(mipangci) a.
One day, a pregnant woman and an old woman started to talk.
Suddenly, they saw the water in the ocean pull back very
quickly.
2. maniring o mamli so kanen am, "mi ta pa tomavo so attaw
ta, ta ala ya maci o wawa ya" koan na. to zakzak sira omonot
do wawa, am ji da apisa.
The pregnant woman said, "Let's go get seawater. As it looks,
the sea might dry up." They started chasing the seawater
(wanting to get seawater), but they couldn't catch up to it.
3. mazikna o mamli so kanen am, to rana miwalam a, to na
cita o attaw a omvoyog do teyrahem no ahan a, kapanaci na
no kararay na omvaliked sia.
The pregnant woman was tired from chasing the water, so she
stopped to rest. Suddenly, she saw water coming out from
beneath a white rock, so she told her companion to come and
help to move the white rock.
4. valikeden da am, to ngalabobo o attaw do teyrahem a,
katavo da rana so attaw da; asio do kavavatanen a,
o ranom ori am, to rana mamtes a komalabobo a, to
sia rana malalayo a mangay do ili a.
When they moved it, the water beneath it immediately started
to shoot out, so they quickly started to get seawater. The
water started to come out with a vengeance, just as it was
destined to do, and so they started to run back to the village.
5. ji ngahay a miparako o wawa, miratateng am, to na rana
ngaopa sira o mamli so kanen a, to ngangato o wawa ori am,
to rana ngay do kahangoan am, do kasolian am, to sia
rana mikakalakat o tao a tomanang do makakarang a
tokon a.
The water rose very quickly and soon drowned the two women.
The water continued to rise, covering the entire pandan tree
area as well as the taro area. People all ran to higher ground
in the mountains.
6. meyenaen o wawa am, do Jipeygangen rana aka do
Jiciakateleman rana a tokon o nitomoaw a, kato na rana
atazangposan no pongso ya nimehnep a; ikasiam na a kawan
am, ori rana o nitazetazestes na omavak a, kangay na rana
maneyked do adan a paneyneykedan na.
After the water stopped rising, seawater nearly covered the
whole island. Only after nine years did the seawater

gradually subside and go back to its original position.

7. mitametamek rana o pongso ta ya am, aciacilban na no tao do to am, maniring do raroa aka apo na am, "teywara pa o rako a karatayan ito, am makey kamo a pakasen ko" koan na.

When the grass on the island started to grow, and the person in the sky looked down on our island, he told his two grandsons, "That plain is wonderful! Would you be willing to go down into the world if I asked you to?" he said.

8. "imo saon am" koan na no apo na, miratateng am, mangap so asa aka kawalan a kapakovot na so asa aka apo na, kapangap na so asa aka vato a, kapakovot na so asa aka apo na. His grandsons said, "It is all up to you," so he took a shoot of bamboo and stuffed one of his grandsons into it, and then he took a rock and stuffed the other grandson into that.

9. pakasen na sira am, asio do masagpaw o vato a, kato na ngosokan a makas do avak na Jipaptok; o kawalan am, mapapaw a, kato na par'isan sia no sinazowsaw no angit a, kasasnad na do karatayan do ranom.

Then he took the bamboo and the rock and threw them down, and because the rock was heavier, it fell straight in the middle of the Jipaptok mountains, while the lighter bamboo floated with the currents and landed beside a source of water on the plain.

10. makas o vato do teyrahem am, to misisi a kapakowbot no kanakan, milingalingay am, "ikong o ko nikapoan ya" koan na am, mi na oliin o vato ori a kapinan na jia; "asio ya maciglang ya; wajin sira ina ya?" koan na am, akmi to miningenget a, macita no akay na do to am, to mikeykam'ing a, "na kalaen sira ina na ya an? am asio o niapoan na?" koan na.

The rock split when it hit the ground, and a child jumped out of it. After looking around, he said, "Where did I come from?" He went back to touch the rock, and said, "Why is it so hard? Where are my parents?" He then looked like he was about to cry, and when his grandfather in heaven saw this, he laughed and said, "Is he looking for his parents? He doesn't even have any!"

11. mehtak o kawalan am, to pa miyoyowyaw do karatayan ori, ta o akay da o mapisinmo sira; mosok rana o nimehtak do vato ori am, masazi na rana o nimapo do kawalan, am ori rana o nipieyheza da miyoyowyaw a.

After the bamboo landed and split, the child started walking around because their grandfather had arranged for them to meet. When the rock man came down from the mountains and met

the bamboo man, they went everywhere and played together.

mapatateynep o libangbang A flying fish showed himself in
an old man's dream

1. **Reading**

2. katengan da no libangbang o kanimapadengdeng da sira no tao do kalang aka no ikey a kacikacicil am, mangay na patateynepan no mavaheng so panid o rako a rarakeh.

When the flying fish found out that humans cooked them with the shells and crabs, the black-winged flying fish went and showed himself in an old man's dream.

3. maniring o mavaheng so panid am, "yaken rana ya am, pahad na yaken no among no rayon a libangbang, a mavaheng so panid. The black-winged flying fish said, "I am the spirit of the flying fish in the flying fish season, called the black-winged flying fish."

3. inio rana am, ji nio padengdenga yamen do sinavat nio, ta ya namen ikeyngen am, ya nio ipikanokanoka, patareken nio o zanegan nio jiamen".

"You should not cook us with other seafood that you pick up from the intertidal zone, otherwise we will get sick, and you will start to grow skin disease. You must use a different pot for flying fish (us)."

4. no yakan nio yamen am, patareken nio o vanga aka no amongan nio a zanegan nio jiamen, ji nio mancian o "dengdengen" a, ipanci nio o "zanegen" ; mangay do zazawan nio aka no pamowpawan nio o patareken nio; no apen nio yamen am, ipanlag nio yamen am mivanoa kamo.

"When you eat us (flying fish) you must use different plates and pots (different from normal plates). When you cook flying fish, you must say, "zanegen" and not, "dengdengen." Even the racks that you dry fish and let fish dry off on must be different (with a rack specifically for flying fish.) When you prepare to catch us, you must first hold a ceremony to call the fish next to the ocean."

5. no raingen nio yamen am, powtonen nio yamen, adoa o cilad na do asisi na, atlo o cilad na do voko na, kateyray nio jiamen do voko na.

"When you kill a flying fish, you should make the fish look down, (after cutting it) you must make two cuts along the side without bones (meat) and three cuts along the side with bones, and then hang it up to dry on the side with bones (tie a string to it.)"

6. am ji ko to nanaoa imo, ta ya mahep am, ji mo atenggi, ta ya ka mitkeh a, sipepnezak am, romiag ka pa, kangay mo do Yabnoy ito a omnanala jiamen; ta paloloen ko o

salilian aka no papatawen aka no sosooen, aka no kalalaw a mangay macisirisiring jimo; ipanci namen jimo o akakanan nio jiamen an" koan na, kangay na rana.

"However, I can't teach you too much, since it is night and you are sleeping, so you won't remember it. In the morning, after you eat breakfast, go to *do Yabnoy* and wait for us. I will bring salilian, papatawen, sosooen, kalalaw, and other fish to talk to you, and they will tell you how to eat us (flying fish), ok?" Then it left.

mitatala Building a boat

Reading

1. no isibo o vazay am, ji niboan o maláhet a ipipinapinan, a no apipia rana am, ori rana o isibo rana.
If you want to hold a ceremony for a new boat, you must not take very bad tools. When you have prepared your tools, you can go and cut the wood that you need.
2. mangay do takey am, mi toposan o pimoamoan, apen o niagazan a kowli rana nia.
After getting to the mountains, go to your own orchard and cut down the trees that you have originally chosen and marked and carry them home.
3. kaktokto jia, aktoktoan o pikatangyan am, pikavangan am, cinedkeran sira, mitartarek sira.
The length of measurement is according to personal needs, you should see whether you are going to build a single person boat, a two-person boat, or a big boat.
4. ta pizangkapan o manoang(龍骨)ya, ta beken a o mateteneng a tao a, papira sira? raroa am, asa aka tao saon o mateteneng do makeykeylian am.
Connecting the ribs of a boat is not something that everyone knows how to do; only someone with the skill of connecting can take such a task. Who in the village could do it? Usually, one village only has one or two people who could do it.
5. ori o ji to mitatalai no ji ateteneng, ta ji da napai o kaji da makatenengan jia, a manngo si Mangday a, to na na ngaolii do kalahet na.
Therefore people who do not know how to build boats will not start building a boat carelessly because they will be afraid that they don't know how to do it. Just like si Mangday, they might give up after feeling it was not possible.
6. o masisidongen am, ji da todey nidonga, ori o ipiciataretarek no tao a mahay a mitatala, ta o ji asisidongen am, sino o somidong sira?
Boat makers who normally are willing to help others without being asked to, (when they are making a boat) other people will come help him too. Therefore, there is a speed difference when making a boat. When a boat maker doesn't usually go to help people, who would go help him?
7. o ji ateteneng a tao am, ji aro o arian da am, o mateteneng am, a sino mangri, ori o ipiciataretarek no mahay a mapakavos so vazay ya.
Those who don't know how to build boats waste a lot of materials, but those that know how to build boats don't waste

the material. Therefore, some people finish the job quickly and other finish very slowly; the difference is there.

9. o mazoazoayin am, "ji vateki o kma sia", am a no apia o langolangoy na am, to vateki ori.
If the finished boat (looks) very pleasing to the eye (beautiful,) a braggart will be moved and say, "Such a beautiful boat! Why are there no carvings?" and will immediately start carving.
10. o avak no tatala am, to vateki ori, no apen do kapakainahahapan jia, no kapia na no ngilin no masasagaz ya nivatekan am, ori o vatekan da do dang.
If you look at it from the "Hope I can catch a lot of fish with it," "Hope it gives me good luck at sea," or "With carvings it will be very good for fishing" perspectives, even the middle boats (between good and bad, the normal boats) can be carved upon.
11. am no nakem da so kapivatek da am, ji sira pa mamiromiroa a kapitatala da rana; am ori o ji miyangayi no todaka piteytatala ya.
If people only want to carve on the boat, they must first plant a field of taro before starting to build a boat. Therefore it is different from people who build boats for the sake of building boats.
12. ta no ji mivatek am, to da minanakeman, ta ji da pa nakenakema o yahap da sia am, do akma sang.
If you don't think about carving, then you wouldn't think about the preparations. (Only those who want to have a boat finishing ceremony) They will work hard and think about all the preparations that have to be done if they want to have the ceremony. That's all.

anood do tatala Singing at the boat completion ceremony

1. **Reading**

2. no makoyob am, ori o yai da no pinatoyon; no makaranes sira do inaorod no vahay no mivazay a tao am, manoma na pa o rarakeh a maniring; ji da mamareparengan sira ori so pipia ciring, a ipatonggal da jira.

[Friends who have been invited to attend the completion ceremony] Guests arrive in the afternoon. When they get to the host's front porch, the oldest person among the guests will begin by singing praise to the host. Of course, the host would also sing praise back to the elderly singer.

2. a no mahep rana am, toda palipalit rana o amian so ciring am, do zikzikna da am, omngarngaran do ineynahahapan da am.

At night, the people who have prepared songs will take turns blessing and praising the host for his work and accomplishments in fishing.

3. ta o mitatala ya am, malavat o among am, ineynahahapan am, ori o ipitatala ya.

The purpose of building boats is to sing of the good catches of fish the accomplishments at fishing.

4. ta angsahen da ji patoawa o pasisapasapan da do among no rayon am, alibangbang am, cinaknan am, ori o malavat da ineynahahapan da am,

(If it weren't for building boats and the ceremonies following it) They would never be able to release what was in their hearts about catching flying fish and accomplishments and hard work in the season of flying fish.

5. Ori o ipakasapa da so mivatek ya, ta malavat da o ineynahahapan, ta tana nimivazay do vahay am, makarang am, ta malavat o pasisapasapan do among do rayon am,

Therefore they will want to carve a new boat so that they can have a boat completion ceremony where they could sing of their accomplishments in catching fish. Even though ceremonies for new work houses or homes have singing, they do not sing about experiences in fish catching.

6. no miciamarawan am, ji aro o makalavat so ineynahahapan da, am ji da pasapasapai ori no tao, ta amizingan da so ineynahahapan na, kato na rana arawan a miraraod a.

When they sing until almost dawn, nearly all hosts will sing about their fishing accomplishments. At this time, all guests would only listen to the parts about the accomplishments in fishing (not interrupting or singing back), and they will sing until morning.

Reading

1. a no teyka rana nipareng o tatala a nivatekan am, mangap rana so soli a padponen do tatala.

When a boat is made and the carving is finished, people will start to dig up taro and fill the boat.

2. o apereh so hakawen am, makateytetlo a araw o pangap da so soli, am o aro so hakawen am, ji ngian so makalima a araw am, makapito a araw.

People with fewer taro fields take about three days to dig them up while people with more fields take five to seven days.

3. no teyka rana mangap so soli am, omlivon rana o mehakay a mapatoyon so zipos da am, kagagan da do pikaililian na.

After wrapping up the digging of taro, the men will go around the different villages on the island and invite friends and family.

4. ikadoa na araw no nipatoyon do makoyab am, mai sira o pinatoyon, kapianoanood da do makoyab, aka do mahep, kato da arawan a mianoanood.

Guests will go the afternoon of the second day to the house of the host, and they will begin to sing in celebration all the way through the night and into the next morning.

5. madagdag am vonongen rana o nidpon do tatala a soli, kavonong da sia do inaorod, kapinmo rana; citaen da o kalovotan no vilang no pinatoyon aka no keylian da, kahaban da jia so teysa ngernan, ta ihawa o teysa ka tao a abo so anmo.

In the morning, they will take the pile of taro from the boat and make piles in the front yard to prepare to give away taro. Before making piles, they must make sure they have enough for the entire village and have ten extra servings for those who did not receive taro.

6. teyka minmo am, manakep so kois; ji to gcin o toda apia so lima, ta o madket so lima am, maoyat o mangay manakep so kois, am ori o ikateyapia na citaen no miyangangay a gomcin do amaot a manakep so kois ya.

After giving away taro they begin to catch pigs. Catching pigs is not something everyone can participate in because you must have enough strength to do so. Therefore, watching a group of similar-aged young people going into the pig pen

to catch pigs is a very great thing.

7. teyka rana igoan am, sazaban rana, kaparpareng rana sia, kapivonong rana so mataen; teyka mivonong so mataen am, manway rana kapatotolaw da so cinedkeran; kaosok da rana nia do ttaw a avavangen,
You pierce the pigs' throat, burn off their hair, separate them into different pieces, and dish out the pieces of meat that are eaten raw. Next, you hold up a fist and shout at the boat's progression as you go into the boat-tossing ceremony. Finally, the boat is pushed next to the ocean and into the water for a trial run.
8. o ji meyhehezahez a maoyat a tao am, ori o mangay mangavavang am, ori o citan so kalalam na no vayo a tatala.
People who go along for the trial must be very active with a lot of energy and strength. The purpose of the trial is to see how fast the new boat can go.
9. no teyka mangavavang am, omoli rana sira, kapateketekeh rana, no mapateketekeh am, panmaen pa o nimarai na ili, nimanowji na o keylian; ori o katoatontonan no pamarmarngan so kanen do tatala ya.
After finishing the trial, back in the village the meat is distributed starting from the farthest village with the village they are in being the last to receive the meat. This is what happens for a celebration of a new boat.

minganangana Thanksgiving

Reading

1. o pancian da nia a rako a pinganangana am, ipangmay da o zipzipos da kadoan lili ori, mangamanganak no kakteh aka no kakteh, aka no mapen do katawtao a katkateysa da, ori ipangmay da am, rako a nganangana ori.

That is why we call it a major thanksgiving day (giving gifts to each other), because (the women) make taro cakes for (male) relatives in other villages as well as nephews, brothers, and closer male cousins; therefore it is called a big thanksgiving day.

2. mehakay pa o ipangmay do ipinganangana ori, ta ipakan sira ori, ji mangmayan pa o zipos do manoma ori am, o manowji o ipangmay nira.

Before (the first) thanksgiving they only made it for the husbands and not for the relatives; only later (the second time) do they make it for them (the relatives) to eat.

3. o mamli so kanen a zipos aka no mehakay no mangdes am, ji mangmayan pa ori, ta alagen da, ta kaniawen da, ta makasasaha koan da.

During thanksgiving, you cannot make taro cakes for the husband of a pregnant wife or the midwife's husband because they would feel it is forbidden and taboo. Also, the husband would have a hard time catching fish.

4. ta o ipangmayan no zipos ya mehakay am, no mialaod sira mangahahap am, ori o kanginanginanawan da nira ori.

That is why you must make taro cake for the male relatives, because when they are far out at sea (deep sea) fishing, people would be worried about them.

5. no teyka rana mipoapoag am, arako rana o wawa a mar'is rana, malahet o wawa, so ji da rana mialaoji, am ori o pangmayan no zipozipos ang.

After mipoapoag (the date for asking for success, forgiveness, and peace) is over, the waves start to become bigger and bigger, and the tide becomes stronger, so they cannot go far out to sea to fish. Therefore, you need to make taro cakes to thank and comfort them.

6. nikeykaziknan da nira ori o pangmayan da nira ori am, ikadoa na ori am, ikalaw o zipozipos a mialaod ang.

It is mostly to show you thank them for their effort in fishing, and also worry for their safety when they go deep sea fishing, so you make taro cakes for them.

cinon Weaving

Reading

1. manoma pa o kapanokos so mahaso no mehakay, no ananaro rana am, mi da rana apen no mehakay a.

First of all, the men sow mahaso, and when it grows up, the men go havest it.

2. kahai da jia, kapongpong da sia do kawalan a kalima araw. kasira da rana sia no mavakes.

Then, they cut off the meat (leave the fibers) and hang it up to dry for five days. The women then take it and tear it into thin strings.

3. teyka da rana apoasen, senden da rana, kapahawa da sia, kavahawat da sia, kasadang da rana sia.

After finishing the string they refine it, then they wrap it onto a H-shaped piece of bamboo to make the spindle. They would then also string the frame.

4. teyka da a nisadang, weywayin da, kacinon da rana so sang a pangayan so vahevahed na, teyka da rana cinonen am, akdengan da rana.

After this preparation, you spread apart the strings evenly. Then you can begin weaving and making patterns. After finishing making the clothing, you hem the edges.

5. o kekjit am, ji da maspasi ori, am o talili aka no ayob am, mi da paspasan do keysakan, ta aro dang o makatokatotoing am, ori o paspasan da do dang, mamareng so kanen o nimaninon so talili.

The finished skirts and pants don't need a ceremony of blessing (getting rid of sin), but the finished clothing for both males and females (almost square shawls) must be taken to the sea for a cleansing because (the patterns on the clothes) often will contaminate (bring bad luck). After finishing the cloth, the weaver will eat a large feast in celebration.

6. no mian so ineynahahapan no mehakay am, mi namen rana isakorang ori a mavakes, o mehakay am, isakorang da o ayayob da.

When our husbands have a good catch of fish, we women will take the weaved clothing out and put it on, and the men will also take out their clothing and put it on.

7. no mian so man-gegen a keylian am, babaen ori, a isinmo so nipatoyon a zipozipos do teysa aka ili am; a no mangay isaray o hahakawan no zipozipos do teysa aka ili am, akma sang.

If there is anyone in the village holding a (boat, house) finishing ceremony, they will wear the weaved clothes to invite friends and family from other villages. When going to other villages to attend a family member or friends' finishing ceremony or harvest, they will also wear the weaved clothing.

8. a no nimalikey o kanakan a nimian do sanggi am, babaen namen ori; nimyapo nokakoa ori a toda vangovangon o kangay namen ombaba so iveyvovoka namen.

If a new child is born, we will also wear the weaved clothing. This is what has happened through the generations. (In all the events mentioned above) We will take out the clothes from the bottom of the boxes and put them on.

mangay do kiokay
Go to church

Reading

On Sunday, Sompō went to church for the service. The pastor led the congregation in singing, Bible reading, communion, and prayer.

1. akokay kanio manga kakteh ko do cinai, mianoanood tamo pa so asa aka anood an.
Dear brothers and sisters, hello. Let us begin with a hymn, ok?

3. citaen tamo o seysio, o kavakovakong na am, Yowani, o rako a vatvatek am, na ikatlo, o likey a vatvatek am, ya anem o ikarōa na.
Let us read the Bible, in the book of John, chapter 3, verse sixteen.

3. ya teyrako na karilawan no tao do karawan ni ama ta do to, mangay do na veyvowen a anak na o ya na nitoro, so ikamimin da no omanoyong jia tao a ji rana meydednai no piyoayon na ni ama ta do to, ta mahap da rana o to miyonong a ikaviay no pahad.
For God so loved the world that he gave his one and only Son, that whoever believes in him shall not perish but have eternal life.

4. ciciatoai rana am, tamo kanen o katawtao na ni Yeso:
o ko ipamizing jinio am, nimahap ko ji Yeso a panirsirngen ta, so ko nipancian rana nia jinio, ahēp no kapanazang da ni Yeso, am ahapen na o pang, a kasaray na nia ji ama ta do to a akcikcilen.
Now let us take communion (eat Jesus' body): For I received from the Lord what I also passed on to you: The Lord Jesus, on the night he was betrayed, took bread, and when he had given thanks, he broke it,

5. maniring am:
o ya rana am, katawtao ko ya a iviay jinio, so kanan nio sia a yapapaw nio jiaken. mateyka sira koman am, akman so sang a mahap so ayoyopan.
And said, "This is my body, which is for you; do this in remembrance of me." In the same way, after supper he took the cup,

6. maniring am:
o ya rana am, yongkad no vayo a pangozayan nio a ciring na ni ama ta do to, a manci no kahap na jinio do kanimvoyog ko ninio no rala, so to nio amoamooni sia a yapapaw nio

jiaken.

Saying, "This cup is the new covenant in my blood; do this, whenever you drink it, in remembrance of me."

7. mangday o kakan nio so pang a omyop so potaw cio ya o kapeylimoang nio ni yeso Kizisto a nimawakwak no raraten nio, mangay do ikeypiroa na mai.

For whenever you eat this bread and drink this cup, you proclaim the Lord's death until he comes.

8. apen tamo o ninanao na so macilocilolo jia a minozi ji ama ta do to:

mo ama do to, inaoy no si mamimin o tao a zomoazoay so meylimoang a ngaran mo. Inaoy no italamozong mo o karawan, inaoy no mai jiamen do teyrahem o apia ahapan mo sia do teyngato.

Let us pray the Lord's prayer (The prayer Jesus taught the disciples to pray):

"Our Father in heaven, hallowed be your name, your kingdom come, your will be done on earth as it is in heaven.

9. o kanen namen siciaraw ya am, itoro mo jiamen.

vonasen mo o raraten namen, akman jiamen a ji mapeyan sia do onewnd so raten da jiamen no iciatatao namen.

Give us today our daily bread. Forgive us our debts, as we also have forgiven our debtors.

10. ji mo yamen amia kalittan, apzatan mo yamen mo ama do to do kararatan do teyrahem, ta imo rana am, ka teymowyat a teymazoay a tao do to, a ya tomalamozong niamen a mangay do kaidan no karawan, Amin.

And lead us not into temptation, but deliver us from the evil one, for yours is the kingdom and the power and the glory forever. Amen.

11. inaoy no si macitovong jinio o pangangasian na ni Yeso Kizisto a panirsirngen ta, aka no pangangarilawan na ni ama ta do to a kapzat na jinio no Seyzi.

May the grace of the Lord Jesus Christ, the love of the Father, and the protection of the Holy Spirit be with you forever and ever.

Yami Reduplication¹

D. Victoria Rau, Providence University

Maa-Neu Dong, National Museum of Natural Sciences

Abstract

This study aims to investigate Yami reduplication based on the Morpheme Doubling Theory (MDT). There are only two types of reduplication in Yami: full reduplication and partial reduplication. Under the MDT model, Ca-reduplication is classified as a subtype of partial reduplication, whereas right reduplication is a type of full reduplication. In addition, reduplication can be analyzed either as infixation or prefixation depending on the patterns of morphophonemic alternation. Most reduplication occurs in word stems; however, there are cases that target prefixes. A stem is reduplicated to express five core functions in Yami: plurality, comparative degree, distribution, repeated actions or continuous actions. Reduplication is essentially a doubling of identical stems to express iconicity. In addition to these core functions, other nuances of meanings in the reduplicated forms are obtained from other derivational affixes.

Key words: Yami, reduplication, Morpheme Doubling Theory (MDT), patterns, meanings

1. Introduction

There has been a plethora of studies on reduplication in Formosan languages in the past decade. Zeitoun and Chen (2005) have conducted a survey of these studies and identified two major patterns: partial and full reduplication. Although these patterns have long been recognized in studies of other Austronesian languages, for example Tagalog (Wolff et al. 1991), there has generally been a lack of agreement on the terms used.² Furthermore, comparative morphological studies between Formosan and other Western Austronesian languages are generally lacking, except for Ross (1995) and Blust (1998, 2003).

Yami has long been either left out of or treated briefly without sufficient data in discussions of Formosan languages. In fact, Yami serves as an important link in comparative studies between Formosan and Western Austronesian languages. Data

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² Full and partial reduplications in Tagalog (Wolff et al. 1991) refer to disyllabic-root (CVCV- or “R”) and monosyllabic-root reduplications (CV- or “r”) respectively. Adelaar’s classification of Siraya reduplication patterns (2000) defines monosyllabic-root reduplication as a doubled root syllable with or without a third element (an infix or a linking vowel), whereas disyllabic-root reduplication concerns entire disyllabic roots except for the last consonant if there is one. Chang’s full reduplication refers to a near-complete reduplication in which the reduplicant copies all but the last C of the base. On the other hand, Zeitoun and Chen’s (2005) full reduplication “consists of the copying of the entire disyllabic root with or without the last consonant if there is any.”

from Yami reduplication will provide important information to fill in the gap, allowing for a comprehensive survey of Taiwan Austronesian reduplication patterns.

This paper begins with a discussion of the phonology of Yami, followed by a detailed discussion of the two patterns of reduplication: full and partial. Next, two analyses based on infixation and prefixation are proposed to account for the patterns of reduplication, which may target either stems or prefixes. Finally the core functions of reduplication in Yami are illustrated with examples based on Dong’s field notes and the vocabulary list in Rau et al. (2005).

The description of reduplication patterns follows Inkelas and Zoll’s Morphological Doubling Theory (MDT) (2005). In this model, reduplication is a morphological construction, which involves semantic identity rather than phonological copying. Both the mother and the two daughters can undergo their own cophologies. By adopting this approach, Lee (2005) argued that the paradox of directionality and base-reduplicant locality could be eliminated. Thus rightward reduplication (Chang 1998) can be treated as a subtype of full reduplication, as suggested by Li and Tsuchida (2001).

2. Yami phonology³

2.1 Consonants and vowels

There are twenty consonants (Table 1), four vowels, and four diphthongs (Table 2) in Yami. All the symbols in the tables represent standard Yami orthography⁴.

Table 1. Classification of Yami Consonants

	Labial	Alveolar	Retroflex	Palatal	Velar	Uvular	Glottal
Stop	p, b	t	d		k, g		ʔ
Fricative	v		s			h	
Nasal	m	n			ng		
Liquid		l	r				
Affricate				c, j			
Trill		z					
Glide	w			y			

³ This section is adapted from Rau and Dong (2005) with slight modification.

⁴ The Yami Christian Churches adopted an orthography to translate the New Testament. Li (1992) proposed a different version as a preliminary attempt to standardize the Austronesian language alphabets in Taiwan. The Ministry of Education (MOE) of the Republic of China adopted a standardized version in 2002, based on the authors’ proposal, as a guideline for materials development. The Yami orthography adopted in this paper is the most current standardized MOE version of the Yami orthography.

Table 2. Classification of Yami Vowels

	Front	Central	Back
High	i		o
Mid		e	
Low		a	
Diphthong	ay, aw, oy, iw (see footnote 10 for other derived diphthongs)		

The corresponding phonemes are explained as follows.

1. /p, t, k/ and /b, d, g/ are voiceless and voiced stops, respectively.
2. /ʔ/ is a glottal stop [ʔ].
3. /m, n, ŋ/ are bilabial, alveolar, and velar nasals, respectively.
4. /v/ is a voiced labiodental fricative. There is a sound change in progress to [f] among the younger generation (Li & Ho 1989).
5. /s/ is a voiceless retroflex fricative [ɬ].
6. /h/ is a voiced uvular fricative [ħ].
7. /l/ and /r/ are lateral and retroflex [ɭ], respectively.
8. /c/ and /j/ are voiceless alveopalatal affricate [tʃ] and voiced palatal affricate [dʒ], respectively.
9. /z/ is an alveolar trill [ʀ].
10. /w, y/ are glides.
11. /i/ and /a/ are front vowel and low vowel, respectively.
12. /e/ represents a central vowel [ə].
13. /o/ represents a back vowel [ʊ] ~ [u] ~ [o].
14. The nucleus of the diphthongs /ay/ and /aw/ is centralized, raised or monophthongized, beginning in the northern part of the island, Iraralay, and spreading to the east, Iranmlek and Ivalino (Rau et al. 1995), e.g., *mangay*: [maŋəy] ~ [maŋiy] ‘go’, *araw*: [aɭəw] ~ [aɭuw] ‘sun’. Only a few lexical items on the west coast, Imowrod and Iratay, have been affected by this change, such as *alilikiy* ‘all very small’ and *manganiðhey* ‘scary’. However, this sound change in the north has developed into a chain shift, in that the front vowel /i/ in some lexical items is lowered and diphthongized, e.g. *mi* ‘go’ becomes [məy].

2.2 Long consonant

The length of consonants is distinguished in Iraralay on the north coast, such as *opa* ‘thigh’ vs. *oppa* ‘hen’, *aming* ‘Amen!’ vs. *amming* ‘beard’, *kaliman* ‘Go to hell!’ vs. *kalimman* ‘the fifth month’. Ivalino on the east coast also has a geminate consonant, e.g.

attaw ‘sea water’,⁵ *mitattew* ‘swim’ (Li & Ho 1989). Although the geminate consonant can be interpreted as the result of reduplicating the root *ataw* without the coda and deleting the unstressed vowel in both the reduplicant and the base (i.e., *ata-ataw* → *at-taw*), it is unclear if all the examples of long consonant in Yami are derived from reduplication.

2.3 Stress

Stress is phonemic in Yami, e.g., *mapingsán* ‘tasty’ vs. *mapingsan* ‘organized’. The default (unmarked) stress is on the ultimate syllable. All other stress has to be marked individually, e.g., *masáray* ‘happy’, *masasáray* ‘every one is happy’, *mapasózi* ‘cause to be upset’, *i’óya* ‘angry at’, *mámiying* ‘laugh’, *mamiyimíyingen* ‘love to laugh’, and *malavlávin* ‘a cry baby’.

The prefix *tey-* ‘most’ attracts stress. Stress usually falls on the syllable following *tey-* ‘most’, such as *teymá’oya’oyaen* ‘become easily upset the most’, *teymámiyimiyingen* ‘one who loves to laugh the most’, and *teymápa’oya* ‘most upsetting’. But words with *tey-* ‘such and such an amount is allocated to each unit’ (e.g., *teylilima* ‘five for each’) have ultimate syllable stress.

The auxiliary *ji* ‘not’, as a clitic, also attracts stress. Stress generally falls on the syllable immediately following it. For example, *ji ángay* ‘can’t go’, *ji máncian* ‘Don’t say it’, *ji nímiwalam* ‘did not rest’, *ji ká makamo* ‘I am sorry that I have bothered you (lit. I did not show courtesy to you).’

In an imperative sentence, stress generally falls on the first syllable of the verb, e.g., *píanoanood pa* ‘Sing!’ or *ápey* ‘This is for you!’

The final syllable can also be lengthened to express ‘only, again, also’, such as *asáa* ‘the only one’ (< *ása* ‘one’).⁶

2.4 Syllable structure

The canonical syllable structure is (C)V(C). No consonant clusters are allowed except when the syllable onset contains a glide (CG)V(C)⁷ or when a geminate consonant (C)V(CC)V(C) occurs, as described in 2.2 as long consonants, e.g., *oppa* ‘hen’. The vowels /i/ and /o/ are interpreted respectively as glides /y/ and /w/ in tautological syllables and in roots when /i/ and /o/ are not stressed, e.g., *siam* [syam] ‘nine’, *ziak* [zyak] ‘word, speech’, *rios* [ryos] ‘bathe’, *boak* [bwak] ‘split wood’, and *koat* [kwat] ‘boiling’.

⁵ The form is *attaw* ‘sea water’ in Imowrod dialect.

⁶ Other examples are as follows: *ko mangay do gakoo*, ‘I am going to school, too;’ *ko ji akcūn*, ‘I’m also very hungry;’ *ka pa komaan?* ‘You are going to eat again?’

⁷ The postconsonantal onglides should probably be analyzed as moraic, as proposed by Huang (2005) to account for the representation for Isbukun onglides. In other words, the glide is analyzed as part of the nucleus instead of the onset. This issue is beyond the scope of this paper; however, it is definitely worth another phonological study in the future.

hot'. Table 3 illustrates all the possible syllable types with examples.

Table 3. All possible syllable types in Yami

Syllable type	Yami	Gloss
V	o	Nominative case marker
V.V	ai	foot
V.VC	aon	take out food from a pot
V.V.CVC	aorod	front yard
VC	am	Topic marker
V.CV	ori	that
V.CVC	icoy	egg
VC.CV	agza	fast
V.CV.V	adoa	two
V.CV.VC	avoag	male animal
VC.CVC	abcil	famine
VC.CV.CVC	apnezak	morning
V.CV.CVC	aganas	mud slide
V.CV.CVC.CVC	alibangbang	flying fish
VC.CVC.CV	aktokto	thought
CV	da	third person plural genitive pronoun, their
CVC	bos	sound made to chase an animal away
CV.V	tao	human
CV.VC	kois	pig
CV.CV	rako	big
CV.CV.V	kadai	millet
CV.CV.CV	tatala	boat
CV.CVC	tawag	summon
CVC.CVC	sipzot	hit
CV.CV.VC	cilaos	make a hole
CV.CVC.CVC.V.CVC	balangbangapat	<i>Cyclosoeus acuminata</i>

2.5 Monosyllabic bound roots

There are two types of monosyllabic bound roots that undergo vowel epenthesis in word formation. Type A contains consonant clusters in the bound roots that violate the canonical syllable structure, e.g., *-bhes* 'throw a stone at someone', while Type B contains either a CVC bound root, e.g., *-kan* 'eat' or a bound root with a glide, e.g., *-vias*

‘sweep’. The Type A bound roots are either prefixed with *a-* in the imperative form, e.g., *a-gcin* ‘Go down!’ or inserted with the mid central vowel /e/ to derive new words in reduplication, e.g. *behe-behes-an* (< *-bhes*) ‘throw stones at someone’. However, if the root contains a round vowel /o/, the inserted vowel is also /o/ in reduplication, as in *mi-do-dpon-an* (< *-dpon*) ‘pile up’. The feature [+round] is observed in the vowel harmony. More examples for Type A roots are illustrated as follows:

Type A. Monosyllabic roots with consonant clusters

Gloss	Bound form	a-prefixation	Inserted /e/ or /o/ in reduplicated form
throw stone at someone	-bhes	a -bhes	behe-behes-an
pile up	-dpon	a -dpon	mi-do-dpon-an ⁸
go down	-gcin	a -gcin	mi-ge-gcin
put aside	-ptad	a -ptad	mi-peta-petad

Type B roots can be either prefixed with *a-* or without *a-*, depending on the type of roots and the type of transitive or intransitive affixes. The following examples illustrate the two subtypes of Type B roots.

Type B. Monosyllabic CVC roots or roots with a glide

Gloss	CVC bound root	a-prefixation	No a-prefixation
eat	- <i>kan</i>	<i>a-kan</i> ‘Eat!’ <i>a-kan-an</i> ‘place to eat’	<i>k-om-an</i> ‘intransitive verb’ <i>kan-en</i> ‘food’ <i>ka-kan-an</i> ‘plate, taste’
wash clothes	- <i>pis</i>	<i>a-pis-an</i> ‘transitive verb’	<i>mi-pi-pis</i> ‘intransitive verb’ <i>ni-pis-an</i> ‘transitive, perfective verb’
	Bound root with a glide CGVC		
sweep	- <i>vias</i>	<i>a-vias-an</i> ‘transitive verb’	<i>mi-vias</i> ‘intransitive verb’ <i>vi-vias</i> ‘broom’
two	- <i>doa</i>	<i>a-doa</i> ‘two	<i>ipi-doa</i> ‘twice’

⁸ There is a variation between [e] and [o] in *mi-do-dpon-an* ‘pile up’, but so far we have not been able to find a counter example that indicates insertion of [o] is not possible before a bound root with a round vowel.

3. Patterns of reduplication

There are two types of reduplication in Yami: full reduplication and partial reduplication.

3.1 Full reduplication

Full reduplication copies the first two syllables of the base, without the coda if there is any. In the MDT model, full reduplication is reinterpreted as the shape of a daughter node that undergoes truncation to retain only two syllables of the output without the coda. It can be further classified into four types according to its reduplicated syllable structure: 1) CV.CV, 2) CV.CV-, 3) CV.V-, and 4) V.CV-, as illustrated in Table 3.

Table 3. Examples of full reduplication of the base

Syllable type	Examples
CV.CV	<i>rako-rako</i> ‘bigger’, <i>sozi-sozi</i> ‘anger, fuming’, <i>vato-vato</i> ‘stones’, <i>tapi-tapi</i> ‘planks’, <i>baka-baka</i> ‘cows’, <i>lima-lima</i> ‘hands’, <i>tao-tao</i> ‘people, totem’
CV.CV-	<i>toko-tokon</i> ‘mountains everywhere’, <i>ciri-ciring</i> ‘language’, <i>zipo-zipos</i> ‘relatives’
CV.V-	<i>koi-kois</i> ‘pigs’, <i>sao-saolin-in</i> ‘back and forth’
V.CV-	<i>ananak (ana-<u>anak</u>)</i> ⁹ ‘children’, <i>avavang (ava-<u>avang</u>)</i> ‘toy boat’, <i>angangayan (anga-<u>angay-an</u>)</i> ‘place one goes regularly’, <i>onewned (one-<u>oned</u>)</i> ¹⁰ ‘deep in the heart’, <i>obowbotan (obo-<u>obot-an</u>)</i> ‘place where one defecates’, <i>ineynapo (ina-<u>inapo</u>)</i> ‘ancestors’, <i>ovowvan (ova-<u>ovan</u>)</i> ‘gray hair’, <i>avwavong (avo-<u>avong</u>)</i> ‘shadows’

In the MDT model, the stem *anak* ‘child’ is first doubled to provide inputs for the two daughters. Daughter 1 undergoes deletion of its coda (NoCoda >> IO-Faith) and the reduplicated mother node also undergoes merger of the two identical vowels in an unstressed syllable to form *ananak* ‘children’, as illustrated in (1).

⁹ One of the identical vowels *a* is deleted.

¹⁰ When two vowels are juxtaposed in reduplication, they are diphthongized as follows:

eo-> ow, ew: *one-oned* ‘deep in the heart’ -> *onowned*, *onewned*

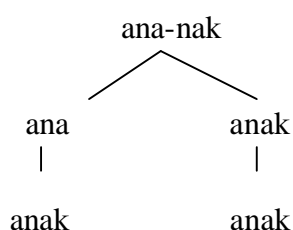
ao-> ow: *ota-ota* ‘vomit’ -> *otowta*, *ova-ovan* ‘gray hair’ -> *ovowvan*, *opa-opag-en* ‘pound, hit’ -> *opowpagen*

ai-> ey: *ina-inapo* ‘ancestors’ -> *ineynapo*, *isa-isana* ‘hotels’ -> *iseysana*, *ila-ilamdampen* ‘test, sound out’ -> *ileylamdampen*

oa -> wa: *avo-avong* ‘shadows’ -> *avwavong*

oo -> ow: *obo-obot-an* ‘place where one defecates’ -> *obowbotan*

(1)



Full reduplication is by no means restricted to duplicating the reduplicant only once. There are examples (e.g., *ma-kato-kato-toing* ‘contagious’) that demonstrate the possibility of duplicating the reduplicant up to twice. This will be further analyzed as a type of infixing reduplication in Section 4.1.

3.2 Partial reduplication

Partial reduplication involves the reduplication of the first syllable of the base with or without the coda. In the MDT model, partial reduplication is reinterpreted as the shape of a daughter node that undergoes truncation to retain only one syllable of the output with or without the coda. It can be further classified into four types according to its reduplicated syllable structure: 1) CV-, 2) Ca-, 3) CVC-, and 4) V-, as illustrated in Table 4.

Table 4. Examples of partial reduplication of the base

Syllable type	Examples
CV-	<i>so-soli</i> ‘taros’, <i>to-tozok</i> ‘fork’
Ca-	<i>pa-pira</i> ‘how many animate beings’, <i>ra-roa</i> ‘two animate beings’
CVC-	<i>kag-kagling</i> ‘a herd of goats’, <i>lak-laktat</i> ‘illness, nasal mucous’, <i>sey-seyked-an</i> ‘place where a boat is beached’
V-	<i>o-oyod-an</i> ‘plate for fish that women are allowed to eat’, <i>i-irasan</i> ‘oar rack’

Ca- reduplication can be considered a subtype of CV- reduplication, where the vowel of the first syllable of the reduplicated form is changed to /a/, as in *pa-pira* ‘how many animate beings’ or *ra-roa*¹¹ ‘two animate beings’. It usually occurs in numbers to indicate plurality of animate beings, as shown in (2)¹².

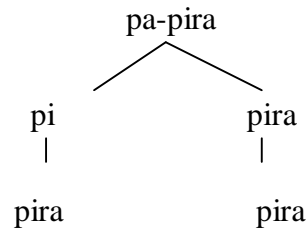
¹¹ *raroa* is derived from *adoa* ‘two’. /d/ is weakened into /r/ intervocalically, e.g., *adoa* -> *aroa* -> *roa*.

¹² AF= agent focus, AUX = auxiliary, CON= conjunction, EXCL = exclusive, GEN = genitive, IF= instrumental focus, NOM = nominative, LIN = linker, P = plural, RED = reduplication, S = singular, SV = stative verb, 1= first person, 2 = second person, 3 = third person.

(2) *ya pa-pira o ka-kteh mo?*
 AUX Ca-RED-many NOM Co-sibling 2.S.GEN
ya ra-roa sira kaka a mehakay.
 AUX Ca-RED-two 3.P.NOM older.sibling LIN male
 ‘How many brothers and sisters do you have? I have two older brothers.’

Let us take *pa-pira* ‘how many animate beings’ for example. In the MDT analysis, the stem *pira* ‘many’ is first doubled to provide inputs for the two daughters. The cophology of the first daughter retains the first syllable CV, whereas the mother node undergoes a change of the vowel of the first syllable from /i/ to /a/, as illustrated in (3). Under this analysis, Ca- reduplication is really nothing but a subtype of partial reduplication.

(3)



Partial reduplication, like full reduplication, does not restrict itself to duplicating the reduplicant only once. Examples of “twice reduplication”, such as *ma-te-te-teneng* ‘understand even better’, will be analyzed further in Section 4.1. Ca- reduplication, as a subtype of partial reduplication, is no exception in this regard.

The reduplication of the initial Ca- syllable in the following examples in (4) is done twice, as in *tey-ra-ra-roa* ‘two in a group’. The concept of ‘in a group of such and such a number’ is expressed by *tey-* to the reduplicated stem. More examples are provided in (5)-(6).

(4)

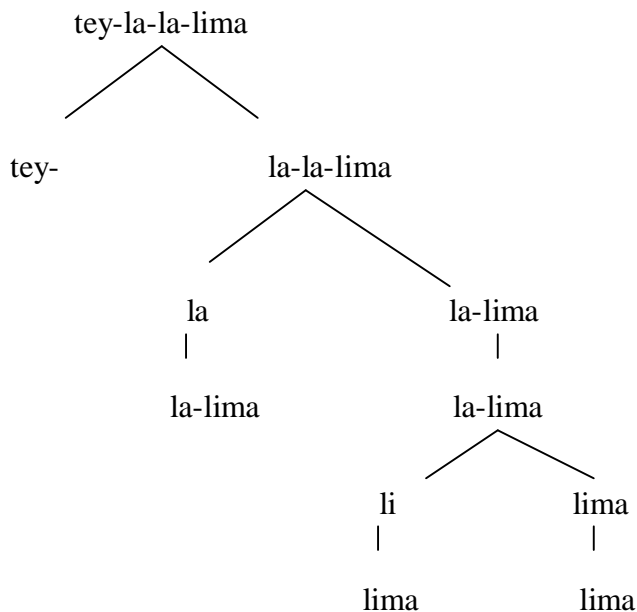
Group of two	Group of three	Group of four	Group of five	Group of six
<i>teyrararoa</i>	<i>teytatatilo</i>	<i>teypapapat</i>	<i>teylalalima</i>	<i>teynananem</i>

(5) *tey-la-la-lima kamo a somdep.*
 group-RED-Ca-five 2.P.NOM LIN <AF>enter
 ‘Come in in groups of five.’

(6) *namen tey-pa-pa-pito do asa aka mibetbet.*
 1.P.NOM.EXCL group-RED-Ca-seven LOC one CON fishing.boat
 ‘We have seven people to a fishing boat.’

In the MDT model, *tey-la-la-lima* ‘five in a group’ is composed of three constructions: truncation, reduplication, and prefixation. The cophology of the mother node *la-lima* is a change of vowel from /i/ to /a/, as illustrated in (7):

(7)



4. Infixation and prefixation

We have so far discussed the two types of reduplication in terms of the number of syllables involved in reduplication in the previous section (i.e., partial vs. full). There are also two types of reduplication in terms of the position of the “reduplicant” within the word: i.e., infixation vs. prefixation.

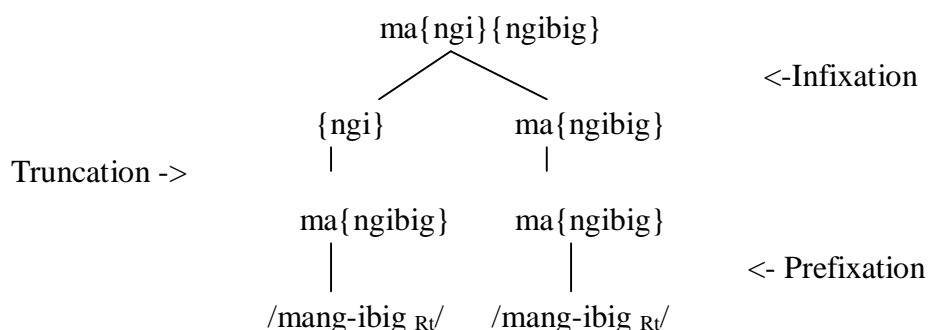
Prefixation is defined as prefixing the reduplicant to the stem, as shown in all the previous examples in (1), (3), and (7), whereas infixing reduplication is defined as infixing the reduplicant between the stem and its prefix. Most doubling of stems with prefixes, e.g., *mi-*, *ma-*, *maN-*, *ka-*, *a-*, can be neatly analyzed as infixation, as discussed in 4.1 and 4.2, but there are other cases involving the prefix *paN-/maN-* that should be either analyzed as prefixation or infixation depending on their morphophonemic

alternations, as discussed in 4.3. Although most of the examples of reduplication analyzed in the following sections target stems, there are also cases of reduplication that target prefixes, which is taken up in 4.4.

4.1 Infixing reduplication: Second syllable reduplication

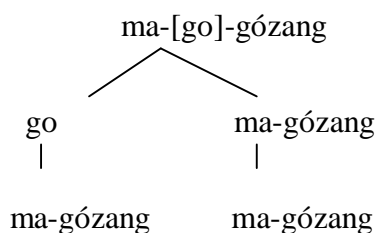
The second syllable reduplication in Tagalog was convincingly analyzed as infixation instead of prefixation in the MDT model (Inkelas & Zoll 2005: 183-185). The following example (8) *mangingibig* ‘suitor’ from Inkelas & Zoll (2005: 185) serves as a good example. This structure is composed of three independent constructions: prefixation, truncation, and reduplication. This example shows that Tagalog reduplication truncates the word to the first CV of the Proot, a morphological root plus a preceding prefix-final consonant to serve as a syllable onset, where needed. Thus, doubling of onsets and of nasal fusion in Tagalog reduplication (e.g., *pa-mu-mutul* ‘a cutting in quantity’, *na-ngi-ngisda* ‘is/are going fishing’) supports the infixation + normal application analysis over the prefixation + backcopying analysis.

(8) Tagalog example (adapted from Inkelas & Zoll 2005)



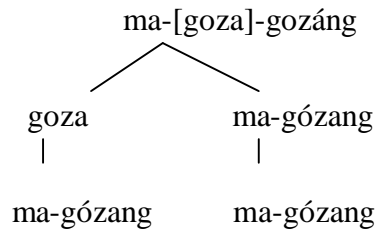
The same analysis can be applied to the Yami data. The following examples involve infixation of the reduplicated stems with intransitive prefixes in Yami. Let us contrast *ma-go-gózang* ‘all very thin’ with *ma-goza-gozáng* ‘thinner’. The infixation of partial reduplication indicates plurality whereas the infixation of full reduplication indicates comparatives¹³, as illustrated in (9a) and (9b).

(9a)



¹³ Comparatives can also be formed by prefixing *ka-* after full reduplication, e.g. *ka-tava-táva no kois nio*. (very-RED-fat + GEN + pig + 2.P.GEN) ‘How fat your pigs are!’

(9b)



On the other hand, plurality is expressed by partial reduplication, i.e., reduplication of the first CV- of the root, e.g., *ma-le-léma* ‘all lazy’. A comparison between comparatives and plurality is illustrated in (10). The stem of plurality is stressed in the penultimate syllable, whereas the comparative is stressed in the last syllable. More examples are provided in (11)-(12).

(10) Comparisons of comparatives with plurality reduplication

Stem	Comparative	Plurality
<i>apía</i> ‘good’	<i>a-pia-piá</i> ‘better’	<i>a-pi-pía</i> ‘all good’
<i>matáva</i> ‘fat’	<i>ma-tava-tavá</i> ‘fatter’	<i>ma-ta-táva</i> ‘all fat’
<i>anáro</i> ‘long’	<i>a-naro-naró</i> ‘longer’	<i>a-na-náro</i> ‘all long’
<i>masári</i> ‘dark’	<i>ma-sari-sarí</i> ‘darker’	<i>ma-sa-sári</i> ‘all dark’
<i>malóit</i> ‘dirty’	<i>ma-loi-loít</i> ‘dirtier’	<i>ma-lo-lóit</i> ‘all dirty’
<i>másngen</i> ‘near’	<i>ma-snge-sngén</i> ‘nearer’	<i>ma-sé-sngen</i> ‘all near’

(11) *ko ma-tava-tava aka ni kaka.*
 1.S.NOM SV-RED-fat CON GEN older.sibling
 ‘I am fatter than my older sister.’

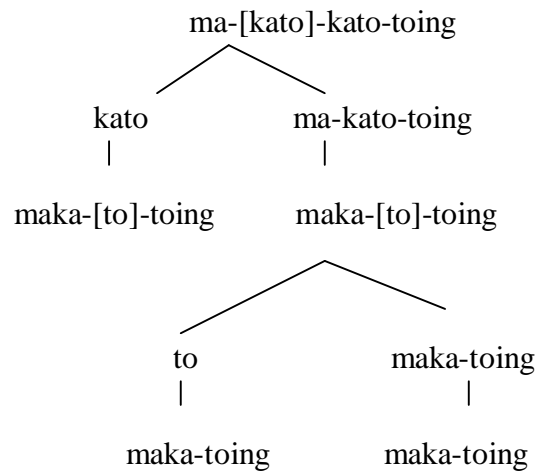
(12) *namen ma-ta-táva sira kaka.*
 1.P.NOM.EXCL SV-RED-fat NOM.P older.sibling
 ‘We sisters are all fat.’

Although most of the examples we have discussed so far involve second syllable reduplication, this does not assume that the prefix before the “reduplicant” is monosyllabic. There are many examples of infixing reduplication in Yami involving prefixes of various shapes and meanings, e.g., *ipi-[zi]-ziak* ‘reason to speak’, *icia-[ma]-mavakes* ‘women as a peer group’, *maka-[pi]-pia* ‘can improve’, *mala-[pe]-pseng* ‘smells like something is burned’, *mapa-[kza]-kza* ‘love to show off’, *masi-[zaka]-zakat* ‘kill each other’, *mika-[za]-zakat* ‘one by one dies’, *mipa-[ra]-rakeh* ‘getting older and older’, *maci-pa-[ngao]-ngaop* ‘gather salt together’,

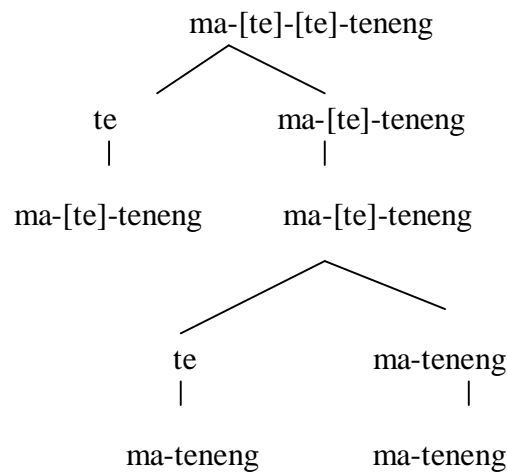
mapaka-[zaka]-zakat ‘pretend to be dead’, *mapika-[‘ing]-‘ingn-en* ‘cause to have aches and pains’. All the above examples can be analyzed as infixing reduplication.

As mentioned in 3.1 and 3.2, reduplication is not restricted to duplicating the reduplicant only once. The phenomenon can be easily accounted for by infixing reduplication in the MDT model. The examples of *ma-kato-kato-toing* ‘contagious, spread around’ and *ma-te-te-teneng* ‘understand even better’ are illustrated in (13) and (14), respectively. Example (13) involves a reanalysis of the intermediate mother node from *maka-to-toing* to *ma-kato-toing*. The reduplication that targets prefixes will be discussed in 4.4.

(13)



(14)



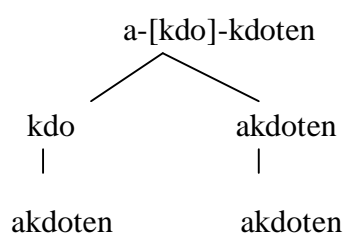
4.2 Infixation of the reduplicated stem with *a*-prefix

The monosyllabic bound root (See 2.5) is prefixed with a semantically empty

morpheme *a*-¹⁴ to form a new stem. The reduplication of the second syllable can be easily analyzed as infixation in the MDT.

For example, *a-[kdo]-kdot-en* ‘pinch a little’ is derived from the cophologies of the two daughters with the same stem *a-kdot-en* ‘pinch something’, as illustrated in (15). The semantically empty stem-forming morpheme *a-* is prefixed to the bound root *-kdot* ‘pinch’ to form a legitimate syllable structure CV.CVC (*ak.dot*) and suffixed with a transitive morpheme or patient focus *-en*. The first daughter undergoes truncation and retains the first C.CV of the stem. The output of the first daughter is then infixated in the second syllable of the mother node to form *a-[kdo]-kdot-en*. Therefore, the so-called “rightward reduplication” (Chang 1998) is no longer necessary and can be classified as a type of full reduplication.

(15)



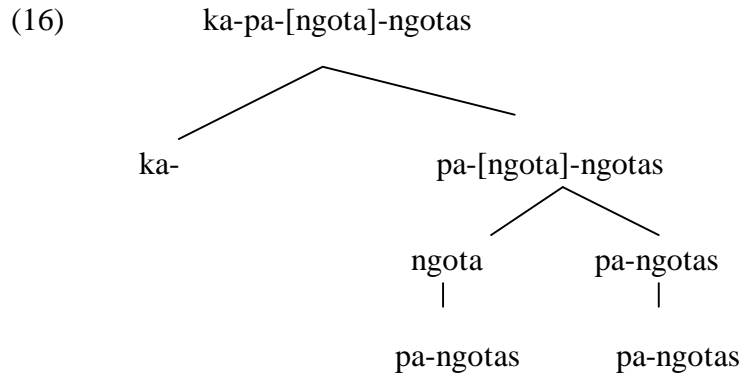
The same infixation analysis can be applied to other similar examples, such as *a-[kbe]-kbeng-en* ‘press a little’, *a-[dka]-dkan-an* ‘kiss’, *a-[sle]-slet-an* ‘lock’, and *a-[sde]-sdep-an* ‘entrance’.

4.3 Infixing vs. prefixing reduplication with *paN-*

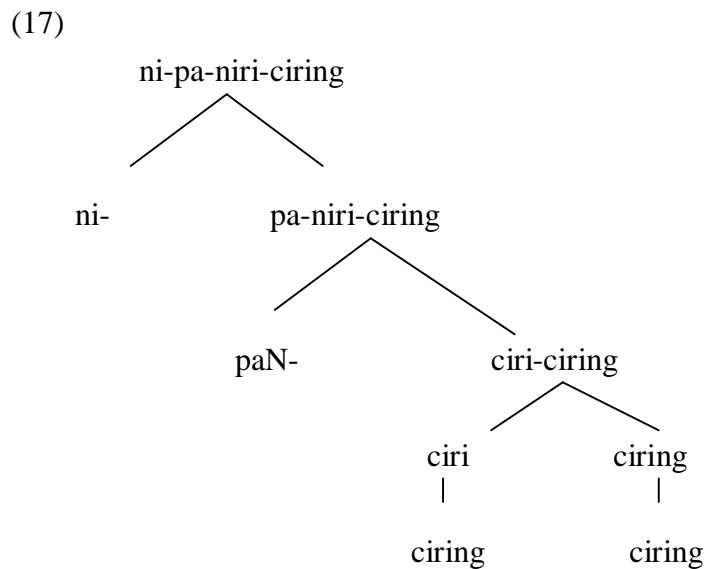
Next, we will examine a case of reduplication with the prefix *paN*-¹⁵, which involves both infixation and prefixation, depending on its morphophonemic alternations. There are two ways for *paN-* ‘distributed’ to be reduplicated and added to the root. It can be first added to the root *kotas* ‘pick leaves’ to form a new stem *pangotas*. After truncating the prefix and the coda, the first daughter is infixated to the mother node to form *pa-[ngota]-ngotas* ‘one keeps picking leaves’. The prefix *ka-* ‘then, afterwards’ is then added to the mother node to form *ka-pa-ngota-ngotas* ‘then one keeps picking leaves’, as illustrated in (16).

¹⁴ The semantically empty stem-forming prefix *a-* should be distinguished from the inflectional *a-*, which is the subjunctive form of the derivational prefix *ma-* to form a stative verb.

¹⁵ *N-* is an assimilatory nasal, the phonetic feature of which depends on the feature of the following segment.



However, the second way cannot be analyzed as infixation, but rather as prefixation because the morphophonemic alternation triggered by *N-* does not affect the second daughter. The root *ciring* ‘word’ is first reduplicated to form the new stem *ciri-ciring* ‘words, language’. Then prefix *paN-* is added to *ciri-ciring* to form another new stem *pa-niri-ciring* ‘curse’. Then the prefix *ni-* ‘perfective’ is added to form *ni-pa-niri-ciring* ‘already cursed’, as in (17).



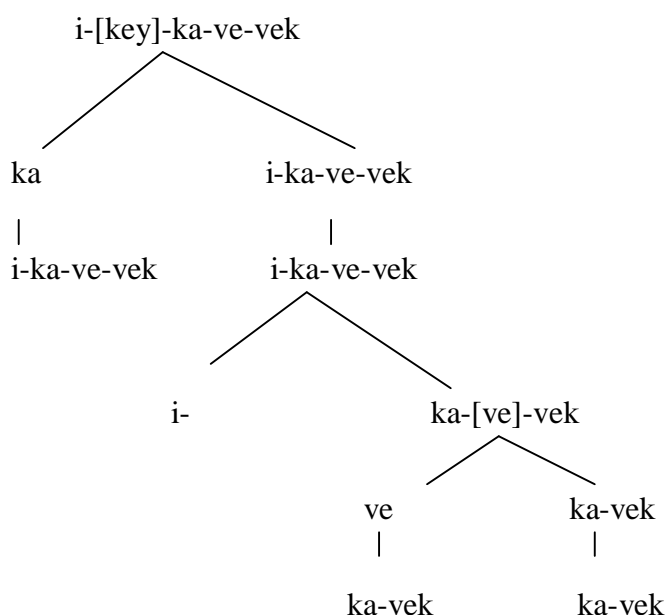
4.4. Reduplication targeting prefixes

Most of the examples we have discussed so far involve reduplication targeting stems. In the MDT model, reduplication of the prefix can also be neatly analyzed as infixation in Tagalog (e.g., *i-ka-katakbo* ‘will cause to run’, *i-pa-paglinis* ‘will clean for’, and *ma-ka-kahalata* ‘will notice’). However, examples of reduplication targeting the prefix in Yami can be analyzed either as infixation or prefixation depending on the locality of the prefix. In the following discussion, we will examine three cases: (1) infixed reduplicant, (2) reanalyzed prefix + stem, and (3) prefixed reduplicant.

4.4.1 Infixed reduplicant

In examples such as, *i-[key]-ka-rahēt na* ‘getting even worse’ (*i-* ‘IF’, *ka-* ‘stative’, *rahēt* ‘bad’, *na* ‘3SGEN’), and *i-[key]-ka-ve-vek* ‘to try even harder’ (*i-* ‘IF’, *ka-* ‘stative’, *avek/-vek* ‘make an effort’), the infixed reduplicant [*key*] undergoes a change of vowel from /a/ to /ey/. An analysis of *i-[key]-ka-ve-vek* ‘to try even harder’ is provided in (18).

(18)



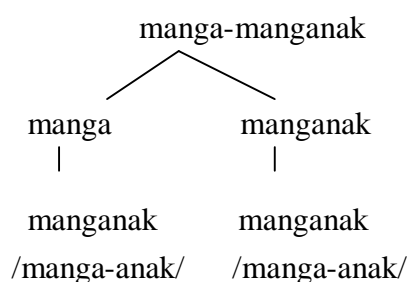
4.4.2 Reanalyzed prefix + stem

Other examples of infixation targeting the reanalyzed prefix and stem, e.g., *ma-[kato]-kato-toing* ‘contagious’, *ma-[kawa]-kawalam* ‘many people chat together’ (*ka-* ‘co-’, *walam* ‘rest’), have been discussed in (13).

4.4.3 Prefixed reduplicant

The rest of the examples, targeting prefixes such as *ni-* ‘perfective’ in *ni-ni-ahap* ‘everything that has been taken away’ or *manga-* ‘many’ in *manga-manga-(a)nak no kakteh* ‘cousins’ (*manga-* ‘many’, *anak* ‘child’, *no* ‘GEN’, *kakteh* ‘cousin’), can be analyzed as prefixation. Example (19) is an illustration of how *managa-manganak* is analyzed. The cophologies of the two daughter nodes merge the two identical /a/ vowels to form *manganak*. The first daughter undergoes truncation and retains only the first two syllables of the stem *manga-* before it is prefixed to the mother node to form *manga-manganak*.

(19)



5. Core functions of reduplication

A stem is reduplicated to express five core functions in Yami: plurality, comparative degree, distribution, repeated actions or continuous actions. In Table 5, the reduplicated forms are preceded by roots/stems and followed by the function of the reduplication. In some cases there is overlap between the functions, so assignment of an example to one class or another is somewhat arbitrary. It is clear from the following table that reduplication is essentially a doubling of identical stems to express iconicity. In addition to the core functions mentioned above, other nuances of the meaning of the reduplicated form are derived from other derivational affixes.

Table 5. Examples of reduplication

Root/Stem	Gloss	Reduplication	Gloss	Function
mangeb, eb/mangeb	蹲在裡面望外看 squat inside and look out	ma-nge-ngeb	正蹲在裡面望 外看 squatting inside and looking out	continuous action
acileb, cileb/manile b	俯瞰 overlook	mang-aci-acileb	俯瞰(較廣) overlook (a broader area)	distribution
ama/miama	比別人多的那一份 /比別人多一份 have one more share than the others	mi-a-áma	愛現,在別人面 前炫耀 show off	repeated action
angsa	老人吃的一種魚 fish for old people	mala-a-angsa	有 angsa 魚味 smells like angsa fish	plurality
anig	不好意思 sorry	pang-ani-anig-an	禮節,禮貌 courtesy	repeated action

arilaw/pang arilawan	同情,可憐/同情人的心 sympathy/a heart of compassion	pang-ari-arilaw-an	同情心 compassion	repeated action
atot/miatot	屁/放屁 fart	mi-ato-atot	連續放屁 fart repeatedly	repeated action
attaw, hattaw/ mahattaw	漂浮/島嶼,漂浮 float/island	ma-atta-attaw	漂盪在水上, 海水 floating, sea water	continuous action, plurality
avay/ mangavay	罵/罵人 scold	ma-nga-ngaváy-in	很愛罵人 like to scold	repeated action
avay	罵 scold	mipa-ngava-ngavay	自言自語的罵 grumbling about	repeated action
awat	游 swim	mi-aw-awat	游泳 swim	repeated action
awat	游 swim	ipi-aw-awat	游泳的原因,泳 具 reason to or tool used for swimming	repeated action
bayo/ mabáyo	吝嗇/很吝嗇 stingy	ma-bayo-bayo	較吝嗇 more stingy	comparative
bo, abo	無 no	mika-bo-bo	都消失了,都掉 了 disappear one by one	repeated action
Bo, abo	無 no	maka-e-bo	使無 cause something to be gone	repeated action
boang/ máboang	習慣/很習慣某人 或物,對人不怕生 的 get used to	ma-boa-bóang-en	很容易與人混 熟(不怕生的) mingle easily	repeated action
boang	習慣 get used to	maka-bóa-boang	人緣佳,不怕生 sociable	repeated action
ciglang/ macíglang	硬的/很硬 hard, firm	ma-ci-cíglang	都很硬 all very hard, firm	plurality
cilan/ micilan	雞眼/有雞眼的 corn, callus	mi-ci-cilan	長雞眼 develop a corn	continuous action
cilat	閃電 lightning (n.)	mi-ci-cilat	閃電 lightning (v.)	continuous action

cimoy	雨 rain	mi-cimo-cimoy	淋雨 get rained on	repeated action
cimoy	雨 rain	mipa-cimo-cimoy	淋雨,不避雨的 get rained on purposefully	repeated action
cinedkeran/ micinedkera n	大船/有大船的, 建造大船 big boat/build or own a big boat	mi-ci-cinedkeran	造大船 big boat building	continuous action
cipa	啖,痰 spit	mi-ci-cipa	一直吐痰,吐啖 keep spitting	repeated action
cipa	啖,痰 spit	ipi-ci-cipa	為..吐啖,不屑 的,為覺得噁而 吐的,呸 reason to spit, disgusted	repeated action
dehdeh	外地人 foreigner	mapaka-deh-dehde h	自以為自己是 漢人(外地人) pretend to be a foreigner	pluality
dket/ mideket	粘貼/黏在一起 adhesive/stick together	mi-de-deket	都黏在一起 all stick together	repeated action
dket; adket/ pideketen, pideket	粘貼/把..粘在一起 adhesive/stick together	pi-de-deket-en	使相連,黏起來 casue to be stuck together	repeated action
ema/ méhma	軟的,易折的/很軟 soft	ma-'e-'éma	都很軟 all very soft	pluality
ganam/ macipagana m	舞/加入跳舞的行 列 dance/join a dance	macipa-gana-gana m	參加跳舞團 join a dance troup	repeated action
gilo	彎曲 bent	mi-gi-gilo	彎曲的情形 in a bent shape	continuous action
gilo, tagilo/ pitagilo	彎曲/命人將某物 扭轉或彎曲變形 bent/bend something	pi-ta-tagilo-en	使東西扭轉或 彎曲變形 cause something to be bent or change shape	continuous action

gozang/mag ozang [1]	瘦的/很瘦 thin	ma-goz-a-gozang	比較瘦 thinner	comparative
gozang/ mgozang	瘦的/很瘦 thin	ma-go-gó-zang	都很瘦 all very thin	plurality
ingen	痛,疼痛 hurt, painful	mapa-ley-leyngen	叫人活該;見人 遇到麻煩事或 跌傷時,不但不 安慰,反而火上 加油的 cause someone to have more pain or trouble	repeated action
ingen	痛,疼痛 hurt, painful	mika-'inge-'ingen	都生病了,到處 都是病 become ill one after another, get ill all over	plurality
ingen	痛,疼痛 hurt, painful	mapika-'ing-'ingn-e n	使(令)人疼痛 的 cause someone to have aches and pains	repeated action
ingen	痛,疼痛 hurt, painful	mapaka-'inge-'inge n-en	裝病 pretend to be ill	repeated action
itkeh	睡覺 sleep	ma-'it-'itkeh-en	很愛睡覺 like to sleep	repeated action
itkeh	睡覺 sleep	mika-'it-'itkeh	都睡覺了 all sleep one after another	plurality
itkeh	睡覺 sleep	mapaka-'it-'itkeh	裝睡 pretend to sleep	repeated action
izay	徽章,象徵 榮譽的 東西 badge, emblem	mapaka-iza-izay	自以為很偉大 或威風 pretend to be great and powerful	repeated action
kadkad	抓癢 scratch	mi-ka-kadkad	到處抓癢的動 作 scratching all over	distribution

kan/ kanen	吃,食物 eat/food	maci-ka-kan-en	向人家討食物 吃 beg for food	repeated action
kaop/ macipangao p	一把抓/加入抓取 的行列 grab/join in a group to grab	macipa-ngao-ngaop	與人一起去採 鹽巴 join in a group to gather salt	repeated action
karang/ makarang	高的/很高 tall	ma-ka-karang	都很高 all very tall	plurality
karo	離開 leave	mika-karo-karo	紛紛離去 leave one after another	plurality, repeated action
kawaz/ mikawaz	刨刀/做刨平的動 作 plane/planing	mi-ki-kawaz [2]	刨工 a person who does planing	repeated action
kayo/ macipangayo	木柴/加入砍柴的 行列 wood/join in a group to cut wood	macipa-ngayo-ngayo	砍柴的年紀,與 人一起去砍柴 reach the age to cut wood, join in a group to cut wood	repeated action
kcin	餓 hungry	maci-ke-kcin	到處叫餓 cry hungry everywhere	repeated action
keleh	狐臭 body odor from the armpit	mala-ke-keleh	有狐臭味的 smells like body odor from the armpit	repeated action
kevet	萎縮,縐紋 shrivel, wrinkled	mi-keve-kevet	收縮,縮成一團 shrink (into a ball)	continuous action
kezdaz	砍掉 chop down	mi-ke-kezdaz	持鐮刀 holding a sickle	repeated action
kezen	萎縮(泡水) shrink	mi-keze-kezen	萎縮起來 become shrunken	continuous action
kna,akna	釣 to fish	mi-kena-kena	船釣 to fish from the boat	repeated action
koat/	燙的/很燙	ma-koa-koat	比較燙	comparative

mákoat	burning hot		hotter	
kza	喜歡 like	mapa-kza-kza	愛現的,很愛炫耀 love to show off	repeated action
lagaraw	魚名 fish name	maci-la-lagaraw	與人去釣 lagaraw 魚 join a group to fish for lagaraw	repeated action
laktat/ malaktat	鼻涕/流鼻涕(感冒) snot/have a runny nose	mi-la-laktat	擤鼻涕 blow one's nose	repeated action
laktat	鼻涕,疾病 snot, disease	maka-la-laktat	招來疾病 cause to have a disease	repeated action
lalam, alalam	玩具 toy	mi-ala-lam	玩耍 to play	repeated action
lavang/ malavang	白的/很白 very white	ma-lava-lavang	比較白 whiter	comparative
lavang	白色 white color	mika-lava-lavang	到處都是斑點 to have white spots everywhere	distribution
lavi	哭 cry	ma-lavi-laví-in	很愛哭 love to cry	repeated action
lavi	哭 cry	ka-lavi-laví-in	很會哭,這麼會哭 crybaby	repeated action
lavi	哭 cry	mi-lavi-lavi	哭鬧 keep crying	continuous action
lavi	哭 cry	mika-la-lavi	都哭了,一個個都哭了 all cry one after another	plurality, distribution
law, alaw/ málaw	擔心,憂慮/很擔心 worry	ma-la-láw-en	很容易焦慮的 get anxious easily	repeated action
lektek	跌倒 fall down	mika-lek-lektek	都跌倒 all fall down	plurality
likod	背	mi-liko-likod	背對背	continuous

	back		back to back	action
likod	背 back	maci-li-likod	叫喊背痛 complain about back aches	repeated action
likod	背 back	mipa-liko-likod	背對著 turn one's back on	continuous action
liman	打死 fight to kill	mi-li-liman	打架 have a fist fight	repeated action
liman/ maciliman	打死/跟某人打架 fight to kill/engage in a fight	maci-li-liman	與人打架(群 架) engage in a group fight	repeated action
lingay	轉過頭看 turn one's head to look	ipi-ling-lingay	帶人觀光,觀光 的目的 take someone sightseeing, reason to go sightseeing	repeated action
litod	拗折 bend	mi-li-litod	跪著 on bended knees	continuous action
lovot	集中,全部 gather	mapi-lovo-lovot	招集的 assemble	repeated action
mavakes/ iciamavakes	女人/同為女性的 (單) female/as a member of a group of women	icia-ma-mavakes	同為女性的,複 數 as members of a group of women	plurality
metdeh	孩童 child	icia-me-metdeh	同為孩童的 as members of a group of children	plurality
miying/ mamiying	笑/一直笑 laugh/keep laughing	ma-miyi-miyíng-en	很愛笑 love to laugh	repeated action
miying	笑 laugh	mi-kam-kamiying	開懷大笑 begin to laugh out loud	continuous action
moa/pimoan	種植/種(某物)的地 方 plant/place to grow something	pi-moa-moa-an	果園,種多種東 西的地方 orchard, place	plurality

			to grow various things	
nangwa	仰著倒下 fall over backwards	mika-nang-nangwa	都仰著倒下了 fall over backwards one after another	plurality
navak, <avak	中間 middle	macipa-nava-navak	位居中央 to be located in the middle	continuous action
ngay, angay/mangay	去,命人去/去 go	ma-nga-gay	常常去 go regularly	repeated action
ngebnggeb	整個嘴巴浸入水中 喝水 put the whole mouth in the water to drink	mi-nge-ngebnggeb	整個嘴巴浸入水中 喝水 put the whole mouth in the water to drink	continuous action
ngina/ mingina	價錢/有價錢的,交易 price/priced, trade	mi-ngina-ngina	交易 trading	repeated action
ngina	價錢 price	maci-ngina-ngina	去購物 go shopping	repeated action
nnget/ kanngeten	汗/正熱,流滿身汗 sweat/covered with sweat	ka-nnge-nngét-en	很容易流汗 get sweaty easily	intensity
noma	先 first	macipa-noma-noma	名列前茅,位於 比較前面的部份 to be ranked high, fronter	comparative
obot/ malaobot	糞便/有糞味的 feces/smells like feces	mala-o-obot	有糞味的 smells like feces	repeated action
oli/ mioli	返家(部落)/折返 go home/return	mi-oli-oli	來來回回 going back and forth	repeated action
opta	仆倒 fall flat	mika-'op-'opta	都倒臥在地上 (個個臥倒在地) fall flat on	plurality, distribution

			地) fall flat on the ground one after another	
ota	嘔物 throw up	m-otow-ta; (ma-ota-ota)	嘔吐(頻繁) throw up (repeatedly)	repeated action
otab	泡沫 bubble	mi-ota-otab	起泡沫 bubble up	continuous action
oya/ maóya	很氣某人/一臉兇 兇的樣子 angry	ma-oya-oyá-en	愛生氣的 get angry easily	repeated action
oya	很氣 angry	mi-oya-oya	生氣,發脾氣 become angry	continuous action
oya	很氣 angry	ipi-oya-oya	為..而生氣,生 氣的原因 reason to be angry	repeated action
oyot/ macipangoy ot	抽出/加入抽籤的 行列 draw lot/engage in lot drawing	macipa-ngoyo-ngo yot	參加抽籤(頻 繁) engage in lot drawing (regularly)	repeated action
paid	扇一扇 to fan	ipi-pai-paid	扇子,用來扇風 的 fan (a tool)	repeated action
paw, apaw/mápa w	輕的/很輕 light (not heavy)	ma-pa-paw	比較輕 lighter	comparative
pia, apía	好,良,善 good	ka-api-apia-an	好地方 good places	plurality
pia, apia/ kapia, kapan	好,良,善/很好 good	ka-pi-pia-an	較好的地方 a better place	comparative
pia, apía/ makapía, kapan	好,良,善/好好地 good/do something well	maka-pi-pia	可改善的 can be improved	repeated action
posing/mika posing	撕裂/互為表親關 係 to tear/in a relationship of cousins	mika-posi-posing	都撕的亂七八 糟 rip all to shreds	plurality

pseng	鍋巴,燒焦 burned rice	mala-pe-pseng	燒焦味 smells like something is burned	repeated action
ptad, aptad/mipet ad	落地聲,放下/停止 動作,發出落地的 聲音 thunk, drop/stop, fall with a thunk	mi-peta-petad	坐在地上不斷 踢腳的動作,如 小孩哭鬧耍賴 的情形 sit on the floor and kick constantly, throw a tantrum	repeated action
rahet/ maráhet	不好/很不好 not good	ma-rahe-rahet	較不好 worse	comparative
rahet/ karáhet, karahetan	不好/覺得很煩, 不好的地方 not good/feel troubled, a bad place	ka-rahe-rahet-an	荊棘處,兇險處, 平常狀況就不 好 a place with thistles, a dangerous place, a not very good condition	repeated action
rahet	不好 not good	mika-rahe-rahet	弄的亂七八糟, 到處都被破壞 make a mess, destroyed everywhere	distribution
rahet/ manráhet	不好/令人心煩的 not good/cause to feel troubled	man-rahe-rahet	背地裡愛說人 壞話 love to talk behind one's back	repeated action
rahet	不好 not good	mapika-rahe-rehet	搞破壞 cause destruction	repeated action
rakeh	年長的 old	icia-ra-rakeh	同為老人的 as a member of the group of old people	plurality
rakeh	年長的 old	mipa-ra-rakeh	愈來愈老 getting older and older	continuous action

rakep/ macirakep	捉,抓/加入摔角的 行列 catch/join in wrestling	maci-ra-rakep	跟人摔角 engage in wrestling	repeated action
raten	不允許 prohibited	mi-ra-raten	犯罪 to sin	repeated action
sakeb	趴著,腹面著地 lying face down	pi-sa-sakeb	命人趴下 lie down face down (a command)	continuous action
sakeb	趴著,腹面著地 lying face down	pi-sa-sakeb-en	使趴著 cause to lie down face down	continuous action
sakeb	趴著,腹面著地 lying face down	mi-sa-sakeb	趴著 lying face down	continuous action
saki	酒 wine	mika-saki-saki	都醉的一蹋糊 塗,一個個都醉 了 all get drunk, get drunk one after another	plurality, distribution
saray/ masaray	愉悅的 happy	ma-sa-sáray	都很快樂的 all very happy	plurality
sazap/ misazap	面對著/面對面 to face/face to face	mi-saza-sazap	面對面 face to face	continuous action
sazap/ mipasazap	面對著/面對面 to face/face to face	mipa-saza-sazap	面對著 to face	continuous action
sinmo/ misinmo	迎接/會合,相遇,結 婚 receive/meet, get married	mi-sin-sinmo	集合,會合 meet, get together	repeated action
sinmo/ mapisinmo	迎接/使會合 receive/cause to get together	mapi-sin-sinmo	準備 prepare	repeated action
siring	說話 speak	pa-niri-siring-en	領袖,首領,領導 者 leader	repeated action
snek	不好意思 shameful	macipa-se-snek	引以...為恥, 使蒙羞 consider to be shameful	repeated action

soli	愛生氣的 bad-tempered	ma-soli-soli-in	很小氣的(容易 情緒性的) get emotional easily	repeated action
sozi	兇貌 fierce appearance	mapaka-sozi-sozi	假裝生氣,裝兇 pretend to be fierce	repeated action
spi	破掉 broken	mika-spi-spi	到處都是破掉 的情形 broken everywhere	plurality
taci	尿 urine	mi-taci-taci	到處尿,尿失禁 urinate everywhere	distribution
taci	尿 urine	mala-ta-taci	有尿騷味 smells like urine	repeated action
tagala	口張不合 with a mouth open	mi-ta-tagala	口張不合 with a mouth open	continuous action
tana	土壤 soil	mi-tana-tana	製陶 make pots	repeated action
tangay/ mitangay	眼前/兩個面對面, 擺在眼前的 in front of/face each other, put in front	mi-ta-tangay	仰著 lying with face up	continuous action
tangtang/ pitangtang	搥打/命人打鐵 pound/forge	pi-ta-tangtang	工具,或命人搥 打或敲擊任何 東西 tool used to pound, pound on it! (a command)	repeated action
tangtang	搥打 pound	mi-ta-tangtang	打鐵 forge	repeated action
tao	人 person	icia-ta-tao	人,(同為...人 的) as a member of a group of human beings	plurality
tarek	相同的 same	mapika-tare-tarek	作分類 to classify	repeated action

tava/ matava	脂肪,粗/很胖,很粗,很肥 fat/very fat	ma-ta-táva	都很胖 all very fat	plurality
tava/ matava	脂肪,粗/很胖,很粗,很肥 fat/very fat	ma-tava-tava	比較胖 fatter	comparative
tava	脂肪,粗 fat	maka-ta-tava	會讓人發胖的 cause to be fat	repeated action
teleh	聾 deaf	maka-te-teleh	致使耳聾 deafen	repeated action
teneng/ maténeng	智慧/很聰明 wisdom/very smart	ma-te-téneng	都很聰明 all very smart	plurality
teneng/ mateneng	智慧/很聰明 wisdom/very smart	ma-tene-teneng	比較聰明 smarter	comparative
tog	倒著的 upside down	mipa-to-tog	倒過來,傾斜一 邊 cause to be upside down	continuous action
toing	傳染 spread a disease	maka-to-toing	會傳染的 contagious	repeated action
toki	拳擊 hit with a fist	mi-toki-toki	拳打 hitting with fists	repeated action
toklay	單腳跳 hop on one foot	mapaka-tok-toklay	假裝跛子 pretend to be crippled	repeated action
toknoz/ mitoknoz	撞擊,撞到/相撞 hit, bump into/slam into each other	mi-tok-toknoz	撞成一堆 slam into each other	repeated action
vahay/ mivahay	家/居住 house/reside	mi-va-vahay	有洞的 have a cave	repeated action
vahay/ macivahay	家/與人共住,寄居 house/live with someone	maci-vaha-vahay	嫁人 get married (to a man)	repeated action
vait	較量的 measure one's power with	maci-vai-vait	到處與人較量 engage in power-measurin g everywhere	distribution
valang	陽光 sunshine	mi-vala-valang	晒太陽 sun bathing	repeated action

vaod/ pamaod	網綁/令人網綁 bind/cause to be tied up	pa-ma-maod-an	監獄 jail	repeated action
vazay/ mivazay	工作,職業/做事,工 作 work (n., v.)	mi-vi-vazay [3]	常常工作,平日 的工作 work regularly, regular work	repeated action
vekeh	顆粒,凸起的 grain, swell	mi-ve-vekeh	腫塊,腫起來 lump, swelling	continuous action
vekeh	顆粒,凸起的 grain, swell	mika-veke-vekeh	到處都是腫塊 (顆粒) full of lumps all over	plurality
vera	刷洗 wash, scrape	mi-vera-vera	洗餐盤 wash plates	continuous action
visang	兩腳張開 with two feet spread apart	mi-vi-visang	兩腳張開 with two feet spread apart	continuous action
vongtot	餿味,臭酸 a smell of rotten food, rancid	mala-vo-vongtot	有餿味的 smells like rotten food	repeated action
vota	瞎 blind	maka-vo-vota	招致眼瞎,可讓 人眼瞎的 can cause blindness	repeated action
walam/ maciwalam	休息/與人聊天 rest/engage in chatting	maci-wa-walam	到處去聊天 engage in chatting everywhere	plurality
wari	弟,妹 younger sibling	ma-wari-warí-in	很照顧弟弟妹 妹的 caring for one's younger sibling	repeated action
yala	籃子 basket	mika-yala-yala	一籃一籃的 one basket after another	plurality
yangay/ miyangay	一樣/一樣 the same	mi-ya-yángay	都一樣 all the same	plurality

yowyaw/ miyowyaw	追逐,驅趕/遊玩 chase/play	mi-yo-yowyaw	閒逛,到處遊玩 wander around, to play everywhere	repeated action
zakat/ mazakat	殺,打死/死掉 kill/dead	ma-zaka-zakat	要死不活的樣子,多次死掉的 half-dead, to be dead many times	repeated action
zakat/ makazakat	殺,打死/能致死亡 的 kill/deadly	maka-za-zakat	招致死亡的,可 讓人死的東西 can cause death	repeated action
zakat	殺,打死 kill	masi-zaka-zakat	與人相殘 engage in killing	repeated action
zakat	殺,打死 kill	mika-za-zakat	都死了(一個個 死了) die one after another	plurality, distribution
zakat	殺,打死 kill	mapaka-zaka-zakat	裝死 pretend to be dead	repeated action
zavoz/ mizavoz	混合/兩種混在一 起 mix/mix two together	mi-zavo-zavoz	混合,混雜 mix together	repeated action
zda, azda/ kazdan	大浪/浪濤洶湧處 (暫時) ocean waves/a place where waves are high	ka-ze-zda-an	浪濤洶湧處(平 常,長久) a place where waves are always high	repeated action
ziak	說話聲 speech sound	ipi-zi-ziak	說話的原因 reason to speak	repeated action
zicik, zcik	破損 crack	mika-zici-zicik	到處都是龜裂 的情形 become cracked everywhere	distribution
zingzing	抖一抖 shake	mi-zi-zingzing	甩一甩,抖一抖 shake one's hand or one's leg	repeated action

zipos	親戚 relatives	ma-zipo-zipós-en	與親戚關係良 好的 maintain a good relationship with one's relatives	repeated action
zipos/ kapizipos	親戚/只因是親戚 關係 relatives/only due to a relative relationship	ka-zipo-zipós-en	對親戚和睦 have harmony with one's relatives	repeated action
zoay/ mazóay	榮耀,很美 glory, very beautiful	ma-zoa-zoáy-in	很愛現,愛美的 likes to look beautiful	repeated action
zoay	榮耀,很美 glory, very beautiful	mapaka-zoa-zóay	很愛現,愛美的 pretend to look beautiful	repeated action

[1] /l/ and /z/ are variants, i.e., magolang ~ magozang 'thin'

[2] mikikawaz varies with mikeykawaz 'a person who does planing'.

[3] The infix reduplicant is vi- instead of va- in mi-vi-vazay 'to work regularly'.

6. Conclusion

This paper has presented data and analysis of Yami reduplication based on a Morpheme Doubling Theory (MDT). We have shown that reduplication is essentially a doubling of identical stems to express iconicity. There are only two types of reduplication in Yami: full reduplication and partial reduplication. In the MDT model, Ca-reduplication is classified as a subtype of partial reduplication, whereas right reduplication is a type of full reduplication.

We have also presented evidence to show that reduplication involving the prefix *paN-* can be analyzed either as infixation or prefixation depending on the patterns of morphophonemic alternations. Although most reduplication occurs in word stems; there are many cases that target prefixes.

Finally, we have demonstrated that a stem is reduplicated to express five core functions in Yami: plurality, comparative degree, distribution, repeated actions or continuous actions.

For future studies, an analysis of the relationship between stress shift and reduplication will be necessary. With the detailed data in Table 5 and other data in Rau et al. (2005), this paper has paved a way towards future investigation in that direction.

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Endangered Language Documentation and Transmission

D. Victoria Rau

Department of English Language, Literature and Linguistics
Providence University, Taiwan

dhrau@pu.edu.tw

Meng-Chien Yang

Department of Computer and Communication Engineering
Providence University, Taiwan

mcyang2@pu.edu.tw

Maa-Neu Dong

Department of Anthropology
National Museum of Natural Science, Taiwan

tong@mail.nmns.edu.tw

Abstract

This paper describes an on-going project on digital archiving Yami language documentation (<http://www.hrelp.org/grants/projects/index.php?projid=60>). We present a cross-disciplinary approach, involving computer science and applied linguistics, to document the Yami language and prepare teaching materials.

Our discussion begins with an introduction to an integrated framework for archiving, processing and developing learning materials for Yami (Yang and Rau 2005), followed by a historical account of Yami language teaching, from a grammatical syllabus (Dong and Rau 2000b) to a communicative syllabus using a multimedia CD as a resource (Rau et al. 2005), to the development of interactive on-line learning based on the digital archiving project. We discuss the methods used and challenges of each stage of preparing Yami teaching materials, and present a proposal for rethinking pedagogical models for e-learning.

1 Introduction

Computer applications in second language acquisition (CASLA) have become indispensable in language teaching, assessment and research (Chapelle 2001). Applied linguists no longer question whether it is necessary to use computers to assist in language teaching and learning but debate how to most effectively use the educational technology.

The technology of e-learning has dramatically changed the genre of the language textbook, the context of language teaching and learning, and the traditional roles of language teachers and learners. The key benefits of e-learning, such as the ability to meet individual learning needs, access a wider range of resources, and be exposed to multimedia materials, including both images and sounds, are particularly useful for the design of teaching materials for less commonly taught languages and/or endangered languages, since such textbooks are not readily available and are extremely costly to produce. However, little research has been conducted to explore the potential benefits of using information and communication technology (ICT) in the promotion of minority language teaching and research.

Many projects around the world are now seeking to preserve endangered languages (e.g., Lublinskaya and Sherstinova 2002; Psutka et al. 2002). The attempt to preserve an endangered language includes several steps: documenting and recording the oral and written literature, compiling the grammar and a dictionary of the language, and annotating the documentation related to this language. It is important that an endangered language preservation and documentation project should be comprehensive and carefully planned. This project needs not only to take advantage of state-of-the-art technologies and establish an environment for learning, but also to find an effective approach to teach the endangered language to the ethnic group using the language, particularly to members of the younger generation who often live in urban areas without any connection to their place of origin.

With a two-year grant (2005-2007) from the Endangered Language Documentation Project (ELDP, MDP0114, <http://www.hrelp.org/grants/projects/index.php?projid=60>) from the School of Oriental and African Studies (SOAS), University of London, our research team, represented by the current authors, has begun to prepare digital archiving materials to document the Yami language, a Philippine Batanic language spoken on Orchid Island by less than 4,000 people, and facilitate preservation and dissemination of the Yami materials collected since 1994. According to Rau's (1995) sociolinguistic survey on Orchid Island, Iraralay is the only community of the six villages on the island where children still use some Yami for daily interaction. Although Yami has been offered as an elective in elementary school since 1998, Yami is gradually being

replaced by Mandarin Chinese. Among the junior high school students on the island, 60% either believed Yami would die eventually or were uncertain about the fate of the language.

The approach proposes a comprehensive series of steps to collect and record the Yami language. In addition, the work includes development of a learning method that will be effective with Yami youngsters who live in urban areas away from Orchid Island. Although the complete work of documentation will take many years, the Yami language is in danger of being lost due to rapid urban migration. Therefore, we have developed a strategy to make language items available in learning materials as soon as they have been collected, taking advantage of information technology and computer networking. Using these technologies we have developed an integrated platform for documenting, processing and learning that will help both Yami youngsters and other students taking Yami as a second language.

The integrated platform is built on a main web server with several supporting servers. The main server is designed as the server for resource management and the supporting servers are designed for different purposes. The purpose of this design is to effectively edit the oral recording of the Yami language and to make the language learning materials available. The proposed platform includes three subsystems:

1. a subsystem to manage and edit the digital archiving of the Yami language,
2. a subsystem to handle the workflow of collecting oral recordings of the Yami language,
3. a subsystem to create and manage the Yami language learning materials.

Each subsystem is installed on one or two servers. All these subsystems will be described in detail in Section 3.

Although most ideas in the proposed integrated framework have been used for other language documentation and learning, the proposed framework is an initiative for archiving and teaching an endangered language¹. The attempt of our study is not only to use technologies to preserve an endangered language but also to develop a well-accepted platform for this language. Hence, people can and will learn and appreciate this language and its cultural heritage.

The aim of this paper is to provide a progress report of the current development of the integrated framework, and discuss the various stages of Yami language teaching leading toward e-learning and rethinking pedagogical models. The remainder of this paper is organized as follows. We begin by describing the background of this project and the progress we have made during the first six months and future activities for the second year. Section 3 is an introduction of the integrated framework. Section 4 illustrates the current development of the system, followed by Section 5, a historical account of the developmental process of the Yami language

¹ The integrated framework was first presented at the 2005 ALR Workshop (Yang and Rau 2005).

teaching materials as we move from a traditional grammar translation model towards meeting new challenges in e-learning.

2 Digital Archiving Yami Language Documentation

The Yami digital archiving project began on August 1, 2005. The first two authors serve as the PI and co-PI, respectively. We have also hired four computer technicians, two graduate students, and three Yami staff members for this project. Among the three Yami staff members, our senior language consultant, Maa-neu Dong, has been responsible for transcribing and translating all the materials (tape recording, videotaping, and pictures) in Yami. She has also served as a go-between for our research team and the Yami staff members on Orchid Island.

The other two Yami staff members were asked to provide audio and/or video recordings and pictures at least once a month. It took two months at the beginning of the project to purchase equipment, write up a detailed user's manual, communicate with the Yami staff members to ensure they understand how to use the equipment properly to collect data, and wait for them to sign a paper on Intellectual property rights. One of the staff members has been able to contribute materials regularly since September. However, the other member who originally agreed to participate in the project decided to take another job and thus was replaced by someone else at the last minute. It took the new staff member a much longer time to understand how to collaborate with us.

In addition to digitally archiving the 20 narratives, reference grammar, trilingual dictionary with 2000 entries (Rau and Dong, in press), and multimedia pedagogical materials (Rau et al. 2005), we also collaborated with local consultants to document daily conversations, business transactions, festivals, and ceremonies.

The topics were selected based on consultation of previous research on Yami ethnography, and were designed to meet the standards stipulated by the R.O.C. Ministry of Education for developing Austronesian teaching materials in Taiwan. The topics are closely related to those selected for inclusion in the four volumes of Yami multimedia teaching materials (Rau et al. 2005).

Over the past six months, we have developed the metadata following the structure of the OLAC format. The web site for recording the progress of this project has been established at Providence University with the IP address: <http://yamiproject.cs.pu.edu.tw/yami/>. So far, we have built the e-learning platform and put the four volumes of Yami teaching materials there for online language courses. The activities to be undertaken in the second year are as follows:

- The query interface and the query language for the archiving Yami language database will be designed using the techniques of intelligent searching and common sense indexing.
- An on-line Yami New Testament dictionary will be created.
- E-learning materials with different levels of difficulty will be created and installed into the e-learning platform.
- The server and accessing entrance of the Yami language digital archiving will be procured and installed.
- The preliminary corpus of the Yami language including the language learning materials, the dictionary and the Yami narratives translated into English and Chinese will be established.
- The e-learning materials will be field tested in the PI's graduate seminar, "Austronesian Linguistics: Yami structure, function, and teaching" in Spring 2006.

3 Integrated Framework

In this section, we describe our design and the theoretical framework behind it. The project is divided into four major steps:

- (1) field recording: recording the oral sound data of the Yami language,
- (2) archiving: editing the sound data and annotating the data using the metadata,
- (3) multimedia transformation: analyzing the original data and creating a multimedia Yami dictionary and text description,
- (4) e-learning: creating online Yami language learning materials.

The framework is designed to meet two requirements of our Yami language archiving project:

- (1) to build a complete and original archiving database for Yami language including speech of various genres, grammar, vocabulary and cultural artifacts,
- (2) to create learning materials in an easy-to-learn environment via internet and computer.

3.1 Field Recording

First of all, the existing records collected by the research team since 1994 were organized and digitalized, along with new field recordings. In our project, we have developed an oral speech archiving database to store these oral recordings. Each recording is scanned to find the basic sound characteristics and transferred into digital data. The sound characteristics are used for

comparing and tracking these recordings. The field recordings are arranged by segments, ranging from words in isolation to “idea units” or “tone units” (Chafe 1979) in continuous speech.

Once a segment of the field recording has been completed, the original data is stored in the computer and two different types of digital data are created. These include MP3 data that are used for creating the learning materials and the annotated digital data in which the recordings are separated into sentences with Chinese and English translations. All these data are stored in a relational database with the recording date used as the searching key.

The processing of field recordings is considered to be the preparation and preprocessing stage of the Yami language documentation project. The voice database is used to create the archived data and learning materials.

3.2 Archiving

The archiving step begins with editing the voice database and construction of the Open Language Archives Community (OLAC) metadata for each entity in the voice database. The original sound tracks in the field recording database are edited to improve clarity of the sound by using sampling techniques (Kientzle 1998). The edited sounds are stored as the new sound records in the voice database.

The metadata used for describing Yami language is the OLAC metadata, an extended Dublin Core set with basic elements of language resources. To meet the requirement of the linguistic community, certain new extension elements are put in the OLAC set following the Dublin Core Metadata Initiative (DCMI) guidelines (DCMI 2000). To build a proper OLAC metadata for the Yami language, we have chosen to adopt the OLAC set proposed by Bird and Simons (Bird et al. 2001, Bird and Simons 2003) for this project. Because Yami is primarily an oral language, we use a subset of this OLAC set. The OLAC elements used in this project are: {Title, Creator, Subject, Subject language, Description, Publisher, Contributor, Date, Type, Format, Identifier, Source, Language, Relation, Rights}. The reason for selecting these elements is to create a common description of the Yami language. Furthermore, after reviewing the field study materials, we can show that the above OLAC subset can meet the basic requirement for describing the Yami language. The rules to apply these OLAC elements to each recording of the Yami language are:

- (1) Each OLAC element can be optional and repeatable;
- (2) Each OLAC element can describe only one single identification or one single range;
- (3) Data format of each OLAC element follows the rules in DCMI (DCMI 2002).

Each OLAC element used in describing the Yami language is given following the OLAC and ELDP guidelines. Suppose there is a Yami language sound track to be described, the OLAC element set of this sound track is shown as follows:

Title: the Chinese name of the Yami language sound track. A second Title element is used to store the English translation.

Creator: the Yami speaker who uttered this speech. A second Creator element is used to store his/her Chinese name.

Subject: the keyword used to classify the content of the Yami language sound track. The keywords and controlled vocabularies are being collected.

Subject language: the Chinese linguistic description of the Yami language. A second element is the corresponding English description.

Description: the usage and the multimedia data related to this Yami language sound track. Some multimedia data are collected using the Multimedia Transformation step described in Section 3.3.

Publisher: the research teams and the sponsoring institutions.

Contributor: the research teams and the person who recorded this sound track.

Date: the date this sound track was recorded and the date the archiving process was completed.

Type: the genre of the content of the Yami language sound track. We are transferring many Yami-language linguistic and anthropological terms into DC-type. These DC-type terms are used as the Type element.

Format: the digital data type of the Yami language sound track.

Identifier: the ELDP identifier for this Yami language sound track. We have followed ELDP guidelines to create identifiers for the archived sound track.

Source: the location of the archiving database and the location for storing the field study draft.

Language: English and Chinese (traditional and simplified characters)

Relation: the related Yami language sound tracks.

Rights: copyright information of this sound track.

In the archiving step we also consider how to build a database of the controlled vocabularies for the Yami language. We use three sources for the controlled vocabulary in this project: lexicon, primary text and language description.

The table of OLAC metadata is created in two forms, one XML text table format and one relational table format. The voice database from the first step is edited and connected to the metadata table.

Another goal of this step is to build a Yami language online dictionary. The OLAC metadata are used for parsing and editing the voice database to create a Yami language online dictionary. We are developing an auto dictionary-generating program that can process the OLAC metadata and find suitable terms. In addition, we will use the grammar and course materials of the Yami language multimedia courseware created by Rau et al. (2005) to build our on-line multimedia Yami language dictionary.

When the metadata of a set of the Yami language sound tracks is completed, the results will be published online on our web site. So far our focus has been aligning the OLAC metadata of the Yami language sound tracks with the multimedia courseware by Rau et al. (2005). Beginning in 2006, we will try to use ontology to determine rules for creating metadata automatically and to develop an automatic metadata generator for the Yami language.

3.3 Multimedia Transformation

To preserve the Yami language, we use an image database to annotate the language. In addition, each word in Yami is annotated with its orthography stored in a sound database. The purpose of this transformation is to build an image for each Yami word. Therefore, the meaning of the word can be related directly to a picture. The reasons why we have chosen to use this approach to annotate the Yami language are as follows:

- (1) The annotated pictures help learners understand the traditional lifestyle on Orchid Island and give them more incentive to learn the language.
- (2) The pictures include many Yami cultural artifacts. The annotated pictures can thus preserve descriptions of their cultural heritage.

The steps for multimedia transformation of the Yami language are as follows:

- (1) Collect suitable images for building the annotated image database. In addition to the materials being provided monthly by our Yami consultants, we consulted other research teams to borrow Yami images and video recordings. Jian-Xiang Lin's sample materials can be retrieved from the following websites:

<http://d1m.ncnu.edu.tw/Lanyu/DigitalReservation/script/scheme/preview.asp?xml=415.xml&dxsl=Acu104.xsl>,

<http://www.sinica.edu.tw/~video>.

- (2) Design criteria to choose the images. We will select appropriate images and develop possible connections between Yami expressions and a set of pictures.

- (3) Build a special annotated database and use the Yami language to annotate the image data. The annotated algorithms will be based on the fuzzy logic style (Kecman 2001) or the Coherent Language Model (Jin, Chai and Si. 2004).
- (4) Build a corresponding mapping relation between a Yami expression and a set of annotated images. The mapping relations will be a set of contexts and symbolic tables similar to a set of induction rules.
- (5) Build a sound connection between each Yami word and its phonetic symbols by using the fuzzy logic learning algorithm.

The results of multimedia transformation will be able to be used as a foundation for creating online learning material. The results are stored in a relational multimedia database as well as the XML pages.

3.4 e-Learning

The final task of our project is to find an effective way to teach the Yami language to urban Yami youngsters and other learners of Yami as a second language. To create an open environment conducive to self-study, our choice is computer-based or Internet-based learning. There have been various discussions about how to use information technologies and the web to learn a different language. Gerbault (2002) showed that it is viable to set up a multimedia environment for leaning a language without a teacher's participation. Fujii et al. (2000) demonstrated a project using the Internet as a tool for the teacher to post course materials and create an online learning environment.

E-learning generally consists of self-access, reference sources, discussion forum, and virtual learning classrooms. The main motives for introducing e-learning include improving student multimedia learning experience, enhancing learner autonomy and broadening participation. Finally, e-learning can be controlled primarily by tutors or students, depending on the objectives, contents, learning tasks, length/time/place of study, or choice of assessment activities.

A computer-based learning environment is a very effective way to help students learn. In order to provide an effective learning environment, Leung (2003) suggested that four contextual issues should be considered in design and implementation of computer-based learning. These issues are topic selection, authenticity, complexity, and multiple perspectives. The design of the web-based computer-assisted learning program for the Yami language takes these four issues into consideration. We outline our design as follows.

The proposed e-learning environment in this project is designed to function as a virtual classroom. Students can select the Yami language learning materials based on their interest and

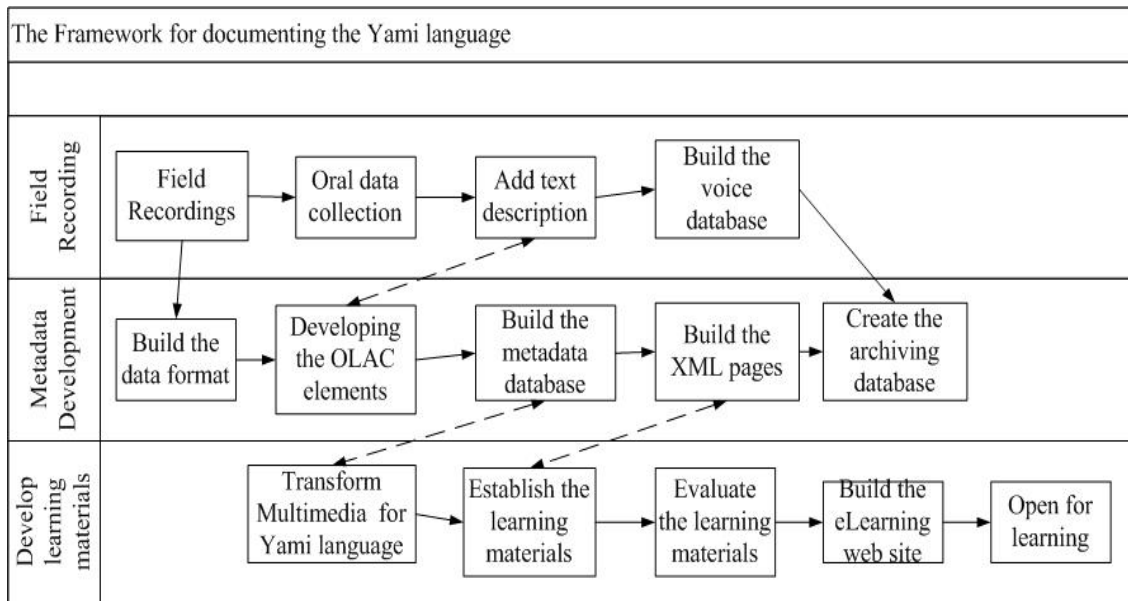
capability. If a student asks for clues or explanation of a specific Yami word or expression, a suitable image or video clip is retrieved from the multimedia database. If a student is not familiar with a specific Yami sound, a similar phonetic symbol is provided to him/her. The learning materials are arranged in three different settings: scenario setting, easy-to-difficult condition setting, and learner's choice setting. The scenario setting uses related scenes in Yami society such as the flying fish festival as a main theme of the learning materials. The easy-to-difficult condition setting allows the learner to select different levels of the Yami language materials. The levels are based on word frequencies and complexity of grammar. The learner can arrange the learning materials in the chosen setting. The learning system will give detailed guidelines to explain how to choose the learning materials. If a student wants to learn the Yami language, s/he can choose different learning materials based on his/her interest. The learning materials are designed as theme units with exercises and rubrics for self-assessment. The design of these Yami language exercises is based on a study about the reactions of students to using a web-based system for learning Chinese in Taiwan (Yang, 2001).

We also plan to use multimedia to help students learn the Yami language. We will build an annotated image database as a tool to help the learners understand the meaning of Yami words or expressions. To promote clearer understanding, the database will include both a video clip and several still images to help learners visualize Yami culture.

The interface of the proposed learning environment is built on a web server with a dynamic web page. To establish a more efficient learning environment, all the learning materials are edited into reusable learning objects. The user interface is developed as an adaptive style following Mich et al.'s (2004) PARLING system.

The proposed framework is illustrated in Figure 1.

Figure 1: The integrated framework for the Yami Language preservation project



4 Current progress in development of the e-learning platform

Based on the above-mentioned framework, we have developed the first version of the multimedia e-learning platform for the Yami language. The e-learning platform is developed following the guidelines:

1. the e-learning system should provide an interface simple enough for the beginner;
2. the e-learning system should include different levels of the course materials with the possibility of adding new materials;
3. the e-learning system should provide many visual effects to stimulate interest in learning the Yami language.
4. the e-learning system should provide a comprehensive dictionary and an effective searching tool.

Currently, the Yami language materials collected to build the e-learning platform include:

1. the Yami language course materials by Rau et al. (2005),
2. the sound tracks of each utterance in the forty lessons,
3. images and video clips collected by the three Yami staff members.

The e-learning system is developed as a group of dynamic web pages which are stored in a web page server with a database engine for manipulating the course materials and the learning records.

The current e-learning platform for the Yami language includes the following components:

1. the Yami course materials, classified into three levels: beginner, intermediate and advanced;

in each lesson, the materials include the Yami text, Chinese and English translation, word analysis, grammar, learning activities, and exercises,

2. the Yami dictionary, organized in alphabetic order,
3. the system setting tool which includes the interface setting, the learning log setting, and the web display setting,
4. the online learning activities which students can use to collaboratively practice with their partners,
5. the virtual learning group which allows students to email their learning logs to their own mailbox and the teacher's mailbox.

The e-Learning platform for the Yami language is shown in Figure 2.

Figure 2. The e-learning platform for the Yami language

The screenshot shows the Yami Language Learning Center interface. At the top, there is a navigation bar with the following items: [Home](#), [Beginner](#), [Intermediate](#), [Advance](#), [Dictionary](#), [Learning](#), and [Options](#). Below this, there are language selection options: [English](#) and [中文版](#). The main content area is split into two sections:

- Learning Log:** This section displays a log of learning activities. It starts with "Learning Period lasts: 1 mins 17 seconds". Below this, there are several entries:
 - Lesson 1 : [Text](#)
 - Lesson 2 : [Text](#)
 - Lesson 2 : [Activities](#)
 - Lesson 2 : [Text](#)
 - Lesson 2 : [Exercise](#)
 - Lesson 2 : [Text](#)
 At the bottom of the log, there are buttons for [\[Reset\]](#) and [\[Save Log\]](#), and a "Sub menu" section with a link to [Show Text](#).
- Table of Contents:** This section lists 10 lessons with their respective topics:
 - Lesson 1 [Greetings](#)
 - Lesson 2 [Self-Introduction](#)
 - Lesson 3 [Family Members](#)
 - Lesson 4 [Eating breakfast](#)
 - Lesson 5 [Visiting a school](#)
 - Lesson 6 [In the classroom](#)
 - Lesson 7 [Meeting friends](#)
 - Lesson 8 [At the village](#)
 - Lesson 9 [Staying in a rooming house](#)
 - Lesson 10 [Natural environment](#)

5 Development of Yami language materials: a historical account

The process of building a platform for the e-learning materials needs to be informed by an in-depth investigation of the contexts of language teaching and learning, so that the design of ICT materials can meet the learners' needs. The present researchers discovered quickly that it would not be sufficient to simply make the four volumes of prepared language materials available on the Internet without making drastic modifications to the format. What are the benefits and constraints of e-learning? What on-line support is required? In other words, we need to rethink pedagogical models for e-learning.

Before we propose how to explore the task of developing Yami e-learning courseware from the viewpoints of applied linguistics and computer science, we provide a historical account of the development of Yami language materials and the teaching and learning contexts since 2000.

5.1 From audiolingual to communicative competence

The first Yami textbook (Dong and Rau 2000b) for adult learners was compiled when Rau was teaching a graduate course on Austronesian Linguistics at Providence University. Three students participated in that course, learning the structure of Yami as an introduction to Austronesian languages before they could read and understand journal articles in the field. They were also employed at the same time to help with Yami data collection for a project funded by the Council of Aboriginal Affairs (Dong and Rau 1999, 2000a). The reason that a course on aboriginal languages in Taiwan was offered in an English graduate program is also related to the wider social context where ethnic languages were given opportunities to reverse their language vitality in Taiwan.

After the announcement of the policy of the Ministry of Education (MOE) to offer ethnic languages (including aboriginal languages) as elective courses in grade one beginning on June 4, 1999, many Austronesian language communities were provided with grants, but lacked sufficient training to create teaching materials for primary schools to meet the immediate needs. As a result, the quality of the textbooks created by non-professionals left much room for improvement. Native speakers could provide constructed dialogues and stories in their languages, but had no knowledge of the structure and pedagogy necessary for writing teacher's manuals. Since that gap can only be filled by a unique combination of manpower, the first author, who learned her trade from John Wolff while compiling a Pilipino textbook (Wolff, Centeno and Rau, 1991) collaborated with the third co-author, a Yami language worker, who received training to transcribe and translate Yami speech data at the Institute of Ethnology at

Academia Sinica, to embark on this mission.

The first Yami textbook was heavily influenced by Wolff's audiolingual, self-instruction design but organized by a "functional" syllabus, advocated by Huang (1992). The book begins with a general introduction including principles of pronunciation, followed by ten lessons and a reference grammar. The last lesson is a short story, but the other nine are constructed dialogues based on a plot of a Chinese woman visiting her Yami friend on Orchid Island. Each lesson consists of four sections: (1) dialogues, (2) word analysis, (3) sentence patterns with drills and grammatical explanations, and (4) culture notes. The curriculum design was modeled after the late twentieth century's "Cornell experience" with native speakers leading the drills in L2 and linguists explaining the grammar in L1.

However, with the rapid development of computer technology, any new language teaching materials in the 2000s have been expected to add multimedia components. During 2003-2004, Dong was hired to teach Yami as a required course in the Department of Language Communication at National Dong Hua University on the east coast of Taiwan. She was approached by the department head to plan a new series of textbooks with four volumes to meet the standards for the Austronesian language curriculum, as stipulated by the MOE. During the same time Rau was a visiting scholar at Center for Advanced Research on Language Acquisition (CARLA), University of Minnesota, conducting research on second language acquisition. We rose to the challenge and planned our second Yami textbook (Rau et al 2005).

We laid out three principles in preparing the multimedia materials: (1) selecting interesting topics covering a wide range of genres and structures, (2) adopting a communicative task-based approach closely tied with standards and assessment, and (3) using ICT (information and communication technology) to enrich the contents and modes of presentation. The topics and sequence of grammatical structures followed the MOE standards closely. Similar to our first textbook, the first two volumes comprise constructed dialogues based on a story line of a Chinese student touring Orchid Island. The main character flies back to Taiwan at the end of Volume Two. The third volume includes many dialogues constructed based on the folklore and narratives we collected previously (Rau and Dong, in press). Volume four is a collection of short stories and descriptions of cultural activities ranging from traditional to contemporary events. The second textbook is enriched with extensive comments on grammar, classroom activities, student exercises, and a CD.

We explicitly stated how to use this textbook in the preface. The four volumes are designed as a four-semester "Yami as a second language" course for college level students, meeting four hours per week. The language instructor is foregrounded, leading classroom activities, whereas the linguist is invisible because she has provided all explanations in writing. The students are required to listen to the CD and preview the lesson (including the dialogues,

vocabulary and grammar) before they attend the class. During the first two hours of each lesson, the native speaker can use the classroom activities and assign exercises as homework. When they meet in the third hour, the students may present the results of their assigned homework. In the fourth hour, the instructor can choose to provide feedback on the students' homework or entertain questions.

The two textbooks were field tested with undergraduate students at Dong Hua University and graduate students at Providence University. Dong was invited to teach Yami at Dong Hua University during 2003-2005. She began with seven undergraduate students, two of whom were Yami native speakers. Whereas the five Chinese students were taking it to fulfill language requirements, the two Yami students were learning literacy skills and grammatical structure of their native language. The students met once every week on Saturdays for four hours. It was later changed to once every two weeks for six hours due to the long transportation time for the instructor. She started by focusing on dictation, pronunciation, conversations, and sentence patterns without using any textbook the first semester. Not until the second semester did she use the first Yami textbook (Dong and Rau 2000b) as the major textbook for the course. The grammar description in the book is simple enough that was easily received by the students.

In the second year, five students continued with the course (4 Chinese and one Yami). They began to use the third and fourth volumes of the multimedia materials (Rau et al. 2005). The learning activities and exercises caught their attention. They were especially interested in drawing comics for story retelling as a suggested activity. But the grammar explanation seemed to be too technical and beyond their comprehension.

In the Spring 2005, Dong and Rau co-taught Yami lessons to five graduate students at Providence one hour per week as part of the Austronesian Linguistics seminar, using the first two volumes of the multimedia materials. Dong was responsible for providing Yami language input by modeling pronunciation and supplying vocabulary and sentences to mediate communication in Yami, a modified Community Language Learning approach (CLL, Curran 1976). Rau, on the other hand, played the role of a linguist, explaining grammatical structures in L1. As expected, the graduate students in linguistics picked up the grammar much more quickly than the undergraduate students without such training. They also exceeded the undergraduate students in classroom activities and assigned homework. However, the undergraduate students outperformed the graduate students in oral proficiency and pronunciation. The different course objectives certainly contributed partially to the different results.

While trying to prepare e-learning materials, transforming the traditional language teaching from print materials to on-line multimedia learning, we quickly noticed that the linguist could not simply upload all the word files and let the computer technicians worry about the rest. The

real challenges are really beginning. Thus we need to rethink pedagogical models and redesign our materials for e-learning.

5.2 Proposal for rethinking pedagogical models in e-learning

While a new genre is emerging (Swales 1990), we propose to explore (1) the learning experience, learners' strategies, autonomy, identity, and needs, (2) the effectiveness of the adaptive materials and e-portfolio, and (3) the major genre differences between the traditional language teaching materials and the newly designed e-learning materials. We plan to use nexus analysis (Scollon and Scollon 2004), an ethnographic discourse analysis, as our guide for a qualitative study. In the area of computer technology, we will develop online Yami language course materials and authentic assessment with a rich variety of cultural items, focusing on techniques to adapt the Yami language learning platform. The online platform is designed for both second language acquisition and first language literacy education. The system will automatically adjust the online learning materials presented based on the user's progress. In addition, we will also explore the techniques necessary to develop handheld portable Yami language e-learning materials.

6. Conclusion

This paper describes the ongoing project on Yami language documentation and transmission. Our collaborative work might serve as an example of preserving and promoting endangered language in Taiwan. The integrated framework for archiving, processing, and teaching the Yami language has provided a good model for language preservation. Our experience has also pointed to future studies in rethinking pedagogical models in designing new materials to face the challenges of e-learning.

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Iconicity and Tense, Aspect, and Mood Morphology in Yami

D. Victoria Rau
Providence University
E-mail: dhrau@pu.edu.tw

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Iconicity and Tense, Aspect, and Mood Morphology in Yami¹

D. Victoria Rau
Providence University

Abstract

This study aims to investigate the relationships between the forms and functions of the Tense-Aspect-Modality categories. Bybee's hypothesis (1985) was tested against Yami data to discover how the categories of tense, aspect, and mood interact to support the iconicity hypothesis. The morphemic order and the degree of fusion are not arbitrary, in that the categories that most affect the meanings of the stems occur closest to the stem, whereas those that have least impact on the lexical meaning of the stem occur in the periphery. Greater semantic cohesion of concepts is reflected in a higher degree of fusion in their corresponding expression units.

It was found that although the order of the functional categories follows Bybee's iconicity principle, in that the valence affix is closest to the stem, while the aspect and modality markers are in the periphery, Bybee's definition of terms is not entirely true of Yami and Philippine-type languages in general because there is a mixture of derivation and inflection in the Yami verbal system. The indicative focus affixes are 'derivational', but the non-indicative affixes are 'inflectional'.

Key words: tense, aspect, modality, Yami, iconicity

1. Introduction

This study investigated the tense-aspect-modality (TAM) system in Yami, a Batanic language spoken by approximately 3000 speakers on Orchid Island. Previous research of TAM has been approached from three major perspectives: semantics (Comrie 1976), discourse (Hopper 1982, Schiffrin 1981, Myhill 1992), and cross-linguistic comparison (Bybee 1985). This paper attempts to provide a detailed description of the Yami TAM system from a functional-typological approach (e.g., Givón 1984, Bybee 1985) to uncover the form-meaning relationship of the TAM categories and to test the iconicity principle that form-meaning relationship is not arbitrary. The data for this study comprises fifty texts collected by Dong and Rau (2000b).

The definitions of tense, aspect, and modality have been clearly stated in previous studies (e.g., Comrie 1976, 1985, Chung & Timberlake 1985, Palmer 1986). In this study, Bybee's definitions (1985: 28) are adopted to facilitate future cross-linguistic comparisons in morphology as in (1).

(1)

“Aspect refers to the way the internal temporal constituency of the situation is viewed.

Tense places the situation in time with respect to an established point in time, either the moment of speech, or some other point in time.

Mood² refers to the way the speaker presents the truth of the proposition in the discourse and real-world context. Included here are expressions of probability,

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² Palmer (1986) states that the distinction between mood and modality is similar to that between tense and time, gender and sex. Mood is traditionally restricted to verbal morphology, whereas modality may be expressed by modal verbs or particles. In this current study, we follow the same distinction between mood and modality whenever it is relevant to make the distinctions, but use modality as a cover term for both.

possibility and certainty. Evidentials indicate the source of the information expressed by the proposition and were included under mood.”

2. Bybee’s Principle of Iconicity

Bybee (1985) found cross-linguistic evidence to support her hypothesis that the degree of morpho-phonological fusion of an affix to a stem correlates with the degree of semantic relevance of the affix to the stem. If the meaning of the affix directly affects the meaning of the stem, it tends to be fused with the stem or occurs closest to the stem. For example, the categories of valence, voice, aspect, tense, mood and agreement are ranked for relevance to verbs in that order. In other words, some functional categories are closer to the stem than the others, generally determined by the principle of relevance. A meaning element is considered relevant to another meaning element if the semantic content of the first directly affects or modifies the semantic content of the second.

There is also a strong correspondence between the content of a linguistic unit and the mode of expression it takes. If two meaning elements are highly relevant to one another, they are predicted to have lexical or inflectional expression, but if they are irrelevant to one another, then their combination will be restricted to syntactic expression. Furthermore, the generality of lexical application and the amount of semantic change are also factors predicting expression type. In other words, a very generally applicable semantic notion is most likely to be encoded as an inflectional category, whereas a more specific notion tends to be encoded as derivational.

3. Yami TAM System

Yami TAM system is coded by auxiliary verbs, word order variation, reduplication and affixation. These strategies are widespread throughout both Formosan and Philippine languages to express the meanings discussed in this paper. Starosta (1988: 552) noted that tense marking is marked by an auxiliary verb, which occurs at the beginning of the clause and, as the head of the clause, attracts clitic pronouns in many Formosan languages. Although his analysis is valid in general, auxiliary verbs are only found in a few Formosan languages (e.g., Atayal, Seediq, and Tsou). Furthermore, whether the auxiliary verbs are used to mark tense or mood is subject to one’s interpretations of the TAM categories.

Yami verbal “inflection” was first proposed in Rau (2002a), as represented in Table 1. All the categories, except for the imperative form, (i.e., past, nonpast and subjunctive) distinguish the repetitive aspect with reduplication.

Table 1. Verbal Inflection in Yami (from Rau 2002a)

AF	Indicative		Non-indicative	
	Nonpast	Past	Imperative	Subjunctive
	<i>-om-</i>	<i>ni-om-</i>	∅-	<i>N-</i>
	<i>m-</i>	<i>ni-m-</i>	∅-	<i>N-</i>
NAF				
PF	<i>-en</i>	<i>ni-</i>	<i>-i</i>	<i>N-a</i>
LF	<i>-an</i>	<i>ni-an</i>	<i>-i</i>	<i>N-i</i>
IF	<i>i-</i>	<i>ni-i</i>	<i>i-</i>	<i>N-an</i>

However, Table 1 presents several problems. First, the title of the table might be misleading because the distinction between inflection and derivation was not clearly stated. What the table presents is the indicative and the non-indicative forms of the Yami verbal system. Following Bybee’s definition, the principle of generality distinguishes inflection from derivation. Unlike derivational affixes, the application of the inflectional affixes to the stems is obligatory and without exception. Therefore, all the focus affixes (AF, PF, LF, IF) together with the perfective morpheme *ni-* are derivational, whereas all the imperative and subjunctive forms are inflectional. In other words, there is a mixture of derivation and inflection, an interesting issue that will be pursued in this paper. In a recent typological survey of the Philippine languages, Reid & Liao (2004) insightfully analyzed the focus affixes as intransitive

and transitive affixes. In other words, the focus affixes encode valence.

Second, the grouping of all focus types other than AF into NAF, following Tsuchida's (1976) practice, was not explained at all. In fact, the reason for this division is due to the fact that all such sentences in NAF are syntactically transitive, while the AF constructions are syntactically intransitive.

Third, there are only four focus types in Table 1 with the IF as a cover term for both IF and BF (Benefactive focus). This was not made clear to those who are familiar with the Philippine languages, which typically have five focus types. Ho (1993) claimed *ka-* to be a Time focus in Yami, but this will be analyzed as a nominalizing prefix in this paper, as discussed below, because the syntax of *ka-* does not follow the pattern of the other focus affixes.

Finally, Table 1 only presents the verb paradigm for dynamic verbs, but does not specify the subjunctive patterns that are peculiar to stative verbs, as discussed in Rau & Dong (forthcoming). Further data also show that the imperative form for Instrumental focus should be *-an* instead of *i-*. Thus, it is necessary to revise Table 1 to redress these problems.

The following is the revised version of Table 1 with Ross' (1995) terms juxtaposed in brackets to facilitate cross-linguistic comparisons.

Revised Table 1. Yami Pivot, Mood and Aspect Morphemes

	Indicative				Non-indicative		
	Dynamic Neutral	Dynamic Perfective	Stative Neutral	Stative Perfective	Imperative (Atemporal)	Subjunctive (Projective)	
AF (Actor) Intransitive						Dynamic	Stative
	<i>-om-</i>	<i>ni-om-</i>			∅-	<i>N-</i>	
	<i>m-</i>	<i>ni-m-</i>	<i>ma-</i>		∅-	<i>N-</i>	<i>a-</i>
NAF Transitive							
PF (Undergoer)	<i>-en</i>	<i>ni-</i>	<i>ma-</i>	<i>ni-ma-</i>	<i>-i</i>	<i>N-...-a</i>	<i>a-...-a</i>
LF (Location)	<i>-an</i>	<i>ni-...-an</i>	<i>ka-...-an</i>	<i>ni-ka-...-an</i>	<i>-i</i>	<i>N-...-i</i>	<i>a-...-i</i>
IF, BF (Instrument)	<i>i-</i>	<i>ni-...-i</i>	<i>i-ka-</i>	<i>ni-i-ka-</i>	<i>-an</i>	<i>N-...-an</i>	<i>a-...-an</i>

Yami verbs divide into indicative and non-indicative forms. The indicative forms are unpredictable and hence 'derivational', whereas the non-indicative affixes are formed in a predictable way, and hence manifest 'inflectional' behavior. All verbs are either dynamic or stative. The indicative verbs are either neutral or perfective. Perfective verbs, marked with the prefix *ni-*, have past time reference and are anterior. Neutral verbs are used typically with either present or future time reference. Tense neutralization (Comrie 1985: 102-104) occurs in discourse where the neutral tense form is used for a past event, similar to what is described in Reid (1971) for some Northern Philippine languages and in Jeng (1999) for Bunun discourse.

The non-indicative verbs distinguish between imperative and subjunctive forms. The imperative forms are used exclusively in commands. The subjunctive forms are preceded by the auxiliary verbs *ji* "not, definitely (contrary to the interlocutor's belief)" and *to* "then." An auxiliary verb in Yami occurs at the beginning of the clause and, as the head of the clause, attracts clitic pronouns. As indicated in Revised Table 1 above, the non-indicative subjunctive forms distinguish dynamic verbs from stative verbs. The dynamic verbs are all preceded by *N-*. The set of rules of morphophonemics of *N-* is discussed in the following paragraphs.

3.1 Morphophonemics of *N-*

The affix that is labeled as *N-* is an assimilating nasal, with rules for deletion of certain

consonants that have been assimilated. These rules result in a nasal initial consonant on the verb. However the assimilating nasal only appears when the verb is dynamic subjunctive. When the verb is stative subjunctive, no assimilation or deletion processes are observed, but a prefix *a-* is attached to the stem instead. The morphophonemics of *N-* following *to* and *ji* was first discussed in Rau (2002a) but has been slightly revised since then based on new evidence.

3.1.1 Stative Verb Stems

The stative verb stems include the ones prefixed with *ma-* (AF) to form “adjective” like verbs, *ma-* (PF) expressing potential/abilitative mood, verbs of accidental or unintentional actions circumfixed with *ka-...-an* (LF), and *ika-* prefix (IF, BF) referring to reasons. The prefix *ma-* is changed to *a-* in the subjunctive forms, while those with *-an* and *i-* are changed to *-i* and *-an* respectively following the auxiliary verbs *to* ‘then’ or *ji* ‘not’, as illustrated in the following examples in (2):

- (2) *ma-téneng* > *a-teneng* ‘smart’
ma-sinmo > *a-sinmo-a* ‘meet someone’
ma-cita > *a-cita-a* > *a-cita* ‘just see someone or something’
ka-teneng-an > *a-teneng-i* ‘just know something’
i-ka-ráhet > *a-rahét-an* ‘worry about something’

3.1.2 Dynamic Verb Stems

The dynamic verb stems refer to the rest of the verbs in Yami. The morphophonemics of *N-* of the dynamic verb stems is presented in Table 2.

Table 2. Morphophonemics of *N-* of dynamic verb stems

Stem beginning with	Phoneme ³	Change to
[+alveolar]	/s/ and /t/	/n/
[+palatal]	/c/	/n/ ⁴
[+labial]	/p/	/m/
[+velar]	/k/	/ng/ = [ŋ]
[+vocalic]	/i/, /a/, and /o/	/ng/ = [ŋ] + vowel

Table 2 indicates that (1) *N-* changes stems beginning with [+coronal], such as /s/, /t/ and /c/, to /n/; (2) *N-* changes stems beginning with [+labial], such as /p/, to /m/; (3) *N-* changes stems beginning with [+velar], such as /k/, to /ŋ/; and (4) If the stem begins with a vowel, /ŋ/ is prefixed to the vowel stem. Verb stems beginning with all the other consonants do not undergo any changes of *N-*.

Examples of correspondences between the dynamic verb stems and their subjunctive forms are illustrated in Table 3:

³ Yami has twenty consonants and four vowels, as represented in its orthography in the following tables (i) and (ii). In our previous study (Dong & Rau 2000a), the palatal nasal /ɲ/ was not included in the chart. Prof. Lawrence Reid (personal communication) suggested there might be four contrastive nasals /m, n, ɲ, ŋ/ in Yami, as well as in Ivatan. But an analysis of Yami phonology (Rau & Dong, forthcoming), including the phonemic status of the palatal nasal and distribution of the glottal stop, indicates that palatal nasal is an allophone of /n/ occurring before the front vowel /i/. Thus, the palatal nasal [ɲ] is not included in the inventory of the Yami consonants. The Yami stress pattern is briefly discussed in Rau & Dong (forthcoming), although a complete analysis of the relationship between stress and morphophonemic processes is yet to be worked out. Stress is phonemic in Yami and thus word stresses are marked in all examples.

Table i. Yami Consonants

	Labial	Alveolar	Retroflex	Palatal	Velar	Uvular	Glottal
Stop	p, b	t	d		k, g		ʔ
Nasal	m	n			ng		
Fricative	v		s, r			h	
Lateral		l					
Affricate				c, j			
Trill		z					
Glide	w			y			

Table ii. Yami vowels

	Front	Central	Back
High	i		o
Mid		e	
Low		a	

⁴ Rau (2002a) combined /c/ and /s, t/ under the same category [+coronal]. But Prof. Lawrence Reid (personal communication) suggested that /c/ be distinguished from /s/ and /t/ in their morphophonemics, thus the subjunctive form for *ciowciow* “chase” should be *ɲiowciowa*. However, there is evidence to show that [ɲ] is a conditioned allophone of /n/ and always occurs before the high vowel /i/. Thus, there is no need to change the original analysis. The subjunctive form for *ciowciow* “chase” is written as *niohciowa*.

Table 3. Indicative and subjunctive forms of dynamic verb stems

Stem	Indicative Form	Subjunctive Form
[+alveolar]	<i>singkad-an</i>	<i>ningkaj-i</i> ‘see clearly’
	<i>a-spang-an</i> ⁵	<i>a-npang-i</i> ‘meet’
	<i>i-toro</i>	<i>noro-an</i> ‘give’
[+palatal]	<i>cita-en</i>	<i>nita-a (nita)</i> ‘look at’
[+labial]	<i>a-pno-en</i>	<i>a-mno-a</i> ‘fill’
[+velar]	<i>i-kelaw</i>	<i>ngelaw-an</i> ‘surprise’
[+vocalic]	<i>itkeh</i>	<i>ngitkeh</i> ‘sleep’
	<i>amizing-en</i>	<i>ngamizing-a</i> ‘listen to’
	<i>onot-an</i>	<i>ngonoc-i</i> ‘follow’

4. Tense

Tense is not a grammatical category in Yami. Yami verb stems are unmarked for tense in discourse when the time frame is clear from the context. But if the time frame needs to be established, the past-future time contrast is distinguished in the WH question word with the prefix *ka-* ‘past’ and *ma-* ‘future’. In addition, the conjunction *no* ‘when or if (invisible)’ and *si* ‘when or if (visible)’ also help mark the time distinctions. Therefore, *no ka-* refers to past time, whereas *si ma-* and *no ma-* refer to ‘in the near future’ and ‘in the future, invisible or uncertain’ respectively, as illustrated in (3a)-(3c) ⁶.

- (3a) *no ka-ngo o k-ai mo?*
 When.invisible PA-what Nom NOM-come 2.S.GEN
 ‘When was your arrival?’
- (3b) *si ma-ngo am, m-ai ka?*
 When.visible FUT-what PAR AF-come 2.S.NOM
 ‘When will you come (in the near future)?’
- (3c) *no ma-ngo am, m-ai ka?*
 When.invisible FUT-what PAR AF-come 2.S.NOM
 ‘When will you come (in the future, invisible or uncertain)?’

The prefixes are also added to time adverbials to distinguish past from future, such as *nokakoyab* ‘yesterday’, *siciaraw ya* ‘today’, and *simaraw* ‘tomorrow’.

4.1 Tense Neutralization

Tense neutralization occurs in Yami narratives where the unmarked tense form is used for a past event when the time reference is pragmatically clear. In the following story⁷, the narrator first sets the time frame of the story as the old school days as in (4-1). For the rest of

⁵ The *a-*prefix occurs in two types of monosyllabic bound roots (Rau & Dong, forthcoming). Type A contains consonant clusters in the bound roots that violate the canonical syllable structure, e.g., *-bhes ~ a-bhes* ‘throw a stone at someone’. Type B contains either a CVC bound root, e.g., *-kan ~ a-kan* ‘eat’ or a bound root with a glide, e.g., *-vias ~ a-vias* ‘sweep’.

⁶ A list of the abbreviations are as follows:

1= first person	2= second person	3= third person	AF= agent focus
AUX= auxiliary verb	C= consonant	CAU= causative	D= deictic
EMP= emphatic	EXCL= exclusive	FUT= future	GEN= genitive
HM= hesitation marker	IF= instrumental focus	IMP= imperative	INCL= inclusive
LIN= linker	LF= Locative focus	LOC= locative	MOD= modality
N= archiphoneme N-	NEG= negative	NM=nominalization marker	
NOM= nominative	OBL= oblique	P= plural	PA= past/perfective
PAR= particle	PF= patient focus	PN= personal name	Q= question
REC= reciprocal	RED= reduplication	RP= recent perfective	S= singular
SUB= subjunctive	SV= stative verb	VP= verb prefix	VS= verb suffix

⁷ This story is entitled ‘Playing Possum’, told by Si Apen Kotan, male, 75 years old in Yayo Village.

the story, the unmarked tense form is used for the story line. The narrator regularly uses *miratateng am* ‘later on’ and its variants *tateng am* or *ratateng am* or *mownay am* ‘a moment later’ to reset the time frame in the past. Future is also inferred from the context by the unmarked word order (predicate initial), as shown in (4-2).

- (4-1) *a no ka-pi-vat-vatek namen rana,*
 PAR when.invisible PA-VP-RED-write 1.P.EXCL.GEN already
manga-kakteh am,
 P-older.sibling PAR
 ‘This happened when we were students, dear brothers.’
- (4-2) “*mi ta na mi-vat-vatek*”
 go 1P. INCL.NOM already AF-RED-write
 “Let’s go to school! (Lit. We will go to school now.)”
- (4-3) *ko-an ko si Apen Sidongen am,*
 say-LF 1.S.GEN NOM Grandpa PN PAR
 ‘I said to Grandpa Sidongen.’
- (4-4) “*noon*”,
 OK
 “OK!”
- (4-5) *m-angay namen a,*
 AF-go 1.P.EXCL.NOM PAR
 ‘We went.’
- (4-6) *ka-ian namen⁸ rana do pi-vate-vatek-an a,*
 then-be.at 1.P.EXCL.GEN already LOC VP-PRED-write-LOC PAR
 ‘And then we were at the school.’
- (4-7) *tateng am, nanao-en na yamen am,*
 later PAR teach-PF 3.S.GEN 1.P.EXCL.NOM PAR
 ‘Later on, he began to teach us.’

4.2 Aspect

Aspect refers to the way the internal temporal constituency of the situation is viewed. Yami aspect makes the following semantic distinctions: [+/-perfective], [+/-repetitive], and [+/-continuous]. The meanings behind each aspect and the expression units used to code each aspect is presented in Table 4.

⁸ The first person plural exclusive bound pronoun has the same form *namen* for both the nominative and the genitive cases. The Yami pronominal system is presented in Table (iii):

Table iii. Yami personal pronouns (adapted from Rau & Dong, forthcoming)

	Nominative (Bound)	Nominative (Free)	Genitive (Bound)	Genitive (Free)	Locative (Free)
1S	<i>ko</i>	<i>yaken</i>	<i>ko</i>	<i>niaken</i>	<i>jiaken</i>
2S	<i>ka</i>	<i>imo</i>	<i>mo</i>	<i>nimo</i>	<i>jimo</i>
3S	<i>ya</i>	<i>iya</i>	<i>na</i>	<i>nia</i>	<i>jia</i>
1PEXCL	<i>namen</i>	<i>yamen</i>	<i>namen</i>	<i>niamen</i>	<i>jiamen</i>
1PINCL	<i>ta, tamo,</i> <i>takamo</i>	<i>yaten</i>	<i>ta</i>	<i>niaten</i>	<i>jiaten</i>
2P	<i>kamo, kanio</i>	<i>inio</i>	<i>nio</i>	<i>ninio</i>	<i>jinio</i>
3P	<i>sia</i>	<i>sira</i>	<i>da</i>	<i>nira</i>	<i>jira</i>

Table 4. Meanings and Expression Units for Yami Aspect Markers

Aspect	Expression	Example
Perfective	<i>ni-</i>	<i>ni-koman</i> ‘ate, have eaten’
Recent Perfective	<i>ka-</i>	<i>ka-rateng</i> ‘recently arrived’
Unique/Limited	<i>ka-</i>	<i>ka-pi-hanhan</i> ‘only depend on s.o.’
Conjunctive	<i>ka-</i>	<i>ka-pad</i> ‘afterwards drop s.t.’
Immediate Sequential Activity	<i>to</i> + inflection	<i>to mi-sinmo</i> ‘then meet’
Continuous	<i>to</i> + inflection	<i>to lavi</i> ‘keep crying’
Repetitive	Reduplication	<i>ni-manga-mangay</i> ‘went repeatedly’

4.2.1 Perfective *ni-*

Perfective aspect *ni-* is a reflex of *<in> in Yami, a phenomenon shared by her sister language Ivatan (Hidalgo and Hidalgo 1971:53, 70). Unlike most of the languages of the Northern Philippines, which require focus affixation prior to infixation of <in> (Reid 1992: 77), Yami demonstrates an innovation of the morpheme order *ni-om-*. Ivatan and Itbayaten, on the other hand, reflect the reconstructed *<um><in> order, as in *tominbay* ‘answered’, *tominwaw* ‘appeared’ (Larson 1986: 160, 165, Reid 1992).

In an agent focus construction, *ni-* occurs almost exclusively prior to focus affixation. But the archaic infix <in> also occurs in the language, such as *minaN-* (<*m-in-aN*) in *m-in-a-nakaw* ‘stole’ (< *takaw* ‘steal’).

In a NAF construction, *ni-* also occurs at the left end of a word. But the archaic forms infixed with *-in-* tend to become nominalized⁹, as illustrated in (5).

- (5) *c-in-inon* ‘textile’ (< *cinon* ‘weaving’, *t-om-inon* ‘to weave’)
c-in-oat ‘heated water’ (< *koat* ‘hot’)
p-in-atodah ‘accepted taros as a gift from a singing party’ (< *todah* ‘accept’)
s-in-avat ‘collected seafood’ (< *savat* ‘collect’)

The prefix *ni-* marks the events that occur before the time of speech in absolute tense or another event in relative tense, as illustrated in (6-1~6-3).

- (6-1) S: *Ina, ko na ni-m-ai.*
 Mom 1.S.NOM already PA-AF-come
 ‘Mom, I came back.’
- (6-2) M: *Akes kong! ko pa mi-vatvatek,*
 Grandma greeting 1.S.NOM still AF-study
ko ka-ipi-doa rana
 1.S.NOM VP-time-two already
ya ni-m-ai do pongso nio.
 AUX PA-AF-come LOC island 2.P.GEN
 ‘How are you, Grandma? I am still a student. This is the second time I have come to your island.’
- (6-3) A: *asio ka ma-tenéng do ciriciring namen*
 how_come 2.S.NOM SV-be.intelligent LOC language 1.P.EXCL.GEN
ya? sino o ya ni-om-nanao jimo?
 D who NOM AUX PA-AF-teach 2.S.LOC
 ‘How can you be so smart to speak our language? Who taught you?’

The prefix *ni-* also refers to anteriority and thus can be interpreted as perfect, as in (6-2).

⁹ The reason why the so-called “archaic NAF” forms have not changed the position of *-in-* to word-initial *ni-* is probably because they were nouns to begin with. Starosta-Pawley-Reid (1982) claimed that such forms were originally nouns, and that they became verbs as a result of the development of the “focus system”.

Several particles following verbs refer to the TAM categories, a phenomenon commonly found in the Philippine languages, such as Tagalog (Wolff, Centeno, and Rau 1991). For example, *pa* ‘yet, still’ and *rana* ‘already’ in (6-2) and its shorter alternant *na* ‘already’¹⁰ in (6-1).

4.2.2 Recent Perfective: *ka-*

The verb prefix *ka-* encoding recent perfective in Yami is similar to Tagalog recent perfective *ka-* ‘have just done’ as in *ka-rá-rating* ‘have just arrived’ and *ka-bíbili* ‘have just bought’ (Schachter & Otones 1972: 371, Wolff, Centeno and Rau 1991: 602). However, this analysis is not without its problem (Lawrence Reid, personal communication).

The major problem is that what appears at first glance to be an S of these constructions, and is translated as such in English translations, is expressed not by a Nominative NP but by a Genitive NP. The other problem is that there is no way to prove that they are in fact derived from AF constructions with all the focus affixation deleted. In fact, the *ka-* prefix can also be interpreted to form a noun. If a nominal interpretation is adopted, the beginning of the following sentence (7) could be translated as ‘on his arrival at their house’.

- (7) *ka-raténg na do vahay da am,*
 RP-arrive 3.S.GEN LOC house 3.P.GEN PAR
 “*iwang-i o pazezevengen*” *ko-an na o mavakes na.* (10, p. 205)
 open-IMP.LF NOM door say-LF 3.S.GEN NOM wife 3.S.GEN
 ‘As soon as he arrived at their house, he said to his wife, “Open the door!”’

4.2.2 Unique/Limited: *ka-*¹¹

The prefix *ka-* can function as a unique/limited aspect marker to express ‘only’. The verb inflection patterns are the same as that of the recent perfective *ka-*. The case marking of the extended core argument in a single complement actor focus intransitive construction is coded by an oblique marker (Liao, 2002), as illustrated in (8), while the A and O in a patient focus transitive construction are both coded by Genitives as in (9).

- (8) *ka-tangáy saon so m-eyngen ori am.* (69, p. 310)
 only-face like_that OBL SV-sick that PAR
 ‘(They) could only look at the sick person.’
- (9) *ta o ni-mi-zaza tao am akmán sang,*
 because NOM PA-AF-injure person PAR like that
ka-pi-hanhan na rana no tao-do-to an. (30, p. 99)
 only-VP-depend 3.S.GEN already GEN heavenly.father PAR
 ‘For a person injured like that, she could only depend on God to heal her.’

4.2.3. Conjunctive: *ka-*¹²

The clauses beginning with the conjunctive *ka-* ‘afterwards’ always follow a previous event to connect subsequent events. The morphosyntax of the conjunctive *ka-* is the same as the recent perfective *ka-* and the unique *ka-*, as discussed in Sections 4.2.1 and 4.2.2. With the proper syntax, they can be interpreted as nouns too. The following examples in (10)-(11) illustrate their use.

- (10) *to namen vací-a, ka-pa-omon namen sia*
 then 1.P.EXCL.GEN break-PF.SUB afterwards-VP-hide 1.P.EXCL.GEN this.OBL
do tana so oo da ori a (14, p. 77)
 LOC soil OBL head 3.P.GEN this PAR
 ‘We broke (the reeds) in half and hid their heads in the soil.’

¹⁰ The particle *na* ‘already’ shares many similar functions of the Mandarin Chinese sentence final particle *le*. The discussion of the particles related to tense and aspect in Yami is worth another paper.

¹¹ This can be interpreted as nominal constructions too, as discussed in 4.2.1.

¹² The conjunctive *ka-* might be a case of inversion (Givón, 1994) and requires further investigation.

- (11) *s-om-ivoz sira do kahasan am,*
 <AF>slip_into 3.P.NOM LOC mountain PAR
mang-otas so raon a ka-ptad na nia,
 AF-pick OBL leaf LIN afterwards-drop 3.S.GEN this.GEN
ikadoa na no raon am,
 second 3.S.GEN GEN leaf PAR
kotas-en na ka-ptad na nia. (19, p. 191)
 pick-PF 3.S.GEN afterwards-drop 3.S.GEN this.GEN
 ‘After they went up the mountain, s/he picked a (taro) leaf. Having dropped it, (s/he) picked a second (taro) leaf. S/he picked it, (and) immediately dropped it.’

4.2.4 Immediate Sequential Activity: *to*

The interplay between the perfective for ‘foregrounded’ event lines and imperfective for ‘backgrounded’ scene settings and descriptions has long been observed in previous research on other languages (e.g., Hopper 1979ab, 1982, Hopper & Thompson 1980, Rafferty, 1982, Rau 1997). In Yami, the perfectivity (i.e., immediate sequential activity) encoded by the auxiliary verb *to* ‘then’ occurs in foregrounded clauses.

In my previous study on Yami discourse functions (Rau, 2002a), I observed that the auxiliary verbs *to* “then” and *kato* “and then” and prefix *ka-* “afterwards” seem to occur frequently to indicate sequential events. On the other hand, the auxiliary verb *ya* tends to put other clauses into background, serving as either explanations or evaluations. Clauses containing *ni-* verbs in narratives tend to be pushed toward backgrounding because they serve as explanations and occur frequently in clausal nominalization or counter-sequentially.

The auxiliary *to* as an aspect marker, referring to immediate sequential activity, encodes the complicating actions in well-developed personal experience stories (Labov & Waletzky 1967). Let’s look at the following two excerpts of the story “Playing Possum”, the orientation of which was previously illustrated in (4). The story describes how a Yami boy fights with his Japanese teacher. After the orientation of the story is established, the following complicating actions are marked with the aspect marker *to*, as in (12).

- ...
- (12-1) *sipzot-an na rana do atang ko a,*
 hit-LF 3.S.GEN already LOC buttocks 1.S.GEN PAR
 ‘He (the teacher) hit me on my buttocks.’
- (12-2) *mi-o-ya-óya ko am,*
 AF-RED-angry 1.S.NOM PAR
 ‘I (the boy) was very angry.’
- (12-3) *to ko rakep-a jia o si-sipzot na am,*
 then 1.S.GEN grab-PF.SUB 3.S.LOC NOM RED-hit 3.S.GEN PAR
 ‘I grabbed his rod from him.’
- (12-4) *to namen mi-pi-pazáng-i a,*
 then 1.P. EXCL.GEN REC-VP-drag-LF.SUB PAR
 ‘We were fighting with each other (for control of the rod).’
- ...
- (12-5) “*y-angay ko imo ’alio-en do obo-wbot-an,*
 IF-go 1.S.GEN 2.S.NOM load-PF LOC RED-defecate-LOC
do ta-taci-an”,
 LOC RED-urinate-LOC
 ‘I (the teacher) will throw you into a manure pit and a urine pond.’”
- (12-6) *to na i ’a-lió-a yaken am,*
 then 3.S.GEN HM load-PF.SUB 1.S.NOM PAR
 ‘Then he (the teacher) picked me up [lit. loaded me on his shoulder].’
- (12-7) *to na i pa-telém-a yaken am,*
 then 3.S.GEN HM VP-jump-PF.SUB 1.S.NOM PAR
 ‘Then he threw me.’

- (12-8) *to ko i ma-na-navak do ráko a ranom a*
 then 1.S.NOM HM N-RED-middle LOC big LIN water LIN
sombing (obot) no tao a,
 feces (feces) GEN people PAR
 ‘Then I was in the middle of a manure pit.’
- (12-9) *to ko na ¹³sabóy-a am,*
 then 1.S.GEN already splash-PF.SUB PAR
 ‘Then I splashed (water).’
- (12-10) “*ana! a ya s-om-agpian!*”
 Hey PAR AUX <AF>crazy
 ‘Man! (He, the boy) is crazy!’
- (12-11) *ratateng am, to ko ¹⁴sabóy-a am,*
 later PAR then 1.S.GEN splash-PF.SUB PAR
 ‘Later on, I (the boy) splashed (water).’
- (12-12) *to-da¹⁵ a-ciówciow ta.*
 then-already N.SV-chase because
 ‘Then (the teacher) ran away because of it.’

All the clauses preceded by *to* resemble the historical present tense, a tense typically reserved for narrative events within the story world itself (Schiffrin 1981, 1994: 81). It increases the intensity of the speech events by using a set of subjunctive verb inflections. The switch between the indicative (12-1)-(12-2) and the non-indicative verb forms (12-3)-(12-4) has a discourse function to separate episodes, as does the switch between the HP and the preterite in conversations (Wolfson 1979).

4.2.5 Continuous

The auxiliary verb *to* ‘continuously, keep doing such and such’ is also used to code the continuous (durative) aspect, as illustrated in the following examples (13)-(14):

- (13) *ma-o-óyat a tao am, to ’ákaw sira¹⁶.* (10, p. 232)
 SV-RED-strength LIN person PAR AUX cultivate 3.P.NOM
 ‘Industrious people would continuously cultivate their land.’
- (14) “*asio ka ya, mo kehakay,*
 strange 2.S.NOM that 2.S.GEN male.friend
a to mapá-sala so i-panci” (19, p. 201)
 PAR AUX CAU-wrong OBL IF-speak
 ‘My friend, why did you keep mispronouncing (the fish names)?’

4.2.6. Repetitive

The perfective, neutral, and subjunctive verbal categories all distinguish the repetitive (frequency) aspect with reduplication. In Rau & Dong (forthcoming), seven forms of reduplication in Yami were identified: 1) CV-, 2) CVCV-, 3) CVC-, 4) CVV-, 5) VCV-, 6) –V, 7) –CCV. Noun stems are reduplicated to refer to plurality, extremity, variety, scattering, or toys. Verb stems are reduplicated to refer to an instrument that is used to do a certain action repeatedly, the result of a repeated action, or the place where the repeated action occurs. This indicates “repetition” is the core meaning of reduplication for Yami verbs.

The reduplicated part is typically the root of a word minus any final consonant that the root may have, such as *ni-gesa-gesah* ‘things that were thrown’ (< *gesah* ‘throw’), *mi-kala-kala*

¹³ There is a free variation between *saboy-a* and *naboy-a* ‘splash s.t.’ with the latter following the N-morphophonemics.

¹⁴ See footnote 13.

¹⁵ The *da* of *toda* is the adverbial clitic **da* ‘already’ which now forms the first syllable of Yami *rana* ‘already’.

¹⁶ The auxiliary *to*, similar to *ya*, only attracts bound pronouns. Thus the free pronoun *sira* is not moved.

‘search’ (< *kala* ‘look for’), *ka-kan-an* ‘plate’ (< *kan* ‘eat’), and *ni-maci-vaha-vahay* ‘got married’ (< *vahay* ‘house’). But if the root is prefixed with *a-*, the perfective prefix *ni-* is reduplicated, as illustrated in the following example (15).

- (15) *ni-ni-ahap* ‘everything that was taken’ (< *ahap* ‘take’)
ni-ni-akot ‘everything that was moved’ (< *akot* ‘move’)
ni-ni-akan ‘everything that was eaten’ (< *akan* ‘eat’)
ni-ni-angay ‘everywhere that one has been to’ (< *angay* ‘go’)
ni-ni-avay ‘all were scolded’ (< *avay* ‘scold’)

When the root is prefixed to form a new meaning, the new stem can become the base for reduplication. When *paN-* ‘distribution’ is prefixed to form a new stem, the morphophonemics of *N-* can apply to the stem first before reduplication as in (16), or the reduplication can apply to the root first before affixation and morphophonemics of *paN-* as in (17).

- (16) *ka-pa-ngota-ngotas* ‘then collect leaves repeatedly’
(*ka-pa-ngota-ngotas* < *ka-pa-ngotas* < *ka-* + *paN-* + *kotas*)
(17) *ni-pa-niri-ciring* ‘cursed s.o.’
(*ni-pa-niri-ciring* < *ni-paN-ciri-ciring* < *ni-*+*paN-*+*ciring*)

4.3 Modality

Modality concerns the subjective evaluation of the speaker towards an event. According to Bybee’s definitions (1985: 165-166), mood is a marker on the verb that signals what the speaker is doing with the proposition. Included under her definition are epistemic modalities, ranging from certainty to probability to possibility. Excluded from the definition are the “agent-oriented” modalities, such as deontic modalities, markers of ability, desire and intention since they express conditions pertaining to the agent that are in effect with respect to the main predication. In the following sections, we discuss modality expressed by verbal morphology, auxiliaries, and word order variation in Yami.

Yami modality makes the following distinctions: (1) negative, (2) emphatic, and (3) proximity. The negative modality is expressed with the auxiliary *ji* followed by verbal inflection, which is also used to express emphasis with the proper contexts. Proximity is expressed by auxiliary *ya* or fronting the bound pronominal.

4.3.1 Negative

Before we discuss how negation is formed with the auxiliary *ji*, we need to first give a picture of the Yami verb classification with all the TAM categories included.

Yami verbs are first divided into stative and dynamic stems. The stative verbs are composed of stems affixed with *ma-*, while the dynamic stems include all the transitive or NAF (-en, -an, i-) and intransitive affixes or AF (m-). Then the distinction is made between the indicative and the non-indicative verb stems. The non-indicative verb stems can be preceded by the auxiliary *to* ‘then’ as an aspect marker and undergo morphophonemic alternations. The indicative verb stems can be further divided between neutral and perfective. Finally, all the lowest levels can be further distinguished as positive or negative modality, as illustrated in Figure 1. This figure indicates that valence (stative vs. dynamic) is most relevant to the verb and hence occurs closest to the stem, followed by aspect (perfective vs. neutral) and modality (positive vs. negative). This follows Bybee’s principle of iconicity: If linguistic expression is iconic, then we would predict that the categories that are more relevant to the verb will occur closer to the stem than those that are less relevant. Therefore, valence occurs closer to the stem than modality.

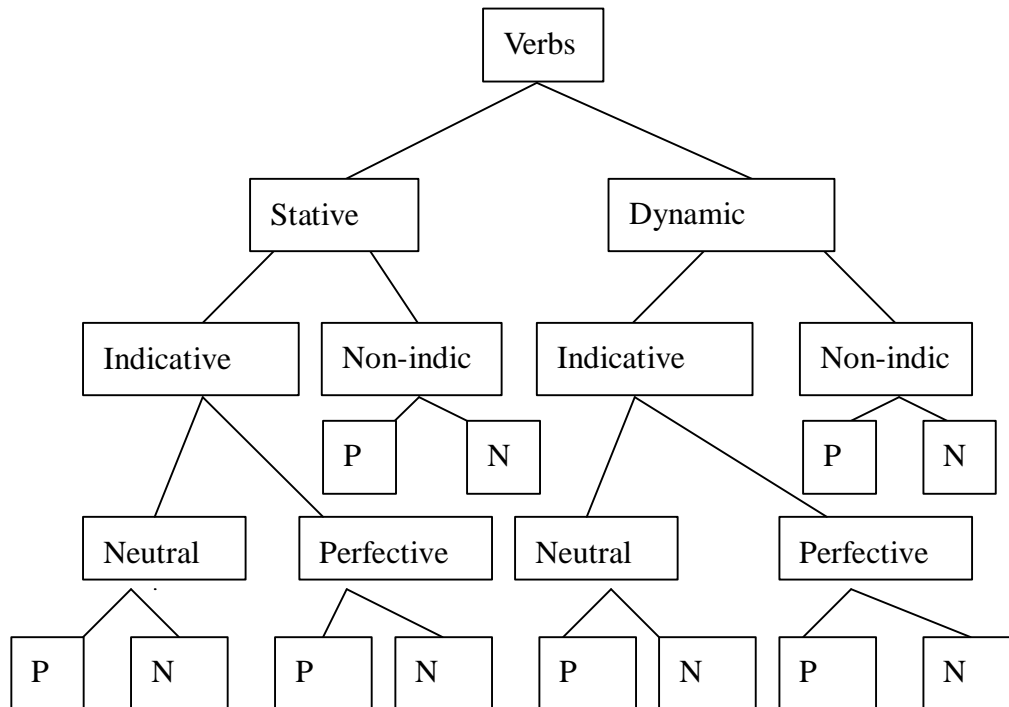


Figure 1. Verb Classification in Yami
P= Positive, N= Negative

Now, let's take the verb root *cita* 'see' as an example to illustrate word formation in Figure 2. A distinction between stative and dynamic is first made, such as *ma-cita* 'can see it' and *cita-en* 'look at it'. The auxiliary *to* can be further added to the new verb stems to form *to a-cita* (< *a-cita-a*) 'just see it' and *to nita* (< *nita-a*) 'just look at it'. The verb stem without *to* preceding it can be further distinguished between perfective (i.e., *ni-ma-cita* 'could see it' and *ni-cita* 'looked at it') and neutral, while the verb stem with *to* can be divided between positive and negative (i.e., *ji to a-cita* 'really¹⁷ see it', *ji to nita* 'do not look at it shortly or do not look at it continuously'). Finally, all the perfective and neutral verb stems can be combined with the negative markers to form stative *ji a-cita* 'cannot see it', *ji ni-ma-cita* 'could not see it', and dynamic *ji nita* 'do not look at it', *ji ni-cita* 'did not look at it'.

The order of these morphemes and auxiliary verbs follows Bybee's principle of relevance in that the prefix *ma-*, expressing valence, is closest to the root, surrounded by the perfective aspect prefix *ni-*, and with the negative marker *ji* occurring at the leftmost end, as in *ji ni-ma-cita* 'did not see it'.

¹⁷ The negative *ji* can be interpreted as emphatic with the proper contexts and intonation, as discussed in Section 4.3.2.

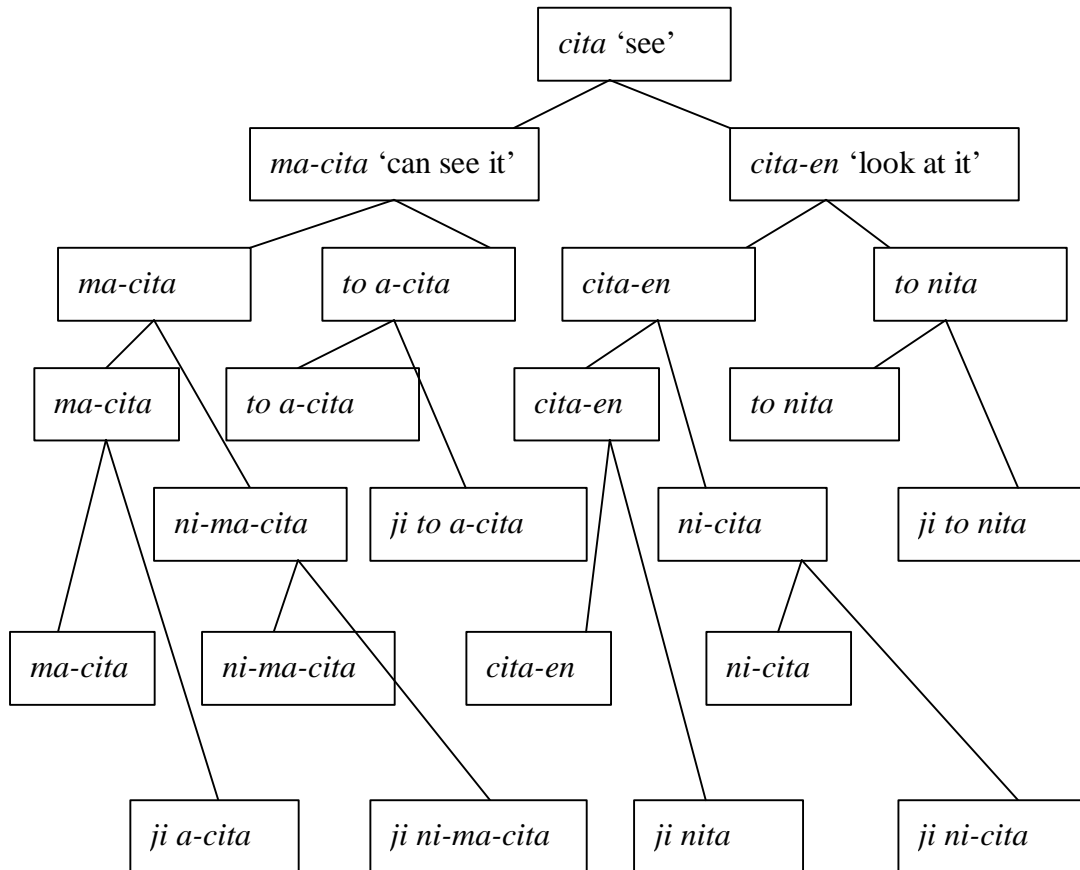


Figure 2. Derivation and Inflection for the Word *Cita* ‘See’

4.3.2 Emphatic

The negative markers *ji* can be interpreted as positive and emphatic if the utterance ends with a rising intonation or when the contexts are clear. The following example (18-1) is positive/emphatic with a rising intonation whereas (18-2) is negative with a falling intonation.

(18-1) *ko ji á-cita imo.* (Rising intonation)
 1.S.GEN NEG N.SV-see.PF 2.S.NOM

‘I can see you (contrary to your belief).’

(18-2) *ko ji á-cita imo.* (Falling intonation)
 1.S.GEN NEG N.SV-see.PF 2.S.NOM

‘I can’t see you.’

4.3.2.1 *Ji abo* ‘absolutely not’

The auxiliary *ji* in *ji abo* ‘absolutely not’ frequently takes its emphatic meaning. The nominalizing prefix *ka-* is required following *ji abo*, as in (19).

(19) *ji abó ka-paka-hap da so siko-siko da*
 EMP no NM-can-take 3.P.GEN OBL RED-cane 3.P.GEN
no ka-mang-anak-an da no ni-manci niaken
 GEN NF-VF-child-NF 3.P.GEN GEN PA-AF-say 1.S.GEN
a ji á-pin-pintek am. (31, p. 33)
 LIN NEG N.SV-RED-long.life PAR

‘The descendents of those who used to say I would not live long will die early before they are old enough to use canes.’

Ji abo as an adverb can modify the clauses led by the nominalized auxiliaries *ka-to* and *ka-ji*. The verb inflection *N-...-an* is governed by *kato/kaji*. The morphophonemics of *N-* follows the pattern discussed in 3.1. Except for example (22), where *ji* is interpreted as emphatic, *ji* in (20)-(21) expresses the negative.

- (20) “*ji abó ka-to ko i maci-vava-an jimo*
 EMP no NM-then 1.S.GEN HM N.VP-carry-NF 2.S.LOC
do akma sia ka-lakalahetan no rarahan am”. (50, p. 109)
 LOC like OBL.this NF-bad.place GEN road PAR
 ‘I definitely cannot let you carry me with the road in such bad condition.’”
- (21) *ji abó ka-ji ko ang-sem-an so mata mo* (10, p. 165)
 EMP no NOM-NEG 1.S.GEN N-raw.meat-NF OBL eye 2.S.GEN
 ‘I will definitely (lit. by no means not eating) eat your eyes raw.’
- (22) *ji abó ka-ji ko a-viay-an*
 EMP no NM-EMP 1.S.NOM N.SV-live-NF
a si mi-pono o enep ya. (6, p. 47)
 LIN if AF-full NOM tidewater that
 ‘If the tide rises, I definitely won’t live.’

4.3.3 Auxiliary verb *ya*

The auxiliary verb *ya*, grammaticalized from the demonstrative or deictic ‘this, here’, is used to draw attention to temporal and spatial proximity. The third person singular nominative pronoun *ya* is also developed from the deictic, albeit through a different path of grammaticalization.

Ya was analyzed as a tense marker by Ho (1993). According to her analysis (1993:130), when *ya* occurs with a non-past verb, it provides a present progressive or a future reading as in (23a)¹⁸. But when *ya* occurs with a past-tense verb, it has a present perfect interpretation in (23b).

- (23a) *ya m-itkeh si Mapapo.*
 AUX AF-sleep NOM PN
 ‘Mapapo is sleeping. Or Mapapo will go to sleep.’
- (23b) *ya ni-man-linas si Mapapo so rasey.*
 AUX PA-AF-wipe NOM PN OBL mat
 ‘Mapapo has wiped mats.’

However, Ho’s analysis could not provide a correct analysis without examining discourse. A more complete analysis of the discourse functions of *ya* can be found in Rau (2002a). It is probably more accurate to analyze *ya* as a deictic marker because its function is to draw attention to spatial and temporal proximity of the event. This phenomenon is similar to the functions of auxiliaries in Tsou and thus *ya* should be identified as marking mood¹⁹.

We begin by illustrating how *ya* functions to mark temporal proximity. In the following passage of a procedural text in (24), the speaker contrasts the past practices with the current ones by using *ya* to refer to the present.

¹⁸ (23a) and (23b) are Ho’s examples with the orthography changed to follow Rau & Dong’s system (forthcoming).

¹⁹ Suggested by one of the anonymous reviewers.

(24) *ano mi-kan-kanen rana am,*
 when.invisible AF-RED-food already PAR
tey-te-tlo aviik a tey-epat o aviik,
 every-RED-three domestic.animal LIN every-four NOM domestic.animal
nokakoa am tey-de-doa o aviik.
 formerly PAR every-RED-two NOM domestic.animal
am ya t-om-azestes rana do sivo-sivovoong da
 but AUX <AF>gradually already LOC RED-descendant 3.P.GEN
rana ya am, a na²⁰ aloslos-an am,
 already that PAR PAR 3.S.GEN slide.down-LF PAR
ya aró o ya maka-ngarnan so aviik,
 AUX many NOM AUX VP-ten OBL domestic.animal
ya aró o ya tey-si-siam,
 AUX many NOM AUX every-RED-nine
am ori o mi da pa-ney-neyked-an no vaza-vazay no tao
 so that NOM go 3.P.GEN VP-RED-stop-LF GEN RED-work GEN person
nokakoa an, yamen a mavakes am ma-pi-vazay so akma sang
 formerly PAR 1.P.EXCL.TOP LIN female PAR AF-VP-work OBL like that
an, alo-aloslos-an na ori am, akma sang o mina-vaza-vazay
 PAR RED-slide.down-LF 3.S.GEN that PAR like that Nom SV<PA> RED-work *namen*
nokakoa, ni-ma-cita namen i-wey-wawalam
 1.P.EXCL.GEN formerly PA-SV-see 1.P.EXCL.GEN IF-RED-custom
nokakoa, ya namen pa ya asa tapilan o ya
 formerly AUX 1.P.EXCL.GEN still AUX one generation NOM AUX
maka-vood so ya ma-kman sang am,
 AF-inherit OBL AUX AF-like that PAR
akma sang a na²¹ tebtéb-an no ciring ko. (22-26, pp. 250-251)
 like that LIN 3.S.GEN break-LF GEN word 1.S.GEN

‘When food was ready to be distributed (in the inauguration ceremony following the building of a house), (everyone received a portion of) three or four pigs. Formerly (everyone received a portion of) two pigs, but gradually as it has come down to succeeding generations, (everyone received a portion of) as many as ten. That is the way it used to be when people stopped working (following the building of a house). Formerly, as for us women, we used to work like that. It (the custom) came down to us, it was like that, the way we used to work formerly. We could see the former customs. As for us, our generation still inherits it like that. Like that is the breaking point of my talk.’

At the end of a procedural text, the speaker draws attention back to here and now by using *ya*, as illustrated in (25):

(25) *ya na kavós-an rana ori no ya ko i-panci. (14, p. 267)*
 AUX 3.S.GEN end-LF already that GEN AUX 1.S.GEN IF-speak
 ‘This is the end of what I wanted to say.’

In the following dialogue (26), one interlocutor asks what has happened to the other person’s foot (something visible). The other interlocutor’s response relates the event to the current time of interaction by using *ya*.

(26) “*ya ni-ma-kong o ai mo?*” *ko-an na,*
 AUX PA-AF-what NOM foot 2.S.GEN say-LF 3.S.GEN

²⁰ The third person bound genitive pronoun *na* “s/she, it”, together with first and second person genitive pronouns, can be moved in front of the verb to indicate proximity, as discussed below in 4.3.4.

²¹ Same as above.

“*a do*²² *ya ko ni-angaz-an a*
 PAR LOC AUX 1.S.GEN PA-go.up-LF LIN
ya ko ni-aong-an jimo. (27-28, p. 136)
 AUX 1.S.GEN PA-catch.up-LF 2.S.LOC
 “What happened to your foot?” asked he. “It was injured when I went to chase you.”

As a deictic referring to temporal and spatial proximity, *ya* occurs frequently in conversations, as shown in the examples in (27)-(28):

- (27) “*mán-ngo ka manga wari?*”
 AF-what 2.S.NOM P younger.sibling
 “*ya m-ian so ya alíkey a ya apía.*” (34-35, p. 83)
 AUX AF-exist OBLAUX small LIN AUX good
 “How are you feeling, my sister?” “A little better.”
- (28) “*mo ina, ya ko ni-maka-hap so panganpen*”. (11, p. 141)
 2.S.GEN mother AUX 1.S.NOM PA-VP-take OBLfox
 “Mom, I caught a fox.”

Ya also serves as a backgrounding device, providing explanations for previous actions in narratives, as illustrated in (29).

- (29) *ya ko m-ai jia am,*
 AUX 1.S.NOM AF-come there PAR
ya ko today n-ibo ji Akay a yokay-in ang. (19, p. 38)
 AUX 1.S.NOM then N-start.off LOC Grandpa LIN waken-PF PAR
 “I was about to come back, but then I started off to Grandpa’s place to wake him up.”

In summary, *ya* can be analyzed as an auxiliary indicating mood, occurring frequently in personal stories and dialogues to draw attention to temporal and spatial proximity. It also occurs in narratives contrasting the past with the present condition, and provides background comments and explanations.

4.3.5 Word order variation

Temporal proximity can also be encoded by word order variation. Bound pronominal forms are fronted to indicate recency of the event. Examples (30a), (31a), and (32a)²³ with *S* occurring in sentence initial position indicate temporal proximity.

- (30a) *ko k-om-an so wakay.*
 1.S.NOM <AF>eat OBL sweet.potato
 ‘I am eating a sweet potato.’
- (30b) *k-om-an ko so wakay.*
 <AF>eat 1.S.NOM OBL sweet.potato
 ‘I want to eat a sweet potato.’ Or ‘I ate a sweet potato.’
- (31a) *ko k-om-an rana so wakay.*
 1.S.NOM <AF>eat already OBL sweet.potato
 ‘I am eating a sweet potato already.’
- (31b) *k-om-an ko rana so wakay.*
 <AF>eat 1.S.NOM already OBL sweet.potato
 ‘I am about to eat a sweet potato.’ Or ‘I began to eat a sweet potato.’

²² The locative case marker *do* “because” implies that the following event is not done voluntarily. The patient of the NAF (or transitive) verbs *imo* ‘you, singular’ is demoted to the locative case *jimo*.

²³ The examples are adapted from Rau & Dong (forthcoming).

- (32a) *ko ni-k-om-an rana so wakay.*
 1.S.NOM PA<AF>eat already OBL sweet.potato
 ‘I just ate a sweet potato.’
- (32b) *ni-k-om-an ko rana so wakay.*
 PA<AF>eat 1.S.NOM already OBL sweet.potato
 ‘I have eaten a sweet potato.’

In summary, Yami mood is expressed by (1) auxiliary *ji* followed by verb inflection in negation and emphatic constructions, (2) auxiliary *ya* in sentence initial position to indicate temporal and spatial proximity, and (3) fronting of bound pronominal forms to sentence initial position to indicate temporal proximity.

5. Conclusion: Iconicity and TAM in Yami

Our investigation of Yami TAM system has supported the claim that although the three categories were discussed separately, they interact closely with one another, a fact that has been well established in previous research (e.g., Lyons 1977: 690, Waugh 1979: 229, Wallace 1982).

The Yami form and meaning relationship in TAM is by no means arbitrary. The repetitive aspect coded by reduplication typically occurs in the root with idiosyncratic semantic change. The valence category (or focus markers) is closest to the stem, but the derivational/inflectional distinction as defined by Bybee and others does not work for Yami verbal morphology nor does it for the verbal morphology of other Philippine-type languages. The indicative focus affixes are unpredictable, and therefore ‘derivational’, but when the non-indicative affixes are applied to them, the indicative focus affixes are deleted/replaced in a predictable way, and therefore manifest ‘inflectional’ behavior. Therefore, although reduplication is derivational, the focus markers are a mixture of derivation and inflection. Based on the Yami evidence presented in this paper, we can conclude that it is not entirely true of Yami that derivational affixes are always closer to the stem.

The perfective aspect prefix *ni-* occurs at the left end of a word because it is less relevant than the focus markers. Its lexical application is more general than the valence (or focus) marker, although its lexical application is still not obligatory, and hence should be classified as a derivational morpheme. In the outer layer of a word, the application of the morphophonemics of *N-* following the negative modality *ji* (or *kaji*) and the immediate sequential activity aspect *to* (or *kato*) is obligatory and hence should be classified as inflectional. The auxiliary *ya*, occurring at the beginning of a clause to express temporal and spatial proximity, is closely correlated with its low relevance to a stem. Finally, word order variation marking proximity is also low in relevance to a stem and hence is coded by a syntactic device. The order of those semantic categories are presented as follows in Table 5:

Table 5. Order of Semantic Categories in Yami

Mood	Aspect	Valence	Stem
Word order variation			
Auxiliary <i>ya</i>			
Auxiliary <i>ji</i> or <i>kaji</i>			+Verb inflection
	Auxiliary <i>to</i> or <i>kato</i>		+Verb inflection
	Derivational prefix <i>ka-</i>		
	Derivational prefix <i>ni-</i>		
	Stem reduplication		Stem reduplication
		Derivational indicative affixes <i>m-</i> , <i>-en</i> , <i>-an</i> , <i>i-</i> , but the non-indicative forms are inflectional	

In general, Bybee's principle of relevance of the meaning of an affix to a stem, the generality of lexical application and the amount of semantic change as factors predicting expression type could account for the order of the TAM categories in Yami.

The order of the TAM categories in relation to the stem displays a similar ranking (i.e., Mood-Aspect-Valence-Stem) to that found in Bybee's cross-linguistic survey. Furthermore, the size of the expression units also follows the iconicity principle to form a continuum, with Valence expressed by affixes (a mixture of derivation and inflection) only, Aspect expressed by reduplication, affixes and auxiliary plus verb inflection, while Mood is expressed by auxiliaries, auxiliary plus verb inflection, and word order variation.

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Phonological Variation and Sound Change in Yami on Orchid Island*

D. Victoria Rau
Providence University, Taiwan
dhrau@pu.edu.tw

Hui-Huan Ann Chang
Providence University, Taiwan
ann.ronald@msa.hinet.net

Abstract

This study investigated the sound change in progress in the Yami diphthongs /ay/ and /aw/ (e.g., *mangay* “go”, *araw* “day, sun”) on Orchid Island. The interpretation of the direction of change has been centralization and upward movement, thus [ay] and [aw] alternate with [ey] and [ew], respectively. In addition, [ey] moves forward to [iy], whereas [ew] moves backward to [ow]. This paper reports the results of qualitative and quantitative analyses to answer the following two questions: (1) What is the direction of the chain shift of (ay) and (aw)? Does it undergo changes of raising or falling? and (2) To what extent is the variation of (ay) and (aw) influenced by a combination of internal factors and external factors?

Our qualitative analysis has revealed that the nucleus raising rule is an innovation in Yami and has progressed faster and longer in (ay) than in (aw). The same rule has also spread to environments such as a-i and a-o across morpheme boundaries. While (ay) is raised to the peripheral high front vowel /i/ in the raising areas, another change, in prefixes with the high front vowel (e.g., *mi-/pi-/ni-*), is reversing the direction and has begun to lower and diphthongize the nucleus /i/ to /ey/.

Our quantitative analysis tested the raising rule in word final position. The raising rule has been identified as associated with geographical differences. However, the raising and non-raising areas also tend to be associated with language vitality. Thus an interpretation on the relationship between ethnic identity and raising is proposed.

Key words: /ay/, /aw/, sociolinguistic variation, sound change in progress, Yami

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1. Introduction

The advance of research on sound change in progress has been considered the greatest achievement in contemporary sociolinguistics (Chambers 1995: 147). One of the most important studies in this line of research is the raising and fronting of (ay) and (aw) in English dialects.

Labov's seminal work on linguistic change in progress on the island of Martha's Vineyard (1963, 1972) has established a paradigm of sociolinguistic variation, combining a quantitative study with an anthropological focus over the last three decades. He correlated centralization of the /ay/ and /aw/ diphthongs with social factors (i.e., identity, occupation, age and ethnicity) and linguistic factors and predicted real time changes from apparent time data collection.

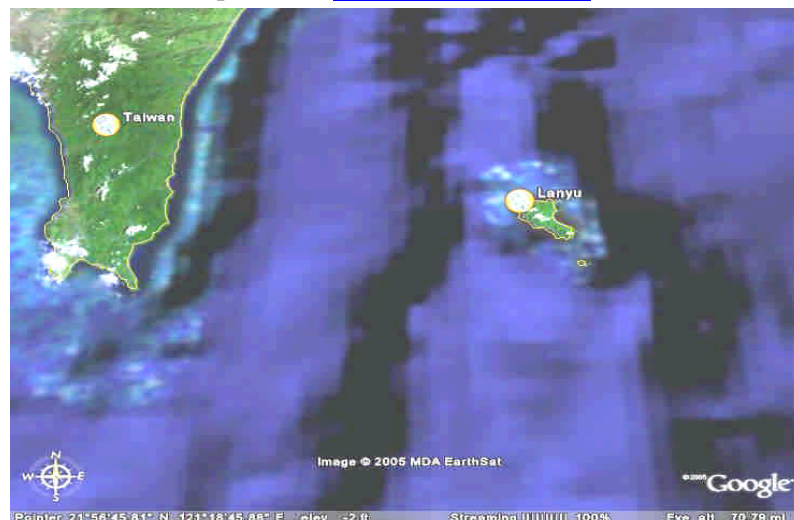
Interestingly, according to preliminary studies by Li & Ho (1988) and Rau (1995), phonological variation in (ay) and (aw) have also occurred in the Yami language on Orchid Island. Both studies found that /ay/ and /aw/ diphthongs undergo sound change, and that the centralization of the two diphthongs /ay/ and /aw/ is related to regional differences.

1.1 The Yami Speech Community

Yami is an Austronesian language spoken on *Lanyu* (Orchid Island), a small offshore island located in the Pacific Ocean 60 kilometers southeast of Taiwan (see Figure 1). According to the Council of Aboriginal Affairs (2005), there are 3,599 Yami, some of whom spend several months a year in Taiwan earning a living.

The Yami language is a Philippine Batanic language, related to Ivatan and Itbayat of Batanes. However, Mandarin Chinese has been spoken on the Island since 1945, when Mandarin Chinese became the national language of the country.

Figure 1: *Lanyu* located in the Pacific Ocean 60 kilometers southeast of Taiwan
(adapted from <http://google.earth.com>)



As shown in Figure 2, there are six villages on the Island from the southwest to the northeast coast clockwise: Imowrod, Iratay, Yayo, Iraralay, Iranomilek and Ivalino.

In and near Imowrod are the airport, post office, clinic, and a hotel. Right across Imowrod at the opposite side of the island is Ivalino, where the Lanyu Nuclear Waste Plant is located. The administrative center of the island is at Yayo, where a hotel and a secondary school can be found. Iraralay and Iranomilek are further away from the government offices and tend to better preserve the Yami language. However, all villages have primary schools with Mandarin Chinese as the only medium of education. Recently, with the development of tourism, an increasing number of remodeled homes have been opened for room and board for tourists, especially on the more scenic beach on the northeast coast.

Figure 2. Geographic description of Lanyu (adapted from <http://google.earth.com>)



1.2 Previous Sociolinguistic Studies on (ay) and (aw) Variation

(ay) and (aw) are two of the best-known sociolinguistic variables and have been studied in the speech of a wide range of English speakers with relatively consistent social and phonological constraints across many communities.

In Labov's pioneering work on Martha's Vineyard (1972), he focused on realizations of the diphthongs (ay) and (aw), such as *nice* and *mouse*. The results show that the nuclei of the vowels were centralized by men, particularly middle-aged fishermen, and decreased with age and with weaker island identity. Furthermore, the centralization (raising) was correlated with certain linguistic and social factors.

Many other studies have also documented (ay) and (aw) variation in various English-speaking communities, such as Lumbee Native American English (Schilling-Estes 2000), islands off the coast of North Carolina (Wolfram & Schilling-Estes 1995, 1996; 1997; Schilling-Estes 1996, 1997; Schilling-Estes & Wolfram 1997; and Wolfram, Hazen & Schilling-Estes 1999), Detroit (Eckert 1996), Pittsburgh (Johnstone, Bhasin, and Wittkofski 2002), Martha's Vineyard (Blake & Josey 2003; Josey 2004), Canada (Chambers 1973), and England (Milroy 1996). All these studies have indicated that (ay) and (aw) display different patterns of variation and social meanings.

The diphthong /ay/ has been found to be monophthongized as [a] in the U.S. south (Wolfram & Schilling-Estes 1996), e.g., *tahm* "time" and *tahd* "tide", but only the white tend to centralize the /ay/ before the voiceless obstruent, such as *raht* "right" and *whate* "white". In the studies of (aw) fronting, Eckert (1989) on Pittsburgh and Labov (1984) on Philadelphia English found that females tended to reduce (aw) raising as their social statuses increased, whereas males demonstrated a curvilinear pattern, in that only the middle working class tended to raise (aw). In a recent study in the Pittsburgh speech community, Johnston, Bhasin & Wittkofski (2002) discovered that /aw/ is further monophthongized to [a] as in [at] (spelled 'aht') for 'out' or [dantan] (spelled 'dahntahn') for 'downtown'.

Several studies on variation of (ay) and (aw) have focused on Ocracoke Island and Smith Island, North Carolina (Wolfram & Schilling-Estes 1995, 1996; Schilling-Estes 1996, 1997; Schilling-Estes & Wolfram 1997; and Wolfram, Hazen & Schilling-Estes 1999). The islanders of Ocracoke are known as 'hoi toiders' (their pronunciation of 'high tiders'), turning [ay] into [oy], and [aw] into [ay], such as *hice* 'house' and *dine* 'down'. The backing of [ay] to [oy] is a social stereotype, a feature commonly associated with the islander, whereas the glide fronting of [aw] to [ay] remains a social indicator because there is no stylistic variation among the islanders. As a social stereotype, the backing of [ay] to [oy], as in 'hoi toiders', was shared mostly by the middle aged male speakers with strong identities with the island (Schilling-Estes 1997). However, the young women on the island preferred the standard variant [ay] (Schilling-Estes & Schrider 1996). Among the Lumbee Indians in Outer Banks of North Carolina, /ay/ is raised, e.g., [roId] 'ride', and /aw/ is glide-fronted, and/or raised, e.g., [saInd] or [seInd] 'sound'.

The variables of (ay) and (aw) are equally salient in the studies of English dialects in other English speaking countries. The famous 'Canadian raising' (Chambers 1973) has been under

American influence and the diphthong (aw) has been subsequently affected. Using the methods of comparative sociolinguistic dialectology, Hung, Davison, and Chambers (1993) explored the development of (aw)-fronting. The results showed that the only systematic variation in (aw)-fronting still occurred in Montreal, whereas in Vancouver, Toronto, and Victoria, (aw) has become Americanized.

Trudgill (1990) observed that the northern dialects in England still preserve the more conservative variants [i] and [u] of the two diphthongs (ay) and (aw) respectively. Thus 'night' is pronounced as neet, and 'house' as hoose. Milroy (1996) investigated the conversational speech of a sample of Tyneside (England) residents in the diphthong /ai/. He also found that [ei] is a conservative allophone close to Middle English /i:/ which is the source of modern /ai/.

The patterns of phonological changes in (ay) and (aw) are similar in Australian (e.g. Horvath, 1985:69) and New Zealand English (Maclagan, Gordon & Lewis, 1999), in that the (ay) is backed and the (aw) is centralized and fronted. But New Zealand English demonstrated further changes in glide, that is /y/ is lowered to /e/ and /w/ is lowered and fronted to a central vowel. Furthermore, Maclagan, Gordon & Lewis (1999) noticed that professional women in New Zealand tended to be conservative in the pronunciations of (ay) and (aw) but quite innovative in changing the front vowels (e.g., 'hit' is pronounced as 'hut'). This corresponds to Labov's prediction (1990) that lower middle class women are conservative in using stigmatized variants but take the lead in the sound change of a non-stigmatized variant.

Forty years after Labov's Martha's Vineyard study, Blake & Josey (2003) went back and found a change in the linguistic pattern predicted by Labov. The results indicated that there is a decreasing rate of /ay/ centralization and a return to mainland speech among Vineyard men, which was caused by social and economic restructuring and resulting ideological changes taking place on the island. Similarly, Josey (2004) found that the decentralization of /ay/ and /aw/ on Martha's Vineyard is caused by the same factors.

To sum up, the two diphthongs /ay/ and /aw/ are undergoing sound changes in many English speaking countries. However, each variable also demonstrates its own unique rate and path of change. Furthermore, the previous studies also found relationships between internal (e.g., voiced vs. voiceless obstruents) and external factors, such as social class and gender, with sound change.

However, the relationships between variation and gender, along with other social factors, such as ethnicity and style, have been investigated more in the qualitative paradigm than in the quantitative one. The fallacy of equating sex with gender has been criticized (e.g., Mendoza-Denton, 2004). In addition, Eckert (2001) also questioned the validity of using the unidimensional definition of style. In Eckert's (2000) study of Detroit adolescents, she found that the raising and backing of (ay) interact with gender and social group categories. The female

burnouts are in lead, even exceeding the rate of backing by their male counterparts. Thus she emphasized the importance of interpreting sound change in relation to style and gender based on the concept of “community of practice” (Eckert & McConnell-Ginet 1992) to generate an “emic” meaning.

Although all the studies reviewed so far have been cases in English speaking countries, (ay) and (aw) variation is certainly not restricted to those areas. However, very little research has been conducted on these variables in minority languages. The only preliminary studies on (ay) and (aw) on Orchid Island can be found in Li & Ho (1988), Rau (1995), Chen (1998), and Rau and Dong (in press).

1.3 Preliminary studies on phonological variation in Yami

All the aforementioned studies on Yami had different foci in their investigation, but all observed phonological variations in passing. They identified several phonological variables in Yami, including the voiced labiodental fricative /v/, voiced uvular fricative /ʁ/, glottal stop /ʔ/, and diphthongs /ay/ and /aw/. The elderly tended to retain [v] and [ʁ], while the younger generation tended to substitute [f] and [ʔ], respectively. In addition, there is centralization of the two diphthongs due to regional differences. According to Rau & Dong (in press), the variable (aw) might be realized by [ew], [ow], or [aw] in words such as *attaw* ‘sea’ and *araw* ‘sun, day’. On the other hand, the variable (ay) might be realized by [iy], [ey], and [ay] in words such as *vazay* ‘work’ and *mangay* ‘go’. The variables (ay) and (aw) are primarily pronounced as [ay] and [aw] respectively in Imowrod and Iratay; however, they are undergoing sound change in progress in Yayo, Iraralay, Iranomilek and Ivalino.

The interpretation of the direction of change has been centralization and upward movement, thus [ay] and [aw] alternate with [ey] and [ew], respectively. In addition, [ey] moves forward to [iy], whereas [ew] moves backward to [uw]. However, Rau & Dong (in press) further observed occurrences of centralization in a few words in the typical non-raising areas, such as *alilikey* ‘all very small’ and *manganíáhey* ‘scary’. Among the typical raising areas, as reported in Rau (1995), Ivalino used more non-raising variants than Iraralay, where the raised variants [ey] and [ew] were most common. Yayo and Iranomilek had further developed fronting and monophthongization [i] and [u] for the diphthongs.

In previous studies, the general directions of sound change of the two diphthongs have been claimed to be (ay): ay>əy>iy and (aw): aw>əw>uw. But interestingly, the front vowel [i] has been observed by Rau and Dong (in press) to undergo lowering and diphthongization to [ey], as in *mi* ~ *mey* ‘go’ in the raising areas. It seems that a regular reversal (Ho 1988): ay > əy > iy > əy is underway.

1.4 Phonological variation in other Batanic languages

Phonological variation has almost never been dealt with in historical linguistics. For example, in Sheerer's comparisons between the Batan dialect and other Philippine and Formosan languages (1908), the two diphthongs were reconstructed as *ay and *aw. Since no sociolinguistic surveys were conducted on the variations of these diphthongs, there is no way to judge if the non-raised variants are really older than their raised counterparts. However, some variants for (ay) and (aw) were recorded in the same study. For example, the word for 'man, male' has the following reflexes: *magakay* (Batan), *laki* (Bontok), *lagey* (Tiruray), and *laloy* (Banawi). Similarly, the word for 'sun, day' has reflexes as follows: *araq* (Batan), *axu* (Bontok), *ago* (Tinggian), *ageo* (Pangasinan), *gay/gey* (Moro Magindanao), *araw* (Tagalog). In Reid's (1971) comparisons of word lists and phonologies in Philippine minor languages, he also recorded /ay/ and /i/ variation for the word 'swim' in Ivatan (*mayawat*) and in Itbayaten (*miawat*).

There are anecdotes in several other studies on Batanic languages that indicate phonological variation in (ay) and (aw). Benedek (1987) used Iranomilek speech as the basis for his comparison with other Bashiic languages, i.e., Ivatan and Itbayat. He noted that there was inconsistency in his transcription of word final /o/ and /aw/ due to insufficient information on Yami phonology. Tshuchida et al. (1987, 1989) chose to juxtapose Imowrod and Iranomilek dialects in their data presentations. The (ay) and (aw) variations between the two dialects are apparent in their collected sentences; however, no systematic investigation was attempted. Finally, the words with final (ay) and (aw) were transcribed differently in West's (1995) Yami word list. Although her source of data is based on the Iraralay dialect, she chose to transcribe some centralized (ay) but left (aw) completely as non-raising.

It seems previous studies have all alluded to phonological variations in different dialects in Yami and other Batanic languages; however, the systematic patterns of phonological variation is yet to be found. Thus the purpose of this paper is to fill this gap by examining the directions of sound change of (ay) and (aw) in detail and determining the linguistic and social factors that are correlated with the sound change.

2 Methodology

This puzzling issue of phonological variation and sound change of (ay) and (aw) was approached from a sociolinguistic variationist paradigm to answer the following three questions: (1) What is the direction of the chain shift of (ay) and (aw)? Does it undergo changes of raising or falling? (2) To what extent is the variation of (ay) and (aw) influenced by a combination of internal factors and external factors? and (3) What social meanings can be attributed to the envelope of variation? A combination of quantitative and qualitative methods was used to

answer the aforementioned research questions.

2.1 Data

The data consist of four corpora: (1) Corpus A is a collection of 11 short narratives from *si amen macinanao* in Iraralay, explaining Yami customs and cultural events, as part of the data for the first author's research project on Digital Archiving Yami Language Documentation (<http://www.hrelp.org/grants/projects/index.php?year=2005>); (2) Corpus B is the *Yami New Testament* (1994), translated by speakers of Iranomilek and Iraralay; (3) Corpus C contains lyrics of 14 clapping songs (Knight & Lu 2005) collected mostly from Iraralay and Ivalino speakers with a few examples from Yayo and Iratay, combining ceremonial lyrics with non-ceremonial melody to express solidarity and praises; and (4) Corpus D was built from 20 narratives in Rau & Dong (in press) and more narratives from Dong & Rau (1999, 2000) to ensure a balanced representation of age, sex, and location of the speakers.

2.2 Analysis procedures

Corpora A through C were used for a qualitative analysis. The nature of the three corpora is suitable for a heuristic and exploratory study to identify sound change patterns that have not been found in previous studies and generate hypotheses for phonological variation of (ay) and (aw).

Maa-neu Dong, an experienced Iratay speaker from the non-raising area with high literacy skills in Yami, was invited to comment on the transcriptions of Corpus A, focusing on the tokens of (ay) and (aw) produced by the Iraralay speaker from the raising area. She was particularly asked to identify any differences between her pronunciation and the transcribed variants. She was further asked to comment on Corpus B, the *Yami New Testament*, translated by speakers from the raising area, to identify any transcriptions that are different from her dialect. In addition, she was consulted to clarify the meanings of the lyrics in Corpus C and comment on the transcriptions made by the original authors, one of whom is from the raising area.

For the quantitative investigation, a variable rule analysis (VARBRUL) was conducted on Corpus D to identify the internal and external factors that account for nucleus raising in (ay) and (aw). The two variables were calculated separately in two analyses.

In numerous sociolinguistic variation studies, VARBRUL has been used to determine the favoring, disfavoring, or lack of effect of various factor groups (i.e., linguistic environment or internal factors and social or external factors). Thus, the quantitative part of this study applied GOLDVARB 2001 (Robinson et al. 2001) to conduct a multivariate analysis of the data and to show how /ay/ and /aw/ variations correlate with various internal and external factors.

3. Results from the qualitative analysis

There are two dialect areas on the island based on the nucleus raising or non-raising of word final (ay) and (aw). Iratay and Imowrod are considered the non-raising areas whereas the other four villages are the raising areas. This grouping is based on an impressionistic account by Dong, which also corresponds with the results of Rau's preliminary results (1995). Typical examples cited to illustrate the differences between the raised and unraised (ay) and (aw) include: *mehakay* ~ *mehakey* 'man, male'; *malaw* ~ *malew*, *malow* 'worry'. However, a close examination of the Yami New Testament, translated mostly by the speakers of the raising area, reveals that the dialectal variation in speech is not reflected in writing. All the raised variants of (ay) and (aw) were transcribed as non-raised in the Bible. These stylistic differences between speaking and writing (orthography) actually provide a clue to the more prestigious status of the non-raised variants of (ay) and (aw), although they say nothing about the general question of power and solidarity of the different varieties on the island. In fact, no one from Orchid Island would admit to the researchers which variety has more prestige; nonetheless, the dialect of the husband carries more power than that of the wife, because it is usually the wife who accommodates to the husband's accent, not the other way around (Dong, personal communication).

3.1 Phonological variation of (ay) and (aw)

The variables (ay) and (aw) are approaching stereotypes, in that they not only demonstrate stylistic variation as mentioned above but were consciously avoided by the native speakers in their transcriptions for the Bible. In the following excerpt (1) from Corpus A, *si aman macinanao* comments on the variation between *ivey* and *ivay*, while discussing the importance of the *ivey* fish caught in the evening. All the relevant tokens are underlined for further discussion in the following paragraphs.

(1)

o *ivey* *iya* *am*,
 NOM¹ fish.name this TM
i-panci *d(a)* *ori* *no* *kadoan* *l-ili* *a* *ivay* *koan* *da*,
 IF-call 3PG that GEN other RED-village LIN fish.name say 3PG
mi-angay *ori* *aka* *no* *ivey*,
 AF-same that and GEN fish.name
ta *yamen* *Jiraraley* *am*,
 because 1PNEXCLF village.name TM
i-panci *namen* *a* *ivey*,

¹ Abbreviations: 1PGEXCL = first person plural genitive exclusive, 1PNEXCLF = first person plural nominative exclusive free, 3PNOM = third person nominative, 3PG = third person genitive, GEN = genitive, IF = instrumental focus, LIN = linker, LOC = locative, NOM = nominative marker, RED = reduplication, TM = topic marker

IF-call 1PGEXCL LIN fish.name

sira do Jimowrod a Jiratey am,
3PNOM LOC village.name LIN village.name TM

i-panci da ivay,

IF-call 3PG fish.name

“Ivey is called *ivay* in other villages. But it has the same meaning as *ivey*. We in Iraraley call it *ivey*, whereas those in Imowrod and Iratey call it *ivay*.”

As shown in excerpt (1), the word final (ay) indicates variation. The speaker draws the distinction between his raised pronunciation of *ivey* and the non-raised *ivay* in the other two villages, i.e., *Imowrod* and *Iratey*. Notice in his reference to *Iratey*, he uses his raised variant [ey], although the speakers from that non-raising area would refer to their own village as *Iratay*. However, in the token of *miángay* ‘same’, contrary to our expectation, he chose the unraised variant, the only word final unraised (ay) in the 11 narratives he contributed. One possible explanation might be that his attention was temporarily drawn to the unraised variant *ivay*. When this word occurs in the reduplicated form later in the text, he sticks to the raised variant *miangangey* ‘all the same’

The nucleus raising of (ay) and (aw) occurs in word final position, but if *-ay* or *-aw* is immediately followed by a suffix, no raising occurs. This indicates the non-raised variants /ay/ and /aw/ are the phonemic representations, thus raising is a variable rule. The contrast between word final and suffixed (ay) and (aw) is shown in example (2) from Corpus A. The same pattern of contrast can be found in Corpus C.

(2)

Word final position	Followed by a suffix
<i>manehawey</i> ‘holds one’s fists and looks angry with eyes wide open’	<i>ji manehaway-i</i> ‘not hold a ceremony of <i>manehaway</i> ’
<i>kapeysiasiy</i> ‘then dismiss’	<i>misiasiy-i</i> ‘dismiss’
<i>mamozwow</i> ‘chase away’	<i>ji vozwow-a</i> ‘not chase something away’
<i>marew</i> ‘daytime’	<i>paka-m-araw-en</i> ‘cause to go overnight’

So far, we have observed that word final (ay) and (aw) seems to be the most easily affected position; however, some idiosyncratic cases seem to be determined by lexical diffusion (Chen 1972). For example, words such as *alilíkey* ‘all small’ and *manganiáhey* ‘scare’ have completed their sound change to the raised variant in the non-raising areas, whereas word final (ay) raising in words, such as *akókey* ‘How are you?’, *vahey* ‘house’, and *mangey* ‘go’, is only occurring in

the raising areas with some variation. The raising rule appears to have occurred earlier in (ay) than (aw) because although word final (aw) raising, such as *ararew* ‘days’, occurs in the raising areas, no tokens with raised (aw) in word final positions have been found in the non-raising areas.

3.2 Raising in a-i and a-o

The nucleus raising rule is not restricted to word final diphthongs (ay) and (aw) but also applies to /a/ in a-i and a-o combinations in other positions. But the rule seems to follow an implicational scale with the following hierarchy: morpheme internal > word boundary > morpheme boundary. In other words, the raising rule has affected almost all the a-i and a-o across morpheme boundaries, such as *asa keyli* ‘one village’ and *makowbot* ‘go out’, as shown in (3). However, word boundaries following bound pronouns display variations in that the raising rule applies more freely to the hesitation marker *i* (e.g., *to dey* ‘just’) than any other words (e.g., *deytoro* ‘they give it). Finally, the raising rule only begins to apply morpheme internally. The raised /ey/ and /ow/ variants, such as *maseyrem* ‘evening’ and *kalowdan* ‘deep sea’ are restricted to the raising areas. Interestingly, the non-raised variants /ay/ and /aw/ also occur in their speech; however, the /ay/ in *rayyon* ‘flying fish season’ is probably diphthongized from /a/, while the /aw/ in *katawtao* ‘self’ is a reduplicated form. In fact, the raised variant *katowtao* is also possible.

Morpheme internal	Word boundary	Morpheme boundary
*(-) <i>maseyrem</i> ‘evening’ (<i>< ma-sairem</i>) *(+) <i>rayyon</i> ² ‘flying fish season’	(-) <i>deytoro</i> ‘they give it’ (<i>< da itoro</i>) (+) <i>to dey</i> ‘just’ (<i>< to da i</i>) ³	(+) <i>asa keyli</i> ‘one village’ (<i>< asa ka-ili</i>) (+) <i>iseysanan</i> ‘hotel’ (<i>< isa-isana-an</i>)
(-) <i>kalowdan</i> ‘deep sea’ (<i>< ka-laod-an</i>) (+) <i>katawtao</i> ‘self’ (<i>< ka-tao-tao</i>)	(-) <i>sirewri</i> ‘they that’ (<i>< sira ori</i>)	(+) <i>makowbot</i> ‘go out’ (<i>< maka-obot</i>), (+) <i>oyówyat</i> ‘strength’ (<i>< oya-oyat</i>), (+) <i>mówney</i> ‘long time’ (<i>< ma-onay</i>) (+) <i>Imowrod</i> ‘village name’ (<i>< ima-orod</i>)

*(-) Iraralay only

*(+) Iraralay and Iratay

² The Iratay variant is *rayon*.

³ The hesitation marker or filler *i* occurs frequently after bound pronouns and *akma* ‘like’ in set phrases. The unraised form *akmay* can still be found in a traditional lyric by an Iratay singer in Corpus C, although all the other singers from the raising areas used *akmey*.

Other evidence in support of the hypothesis that the raising rule is an innovation can be found in traditional lyrics. As mentioned above in (3) that *maseyrem* ‘evening’ is derived from *masairem*. The form *lairem*⁴ ‘evening’ is found in Corpus C, produced by an Iraralay female singer in a love song set to the melody of clapping songs (Knight & Lu, 2005). In addition, there is one case of non-raised word final /aw/ followed by a pause, e.g., *imaziniaw* ‘outsider, other ethnic group’, produced by a male Iraralay singer in his account of the origin of clapping songs.

However, some established /ey/ forms are beginning to raise even further to /iy/, i.e., /ay/ > /ey/ > /iy/. The examples found in Corpus A, as shown in (4), illustrate several examples that usually have the –ey forms on the island but have undergone further raising and fronting to the high front vowel /i/.

(4)

/i/	/ey/
<i>piciylilian</i> ‘each village’	<i>piceylilian</i>
<i>tiyesa</i> ‘each one’	<i>teyesa</i>

3.3 A new development

As discussed in the previous paragraphs, raising in (ay) seems to have progressed faster in the Yami phonological system than (aw), so that raising has been completed in some word final (ay) in certain words in the traditionally non-raising areas. In addition, the lowering and diphthongization rule is beginning to affect /i/ across morpheme boundaries, which are found to be the most easily affected environment in an innovative rule application.

Based on a close examination of Corpus B, three prefixes with /i/ were identified as undergoing lowering and diphthongization change in the raising area: *pi-*, *mi-*, and *ni-*. The first two are transitive and intransitive verb prefixes, respectively, whereas the last one refers to the superlative degree in collocation with the genitive pronoun *na*. The following examples in (5) illustrate the different spellings in the Bible and Dong’s Iratay spellings.

(5)

Prefix	<i>pi-</i>	<i>mi-</i>	<i>ni- ... na</i>
Bible (Iranomilek and Iraralay)	<i>pey-pey-pangayan</i> ‘meaning’	<i>mey-yangay</i> ‘the same’	<i>ney-manowji na</i> ‘the last’
Iratay	<i>pi-pi-pangayan</i>	<i>mi-yangay</i>	<i>ni-manowji na</i>

The same sound change occurring in the superlative *ni-* has spread to some archaic perfective

⁴ The /l/ occurs in old festival lyrics or *raod* to replace other segments in speech. For example, *lairem* vs. *sairem* ‘evening’, *veley* vs. *vahey* ‘house’, *alorod* vs. *aorod* ‘song’, *langara* vs. *tangara* ‘raise one’s head’.

-*in-* but not to the more productive perfective *ni-*. For example, *pey-ney-nozyan* ‘place of prayer’ in the Bible is derived from *p-in-i-nozian*⁵ with a reanalysis.

The prefix *pey-* seems to have been affected by the lowering and diphthongization rule earlier than *ney-*, based on examples such as *p-in-ey-rawalow* ‘was ruined’ and *p-in-ey-kavali* ‘was broken in half’, in Corpus C by a Iraralay singer. This indicates *-in-* is not affected by the rule. In addition, the grammaticalized form *mi* ‘go’ from *mangay* ‘go’ also has the lowered and diphthongized counterpart *mey* in the Bible.

The other evidence in support of the variation between /i/ and /ey/ can be found in *si aman macinanao*’s account of the traditional clapping songs in celebration of the completion of a work house in Corpus A. Unlike the raising rule which is well established, the lowering and diphthongization rule is more recent because there is much more variation in the tokens with (*mi-*)/(*pi-*). The *mey-/pey-* forms are more frequent than the *mi-/pi-* counterparts. Examples with the same root *kariag* are illustrated in (6).

(6) Words derived from *kariag*

/ey/	/i/
<i>mey-kariag</i> ‘clap hands’	<i>ni-mi-kariag</i> ‘clapped hands to sing’
<i>pey-kariag-an</i> ‘place where people clap hands to sing’	<i>ka-pi-key-kariag</i> ⁶ ‘clapping and singing’
<i>i-ka-pey-kariag</i> ‘reason to clap hands to sing’	

In summary, whereas the (ay) raising has progressed to the high front vowel /i/, some prefixes with the high front vowel /i/ are beginning to undergo a lowering and diphthongization rule to /ey/, making an interesting loop, i.e., /ay/ > /ey/ > /i/ > /ey/. The (aw) variable, on the other hand, undergoes the raising rule in a slower pace. Thus we have not seen any reversal changes from /o/ to /ew/.

4. Quantitative analysis

In the following analysis, we only discuss the results of word final diphthongs due to space limitations. A comprehensive quantitative analysis testing all the hypotheses generated from our qualitative analysis awaits future studies.

4.1 Generation of Hypotheses

To clarify and explain the variation of (ay) and (aw) in Yami, based on the theoretical work in

⁵ The perfective *-in-* only occurs in archaic forms where the infix is no longer productive. For productive use, the prefix *ni-* is used to indicate perfectivity.

⁶ The /ey/ is *-key-* is a type of reduplication. See Rau & Dong (2005) for details.

sociolinguistic variation studies, six hypotheses were formulated for the quantitative study:

According to Kaye & Lowenstamm (1981), a coda is more often modified than an onset. In our observations of the raising phenomenon, (ay) and (aw) occurring in word final positions seem to be more prone to modification than any other positions, thus:

Hypothesis 1: Word-final positions of (ay) and (aw) promote raising, while non-word final positions inhibit it.

According to Labov (1972), the favoring preceding consonants in centralized /ay/ are lateral and nasal. The ordering of the effect of the preceding phonological environment of (ay) in Blake & Josey's (2003) Martha's Vineyard is: nasal > voiceless obstruent > lateral > voiced obstruent. We would like to test whether the same hierarchy might apply to (ay) and (aw) raising in Yami or whether it might be language specific, thus:

Hypothesis 2: Preceding nasals promote the production of the raised (ay), while voiced obstruents inhibit it.

Building on hypothesis 2, it is further predicted that:

Hypothesis 3: Preceding nasals promote the production of the raised (aw), while voiced obstruents inhibit it.

Previous studies (e.g., Rau 1995) indicate that (ay) and (aw) raising is a phonological feature specific to the northeast coast of the island, thus:

Hypothesis 4: Yayo, Iraralay, Iranomilek, and Ivalino villages on the northeast coast promote the raised production of (ay) and (aw), while Iratay and Imowrod inhibit it.

Many studies have shown that males and females within a community exploit linguistic resources differently (e.g., Eckert 1996, 2000, Labov, 1963, 1972). Thomas (1988) investigated a South Wales community and found women were more likely than men to preserve local Welsh dialect features. The gender differences are certainly related to identities and social network in the respective communities. Thus, we have the following hypothesis:

Hypothesis 5: Men promote the raised production of (ay) and (aw), while women inhibit it.

Finally as a direct test of sound change in progress, we assume raising is continuing in the younger generation, and thus:

Hypothesis 6: Younger people promote raised (ay) and (aw), while the elderly inhibit it.

4.2 Coding

All the tokens of (ay) and (aw) in Corpus D were coded. The spoken data yielded 1607 (ay) and 420 (aw) tokens. Like Labov's Martha's Vineyard's database (1972), (aw) also occurs less frequently than (ay) in this study. The dependent variable in this study is the raised /ay/ and /aw/. All of the raised diphthongs [iy, əy, əw, uw] were coded the same as application of the raising rule; on the other hand, non-raised diphthongs [ay, aw] were coded as the non-application forms.

There are six factor groups for the independent variables, including three phonological factor groups and three social factor groups (see Appendix A for (ay) and B for (aw)). Several illegible tokens of the dependent variable were not coded, for instance, when a speaker was too excited to speak clearly.

5 Results

After the initial VARBRUL run, recoding the factors within groups, and eliminating non-significant factors or factor groups, the results demonstrate reliable values. Word position, age, and gender factor groups were eliminated. Thus, we cannot confirm three hypotheses: Hypothesis 1 (Word-final positions of (ay) and (aw) promote raising, while non-word final positions inhibit it.), Hypothesis 5: (Men promote the raised production of (ay) and (aw), while women inhibit it), and Hypothesis 6: (Younger people promote raised (ay) and (aw), while the elderly inhibit it.) However, since our focus is only on word final (ay) and (aw), position is no longer a relevant issue for us. Furthermore, since very few Yami speakers under 30 years of age could carry on a conversation in Yami without code-switching with Mandarin, it will probably be very difficult to pursue hypothesis 6. Therefore, in the following sections, we only discuss the effect of preceding segments and regional differences.

Before we move on to the results, a brief explanation of how to interpret VARBRUL values is in order. Note that there is a standard formula to interpret the VARBRUL weights. For each factor, there is a value (i.e., weight) ranging from 0.00 to 1.00. VARBRUL factor values of more than 0.5 indicate a favoring effect by the factor while values of less than 0.5 indicate a disfavoring effect. A value of 0.5 means that the factor has no significant effect on nucleus raising.

5.1 The Case of /ay/

Table 1 shows the variable patterning of raised /ay/. The results of (ay) yielded 1607 tokens from 46 speakers.

Table 1, The Variable patterning of raised /ay/

	Unraised N / %	Raised N / %	Totals N
Villages			
Yayo	63 / 17.5	304 / 82.5	367
Iranomilek	91 / 21.6	330 / 78.4	421
Iraralay	7 / 26.9	19 / 72.1	26

Ivalino	37 / 60.6	24 / 39.4	61
Iratay	553 / 82.9	114 / 17.1	667
Imowrod	54 / 83.1	11 / 16.9	65
Total	805 / 50.3	796 / 49.7	1607
Preceding Segment			
Lateral / Trill	74 / 32.9	151 / 67.1	225
Voiced obstruent	88 / 33.8	172 / 66.2	260
Vowel (vowel & semi-vowel)	39 / 44.3	49 / 55.7	88
Voiceless obstruent	148 / 52.5	134 / 57.5	282
Nasal	456 / 58.7	296 / 41.3	752
Total	805 / 50.1	802 / 49.9	1607
All Speakers (46)			

As indicated in Table 1, the total percentage of raised /ay/ tokens is 49.9 %. In the village factor group, Yayo has the greatest percentage of raised tokens with 82 %, exceeding Iranomilek (78.4 %) and Iraralay (72.1%). Ivalino (39.4%) actually patterned closer to the nonraising areas than the raising areas. Furthermore, in the linguistic environment, the greatest percentage of raised /ay/ is lateral & trill /r, l, z/ (67.1%). This is followed by voiced obstruent with 66.2 %.

The final results from the VARBRUL analysis are presented in Table 2, which presents that the input probability has a value of 0.486. Most importantly, the total Chi-square has a value of 18.9326, less than 20.52 ($df = 4$ $p = 0.001$). Thus, we can interpret VARBRUL weights (values) to find out the influence of the factors. Social group presented in Table 2 shows the probability that /ay/ would be raised as [ey] or [iy] according to regional differences: Imowrod and Iratay strongly disfavor raising of /ay/ ($P_i = 0.167$); however, the other villages including Yayo, Iraralay, Iraomilek, and Ivalino strongly favor raising ($P_i = 0.793$). That is to say, the results confirm Hypothesis 4: Yayo, Iraralay, Iranomilek, and Ivalino villages on the northeast coast promote the raised production of (ay), while Iratay and Imowrod inhibit it.

Table 2. VARBRUL result for /ay/ raising

	Weight
Social Factor	
Yayo / Iraralay / Iranomilek / Ivalino	0.793
Imowrod / Iratay	0.167

Linguistic Factors
Preceding Segment

Voiced obstruent	0.767
Lateral / Trill	0.602
Vowel	0.489
Voiceless obstruent	0.432
Nasal	0.395

Input Probability = 0.486

Total Chi-square = 18.9326 ($df = 5$, $p = 0.001$, Chi-square = 20.52)

Chi-square/cell = 1.8933

Log likelihood = -760.271

Moreover, the results show that preceding segments including voiced obstruents (e.g., /d, g, v, h/) and lateral / trill (e.g., /r, l, z/) are the immediate phonetic environments favoring the raised /ay/. On the other hand, the vowel factor has no effect on /ay/ raising ($P_i = 0.489$), such as /i/ (e.g., *maviay* ‘alive’), central and back vowel /a, o/ (e.g., *kangaay* ‘usual’, *isaboay* ‘lift’), and semi vowel /w/ (e.g., *makajway* ‘diligent, industrious’). Furthermore, there are two other factors inhibiting (ay) raising, i.e., voiceless obstruent ($P_i = 0.432$) and nasal ($P_i = 0.395$). That is, preceding voiceless obstruents /p, t, k, s/ in words such as *cinapay* ‘vegetable’, *miatay* ‘pass by’, *mehakay* ‘male’ and nasals /n, m, ŋ/ (e.g., *aonay* ‘long time’, *pangamay* ‘cursing’, and *nongay* ‘move forward’) inhibit /ay/ raising.

The ordering of the effect of the preceding segments of (ay) in the present study is scaled as follows:

Voiced obstruent (0.767) > Lateral & trill (0.602) > Vowel & semi vowel (0.49) > Voiceless obstruent (0.43) > **Nasal (0.40)**

Obviously, our results differ from Labov’s (1972) and Blake & Josey’s (2003) studies in that nasals /n, m, ŋ/ disfavor /ay/ raising in the present study, while voiced obstruents /d, g, v, h/ promote /ay/ raising. In other words, our results do not support Hypothesis 2: Preceding nasals promote the production of the raised (ay) and (aw), while voiced obstruents inhibit it. This implies the hierarchy established in English is language specific.

5.2 The Case of /aw/

Now let us turn to the variation of /aw/. The results of (aw) yielded 406 tokens from 46 speakers. The frequencies and VARBRUL probabilities of the raised /aw/ are displayed in Table 3. Like the results of /ay/, the results of /aw/ show that Yayo, Iraralay, Iranomilek, and Ivalino villages strongly favor the raising of /aw/ with ($P_i = 0.796$). However, Imowrod and Iratay villages disfavor the raising ($P_i = 0.125$). Again, the result confirm Hypothesis 3: The villages on the northeast coast promote the raised production of (ay) and (aw), while the other two on the southeast coast inhibit it.

Table 3. The frequencies and VARBRUL probabilities of raised /aw/

	Raised N	Total N	VARBRUL Weight
Social Factor			
Yayo / Iraralay / Iranomilek / Ivalino villages	168	239	0.796
Imowrod / Iratay villages	15	152	0.125
Linguistic Factor			
Preceding segment			
Lateral	95	177	0.628
Voiced obstruent	17	41	0.464
Voiceless obstruent	54	145	0.399
Vowel	17	43	0.344

Input Probability = 0.389

Total Chi-square = 11.2334 (df=4, Chi-square = 13.28, p = 0.01)

Chi-square/cell = 1.4042

Log likelihood = -188.928

The factor of preceding nasals was deleted due to its small number of tokens (only 15) and lack of statistical significance. Thus, as shown in Table 3, preceding lateral & trill factor /r, l, z/ promote raising in such words as *mararaw* ‘noon’, *iyaipasalaw* ‘swallow’, and *nivozaw* ‘leave’. Voiced obstruent /d, g, v, h/ (e.g., *midadowdaw* ‘very sad’, *mavokahaw* ‘worry’) slightly inhibits /aw/ raising. This is followed by voiceless obstruent /p, t, k, s/ (e.g., *yapapaw* ‘miss’, *attaw* ‘sea’, *manakaw* ‘steal’, and *kazisaw* ‘cursing’). Moreover, the most inhibiting factor is a vowel or semi-vowel /i, a, o, w/ (e.g., *katoaw* ‘out’, *miyoyowyaw* ‘go to play’, *kapitotowaw* ‘appear’) with the probability weight of 0.344.

The ordering of the effect of the preceding phonological environment of (aw) in the present

study is scaled as follows:

Lateral & trill (0.628) > Voiced obstruent (0.464) > Voiceless obstruent (0.399) > Vowel (0.344).

All in all, the results indicate that voiced obstruents inhibit /aw/ raising. But the tokens with nasals were too small to have any significant effect. Thus the results partially confirm Hypothesis 3. Nevertheless, it still indicates the hierarchy established for English is language specific.

5.3 Discussion

Our results confirmed that the word final (ay) and (aw) raising rule applies in the four villages on the northeast coast of the island, whereas the other two villages on the southwest coast remain primarily unraised. A closer look at the percentages of (ay) raising in Table 1 allows us to see the respective frequencies of raising in Yayo and Ivalino. As shown in Figure 2, Yayo is the administrative center on the island. From the frequent use of the raised variants of the variable (ay) there, it can be inferred that the innovative (ay) raising is considered prestigious now. On the other hand, Ivalino speakers displayed half as much raising as their neighbors, although in the statistical analysis, Ivalino was still grouped with the raising areas.

Although the raising rule only indicates geographical differences but does not have any relationship with age or gender; nevertheless, whether any relationship with social identity is being developed remains to be seen, especially when the raising areas tend to preserve Yami much more effectively than do the non-raising areas (Rau 1995).

We have also determined the preceding phonetic environments in favor of raising for both (ay) and (aw). As shown in previous studies, each variable has its own history and patterns of variation. Although laterals and trills favored raising for both (ay) and (aw), voiced obstruents promoted (ay) raising but inhibited (aw) raising. This pattern is language specific and is part of the internalized grammar of a Yami native speaker.

One drawback of this quantitative analysis is the small size of the (aw) tokens, which is only half as many as the (ay) tokens. Therefore the results can only be considered preliminary.

6. Conclusion

Our qualitative analysis has revealed that the nucleus raising rule is an innovation in Yami and has progressed faster and longer in (ay) than in (aw). The same rule has also spread to environments such as a-i and a-o across morpheme boundaries. While (ay) is raised to the peripheral high front vowel /i/ in the raising areas, another change, of prefixes with the high front vowel (e.g., *mi-/pi-/ni-*) is reversing the direction and has begun to lower and diphthongize the

nucleus /i/ to /ey/.

So far, we only tested the raising rule in word final position in the follow up quantitative study. The raising rule has been identified as associated with geographical differences. However, the raising and non-raising areas also tend to be associated with language vitality. Perhaps a speculation on the relationship between ethnic identity and raising is not implausible, especially when the innovations are led by Iraralay, the same area that preserves Yami the best on the island.

Finally the raising and lowering rules seem to play different roles in the language. Whereas the word final raising (ay) and (aw) was considered predictable and was still transcribed as the non-raised variants in the Bible, other raised variants in a-i and a-o are represented by the raised variants. This indicates the former has stylistic variation (writing vs. speaking) but the latter does not. Thus the word final (ay) and (aw) can be considered as sociolinguistic variables, whereas the (a-i) and (a-o) are only sociolinguistic indicators. Furthermore, the lowering and diphthongization rule is also represented by the spoken variants in the Bible, which indicates (i) is another case of sociolinguistic indicator. The exact patterns of phonological variation in the sociolinguistic indicators await future studies.

Appendix A: The Coding Sheet for (ay)

Dependent Variable:

FG1: Production of raised (ay)

1 = raised (ay) production

0 = un-raised (ay) production

Independent Variable:

FG2: Word position

f = (ay) occurs in word-final (e.g., *kararay* 'classmate')

m = (ay) occurs in medial position (e.g., *angayan* 'take')

FG3: Preceding Segment

i= high front vowel (e.g., *maviay* 'alive')

a= central vowel (e.g., *kangaay* 'usual')

o= back high vowel (e.g., *isaboay* 'lift')

w=semi-vowel (e.g., *makajway* 'diligent, industrious')

d = retroflex stop (e.g., *adaday* 'all, full')

t = alveolar Stop (e.g., *miatay* 'pass by')

p = labial Stop (e.g., *cinapay* 'vegetable')

s = retroflex Fricative (e.g., *rasarasay* 'bottom board')

k = velar Stop (e.g., *mehakay* 'male')

z = alveolar trill (e.g., *vazay* 'thing')

r = retroflex liquid (e.g., *kararay* 'companion, friend')

l = alveolar liquid (e.g., *awalay* 'Ouch!')

n = alveolar nasal (e.g., *aonay* 'long time')

m = labial nasal (e.g., *pangamay* 'cursing')

ŋ =velar fricative (e.g., *nongay* 'move forward')

H = uvular fricative (e.g., *vahay* 'home')

FG4: Villages

Y= Yayo

I = Iranomilek

Z = Iraralay

V = Ivalino

M = Imowrod

T = Iratay

FG5: age

m = under 55

o = 55 +

FG6: gender

f = female

m = male

Appendix B: The Coding Sheet for (aw)

Dependent Variable:

FG1: Production of raised (aw)

1 = raised (aw) production

0 = un-raised (aw) production

Independent Variable:

FG2: Word Position

f = (aw) occurs in word-final (e.g., *pakaw* ‘ceiling’)

m = (aw) occurs in media position (e.g., *arawan* ‘day’)

FG3: Preceding Consonant

i = high front vowel (e.g., *makaniaw* ‘taboo’)

o = back high vowel (e.g., *mitotoaw* ‘out’)

w = semi-vowel (e.g., *nowaw* ‘blister’)

d = retroflex stop (e.g., *midadowdaw* ‘very sad’)

t = alveolar stop (e.g., *attaw* ‘sea’)

p = labial stop (e.g., *yapapaw* ‘miss’)

s = retroflex fricative (e.g., *kazisaw* ‘cursing’)

k = velar stop (e.g., *manakaw* ‘steal’)

z = alveolar trill (e.g., *nivozaw* ‘leave’)

h = uvular fricative (e.g., *mavokahaw* ‘worry’)

r = retroflex liquid (e.g., *mararaw* ‘noon’)

l = alveolar liquid (e.g., *iyaipasalaw* ‘swallow’)

n = alveolar nasal (e.g., *meynaw* ‘strong fishy taste’)

m = labial nasal (e.g., *tazmamaw* ‘illusion’)

FG4: Villages

Y = Yayo

I = Iranomilek

Z = Iraralay

V = Ivalino

M = Imowrod

T = Iratay

FG5: age

m = under 55

o = 55 +

FG6: gender

f = female

m = male

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Phonological Variation and Sound Change in Yami on Orchid Island*

D. Victoria Rau and Hui-Huan Ann Chang
Providence University

This study investigated the sound change in progress in the Yami diphthongs /ay/ and /aw/ (e.g., *mangay* “go”, *araw* “day, sun”) on Orchid Island. The interpretation of the direction of change has been centralization and upward movement, thus [ay] and [aw] alternate with [əy] and [əw], respectively. In addition, [əy] moves forward to [iy], whereas [əw] moves backward to [uw]. This paper reports the results of qualitative and quantitative analyses to answer the following two questions: (1) What is the direction of the chain shift of (ay) and (aw)? Does it undergo changes of raising or falling? and (2) To what extent is the variation of (ay) and (aw) influenced by a combination of internal factors and external factors?

Our qualitative analysis revealed that the nucleus raising rule is an innovation in Yami and has progressed faster and longer in (ay) than in (aw). The same rule has also spread to environments such as a-i and a-o across morpheme boundaries. While (ay) is raised to the peripheral high front vowel /i/ in the raising areas, another change, in prefixes with the high front vowel (e.g., *mi-/pi-/ni-*), is reversing the direction and has begun to lower and diphthongize the nucleus /i/ to /ey/.

Our quantitative analysis tested the raising rule in word final position. The raising rule has been identified as associated with geographical differences. However, the raising and non-raising areas also tend to be associated with language vitality. Thus an interpretation on the relationship between ethnic identity and raising is proposed.

Key words: /ay/, /aw/, sociolinguistic variation, sound change in progress, Yami

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1. Introduction

The advance of research on sound change in progress has been considered the greatest achievement in contemporary sociolinguistics (Chambers 1995:147). One of the most important studies in this line of research is the raising and fronting of (ay) and (aw) in English dialects.

Labov's seminal work on linguistic change in progress on the island of Martha's Vineyard (1963, 1972) has established a paradigm of sociolinguistic variation, combining a quantitative study with an anthropological focus over the last three decades. He correlated centralization of the /ay/ and /aw/ diphthongs with social factors (i.e., identity, occupation, age and ethnicity) and linguistic factors and predicted real time changes from apparent time data collection.

Interestingly, according to preliminary studies by Li & Ho (1988) and Rau (1995), phonological variation in (ay) and (aw) have also occurred in the Yami language on Orchid Island. Both studies found that /ay/ and /aw/ diphthongs undergo sound change, and that the centralization of the two diphthongs /ay/ and /aw/ is related to regional differences.

1.1 The Yami speech community

Yami is an Austronesian language spoken on *Lanyu* (Orchid Island), a small offshore island located in the Pacific Ocean 60 kilometers southeast of Taiwan (see Figure 1). According to the Council of Indigenous Peoples (2005), there are 3,599 Yami, some of whom spend several months a year in Taiwan earning a living.

The Yami language is a Philippine Batanic language, related to Ivatan and Itbayat of Batanes. However, Mandarin Chinese has been spoken on the Island since 1945, when Mandarin Chinese became the national language of the country.

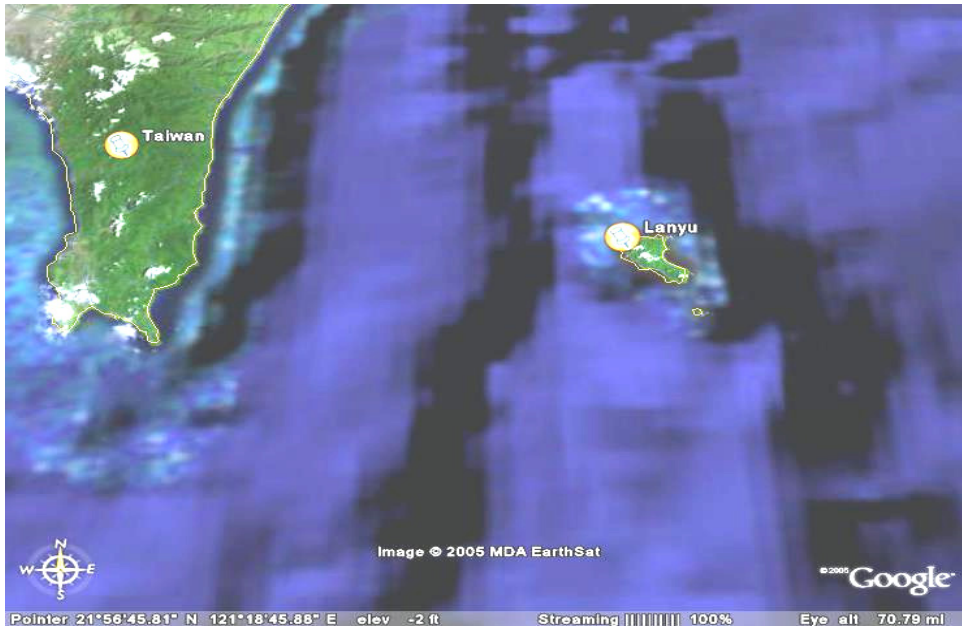


Figure 1: *Lanyu* located in the Pacific Ocean 60 kilometers southeast of Taiwan (adapted from <http://google.earth.com>)

As shown in Figure 2, there are six villages on the Island from the southwest to the northeast coast clockwise: Imowrod, Iratay, Yayo, Iraralay, Iranomilek and Ivalino.

In and near Imowrod are the airport, post office, clinic, and a hotel. Right across Imowrod at the opposite side of the island is Ivalino, where the Lanyu Nuclear Waste Plant is located. The administrative center of the island is at Yayo, where a hotel and a secondary school can be found. Iraralay and Iranomilek are further away from the government offices and tend to better preserve the Yami language. However, all villages have primary schools with Mandarin Chinese as the only medium of education. Recently, with the development of tourism, an increasing number of remodeled homes have been opened for room and board for tourists, especially on the more scenic beach on the northeast coast.



Figure 2: Geographic description of *Lanyu* (adapted from <http://google.earth.com>)

1.2 Previous sociolinguistic studies on (ay) and (aw) variation

(ay) and (aw) are two of the best-known sociolinguistic variables and have been studied in the speech of a wide range of English speakers with relatively consistent social and phonological constraints across many communities.

In Labov's pioneering work on Martha's Vineyard (1972), he focused on realizations of the diphthongs (ay) and (aw), such as *nice* and *mouse*. The results show that the nuclei of the vowels were centralized by men, particularly middle-aged fishermen, and decreased with age and with weaker island identity. Furthermore, the centralization (raising) was correlated with certain linguistic and social factors.

Many other studies have also documented (ay) and (aw) variation in various English-speaking communities, such as Lumbee Native American English (Schilling-Estes 2000), islands off the coast of North Carolina (Wolfram & Schilling-Estes 1995, 1996, 1997, Schilling-Estes 1996, 1997, Schilling-Estes & Wolfram 1997, Wolfram, Hazen,

and Schilling-Estes 1999), Detroit (Eckert 1996), Pittsburgh (Johnstone, Bhasin, and Wittkofski 2002), Martha's Vineyard (Blake & Josey 2003, Josey 2004), Canada (Chambers 1973), and England (Milroy 1996). All these studies have indicated that (ay) and (aw) display different patterns of variation and social meanings.

The diphthong /ay/ has been found to be monophthongized as [a] in the U.S. south (Wolfram & Schilling-Estes 1996), e.g., tahn "time" and tahd "tide", but only the white tend to centralize the /ay/ before the voiceless obstruent, such as raht "right" and whate "white". In the studies of (aw) fronting, Eckert (1989) on Pittsburgh and Labov (1984) on Philadelphia English found that females tended to reduce (aw) raising as their social statuses increased, whereas males demonstrated a curvilinear pattern, in that only the middle working class tended to raise (aw). In a recent study in the Pittsburgh speech community, Johnston, Bhasin, and Wittkofski (2002) discovered that /aw/ is further monophthongized to [a] as in [at] (spelled 'aht') for 'out' or [dantan] (spelled 'dahntahn') for 'downtown'.

Several studies on variation of (ay) and (aw) have focused on Ocracoke Island and Smith Island, North Carolina (Wolfram & Schilling-Estes 1995, 1996, Schilling-Estes 1996, 1997, Schilling-Estes & Wolfram 1997, and Wolfram, Hazen, and Schilling-Estes 1999). The islanders of Ocracoke are known as 'hoi toiders' (their pronunciation of 'high tiders'), turning [ay] into [oy], and [aw] into [ay], such as hice 'house' and dine 'down'. The backing of [ay] to [oy] is a social stereotype, a feature commonly associated with the islander, whereas the glide fronting of [aw] to [ay] remains a social indicator because there is no stylistic variation among the islanders. As a social stereotype, the backing of [ay] to [oy], as in 'hoi toiders', was shared mostly by the middle aged male speakers with strong identities with the island (Schilling-Estes 1997). However, the young women on the island preferred the standard variant [ay] (Schilling-Estes & Schrider 1996). Among the Lumbee Indians in Outer Banks of North Carolina, /ay/ is raised, e.g., [roId] 'ride', and /aw/ is glide-fronted, and/or raised, e.g., [saInd] or [seInd] 'sound'.

The variables of (ay) and (aw) are equally salient in the studies of English dialects in other English speaking countries. The famous 'Canadian raising' (Chambers 1973) has been under American influence and the diphthong (aw) has been subsequently affected. Using the methods of comparative sociolinguistic dialectology, Hung, Davison, and Chambers (1993) explored the development of (aw)-fronting. The results showed that the only systematic variation in (aw)-fronting still occurred in Montreal, whereas in Vancouver, Toronto, and Victoria, (aw) has become Americanized.

Trudgill (1990) observed that the northern dialects in England still preserve the more conservative variants [i] and [u] of the two diphthongs (ay) and (aw) respectively. Thus 'night' is pronounced as neet, and 'house' as hoose. Milroy (1996) investigated the

conversational speech of a sample of Tyneside (England) residents in the diphthong /ai/. He also found that [ei] is a conservative allophone close to Middle English /i:/ which is the source of modern /ai/.

The patterns of phonological changes in (ay) and (aw) are similar in Australian (e.g. Horvath 1985:69) and New Zealand English (Maclagan, Gordon, and Lewis 1999), in that the (ay) is backed and the (aw) is centralized and fronted. But New Zealand English demonstrated further changes in glide, that is /y/ is lowered to /e/ and /w/ is lowered and fronted to a central vowel. Furthermore, Maclagan, Gordon, and Lewis (1999) noticed that professional women in New Zealand tended to be conservative in the pronunciations of (ay) and (aw) but quite innovative in changing the front vowels (e.g., 'hit' is pronounced as 'hut'). This corresponds to Labov's prediction (1990) that lower middle class women are conservative in using stigmatized variants but take the lead in the sound change of a non-stigmatized variant.

Forty years after Labov's Martha's Vineyard study, Blake & Josey (2003) went back and found a change in the linguistic pattern predicted by Labov. The results indicated that there is a decreasing rate of /ay/ centralization and a return to mainland speech among Vineyard men, which was caused by social and economic restructuring and resulting ideological changes taking place on the island. Similarly, Josey (2004) found that the decentralization of /ay/ and /aw/ on Martha's Vineyard is caused by the same factors.

To sum up, the two diphthongs /ay/ and /aw/ are undergoing sound changes in many English speaking countries. However, each variable also demonstrates its own unique rate and path of change. Furthermore, the previous studies also found relationships between internal (e.g., voiced vs. voiceless obstruents) and external factors, such as social class and gender, with sound change.

However, the relationships between variation and gender, along with other social factors, such as ethnicity and style, have been investigated more in the qualitative paradigm than in the quantitative one. The fallacy of equating sex with gender has been criticized (e.g., Mendoza-Denton 2004). In addition, Eckert (2001) also questioned the validity of using the unidimensional definition of style. In Eckert's (2000) study of Detroit adolescents, she found that the raising and backing of (ay) interact with gender and social group categories. The female burnouts are in lead, even exceeding the rate of backing by their male counterparts. Thus she emphasized the importance of interpreting sound change in relation to style and gender based on the concept of "community of practice" (Eckert & McConnell-Ginet 1992) to generate an "emic" meaning.

Although all the studies reviewed so far have been cases in English speaking countries, (ay) and (aw) variation is certainly not restricted to those areas. However, very little research has been conducted on these variables in minority languages. The

only preliminary studies on (ay) and (aw) on Orchid Island can be found in Li & Ho (1988), Rau (1995), Chen (1998), and Rau and Dong (2006).

1.3 Preliminary studies on phonological variation in Yami

All the aforementioned studies on Yami had different foci in their investigation, but all observed phonological variations in passing. They identified several phonological variables in Yami,¹ including the voiced labiodental fricative /v/, voiced uvular fricative /ɣ/, glottal stop /ʔ/, and diphthongs /ay/ and /aw/. The elderly tended to retain [v] and [ɣ], while the younger generation tended to substitute [f] and [ʔ], respectively. In addition, there is centralization of the two diphthongs due to regional differences. According to Rau & Dong (2006), the variable (aw) might be realized by [əw], [uw], or [aw] in words such as *attaw* ‘sea’ and *araw* ‘sun, day’. On the other hand, the variable (ay) might be realized by [iy], [əy], and [ay] in words such as *vazay* ‘work’ and *mangay* ‘go’. The variables (ay) and (aw) are primarily pronounced as [ay] and [aw] respectively in Imowrod and Iratay; however, they are undergoing sound change in progress in Yayo, Iralalay, Iranomilek and Ivalino.

The interpretation of the direction of change has been centralization and upward movement, thus [ay] and [aw] alternate with [əy] and [əw], respectively. In addition, [əy]

¹ There are twenty consonants (Table A), four vowels, and four diphthongs (Table B) in Yami. All the symbols in the tables represent standard Yami orthography. The IPA symbols, whenever different from the orthography, are placed in square brackets.

Table A: Inventory of Yami consonants

	Labial	Alveolar	Retroflex	Palatal	Velar	Uvular	Glottal
Stop	p, b	t	d		k, g		ʔ [ʔ]
Fricative	v [v, f]		s [s]			h [ɣ]	
Nasal	m	n			ng [ŋ]		
Liquid		l	r [ɻ]				
Affricate				c [tʃ], j [dʒ]			
Trill		z [ʀ]					
Glide	w			y			

Table B: Inventory of Yami vowels

	Front	Central	Back
High	i		
Mid		e [ə]	o [o] ~ [u] ~ [o]
Low		a	
Diphthong	ay, aw, oy, iw		

moves forward to [iy], whereas [əw] moves backward to [uw]. However, Rau & Dong (2006) further observed occurrences of centralization in a few words in the typical non-raising areas, such as *alilikey* ‘all very small’ and *manganiáhey* ‘scary’. Among the typical raising areas, as reported in Rau (1995), Ivalino used more non-raising variants than Iraralay, where the raised variants [əy] and [əw] were most common. Yayo and Iranomilek had further developed fronting and monophthongization [i] and [u] for the diphthongs.

In previous studies, the general directions of sound change of the two diphthongs have been claimed to be (ay): ay > əy > iy and (aw): aw > əw > uw. But interestingly, the front vowel [i] has been observed by Rau and Dong (2006) to undergo lowering and diphthongization to [əy], as in *mi* ~ *mey* ‘go’ in the raising areas. It seems that a regular reversal (Ho 1988): ay > əy > iy > əy is underway.

1.4 Phonological variation in other Batanic languages

Phonological variation has almost never been dealt with in historical linguistics. For example, in Sheerer’s comparisons between the Batan dialect and other Philippine and Formosan languages (1908), the two diphthongs were reconstructed as *ay and *aw. Since no sociolinguistic surveys were conducted on the variations of these diphthongs, there is no way to judge if the non-raised variants are really older than their raised counterparts. However, some variants for (ay) and (aw) were recorded in the same study. For example, the word for ‘man, male’ has the following reflexes: *magakay* (Batan), *laki* (Bontok), *lagey* (Tiruray), and *laloy* (Banawi). Similarly, the word for ‘sun, day’ has reflexes as follows: *arao* (Batan), *axu* (Bontok), *ago* (Tinggian), *ageo* (Pangasinan), *gay/gey* (Moro Magindanao), *araw* (Tagalog). In Reid’s (1971) comparisons of word lists and phonologies in Philippine minor languages, he also recorded /ay/ and /i/ variation for the word ‘swim’ in Ivatan (*mayawat*) and in Itbayaten (*miawat*).

There are anecdotes in several other studies on Batanic languages that indicate phonological variation in (ay) and (aw). Benedek (1987, 1991) used Iranomilek speech as the basis for his comparison with other Bashiic languages, i.e., Ivatan and Itbayat. He noted that there was inconsistency in his transcription of word final /o/ and /aw/ due to insufficient information on Yami phonology. Tsuchida et al. (1987, 1989) chose to juxtapose Imowrod and Iranomilek dialects in their data presentations. The (ay) and (aw) variations between the two dialects are apparent in their collected sentences; however, no systematic investigation was attempted. Finally, the words with final (ay) and (aw) were transcribed differently in West’s (1995) Yami word list. Although her source of data is based on the Iraralay dialect, she chose to transcribe some centralized (ay) but left (aw) completely as non-raising.

It seems previous studies have all alluded to phonological variations in different dialects in Yami and other Batanic languages; however, the systematic patterns of phonological variation is yet to be found. Thus the purpose of this paper is to fill this gap by examining the directions of sound change of (ay) and (aw) in detail and determining the linguistic and social factors that are correlated with the sound change.

2. Methodology

This puzzling issue of phonological variation and sound change of (ay) and (aw) was approached from a sociolinguistic variationist paradigm to answer the following three questions: 1) What is the direction of the chain shift of (ay) and (aw)? Does it undergo changes of raising or falling? 2) To what extent is the variation of (ay) and (aw) influenced by a combination of internal factors and external factors? and 3) What social meanings can be attributed to the envelope of variation? A combination of quantitative and qualitative methods was used to answer the aforementioned research questions.

2.1 Data

The data consist of four corpora: 1) Corpus A is a collection of 11 short narratives from *si amen macinanao* in Iraralay, explaining Yami customs and cultural events, as part of the data for the first author's research project on Digital Archiving Yami Language Documentation (<http://www.hrelp.org/grants/projects/index.php?year=2005>); 2) Corpus B is the *Yami New Testament* (1994), translated by speakers of Iranomilek and Iraralay; 3) Corpus C contains lyrics of 14 clapping songs (Knight & Lu 2005) collected mostly from Iraralay and Ivalino speakers with a few examples from Yayo and Iratay, combining ceremonial lyrics with non-ceremonial melody to express solidarity and praises; and 4) Corpus D was built from 20 narratives in Rau & Dong (2006) and more narratives from Dong & Rau (1999, 2000) to ensure a balanced representation of age, sex, and location of the speakers.

2.2 Analysis procedures

Corpora A through C were used for a qualitative analysis. The nature of the three corpora is suitable for a heuristic and exploratory study to identify sound change patterns that have not been found in previous studies and generate hypotheses for phonological variation of (ay) and (aw).

Maa-neu Dong, an experienced Iratay speaker from the non-raising area with high literacy skills in Yami, was invited to comment on the transcriptions of Corpus A,

focusing on the tokens of (ay) and (aw) produced by the Iraralay speaker from the raising area. She was particularly asked to identify any differences between her pronunciation and the transcribed variants. She was further asked to comment on Corpus B, the Yami New Testament, translated by speakers from the raising area, to identify any transcriptions that are different from her dialect. In addition, she was consulted to clarify the meanings of the lyrics in Corpus C and comment on the transcriptions made by the original authors, one of whom is from the raising area.

For the quantitative investigation, a variable rule analysis (VARBRUL) was conducted on Corpus D to identify the internal and external factors that account for nucleus raising in (ay) and (aw). The two variables were calculated separately in two analyses.

In numerous sociolinguistic variation studies, VARBRUL has been used to determine the favoring, disfavoring, or lack of effect of various factor groups (i.e., linguistic environment or internal factors and social or external factors). Thus, the quantitative part of this study applied GOLDVARB 2001 (Robinson et al. 2001) to conduct a multivariate analysis of the data and to show how /ay/ and /aw/ variations correlate with various internal and external factors.

3. Results from the qualitative analysis

There are two dialect areas on the island based on the nucleus raising or non-raising of word final (ay) and (aw). Iratay and Imowrod are considered the non-raising areas whereas the other four villages are the raising areas. This grouping is based on an impressionistic account by Dong, which also corresponds with the results of Rau's preliminary results (1995). Typical examples cited to illustrate the differences between the raised and unraised (ay) and (aw) include: *mehakay* ~ *mehakey* ([ay] ~ [əy]) 'man, male'; *malaw* ~ *malew*, *malow* ([aw] ~ [əw] ~ [uw]) 'worry'. However, a close examination of the Yami New Testament, translated mostly by the speakers of the raising area, reveals that the dialectal variation in speech is not reflected in writing. All the raised variants of (ay) and (aw) were transcribed as non-raised in the Bible. These stylistic differences between speaking and writing (orthography) actually provide a clue to the more prestigious status of the non-raised variants of (ay) and (aw), although they say nothing about the general question of power and solidarity of the different varieties on the island. In fact, no one from Orchid Island would admit to the researchers which variety has more prestige; nonetheless, the dialect of the husband carries more power than that of the wife, because it is usually the wife who accommodates to the husband's accent, not the other way around (Dong, personal communication).

3.1 Phonological variation of (ay) and (aw)

The variables (ay) and (aw) are approaching stereotypes, in that they not only demonstrate stylistic variation as mentioned above but were consciously avoided by the native speakers in their transcriptions for the Bible. In the following excerpt (1) from Corpus A, *si aman macinanao* comments on the variation between *ivey* and *ivay*, while discussing the importance of the *ivey* fish caught in the evening. All the relevant tokens are underlined for further discussion in the following paragraphs.

- (1) *o* *ivey* *iya* *am*,
 NOM² fish.name this TM
i-panci d(a) ori no kadoan l-ili *a* *ivay* *koan da*,
 IF-call 3PG that GEN other RED-village LIN fish.name say 3PG
mi-ángay ori aka no *ivey*,
 AF-same that and GEN fish.name
ta *yamen* *Jiraraley* *am*,
 because 1PNEXCLF village.name TM
i-panci namen a *ivey*,
 IF-call 1PGEXCL LIN ish.name
sira do Jimowrod a *Jiratey* *am*,
 3PNOM LOC village.name LIN village.name TM
i-panci da *ivay*,
 IF-call 3PG fish.name
 “*Ivey* is called *ivay* in other villages. But it has the same meaning as *ivey*. We in Iraraley call it *ivey*, whereas those in Imowrod and Iratey call it *ivay*.”

As shown in excerpt (1), the word final (ay) indicates variation. The speaker draws the distinction between his raised pronunciation of *ivey* and the non-raised *ivay* in the other two villages, i.e., *Imowrod* and *Iratey*. Notice in his reference to *Iratey*, he uses his raised variant [əy], although the speakers from that non-raising area would refer to their own village as *Iratay*. However, in the token of *miángay* ‘same’, contrary to our expectation, he chose the unraised variant, the only word final unraised (ay) in the 11 narratives he contributed. One possible explanation might be that his attention was temporarily drawn to the unraised variant *ivay*. When this word occurs in the reduplicated form later in the

² Abbreviations: 1PGEXCL = first person plural genitive exclusive, 1PNEXCLF = first person plural nominative exclusive free, 3PNOM = third person nominative, 3PG = third person genitive, GEN = genitive, IF = instrumental focus, LIN = linker, LOC = locative, NOM = nominative marker, RED = reduplication, TM = topic marker

text, he sticks to the raised variant *miangangey* ‘all the same’.

The nucleus raising of (ay) and (aw) occurs in word final position, but if *-ay* or *-aw* is immediately followed by a suffix, no raising occurs. This indicates the non-raised variants /ay/ and /aw/ are the phonemic representations, thus raising is a variable rule. The contrast between word final and suffixed (ay) and (aw) is shown in example (2) from Corpus A. The same pattern of contrast can be found in Corpus C.

(2)

Word final position	Followed by a suffix
<i>manehawey</i> ‘holds one’s fists and looks angry with eyes wide open’	<i>ji manehaway-i</i> ‘not hold a ceremony of <i>manehaway</i> ’
<i>kapeysiasiy</i> ‘then dismiss’	<i>misiasiy-i</i> ‘dismiss’
<i>mamozwow</i> ‘chase away’	<i>ji vozwav-a</i> ‘not chase something away’
<i>marew</i> ‘daytime’	<i>paka-m-araw-en</i> ‘cause to go overnight’

So far, we have observed that word final (ay) and (aw) seems to be the most easily affected position; however, some idiosyncratic cases seem to be determined by lexical diffusion (Chen 1972). For example, words such as *alilikey* ‘all small’ and *manganiáhey* ‘scare’ have completed their sound change to the raised variant in the non-raising areas, whereas word final (ay) raising in words, such as *akókey* ‘How are you?’, *vahey* ‘house’, and *mangey* ‘go’, is only occurring in the raising areas with some variation. The raising rule appears to have occurred earlier in (ay) than (aw) because although word final (aw) raising, such as *ararew* ‘days’, occurs in the raising areas, no tokens with raised (aw) in word final positions have been found in the non-raising areas.

3.2 Raising in a-i and a-o

The nucleus raising rule is not restricted to word final diphthongs (ay) and (aw) but also applies to /a/ in a-i and a-o combinations in other positions. But the rule seems to follow an implicational scale with the following hierarchy: morpheme internal > word boundary > morpheme boundary. In other words, the raising rule has affected almost all the a-i and a-o across morpheme boundaries, such as *asa keyli* ‘one village’ and *makowbot* ‘go out’, as shown in (3). However, word boundaries following bound pronouns display variations in that the raising rule applies more freely to the hesitation marker *i* (e.g., *to dey* ‘just’) than any other words (e.g., *deytoro* ‘they give it’). Finally, the raising rule only begins to apply morpheme internally. The raised /ey/ and /ow/ variants, such as *maseyrem* ‘evening’ and *kalowdan* ‘deep sea’ are restricted to the raising areas. Interestingly, the non-raised variants /ay/ and /aw/ also occur in their speech; however, the /ay/ in *rayyon*

‘flying fish season’ is probably diphthongized from /a/, while the /aw/ in *katawtao* ‘self’ is a reduplicated form. In fact, the raised variant *katowtao* is also possible.

(3)

Morpheme internal	Word boundary	Morpheme boundary
*(-) <i>maseyrem</i> ‘evening’ (< <i>ma-sairem</i>) *(+) <i>rayyon</i> ³ ‘flying fish season’	(-) <i>deytoro</i> ‘they give it’ (< <i>da itoro</i>) (+) <i>to dey</i> ‘just’ (< <i>to da i</i> ⁴)	(+) <i>asa keyli</i> ‘one village’ (< <i>asa ka-ili</i>) (+) <i>iseysanan</i> ‘hotel’ (< <i>isa-isan-an</i>)
(-) <i>kalowdan</i> ‘deep sea’ (< <i>ka-laod-an</i>) (+) <i>katawtao</i> ‘self’ (< <i>ka-tao-tao</i>)	(-) <i>sirewri</i> ‘they that’ (< <i>sira ori</i>)	(+) <i>makowbot</i> ‘go out’ (< <i>maka-obot</i>), (+) <i>oyówyat</i> ‘strength’ (< <i>oya-oyat</i>), (+) <i>mówney</i> ‘long time’ (< <i>ma-onay</i>) (+) <i>Imowrod</i> ‘village name’ (< <i>ima-orod</i>)

*(-) Iraralay only

*(+) Iraralay and Iratay

Other evidence in support of the hypothesis that the raising rule is an innovation can be found in traditional lyrics. As mentioned above in (3) that *maseyrem* ‘evening’ is derived from *masairem*. The form *lairem*⁵ ‘evening’ is found in Corpus C, produced by an Iraralay female singer in a love song set to the melody of clapping songs (Knight & Lu 2005). In addition, there is one case of non-raised word final /aw/ followed by a pause, e.g., *imaziniaw* ‘outsider, other ethnic group’, produced by a male Iraralay singer in his account of the origin of clapping songs.

However, some established [əy] forms are beginning to be raised even further to [iy], i.e., [ay] > [əy] > [iy]. The examples found in Corpus A, as shown in (4), illustrate several examples that usually have the -ey forms on the island but have undergone

³ The Iratay variant is *rayon*.

⁴ The hesitation marker or filler *i* occurs frequently after bound pronouns and *akma* ‘like’ in set phrases. The unraised form *akmay* can still be found in a traditional lyric by an Iratay singer in Corpus C, although all the other singers from the raising areas used *akmey*.

⁵ The /l/ occurs in old festival lyrics or *raod* to replace other segments in speech. For example, *lairem* vs. *sairem* ‘evening’, *veley* vs. *vahey* ‘house’, *alorod* vs. *aorod* ‘song’, *langara* vs. *tangara* ‘raise one’s head’.

further raising and fronting to the high front vowel /iy/.

(4)

iy	ey
<i>pic<u>i</u>ylilian</i> ‘each village’	<i>pic<u>e</u>ylilian</i>
<i>ti<u>y</u>esa</i> ‘each one’	<i>te<u>e</u>esa</i>

3.3 A new development

As discussed in the previous paragraphs, raising in (ay)⁶ seems to have progressed faster in the Yami phonological system than (aw), so that raising has been completed in some word final (ay) in certain words in the traditionally non-raising areas. In addition, the lowering and diphthongization rule is beginning to affect /i/ across morpheme boundaries, which are found to be the most easily affected environment in an innovative rule application.

Based on a close examination of Corpus B, three prefixes with /i/ were identified as undergoing lowering and diphthongization change in the raising area: *pi-*, *mi-*, and *ni-*. The first two are transitive and intransitive verb prefixes, respectively, whereas the last one refers to the superlative degree in collocation with the genitive pronoun *na*. The following examples in (5) illustrate the different spellings in the Bible and Dong’s Iratay spellings.

(5)

Prefix	pi-	mi-	ni- ... na
Bible (Iranomilek and Iralalay)	<i>pe<u>y</u>-pe<u>y</u>-pangayan</i> ‘meaning’	<i>me<u>y</u>-yangay</i> ‘the same’	<i>ne<u>y</u>-manowji na</i> ‘the last’
Iratay	<i>pi<u>i</u>-pi<u>i</u>-pangayan</i>	<i>mi<u>i</u>-yangay</i>	<i>ni<u>i</u>-manowji na</i>

The same sound change occurring in the superlative *ni-* has spread to some archaic perfective *-in-* but not to the more productive perfective *ni-*. For example, *pey-ney-nozyan* ‘place of prayer’ in the Bible is derived from *p-in-i-nozian*⁷ with a reanalysis.

The prefix *pey-* seems to have been affected by the lowering and diphthongization rule earlier than *ney-*, based on examples such as *p-in-ey-rawalow* ‘was ruined’ and *p-in-ey-kavali* ‘was broken in half’, in Corpus C by an Iralalay singer. This indicates

⁶ A similar variation between *-ey* and *-ay* is also found in Siraya in Adelaar (2000), as pointed out by an anonymous reviewer.

⁷ The perfective *-in-* only occurs in archaic forms where the infix is no longer productive. For productive use, the prefix *ni-* is used to indicate perfectivity.

-in- is not affected by the rule. In addition, the grammaticalized form *mi* ‘go’ from *mangay* ‘go’ also has the lowered and diphthongized counterpart *mey* in the Bible.

The other evidence in support of the variation between /i/ and /ey/ can be found in *si aman macinanao*’s account of the traditional clapping songs in celebration of the completion of a work house in Corpus A. Unlike the raising rule which is well established, the lowering and diphthongization rule is more recent because there is much more variation in the tokens with (*mi-*)/(*pi-*). The *mey-/pey-* forms are more frequent than the *mi-/pi-* counterparts. Examples with the same root *kariag* are illustrated in (6).

(6) Words derived from *kariag*

/ey/	/i/
<i>mey-kariag</i> ‘clap hands’	<i>ni-mi-kariag</i> ‘clapped hands to sing’
<i>pey-kariag-an</i> ‘place where people clap hands to sing’	<i>ka-pi-key-kariag</i> ⁸ ‘clapping and singing’
<i>i-ka-pey-kariag</i> ‘reason to clap hands to sing’	

In summary, whereas the (ay) raising has progressed to the high front vowel /i/, some prefixes with the high front vowel /i/ are beginning to undergo a lowering and diphthongization rule to /ey/ [əy], making an interesting loop, i.e., ay > əy > iy > əy. The (aw) variable, on the other hand, undergoes the raising rule in a slower pace. Thus we have not seen any reversal changes from /o/ [u] to /ew/ [əw].

4. Quantitative analysis

In the following analysis, we only discuss the results of word final diphthongs due to space limitations. A comprehensive quantitative analysis testing all the hypotheses generated from our qualitative analysis awaits future studies.

4.1 Generation of hypotheses

To clarify and explain the variation of (ay) and (aw) in Yami, based on the theoretical work in sociolinguistic variation studies, six hypotheses were formulated for the quantitative study:

According to Kaye & Lowenstamm (1981), a coda is more often modified than an

⁸ The /ey/ is *-key-* is a type of reduplication. See Rau & Dong (2005) for details.

onset. In our observations of the raising phenomenon, (ay) and (aw) occurring in word final positions seem to be more prone to modification than any other positions, thus:

Hypothesis 1: Word-final positions of (ay) and (aw) promote raising, while non-word final positions inhibit it.

According to Labov (1972), the favoring preceding consonants in centralized /ay/ are lateral and nasal. The ordering of the effect of the preceding phonological environment of (ay) in Blake & Josey's (2003) Martha's Vineyard is: nasal > voiceless obstruent > lateral > voiced obstruent. We would like to test whether the same hierarchy might apply to (ay) and (aw) raising in Yami or whether it might be language specific, thus:

Hypothesis 2: Preceding nasals promote the production of the raised (ay), while voiced obstruents inhibit it.

Building on hypothesis 2, it is further predicted that:

Hypothesis 3: Preceding nasals promote the production of the raised (aw), while voiced obstruents inhibit it.

Previous studies (e.g., Rau 1995) indicate that (ay) and (aw) raising is a phonological feature specific to the northeast coast of the island, thus:

Hypothesis 4: Yayo, Iralalay, Iranomilek, and Ivalino villages on the northeast coast promote the raised production of (ay) and (aw), while Iratay and Imowrod inhibit it.

Many studies have shown that males and females within a community exploit linguistic resources differently (e.g., Eckert 1996, 2000, Labov 1963, 1972). Thomas (1988) investigated a South Wales community and found women were more likely than men to preserve local Welsh dialect features. The gender differences are certainly related to identities and social network in the respective communities. Thus, we have the following hypothesis:

Hypothesis 5: Men promote the raised production of (ay) and (aw), while women inhibit it.

Finally as a direct test of sound change in progress, we assume raising is continuing in the younger generation, and thus:

Hypothesis 6: Younger people promote raised (ay) and (aw), while the elderly inhibit it.

4.2 Coding

All the tokens of (ay) and (aw) in Corpus D were coded. The spoken data yielded 1607 (ay) and 420 (aw) tokens. Like Labov's Martha's Vineyard's database (1972), (aw) also occurs less frequently than (ay) in this study. The dependent variable in this study is the raised /ay/ and /aw/. All of the raised diphthongs [iy, əy, əw, uw] were coded the same as application of the raising rule; on the other hand, non-raised diphthongs [ay, aw]

were coded as the non-application forms.

There are six factor groups for the independent variables, including three phonological factor groups and three social factor groups (see Appendix A for (ay) and B for (aw)). Several illegible tokens of the dependent variable were not coded, for instance, when a speaker was too excited to speak clearly.

5. Results

After the initial VARBRUL run, recoding the factors within groups, and eliminating non-significant factors or factor groups, the results demonstrate reliable values. Word position, age, and gender factor groups were eliminated. Thus, we cannot confirm three hypotheses: Hypothesis 1 (Word-final positions of (ay) and (aw) promote raising, while non-word final positions inhibit it), Hypothesis 5: (Men promote the raised production of (ay) and (aw), while women inhibit it), and Hypothesis 6: (Younger people promote raised (ay) and (aw), while the elderly inhibit it). However, since our focus is only on word final (ay) and (aw), position is no longer a relevant issue for us. Furthermore, since very few Yami speakers under 30 years of age could carry on a conversation in Yami without code-switching with Mandarin, it will probably be very difficult to pursue hypothesis 6. Therefore, in the following sections, we only discuss the effect of preceding segments and regional differences.

Before we move on to the results, a brief explanation of how to interpret VARBRUL values is in order. Note that there is a standard formula to interpret the VARBRUL weights. For each factor, there is a value (i.e., weight) ranging from 0.00 to 1.00. VARBRUL factor values of more than 0.5 indicate a favoring effect by the factor while values of less than 0.5 indicate a disfavoring effect. A value of 0.5 means that the factor has no significant effect on nucleus raising.

5.1 The case of /ay/

Table 1 shows the variable patterning of raised /ay/. The results of (ay) yielded 1607 tokens from 46 speakers.

Table 1: The Variable patterning of raised /ay/

	Unraised N / %	Raised N / %	Totals N
Villages			
Yayo	63 / 17.5	304 / 82.5	367
Iranomilek	91 / 21.6	330 / 78.4	421
Iraralay	7 / 26.9	19 / 72.1	26
Ivalino	37 / 60.6	24 / 39.4	61
Iratay	553 / 82.9	114 / 17.1	667
Imowrod	54 / 83.1	11 / 16.9	65
Total	805 / 50.3	796 / 49.7	1607
Preceding Segment			
Liquid / Trill	74 / 32.9	151 / 67.1	225
Voiced obstruent	88 / 33.8	172 / 66.2	260
Vowel (vowel & semi-vowel)	39 / 44.3	49 / 55.7	88
Voiceless obstruent	148 / 52.5	134 / 57.5	282
Nasal	456 / 58.7	296 / 41.3	752
Total	805 / 50.1	802 / 49.9	1607
All Speakers (46)			

As indicated in Table 1, the total percentage of raised /ay/ tokens is 49.9%. In the village factor group, Yayo has the greatest percentage of raised tokens with 82%, exceeding Iranomilek (78.4%) and Iraralay (72.1%). Ivalino (39.4%) actually patterned closer to the nonraising areas than the raising areas. Furthermore, in the linguistic environment, the greatest percentage of raised /ay/ is liquid & trill /t, l, z/ (67.1%). This is followed by voiced obstruent with 66.2%.

The final results from the VARBRUL analysis are presented in Table 2, which presents that the input probability has a value of 0.486. Most importantly, the total Chi-square has a value of 18.9326, less than 20.52 ($df = 4$, $p = 0.001$). Thus, we can interpret VARBRUL weights (values) to find out the influence of the factors. Social group presented in Table 2 shows the probability that /ay/ would be raised as [əy] or [iy] according to regional differences: Imowrod and Iratay strongly disfavor raising of /ay/ ($P_i = 0.167$); however, the other villages including Yayo, Iraralay, Iraomilek, and Ivalino strongly favor raising ($P_i = 0.793$). That is to say, the results confirm Hypothesis 4: Yayo, Iraralay, Iranomilek, and Ivalino villages on the northeast coast promote the raised production of (ay), while Iratay and Imowrod inhibit it.

Table 2: VARBRUL result for /ay/ raising

	Weight
Social Factor	
Yayo / Iraralay / Iranomilek / Ivalino	0.793
Imowrod / Iratay	0.167
Linguistic Factors	
Preceding Segement	
Voiced obstruent	0.767
Liquid / Trill	0.602
Vowel	0.489
Voiceless obstruent	0.432
Nasal	0.395
Input Probability = 0.486	
Total Chi-square = 18.9326 ($df = 5$, $p = 0.001$, Chi-square = 20.52)	
Chi-square/cell = 1.8933	
Log likelihood = -760.271	

Moreover, the results show that preceding segments including voiced obstruents (e.g., /d, g, v, h/) and liquid/trill (e.g., /r, l, z/) are the immediate phonetic environments favoring the raised /ay/. On the other hand, the vowel factor has no effect on /ay/ raising ($P_i = 0.489$), such as /i/ (e.g., *maviay* ‘alive’), central and back vowel /a, o/ (e.g., *kangaay* ‘usual’, *isaboay* ‘lift’), and semi vowel /w/ (e.g., *makajway* ‘diligent, industrious’). Furthermore, there are two other factors inhibiting (ay) raising, i.e., voiceless obstruent ($P_i = 0.432$) and nasal ($P_i = 0.395$). That is, preceding voiceless obstruents /p, t, k, s/ in words such as *cinapay* ‘vegetable’, *miatay* ‘pass by’, *mehakay* ‘male’ and nasals /n, m, ŋ/ (e.g., *aonay* ‘long time’, *pangamay* ‘cursing’, and *nongay* ‘move forward’) inhibit /ay/ raising.

The ordering of the effect of the preceding segments of (ay) in the present study is scaled as follows:

Voiced obstruent (0.767) > Liquid & trill (0.602) > Vowel & semi vowel (0.49) > Voiceless obstruent (0.43) > Nasal (0.40)

Obviously, our results differ from Labov’s (1972) and Blake & Josey’s (2003) studies in that nasals /n, m, ŋ/ disfavor /ay/ raising in the present study, while voiced obstruents /d, g, v, h/ promote /ay/ raising. In other words, our results do not support

Hypothesis 2: Preceding nasals promote the production of the raised (ay) and (aw), while voiced obstruents inhibit it. This implies the hierarchy established in English is language specific.

5.2 The case of /aw/

Now let us turn to the variation of /aw/. The results of (aw) yielded 406 tokens from 46 speakers. The frequencies and VARBRUL probabilities of the raised /aw/ are displayed in Table 3. Like the results of /ay/, the results of /aw/ show that Yayo, Iraralay, Iranomilek, and Ivalino villages strongly favor the raising of /aw/ with ($P_i = 0.796$). However, Imowrod and Iratay villages disfavor the raising ($P_i = 0.125$). Again, the result confirm Hypothesis 3: The villages on the northeast coast promote the raised production of (ay) and (aw), while the other two on the southeast coast inhibit it.

Table 3: The frequencies and VARBRUL probabilities of raised /aw/

	Raised N	Total N	VARBRUL Weight
Social Factor			
Yayo / Iraralay / Iranomilek / Ivalino	168	239	0.796
Imowrod / Iratay	15	152	0.125
Linguistic Factor			
Preceding segment			
Liquid / Trill	95	177	0.628
Voiced obstruent	17	41	0.464
Voiceless obstruent	54	145	0.399
Vowel	17	43	0.344
Input Probability = 0.389			
Total Chi-square = 11.2334 (df=4, Chi-square = 13.28, p = 0.01)			
Chi-square/cell = 1.4042			
Log likelihood = -188.928			

The factor of preceding nasals was deleted due to its small number of tokens (only 15) and lack of statistical significance. Thus, as shown in Table 3, preceding liquid & trill factor /r, l, z/ promote raising in such words as *mararaw* ‘noon’, *iyaiपालaw* ‘swallow’, and *nivozaw* ‘leave’. Voiced obstruent /d, g, v, h/ (e.g., *midadowdaw* ‘very sad’, *mavokahaw* ‘worry’) slightly inhibits /aw/ raising. This is followed by voiceless obstruent /p, t, k, s/ (e.g., *yapapaw* ‘miss’, *attaw* ‘sea’, *manakaw* ‘steal’, and *kazisaw* ‘cursing’). Moreover, the most inhibiting factor is a vowel or semi-vowel /i, a, o, w/

(e.g., *katoaw* ‘out’, *miyoyowyaw* ‘go to play’, *kapitotowaw* ‘appear’) with the probability weight of 0.344.

The ordering of the effect of the preceding phonological environment of (aw) in the present study is scaled as follows:

Liquid & trill (0.628) > Voiced obstruent (0.464) > Voiceless obstruent (0.399) > Vowel (0.344).

All in all, the results indicate that voiced obstruents inhibit /aw/ raising. But the tokens with nasals were too small to have any significant effect. Thus the results partially confirm Hypothesis 3. Nevertheless, it still indicates the hierarchy established for English is language specific.

5.3 Discussion

Our results confirmed that the word final (ay) and (aw) raising rule applies in the four villages on the northeast coast of the island, whereas the other two villages on the southwest coast remain primarily unraised. A closer look at the percentages of (ay) raising in Table 1 allows us to see the respective frequencies of raising in Yayo and Ivalino. As shown in Figure 2, Yayo is the administrative center on the island. From the frequent use of the raised variants of the variable (ay) there, it can be inferred that the innovative (ay) raising is considered prestigious now. On the other hand, Ivalino speakers displayed half as much raising as their neighbors, although in the statistical analysis, Ivalino was still grouped with the raising areas.

Although the raising rule only indicates geographical differences but does not have any relationship with age or gender; nevertheless, whether any relationship with social identity is being developed remains to be seen, especially when the raising areas tend to preserve Yami much more effectively than do the non-raising areas (Rau 1995).

We have also determined the preceding phonetic environments in favor of raising for both (ay) and (aw). As shown in previous studies, each variable has its own history and patterns of variation. Although liquids and trills favored raising for both (ay) and (aw), voiced obstruents promoted (ay) raising but inhibited (aw) raising. This pattern is language specific and is part of the internalized grammar of a Yami native speaker.

One drawback of this quantitative analysis is the small size of the (aw) tokens, which is only half as many as the (ay) tokens. Therefore the results can only be considered preliminary.

6. Conclusion

Our qualitative analysis has revealed that the nucleus raising rule is an innovation in Yami and has progressed faster and longer in (ay) than in (aw). The same rule has also spread to environments such as a-i and a-o across morpheme boundaries. While (ay) is raised to the peripheral high front vowel /i/ in the raising areas, another change, of prefixes with the high front vowel (e.g., *mi-/pi-/ni-*) is reversing the direction and has begun to lower and diphthongize the nucleus [i] to [əy].

So far, we have only tested the raising rule in word final position in the follow up quantitative study. The raising rule has been identified as associated with geographical differences. However, the raising and non-raising areas also tend to be associated with language vitality. Perhaps a speculation on the relationship between ethnic identity and raising is not implausible, especially when the innovations are led by Iraralay, the same area that preserves Yami the best on the island.

Finally the raising and lowering rules seem to play different roles in the language. Whereas the word final raising (ay) and (aw) was considered predictable and was still transcribed as the non-raised variants in the Bible, other raised variants in a-i and a-o are represented by the raised variants. This indicates the former has stylistic variation (writing vs. speaking) but the latter does not. Thus the word final (ay) and (aw) can be considered as sociolinguistic variables, whereas the (a-i) and (a-o) are only sociolinguistic indicators. Furthermore, the lowering and diphthongization rule is also represented by the spoken variants in the Bible, which indicates (i) is another case of sociolinguistic indicator. The exact patterns of phonological variation in the sociolinguistic indicators await future studies.

Appendix A: The coding sheet for (ay)

Dependent variable:

FG1: Production of raised (ay)

1 = raised (ay) production

0 = un-raised (ay) production

Independent variable:

FG2: Word position

f = (ay) occurs in word-final (e.g., *kararay* ‘classmate’)

m = (ay) occurs in medial position (e.g., *angayan* ‘take’)

FG3: Preceding segment

i = high front vowel (e.g., *maviay* ‘alive’)

a = central vowel (e.g., *kangaay* ‘usual’)

o = back high vowel (e.g., *isaboay* ‘lift’)

w = semi-vowel (e.g., *makajiway* ‘diligent, industrious’)

d = retroflex stop (e.g., *adaday* ‘all, full’)

t = alveolar stop (e.g., *miatay* ‘pass by’)

p = labial stop (e.g., *cinapay* ‘vegetable’)

s = retroflex fricative (e.g., *rasarasay* ‘bottom board’)

k = velar stop (e.g., *mehakay* ‘male’)

z = alveolar trill (e.g., *vazay* ‘thing’)

r = retroflex liquid (e.g., *kararay* ‘companion, friend’)

l = alveolar liquid (e.g., *awalay* ‘Ouch!’)

n = alveolar nasal (e.g., *aonay* ‘long time’)

m = labial nasal (e.g., *pangamay* ‘cursing’)

ŋ = velar fricative (e.g., *nongay* ‘move forward’)

h = uvular fricative (e.g., *vahay* ‘home’)

FG4: Villages

Y = Yayo

I = Iranomilek

Z = Iraralay

V = Ivalino

M = Imowrod

T = Iratay

FG5: Age

m = under 55

o = 55 +

FG6: Gender

f = female

m = male

Appendix B: The coding sheet for (aw)

Dependent variable:

FG1: Production of raised (aw)

- 1 = raised (aw) production
- 0 = un-raised (aw) production

Independent variable:

FG2: Word position

- f = (aw) occurs in word-final (e.g., *pakaw* ‘ceiling’)
- m = (aw) occurs in media position (e.g., *arawan* ‘day’)

FG3: Preceding consonant

- i = high front vowel (e.g., *makaniaw* ‘taboo’)
- o = back high vowel (e.g., *mitotoaw* ‘out’)
- w = semi-vowel (e.g., *nowaw* ‘blister’)
- d = retroflex stop (e.g., *midadowdaw* ‘very sad’)
- t = alveolar stop (e.g., *attaw* ‘sea’)
- p = labial stop (e.g., *yapapaw* ‘miss’)
- s = retroflex fricative (e.g., *kazisaw* ‘cursing’)
- k = velar stop (e.g., *manakaw* ‘steal’)
- z = alveolar trill (e.g., *nivozaw* ‘leave’)
- h = uvular fricative (e.g., *mavokahaw* ‘worry’)
- r = retroflex liquid (e.g., *mararaw* ‘noon’)
- l = alveolar liquid (e.g., *iyaipasalaw* ‘swallow’)
- n = alveolar nasal (e.g., *meynaw* ‘strong fishy taste’)
- m = labial nasal (e.g., *tazmamaw* ‘illusion’)

FG4: Villages

- Y = Yayo
- I = Iranomilek
- Z = Iraralay
- V = Ivalino
- M = Imowrod
- T = Iratay

FG5: Age

- m = under 55
- o = 55 +

FG6: Gender

- f = female
- m = male

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