

VERB CLASSIFICATION, CASE MARKING, AND
GRAMMATICAL RELATIONS IN AMIS

by

Jing-lan Joy Wu
May 10, 2006

A dissertation submitted to the
Faculty of the Graduate School of
the State University of New York at Buffalo
in partial fulfillment of the requirements for the
degree of

Doctor of Philosophy

Department of Linguistics

Copyright by
Jing-lan Joy Wu
2006

Acknowledgements

My first and foremost thanks go to my advisor, Dr. Robert Van Valin, who is no doubt the most inspiring teacher I have ever met in my academic life. Without his enlightenment, guidance, and the great theory that he has developed, this research would have barely shaped. I am especially grateful to him for the extreme patience and constant encouragement, which have helped me stay on the track and face the formidable challenge of dissertation-writing with much confidence and a positive attitude. I also feel indebted to him for his timely academic advice and his efforts of making himself available even when he was on sabbatical.

I also wish to express my gratitude to my two committee members: Dr. Jean-Pierre Koenig and Dr. Matthew Dryer. I want to thank Dr. Koenig for challenging the logics of my presentation and Dr. Dryer for checking the adequacy and clarity of my data description, and more importantly, for reminding me to think beyond the limitation of a framework. I have benefited enormously from the discussion with both professors, and their valuable comments and criticisms have made this dissertation a much better work than its earlier version. I would like to extend my appreciation to all the professors at the Linguistics Department at UB for their training and instruction that have helped me become a more competent researcher and a well-rounded scholar.

I am greatly indebted to the following Amis speakers: Jin-mei Li (Panay), Jyun-jyu Lin (Osay), Wan-song Lin (Talod), Hsiou-mei Lin (Ngaday), Hsiang-chun Shr (Lakaw), Der-sheng Lin (Akih), Huei-min Chang (Dongi), Jin-long Chen (Ofad), Afan Lekal, Hsiao-yi Lin (Piyaw), and Ching-yi Chu (Kolas). Without their generous help, this research would have been impossible. I especially want to thank Panay, Ngaday, and

Osay for hosting me with great hospitality and treating me as a family member during my fieldtrips at Changkuang. I would also like to thank the following institutions for their financial support on my Ph.D. study and my fieldwork on Amis: the Fulbright Foundation, the Academia Sinica, National Science Council, and the Linguistics Department at UB.

I owe a great many thanks to the following fellow students at the Linguistics Department at UB, who befriended me and supported me through my time in graduate school: Lilián Guerrero, Jenn Cornish, Hidematsu Miura, Chris Phipps, Kimio Tanihara, Sunyoung Hong, Tom McClive, Kyoko Toratani, Kazuhiro Kawachi, Myoyoung Kim, Sayaka Abe, Atsuko Nishiyama, Ameyo Awuku, Yukiko Sugiyama, Colette Sheffer, Viktoriya Lyakh, Liancheng Chief, Sabrina Hsiao, and Valeria Belloro. A special “thank you” goes to Chief and Sabrina for providing me much assistance and support and making Buffalo a home for me when I had to travel back and forth from Taiwan to the US during the past several summers.

My heartfelt gratitude also goes to teachers, friends, and colleagues in Taiwan. So much of my inspiration came from the discussion with the following Formosan linguists: Prof. Paul Li, Prof. Lillian Huang, Prof. Limay Sung, Dr. Elizabeth Zeitoun, Prof. Marie Yeh, Prof. Yung-li Chang, and Stacy Teng. I also owe an intellectual debt to Prof. Malcolm Ross from the Australian National University for his valuable suggestions and comments on my work. For friends outside of the Formosan circle, I want to in particular thank Patrick and Bartleby for their friendship and support. I also want to dedicate my appreciation to Tracy, my dear old friend, for her wisdom and the pep talks, which have eased my tension for the rather slow progress on my work all these years. I am also indebted to Elyssa for her encouragement and kind help at some critical

moments.

Last but not the least, I want to express my gratitude to the members of my two families. For my family members in Taipei, I thank Hsieh-O for her generosity and kindness. I feel the most fortunate to be able to live with her for so many years. I am forever grateful to her for the tolerance on my occasional irrationality and constant untidiness, which have been poorly justified with the excuse of dissertation-writing. I thank Sally for being a great listener for my jokes and the stress-relieving chit-chats. For my family members in Kaohsiung, I thank my mother for her understanding and the freedom when it came my time to go. I thank my brothers Chi-hua, Chi-liang, and my sister-in-law Ya-fang for taking good care of the family so that I could be away to pursue my academic achievement in another country. Thanks to little Benjamin for being such an angel who can brighten up the darkest moments in my life. Finally, I want to dedicate this dissertation to my father, who passed away a year before I went abroad for my study. This Ph.D. degree was the last promise I made to him, and now I have fulfilled my promise. I dedicate this work to him for his unfailing love and faith. I hope he is now watching me in heaven with a big smile.

Table of Contents

Acknowledgements iii

List of Tables xi

List of Figures xvi

Abbreviations xvii

Phonetic Symbols xviii

Abstract xix

Chapter 1 Introduction 1

1.1 A General Introduction to Amis 2

1.2 Literature Review 6

1.2.1 Chen (1987) 8

1.2.1.1 The Framework 8

1.2.1.2 Case Relation and Case Forms 9

1.2.1.3 Verb Classes 14

1.2.1.4 Transitivity 19

1.2.1.5 Verbal Derivations 20

1.2.2 Huang (1988) 25

1.2.2.1 The Framework 25

1.2.2.2 The Analysis 26

1.2.3 Yan (1992) 31

1.2.3.1 The Framework 31

1.2.3.2 The Analysis 32

1.2.4 Liu (1999) 34

1.2.5	Liu (2003)	36
1.2.6	Tsukida (2005b)	38
1.3	Overall Comments and Research Issues	42
Chapter 2 The Framework: An Introduction to RRG		45
2.1	Syntactic Representation	46
2.2	Semantic Representation	49
2.2.1	Verb Classification and the Logical Structures	49
2.2.2	Semantic Roles	53
2.3	Grammatical Relations	59
2.4	The Linking Algorithm: From Semantics to Syntax	63
2.5	Summary	65
Chapter 3 A Sketch of Amis Grammar		67
3.1	Word Classes	68
3.2	Basic Clause Structure	73
3.3	The Grammar of Nouns	78
3.3.1	The Case Marking System	78
3.3.2	The Pronominal Systems	85
3.3.3	Noun Phrase Structures	90
3.4	The Grammar of Verbs	99
3.4.1	The Voice System	107
3.4.2	The Temporal, Aspectual, and Modal System	117
3.4.2.1	TAM Information and the Voice Affixes	117
3.4.2.2	Time Expressions and Aspectual Markers	122

3.4.2.3	The Expressions of Moods	124
3.4.3	The Negative Constructions	132
3.4.4	The Imperative Constructions	137
3.5	Summary	142
Chapter 4 Verb Classification and Verbal Derivations 145		
4.1	A Preliminary Classification of the Lexical Categories	147
4.1.1	The Ideophone-Forming Construction and the Categories of the Roots	148
4.1.2	Unaffixed Predicates	157
4.1.2.1	Unaffixed Locative Predicates	158
4.1.2.2	Unaffixed Non-locative State Predicates	160
4.2	Voice Affixes and Verb Classes	162
4.2.1	The Meaning and Functions of the AV Marker <i>Mi-</i>	165
4.2.2	The Meaning and Functions of the UV Marker <i>-En</i>	173
4.2.3	The Meaning and Functions of the AV and UV Markers <i>Ma-s</i>	181
4.2.4	Interim Summary	193
4.3	The Aktionsart Tests and Verb Classes	194
4.4	Further Discussion of Two Verb Sub-classes	214
4.4.1	Involuntary Activities	214
4.4.2	Psych-predicates	217
4.5	Verbal Derivations	225
4.5.1	Deriving a Predicate from a Nominal Root	227
4.5.2	Deriving a Predicate from a State Root	233

4.5.3	Deriving a Predicate from an Activity Root	242
4.5.4	<i>Pa-</i> Causativization	253
4.5.4.1	<i>Pa-</i> and the Categories of the Roots	254
4.5.4.2	The Analysis of <i>Pa-pi-...(-en)</i> and <i>Pa-ka-...(-en)</i> Verbs	263
4.5.4.3	Comparison with Starosta's (1974) Analysis	270
4.6	Summary	273
Chapter 5 Semantic Roles and Case Marking 275		
5.1	Macroroles	277
5.1.1	Macrorole Assignment and Predicates with Zero Core Arguments	279
5.1.2	Macrorole Assignment and Predicates with One Core Argument	284
5.1.3	Macrorole Assignment and Predicates with Two Core Arguments	286
5.1.4	Macrorole Assignment and Predicates with Three Core Arguments	299
5.1.4.1	<i>Pa-</i> + Transfer Roots	302
5.1.4.2	<i>Pa-</i> + Roots of Different Categories	313
5.1.4.3	Undergoer Selection of <i>Pa-pi-</i> Predicates	326
5.1.4.4	Undergoer Selection of <i>Pa-ka-</i> Predicates	330
5.2	Case System and Case Assignment Rules	334
5.2.1	The Forms and Functions of the Case Markers	334
5.2.2	Case Assignment Rules	351
5.3	Summary	357
Chapter 6 Grammatical Relations 359		
6.1	Major Constructions for the Discussion of Grammatical Relations	361

6.1.1	Relative Clause	361
6.1.2	Displacement Construction and WH-question Construction	363
6.1.3	Control Constructions	373
6.1.3.1	The Persuade-type Control Construction	374
6.1.3.2	The Promise-type Control Construction	386
6.1.3.3	The Try-type Control Construction	390
6.1.4	Reflexivization	394
6.1.5	Consecutive Clauses	399
6.2	The Applicative Constructions	410
6.2.1	The Instrumental Applicative Constructions	412
6.2.2	The Locative Applicative Constructions	419
6.2.2.1	The Location-Locative Applicative Construction	422
6.2.2.2	The Purposive-Locative Applicative Construction	423
6.2.2.3	The Patient-Locative Applicative Construction	425
6.3	Voice Constructions	432
6.3.1	The Actor Voice Constructions	433
6.3.2	The Undergoer Voice Constructions	436
6.3.3	Other Constructions Exhibiting Voice Changes	439
6.4	Summary	445
Chapter 7 Conclusion		447
<i>References</i>		456
<i>Appendix</i>		466

Tables

- 1.1 Amis Consultants Currently Living in Changpin, Taitung County 4
- 1.2 Amis Consultants Currently Living in Taipei 4
- 1.3 A Summary of The Sub-grouping Proposals of Amis 6
- 1.4 Some of the Previous Works about Amis Morphosyntax 7
- 1.5 The Case Relations of Amis (Chen 1987) 9
- 1.6 The Case Forms of Amis and the Sets of Case-marked Elements (Chen 1987) 10
- 1.7 The Features of Each Case Form (Chen 1987) 12
- 1.8 The Correspondence of Case Relations and Case Forms (Chen 1987) 12
- 1.9 Verb Classes in Nataoran Amis (Chen 1987) 14
- 1.10 The Sub-categorization of Verb Classes (Chen 1987) 17
- 1.11 Major Verb Classes of Central Amis (Huang 1988) 26
- 1.12 Case Relations in Central Amis (Huang 1988) 27
- 1.13 Some Classes and Examples in Huang's (1988) Verb Classification 28
- 1.14 Imperative Focus Marking System Amis (Huang 1988) 31
- 1.15 Verb Classes in Peinan Amis (Yan 1992) 32
- 1.16 Verb Classes in Amis (Liu 2003) 37
- 1.17 Semantic Features of Each Conjugation in Amis (Tsukida 2005b) 39
- 1.18 The Subcategories of *ma*- Verbs (Tsukida 2005b) 39
- 1.19 The Imbalance Caused by Regarding *ma* Form as GV (Tsukida 2005b) 40
- 1.20 Traditional Split Intransitivity and Verb Classification in Amis
(Tsukida 2005b) 41
- 2.1 Layered Structure of Clause (LSC) 46

2.2	Aktionsart Features of Each Verb Class	49
2.3	Diagnostic Tests for Aktionsart Classes	50
2.4	Lexical Representations for Aktionsart Classes	53
2.5	Macrorole Number and Transitivity	58
2.6	Constructional Schema for English Passive (Plain)	65
3.1	The Possible Deverbal Forms of a Verb	70
3.2	The General Distinction of Three Open Word Classes in Amis	73
3.3	Amis Case Markers	79
3.4	Amis Noun Classifiers	79
3.5	The Composites of Case Makers and Noun Classifiers	79
3.6a	The Functions of Each Case (A Preliminary Summary)	84
3.6b	The Case Marking Patterns of Constructions with Different Voices	84
3.7	Amis Personal Pronouns and Possessive Pronominal Nouns	85
3.8	Amis Demonstrative Pronouns	88
3.9	Amis Interrogative Pronouns	88
3.10	The Modifiers in a Noun Phrase in Amis	99
3.11	The Major Conjugations of Amis Verbs in Affirmative Sentences	101
3.12	The Major Conjugations of Amis Verbs in Negative Declarative Sentences	102
3.13	Amis Voice Markers	108
3.14	Amis Applicative Markers and the Co-occurring Affixes	111
3.15	The Forms of the Verbs in The Applicative Constructions	113
3.16	An Example of the Previous Analysis of Amis Voice System	114
3.17a	The Forms of the Plain Voice Verbs in the RC	116

3.17b	The Forms of the Applicative Verbs in the RC	116
3.18	The TAM Information of Different Voice Markers	118
3.19	Default TAM Interpretations of Verbs Affixed by Different AV Markers	118
3.20	The Comparison Between <i>mi-</i> and <i>-en</i> Verbs (Tsukida 1993)	121
3.21	The Contextual Differences between the Two Readings of V- <i>aw</i>	128
3.22	Some of The Negative Predicates in Amis	133
3.23	Verbs in the Affirmative Declarative Sentences and their Forms after <i>Ca'ay</i>	133
3.24	Verbs in the Affirmative Declarative Sentences and their Forms in the Imperative Sentences	138
4.1	Different Roots and the Structures of the <i>X sa</i> Construction	152
4.2	Categories of the Roots and the Structures and Interpretations of <i>X sa</i>	156
4.3	Different Structures in Nicknaming and Nominalization of State Predicates	161
4.4	Verb Types Differentiated by <i>mi-</i>	173
4.5	Verb Types Differentiated by <i>-en1</i> and <i>-en2</i>	181
4.6	Verb Types Differentiated by AV or Neutral and UV <i>ma-s</i>	190
4.7	The Logical Structures of The Voice Affixes	193
4.8	Summary of Verb Classes Differentiated by <i>mi-</i> , <i>ma-s</i> , and <i>-en1</i>	194
4.9	Tests for Amis Aktionsart Classes	195
4.10	Verb Types and Their Co-occurrence with <i>tu</i>	206
4.11	Verb Types and Their Co-occurrence with <i>ho</i>	212
4.12	Verb Classes and Possible Markers	213
4.13	The Sub-classes of Psych-predicates	219
4.14	The Meaning of <i>ma-</i> and <i>ma-ka-</i> Psych-predicates	223

4.15	Voice Affixes and the Selection of Qualia Roles from Nominal Roots in the Derivation	233
4.16	Degree of Agentivity Displayed in the Activity Roots	243
4.17	The Conjugation Patterns of Plain <i>Pa-</i> Verbs	254
4.18	Types of Interpretations of <i>Pa-</i> + Root	256
5.1	Macrorole Number and Transitivity (=Table 2.5)	279
5.2	Three Types of Structures of <i>-en2</i>	281
5.3	The Comparison of the Second Argument of a Two-place Predicate	292
5.4	Case Marking Patterns For One-place and Two-place Predicates in Amis	295
5.5	The Possible Undergoer Selection Patterns of <i>pa-</i> + Activity Root	323
5.6	The Possible Undergoer Selection Patterns of <i>pa-</i> + State Root	324
5.7	The Interpretations of <i>pa-ka-</i> + Root and Undergoer Selection Patterns	331
5.8	Amis Case Markers (=Table 3.3)	334
5.9	Amis Noun Classifiers (=Table 3.4)	335
5.10	Amis Case Markers (Huang 1995)	335
5.11	Amis Case Markers (Liu 1999)	336
5.12	Amis Noun Classifier System (Liu 1999)	336
5.13	An “Ideal” System of Amis Case Markers Following Liu’s (1999) Analysis	337
5.14	The Comparison of the NPs Marked by <i>tu</i>	350
5.15	Case Marking Patterns in Amis	352
5.16	Voice Affixes and their Common Case Marking Patterns	352

6.1	Summary of the Pivot Types in Displacement and WH-Q Constructions	373
6.2	Controllers and Pivots in the Control Constructions	393
6.3	Controllers and Pivots for the Sentences in (6.29)	401
6.4	The Analysis of Controllers and Pivots in Some Grammatical Constructions in Amis	408
6.5	Constructional Schema for Amis Instrumental Applicative	419
6.6	The Co-occurring Affixes and the Readings of the Locative Applicative Constructions	421
6.7	Constructional Schema for Amis Location-Locative Applicative	423
6.8	Constructional Schema for Amis Purposive-Locative Applicative	425
6.9	Constructional Schema for Amis Patient-Locative Applicative	430
7.1	Aktionsart Features of Each Verb Class (=Table 2.1)	448
7.2	Lexical Representations for Aktionsart Classes (=Table 2.4)	448
7.3	Amis Voice Markers (=Table 3.13)	450
7.4	Amis Applicative Markers and the Co-occurring Affixes (=Table 3.14)	450
7.5	Transitivity and Case Patterns: An Ergative Pattern in Amis	451
7.6	The Logical Structures of the Voice Affixes (=Table 4.7)	451
7.7	Tests for Amis Aktionsart Classes (=Table 4.9)	452
7.8	Functions of Voice Constructions in Amis	454
7.9	Split-Ergativity in Amis	454

Figures

- 1.1 The Distribution of The Indigenous Peoples of Taiwan 3
- 1.2 The Distribution of Amis Dialects 5
- 1.3 Feature Tree and Inflectional Paradigm of Amis Determiners (Chen 1987) 11
- 1.4 Amis Personal Pronouns (Chen 1987) 11
- 1.5 Derivational Processes Relating Amis Primary Verb Classes (Chen 1987) 20
- 1.6 Verb Class II (Huang 1988) 29
- 1.7 Verb Class III (Huang 1988) 29
- 1.8 Case Relation and Nominative Case Markers (Huang 1988) 29
- 1.9 Case Relation and Accusative Case Markers (Huang 1988) 29
- 2.1 General Structure of Role and Reference Grammar 45
- 2.2 LSC with Constituent and Operator Projections 47
- 2.3 The LSC of an English Sentence 48
- 2.4 Some English Syntactic Templates (simplified) from the Syntactic Inventory 48
- 2.5 Continuum for Verb-specific Semantic Roles to Grammatical Relations 54
- 2.6 Thematic Relations Continuum in Terms of LS Argument Positions 54
- 2.7 Actor-Undergoer Hierarchy (VV 2005:126) 57
- 2.8 Summary of RRG Linking System 63
- 5.1 Actor-Undergoer Hierarchy (= Figure 2.7) 278
- 7.1 Actor-Undergoer Hierarchy (= Figure 2.7) 449

Abbreviations

ABLT	Abilitative	PPN	Personal Proper Noun
ASP	Aspect	PREP	Preposition
AV	Actor Voice	RED	Reduplication
CAU	Causative	RECP	Reciprocal
CN	Common Noun	REFL	Reflexive Marker
DAT	Dative Case	UV	Undergoer Voice
EXCL	Exclusive	1/2/3S	first/second/third person singular
FAC	Factual Marker	1/2/3P	first/second/third person plural
GEN	Genitive Case		
InA	Instrumental Applicative		
INCL	Inclusive		
IRR	Irrealis		
LA	Locative Applicative		
LNK	Linker		
MOOD	Mood Marker		
NEG	Negative Predicate		
NEUT	(Voice) Neutral		
NOM	Nominative Case		
PAST	Past Tense		
PL	Plural		
POSN	Possessive Pronominal Noun		

Phonetic Symbols

Symbols Used in this Dissertation (Consonants)	IPA Symbols
p	p
t	t
k	k
q	ʔ
,	ʔ
c	c
f	f
s	s
x	x
h	h̥
m	m
n	n
ng	ŋ
r	r
l	ɾ
d	ɗ
w	w
y	j

Symbols Used in this Dissertation (Vowels)	IPA Symbols
i	i
e	ɛ
a	a
u	u
o	o

Abstract

This dissertation explores the following three issues related to the verbal semantics and syntax of Amis within the framework of Role and Reference Grammar: verb classification, case marking, and grammatical relations. The following analyses and claims are proposed. First, instead of adopting a four-voice system claimed in the prior research, this dissertation argues that there are only two voices in Amis: actor voice (AV) and undergoer voice (UV). The latter is composed of the plain UV and the applicative UV constructions, which include the instrumental applicative and the locative applicative. The applicative constructions promote the semantic status of an NP, and they follow the UV pattern by default. This is a piece of evidence showing the ergativity of Amis. The voice markers exhibit robust derivational functions besides inflectional functions. Their semantics are decomposed and represented with logical structures, and their derivational functions are explicated through a set of lexical rules. Inflectionally, the AV constructions show both PSA modulation and argument modulation functions. The UV pattern, though being deemed as the default voice, appears to be a morphologically marked one for some verbs. Hence, Amis presents a split system in this regard.

Second, a tri-case system containing nominative, genitive, and dative cases is proposed for Amis. The dative case is claimed to mark either a non-macrorole argument or an adjunct. Thus, two-place AV predicates with nominative-dative case pattern should be macrorole intransitive. That is, the AV verbs pattern like intransitive verbs in Amis, and the case marking of the S argument in both types of verbs is the same as the undergoer of a UV verb. Amis thus exhibits an ergative case marking pattern.

Third, besides voice morphology and the case frame, Amis verbs are classified in terms of their Aktionsart features. In general, the basic Aktionsart classes proposed in RRG can be also differentiated in Amis.

Finally, it is found that except for the relative clause and the nominal type of displacement construction where there exists a subject-like grammatical relation, other grammatical phenomena in Amis such as control, reflexivization, and pivots in consecutive clauses mostly have semantic controllers and/or pivots.

Chapter 1

Introduction

This dissertation explores the following three issues related to the syntax and semantics of Amis, an Austronesian language spoken in Taiwan: verb classification, case marking, and grammatical relations. These issues have been explored with various degrees of thoroughness in some of the prior studies of Amis grammar. The prominent three of such studies are Chen (1987), Huang (1988), and Yan (1992),¹ all of which are mainly about verb classification, and among them, Chen (1987), Huang (1988), and Yan (1992) also discuss the case relations in Amis within different frameworks. Compared with the issues of verb classification and case marking, grammatical relations are not discussed with the same depth in the former research. This dissertation will examine the three named issues within the framework of Role and Reference Grammar (RRG hereafter), presented in Van Valin and LaPolla (1997) and Van Valin (2005), which are respectively referred to as VVLP (1997) and VV (2005) in the following discussion. These three issues are put together in this research not only because of their close interaction in Amis grammar but also because of the theoretical interest. As laid out in VVLP (1997) and VV (2005), lexical decomposition of different types of verbs (or predicates) plays an extremely important role in the theoretical construction of RRG. Other components of a grammar such as case marking and syntactic functions crucially refer to the decomposition-based logical structures of a verb/predicate. Hence, it will be interesting to explore these three issues and account for their interaction in the grammar of Amis from the RRG perspective.

¹ Tsukida's (2005b) manuscript is also related to the verb classification of Amis. This work is included in the literature review section.

There are seven chapters in this dissertation. Chapter 1 provides a general introduction to the Amis language, including the geographical distribution and sub-grouping information. In this chapter, works that are related to research issues of this dissertation will also be reviewed. Among these works, Chen (1987) will receive special attention due to its similarity with this dissertation in terms of research focus and scope. Chapter 2 gives an overview of the RRG framework, especially those parts that will be employed in the discussion. Chapter 3 presents a grammatical sketch of the Amis language. Chapters 4 to 6 discuss the three main issues of this work: verb classification and the logical structure of different verb types (Chapter 4), semantic roles and case marking (Chapter 5), and grammatical relations (Chapter 6). Finally, a conclusion is provided in Chapter 7.

1.1 A General Introduction to Amis

Amis is an Austronesian language spoken in Taiwan. Like almost all other Austronesian languages spoken in this area (Yami excluded),² Amis belongs to the Formosan group of the Austronesian Family. According to Blust (1999), the exact number of Formosan languages is unknown. The distribution of the Formosan languages can be found on the map in Figure 1.1.³ As shown on the map, Amis is mainly spoken in the east coast area of Taiwan, stretching from Hualien County to Taitung County and including a small part in Hengchun, Pingtung County in southern Taiwan.

² Yami belongs to the Philippine sub-group; it shares a closer relationship with the languages spoken on the Batanes Islands of the Philippines.

³ As shown on the map, there two groups of the indigenous peoples: the plain group and the mountain group. The former is generally located in the plain areas in western and northern Taiwan and has been assimilated to the Han people to a great extent. Their languages have either died out or gradually become moribund. As for the mountain group, its people live in the mountainous areas in central and eastern Taiwan, as well as the coastal areas in eastern Taiwan. Unlike the plain peoples/tribes, the cultures of this group are still well-maintained and the languages mostly remain actively spoken in their communities.

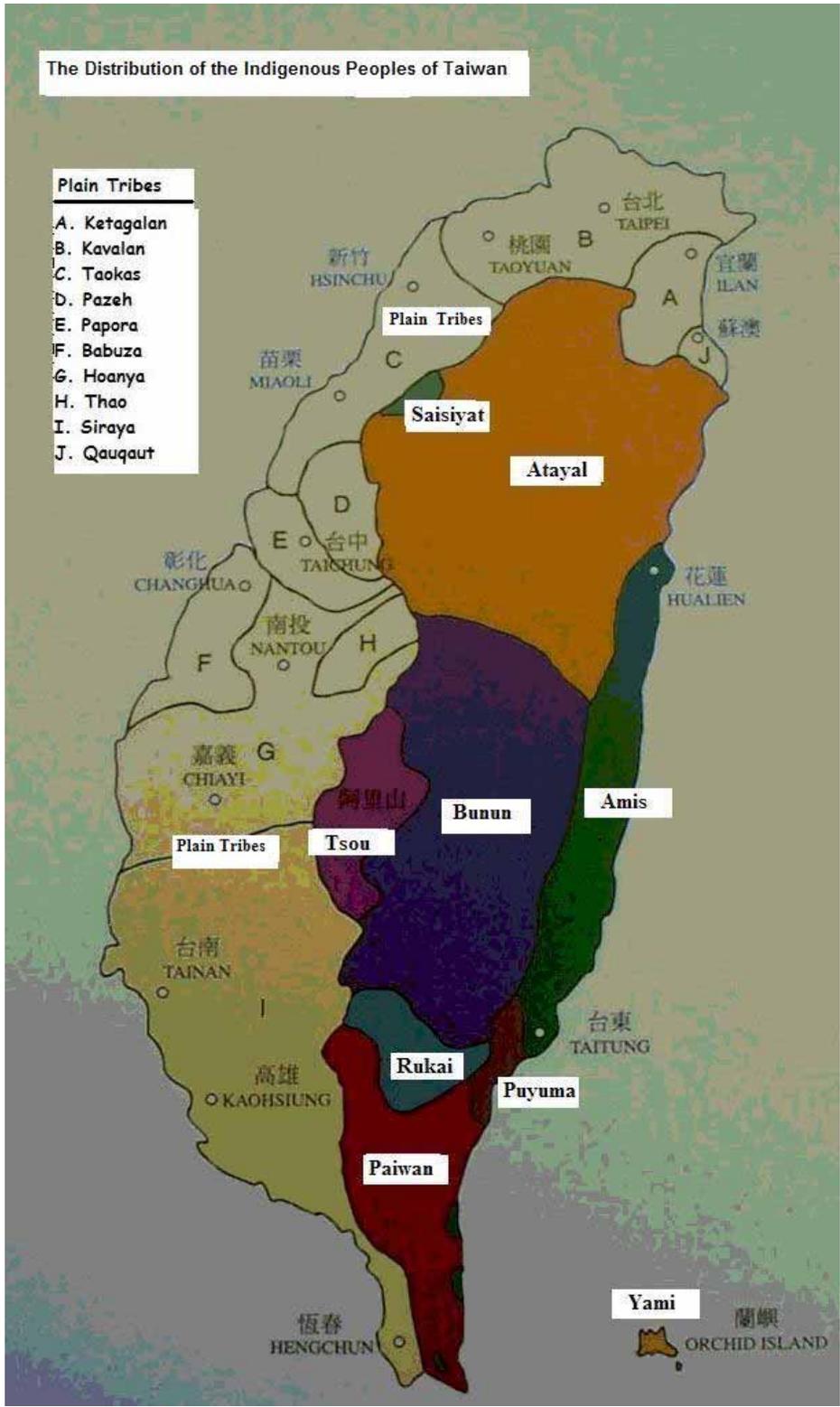


Figure 1.1 The Distribution of The Indigenous People of Taiwan
 (Adapted from: <http://www.construction.tpc.gov.tw/wulia/about/other5.htm>)

Among all the Formosan languages, Amis is known to have the largest population of speakers (around 170,000 people, according to the statistics published by the Council of the Indigenous Peoples, Executive Yuan, ROC in July 2005). According to Tsuchida (1988), there are five major dialects of this language: Sakizaya (or Sakiraya), Northern (or Nanshi Amis), Tavalong-Vataan, Central, (Haian Amis and Hsiukulan Amis excluding Tavalong-Vataan), and Southern (Peinan Amis and Hengchun Amis).⁴ The data analyzed in this dissertation was mainly collected from Haian Amis (meaning Coastal Amis), one of the Central dialects, focusing on the one spoken in the Changkuang Community at Changpin, Taitung County. Tables 1.1 and 1.2 display the names and ages of the language consultants/informants (“*” indicates the main consultants):⁵

Table 1.1 Amis Informants Currently Living in Changpin, Taitung County

Chinese Name/Amis First Name	Gender	Birth-year
*Jin-mei Li/Panay	Female	1945
*Jyun-jyu Lin/Osay	Female	1947
*Wan-song Lin/Talod	Male	1949
*Hsiou-mei Lin/Ngaday	Female	1956
Hsiang-chun Shr/Lakaw	Female	1928
Der-sheng Lin/Akih	Male	1926
Ma-yao Kao/Mayaw	Male	1934
Huei-min Chang/ Dongi	Female	1949

Table 1.2 Amis Informants Currently Living in Taipei

Chinese Name/Amis First Name	Gender	Birth-year
*Jin-long Chen/Ofad	Male	1955
Afan Lekal (Amis full name)	Female	1973

⁴ According to Li (1994), the Central dialect is the one that is the most commonly used, while the Sakizaya dialect retains more older characteristics of the Amis language (Tsuchida 1988).

⁵ These two groups of consultants show slight variation concerning the judgment of the grammaticality of some expressions. It is found in my observation that consultants who immigrated to Taipei at early ages have higher flexibility regarding such judgment and higher tolerance for some seemingly innovative forms. Besides the consultants from Changpin, I also collected a few examples from Mr. Shuang-rung Chen (Mayaw in Amis, born in 1942), who speaks the dialect of Yu-li, Hualien County, which also belongs to the Central dialects.

compared with this disagreement, the internal sub-grouping of the Formosan languages appears even disputable. Blust (1999) illustrates the striking disagreements with the position of Amis in the Formosan family and reports that “Amis has been classified in at least seven different groups of varying membership in which relationship is traced through a single node” (Blust 1999: 40). In addition to the seven taxonomic proposals, Blust also proposes a new class for Amis and other languages based on shared innovations. As the issue of sub-grouping is not the main concern of this dissertation, I will summarize these proposals based on Blust (1999) in Table 1.3 for the readers’ reference without going into the details of each proposal:

Table 1.3 A Summary of The Sub-grouping Proposals of Amis

Name of the Group	Other Members	References
East Formosan Hesion	Bunun, Paiwan, Thao	Dyen (1965)
Paiwanic II	Bunun, Kavalan, Siraya, Yami	Ferrel (1969)
Amis-Extra-Formosan	Malayo-Polynesian languages	Harvey (1982), Reid (1982)
Paiwanic	Bunun, Paiwan, Puyuma, Thao	Li (1985)
--	Kavalan	Li (1990)
Southern Formosan	Paiwan, Puyuma	Dyen (1990)
--	Paiwan	Starosta (1995)
East Formosan	Basay-Trobiawan, Kavalan, Siraya	Blust (1999)

As one can see from the table, the languages that might share a closer relation with Amis are Paiwan, Bunun, Kavalan, Puyuma, Thao, and Siraya.

1.2 Literature Review

Due to its relatively large population of speakers, Amis probably is the Formosan language that has been the most studied and documented. These studies cover a fairly wide range of topics, including phonology, lexicon, dictionary compiling, verbal semantics, and a general description of grammars. The following table lists some of the works that are relevant or cited in this dissertation. Some of these works will be reviewed in next section.

Table 1.4 Some of the Previous Works about Amis Morphosyntax

Author and Year	Description
Fey 1986	This is an Amis-English-Chinese dictionary which consists of approximately 4300 lexical entries collected from “Standard Central Dialect” spoken in the mountain areas from Fuyuan to Fuli in the valley of Hualien County and the coastal areas from Fengpin, Hualien County to Yiwan, Taitung County. In addition to definition and usage, she also discusses phonology, verbal affixation, and syntax of Amis. A dialectal comparison among lexicons is also provided.
Chen 1987	Reviewed in this chapter
Huang 1988	Reviewed in this chapter.
Yan 1992	Reviewed in this chapter.
Tsukida 1993 and 2005b	Tsukida (1993) is a journal paper that discusses the semantics of the suffix <i>-en</i> in Amis with great details. The author’s analysis will be referred to in this work. Tsukida (2005b) is a manuscript that deals with verb classes in Amis and Seediq. Her analysis of the Amis verb classes will be reviewed in this section.
Huang 1995	This is a typological survey of the nominal case marking system in some Formosan languages, including Amis.
Wu 1995, 2000	Wu (1995) is a master’s thesis that discusses the complex sentences in Amis. Her discussion of certain types of complex sentences such as relative clauses and sentences introduced to the quotative predicates <i>sa</i> and <i>han</i> will be referred to in this study. Wu (2000) is a reference grammar that describes the linguistic phenomena of the Amis dialect investigated in this dissertation.
Liu 1999	This is a master’s thesis discussing the cleft sentences in Amis in the formal grammarian framework. The author’s analysis of the case marking system will be discussed in this work.
Tsai and Tseng 1997	This is a descriptive grammar of one the Amis southern dialects. However, there is not much analysis and discussion in the book. Their description of one particular structure (i.e. the ideophone-forming construction <i>Xsa</i>) will be referred to in this work.
Liu 2003	This is a master’s thesis that studies the modification and conjunction of Amis. The author’s sketch of the Amis grammar will be referred to, and her analysis of the <i>Xsa</i> structure will be discussed in this dissertation.
Chu 2005	This is also a master’s thesis. It describes the grammar of Amis from an anthropological-cultural viewpoint. There is not much theoretical discussion, but this work provides many data for future studies.

Starting from the next section, I will review the following works that are, to various extents, pertinent to the research interests of this dissertation: Chen (1987), Huang (1988),

Yan (1992), Liu (1999), Liu (2003), Chu (2005), and Tsukida (2005b), especially the first three works and Tsukida's manuscript. The following review of these works mainly concerns their frameworks and analyses. Let us begin with Chen (1987).

1.2.1 Chen (1987)

Chen's work explores the verbal construction and verbal classification of Nataoran Amis, one of the northern dialects. Utilizing the framework of lexicase grammar developed by Starosta in the 1970s and in the 1980s,⁷ Chen has made a great contribution to the description of the case marking system, verb classes, and derivational processes in Amis.

1.2.1.1 The Framework

In the lexicase framework, words constitute the subject both the morphological and syntactic study, and the idiosyncratic information of words is stored in lexicon. The lexicon in this model consists of three basic types of lexical rules (i.e. subcategorization rules, redundancy rules, and derivation rules) and a list of lexical entries, each of which has a matrix of features that can neither be assigned by subcategorization rules nor can be predicated by redundancy rules. Such features include lexical category features, case relation features, case form features, contextual features, semantic features associated with syntactic or morphological consequence, morphological features, and other idiosyncratic features. For the present purpose, I will only discuss the following issues in the analysis: case relation, case form, and case frame (i.e. a type of contextual features).

⁷ According to Trask (1993:159), the most convenient introduction to this framework is Starosta (1988).

1.2.1.2 Case Relation and Case Forms

As defined by Chen (1987: 56), “Case relations are syntactically significant semantic relations between nominals and constituent heads. Case forms and localistic case form features are features introduced by lexicase to account for traditional grammatical subject and object as well as case inflection categories such as nominative, accusative, dative, and other cases...” While case relations and case forms are deemed as universal, case markers, the actual overt realizations of case relations and forms in a sentence are language specific.

Chen (1987:58) reports the existence of the following case relations in Amis, and each relation will be marked by a feature on the Amis nouns:

Table 1.5 The Case Relations of Amis (Chen 1987)

Feature	Case Relation	Feature	Case Relation
[+AGT]	Agent	[+PAT]	Patient
[+INS]	Instrument	[+PLC]	Place
[+LOC]	Locus	[+TIM]	Time

Among all case relations, Patient is regarded as the fundamental case relation in the lexicase framework. In other words, “if a verb has only one co-occurring nominal actant in the Nominative case form, it is always the Patient.” (Chen 1987:58). This assumption leads to a very important claim made in the lexicase grammar: the subject (i.e. the actant marked by the Nominative case form) of an intransitive verb must be Patient. Cases other than Patient are divided into two groups based on the immediacy of their relationship with the Patient: inner (or immediate) case relations, which include INS and LOC, and outer (or indirect) case relations, which include AGT, PLC, and TIM. In the lexicase framework, only inner case relations can subcategorize verbs, as we will see later in the table of verb classes. However, AGT appears to an exception, as Chen (1987)

uses this outer case to subcategorize verbs as well. She does not offer an explanation for such an exception.

The case relations are indicated by the case forms. Table 1.6 displays the case forms that Chen finds in Nataoran Amis. Note that not every form appears in every set of case-bearing element; for example, the forms for the determiner set are slightly different from those for personal pronouns, as illustrated in Figures 1.3 (Chen 1987:127) and 1.4 (Chen 1987:135) following the table:

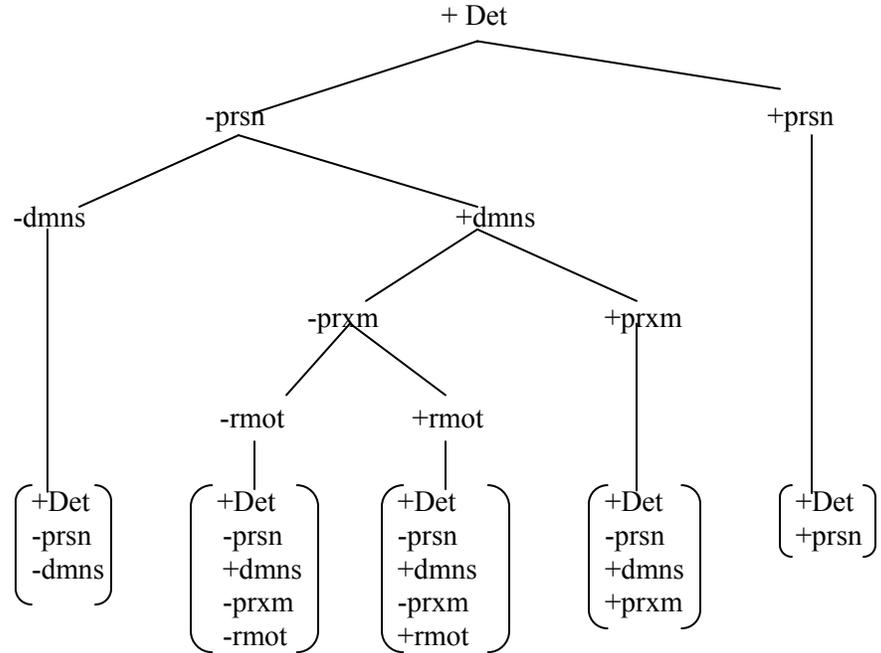
Table 1.6 The Case Forms of Amis and the Sets of Case-marked Elements (Chen 1987)

Set Form	Determiner ⁸	Personal Pronoun	Interrogative Pronouns		Prepositions ⁹
			Personal	Impersonal	
Topic	√	√			
Neutral			√	√	
Nominative	√	√	√		
Genitive	√	√	√		
Accusative	√	√			
Locative	√	√	√	√	
Comitative ¹⁰					√
Benefactive			√		√
Source					√
Goal					√

⁸ This set covers case markers for demonstratives, personal nouns, and common nouns, which form an inflectional paradigm. (Chen 1987: 127).

⁹ According to Chen (1987: 128), the prepositions serve as case-like functions. I thus include them in the set of case forms as they are also specified by the case features in the framework of lexicase grammar. (Chen 1987: 140).

¹⁰ Comitative and Benefactive are realized by a preposition plus a determiner (Chen 1987:140).



Topic	o	ia	ira	ina	ci
Nominative	ko	kia	kira	kina	ci
Genitive	no	nia	nira	nina	ni
Accusative	to	tia	tira	tina	---
Locative	i	itia	itira	itina	ici

Figure 1.3 Feature Tree and Inflectional Paradigm of Amis Determiners (Chen 1987)

	1s	2s	3s	1incl	1excl	2pl	3pl
Topic	ako	iso	cira	ita	ami	amo	ohni
Nominative	kako	kiso	cira	kita	kami	kamo	kohni
Genitive	nako	niso	nira	mita	niam	namo	nohni
	nomako	nomiso		nomita	niniam		
Accusative	ako	iso		ita		amo	ohni
	---	---	---	---	---	---	---
Locative	itakoan	itisoan	iciraan	itamian	ititaan	itamoan	itohnian

Figure 1.4 Amis Personal Pronouns (Chen 1987)

As shown from the above two figures, there is an accusative form in the determiner set, while the CF is not found in the personal pronouns. These two case forms are crucial in signaling whether a two-place predicate is (accusative) transitive or not in Chen's analysis. As the pronoun or the noun marked by the locative case form is not regarded as a PAT, two-place predicates with the second core argument marked by the locative case are not treated as transitive. We will see the examples later in the discussion of transitivity. The difference among the case forms is indicated by their composite features provided in Table 1.7 (Chen 1987:140):

Table 1.7 The Features of Each Case Form (Chen 1987)

Form	Feature
Neutral (Neu)	[+nmtv, +prdc]
Topic (Top)	[+nmtv, -prdc, +cntr]
Nominative (Nom)	[+nmtv, -prdc, -cntr]
Genitive (Gen)	[-nmtv, +drcn, +sorc]
Accusative (Acc)	[-nmtv, -drcn]
Locative (Lcv)	[-nmtv, +drcn, -sorc, -goal, -assn]
Comitative (Com)	[-nmtv, +drcn, -sorc, -goal, +assn]
Benefactive (Ben)	[-nmtv, +drcn, -sorc, +goal]

Note: [\pm nmtv]: Nominative, [\pm prdc]: predicative, [\pm cntr]: contrastive, [\pm drcn]: directional, [\pm sorc]: source, [\pm goal]: goal, [\pm assn]: association

The correspondence between case relations and cases from are given below in

Table 1.8 (Chen 1987:141):

Table 1.8 The Correspondence of Case Relations and Case Forms (Chen 1987)

CF \ CR	PAT	AGT	INS	LOC	PLC	TIM
Topic	+	+				
Nominative	+	+	+	?		
Genitive		+	+	(+)		
Accusative	+	(+)	+			+
Locative				+	+	+
Comitative	(+)	(+)	(+)			
Benefactive				+	?	

As seen in Table 1.8, Genitive Locus is placed in parentheses because this

In (1.1), the markers *ia* and *o* that precede *lomaq* and *ni-pa-ini-an* respectively can serve as a Topic case form and a neutral case form. However, only the NP preceding *iri* (the Topic marker, glossed as TM) is specified as Topic, while the NP following *iri* at the clause initial position is marked by the Neutral case form. As pointed out by Chen (1987:151), not all CF's and CR's can be "topicalized". As one can see from Table 1.8, only Patient and Agent can be topicalized. However, Chen further mentions that in most cases, a topic corresponds to the Patient subject of a verbal or a non-verbal construction.

1.2.1.3 Verb Classes

Chen's verb classes are primarily determined by different case frames, which are composed of case relations.¹¹ Seven primary verb classes are postulated, as seen in Table 1.9 (Chen 1987:172-173):

Table 1.9 Verb Classes in Nataoran Amis (Chen 1987)

Class	Label	Case Frame	Examples
I	Simple non-agentive	[+[PAT], -[+AGT], -[+LOC]]	<i>ma-orip</i> 'alive' <i>adada</i> 'hurt'
II	Intransitive locative	[+[PAT], -[+AGT], +[+LOC]]	<i>ta-ngasa</i> 'arrive' <i>ma-olah</i> 'love'
III	Simple transitive	[+[PAT], +[+AGT], -[+LOC], -[+INS]]	<i>taes-en</i> 'hit' <i>mi-kilim</i> 'seek'
IV	Transitive instrumental	[+[PAT], +[+AGT], -[+LOC], +[+INS]]	<i>tomes-en</i> 'fill'
V	Transitive locative	[+[PAT], +[+AGT], +[+LOC]]	<i>pabeli</i> 'give' <i>mi-palita</i> 'ask'
VI	Impersonal intransitive	[-[Nom], -[+AGT]]	<i>siqnaw</i> 'cold' <i>orad-an</i> 'rain'
VII	Impersonal transitive	[-[Nom], +[+AGT]]	<i>rakat-an</i> 'walk'

Perhaps the most peculiar classes in this table are the impersonal verbs (or subjectless verbs as also named by Chen (1987: 173)). These verbs do not have a Nominative CF in their case frame, and consequently, as argued by Chen, the fundamental CR, Patient, is absent from the case frame. Her reasoning for such a claim is given in (1.2) (Chen

¹¹ As mentioned earlier, the two outer case relations PLC and TIM cannot sub-categorize verbs. Hence, they are not included in the case frames in Table 1.9.

1987:173):

- (1.2) 1. These verbs are ergative.
2. Ergative verbs take only PAT subjects.
3. These verbs do not require the co-occurrence of the Nominative case form.
4. Therefore, there is no PAT in their case frame.

Examples of this class are given below:

- (1.3) a. Impersonal Intransitive (Chen 1987:208, original gloss)

siq ¹ naw	itini	a	remiad.
cold	this		day
(+V		(Lcv	
-[Nom]		+TIM	
-[+PAT]			
-[+AGT]			
+phen			

‘It is cold today.’

- b. Impersonal Transitive (Chen 1987:209, original gloss)

rakat-an	no	matoas-ay	
walk		old-one	
(+V		(Gen	
-[Nom]		+AGT	
-[+PAT]			
+ [+AGT]			
+trns			
+ergv			
+dlbr			

‘the old man [deliberately] walked’

As shown in these examples, Impersonal intransitive verbs denote meteorological phenomena (hence the feature +phen), while Impersonal transitive verbs are verbs designating deliberate action (hence the feature +dlbr).¹² These verbs can appear without a nominative argument (i.e. subject in Chen’s term). Nevertheless, these verbs all have the possibility to be added a Patient CR, which will then become the subject.

An example is given below (Chen 1987:208, original gloss):¹³

¹² This feature might make the term “impersonal” sound odd, as deliberation is assumed to be a human property.

¹³ Chen does not give such examples for the impersonal transitive verbs. It seems that her *-an* is similar to the *-en* suffix in the dialect that I investigated, though Nataoran Amis also has the suffix *-en*.

(1.4) siqnaw kina remiad.
 cold this day
 $\left. \begin{array}{l} +V \\ +[+PAT] \\ -[+AGT] \\ +phen \end{array} \right\}$ $\left. \begin{array}{l} \\ +PAT \end{array} \right\}^{Nom}$
 ‘It is cold today.’

Using the case frames, Chen (1987) distinguishes transitive, intransitive, and ditransitive verbs as follows. Transitive verbs all have $+[+AGT]$ in the case frame, while intransitive verbs do not have a $+[+AGT]$. As for ditransitive, it implies the co-occurrence of a “direct object” and an “indirect object”. Hence, Class V verbs (i.e. the Transitive locative) are the only possible candidates for ditransitive verbs. These case frames also characterize the notions of transitivity and ergativity. That is, transitivity is defined by the co-occurrence of two case relations: PAT and AGT, and possibly PAT and INS. As for ergativity, it is defined by the association between case forms and case relations; in other words, it refers to the association of the Nominative CF with the Patient CR in transitive verbs, and the association of the Genitive CF with the Agent CR or Instrument CR. The co-occurrence restriction between the Nominative CF and all the CRs is termed as “subject choice”. As mentioned in (1.2), ergative verbs always have a Patient subject.

Based on the “subject choice” and other CF-CR mapping, the seven verb classes can be further subcategorized as Table 1.10:

Table 1.10 The Sub-categorization of Verb Classes (Chen 1987)

Class	Label	Subclass
I	Simple non-agentive [+[PAT], -[+AGT], -[+LOC]]	a. Non-agentive Simple Intransitive [+[PAT], -[+AGT], -[+LOC], -[+INS]] Nominative PAT Examples: <i>ma-orip</i> ‘alive’; <i>adada</i> ‘hurt’ b. Non-agentive Simple Transitive (= III c and III d)
II	Intransitive locative [+[PAT], -[+AGT], +[+LOC]]	Nominative PAT Locative LOC Examples: <i>ta-ngasa</i> ‘arrive’; <i>ma-olah</i> ‘love’
III	Simple transitive [+[PAT], +[+AGT], -[+LOC], -[+INS]]	a. Accusative Simple Transitive Nominative AGT, Accusative PAT Examples: <i>mi-kilim</i> ‘seek’; <i>mi-banaq</i> ‘notify’
		b. Ergative Simple Transitive Genitive AGT Nominative PAT Examples: <i>taes-en</i> ‘hit’; <i>ma-caliw</i> ‘borrow’
		c. Non-agentive Accusative Transitive [+[PAT], -[+AGT], -[+LOC], +[+INS], -ergv] Nominative INS, Accusative PAT Examples: <i>sa-pi-angang</i> ‘used for calling someone’; <i>mami-asik</i> ‘assigned to sweep’
		d. Non-agentive Ergative Transitive [+[PAT], -[+AGT], -[+LOC], +[+INS], +ergv] Genitive INS, Nominative PAT Examples: <i>ma-asek</i> ‘strike’; <i>ma-noang</i> ‘move, wave’
IV	Transitive Instrumental [+[PAT], +[+AGT], -[+LOC], +[+INS]]	a. Accusative Transitive Instrumental Genitive AGT, Nominative INS, Accusative PAT Examples: <i>mi-pinaro</i> ‘fill’; <i>sa-pi-angang</i> ‘use for calling’
		b. Ergative Transitive Instrumental ¹⁴ Genitive AGT, Nominative PAT, Accusative INS Examples: <i>temes-en</i> ‘fill up’
V	Transitive locative [+[PAT], +[+AGT], +[+LOC]]	a. Accusative Transitive Locative Nominative AGT, Accusative Patient, Locative LOC Examples: <i>pa-beli</i> ‘give’; <i>mi-caliw</i> ‘borrow’
		b. Ergative Transitive Locative Genitive AGT, Nominative Patient, Locative LOC Examples: <i>pa-pi-angang-en</i> ‘have X call Y’
VI	Impersonal intransitive [-[Nom], -[+AGT]]	Examples: <i>siqnaw</i> ‘cold’; <i>orad-an</i> ‘rain’
VII	Impersonal transitive [-[Nom], +[+AGT]]	Examples: <i>rakat-an</i> ‘walk’

As seen in the table, Class I covers a fairly wide range of verbs. Examples like

¹⁴ Chen (1987:84 and 197) provides an example where a Genitive instrument co-occurs with a Genitive AGT, as shown below:

ma-bahbah	kia	waco	no	lakaw	nia	tamdaw
drive-away		dog		stick		man
+V		Nom		Gen		Gen
+trns		+PAT		+INS		+AGT

‘the man drove the dog away with a stick’, or ‘the man’s stick drove the dog away’

Lit. the dog drove away by the man with a stick

However, a sentence like this can only be interpreted as ‘the dog was driven away by the man’s stick’ in the dialect where I collected my data.

t-em-ireng ‘stand’ and *ma-calibad* ‘angry’ all belong to the category.¹⁵ The only nominative actant always bears the PAT CR. Class I verbs are further classified into intransitive and transitive verbs by the feature $\pm[+INS]$, with the latter grouped under Class III (i.e. IIIc and IIIId). Moreover, in Chen’s work, this class of verbs is also subcategorized by semantic features such as $[\pm phen]$ (phenomenal) and $[\pm exst]$ (exist).¹⁶

Class II verbs are verbs requiring a location in the structure (e.g. locomotion verbs and existential verbs). Their transitive locative counterparts (i.e. Class V) are the causative verbs (verbs prefixed by *pa-*) with the causer as the AGT.

Class III verbs are composed of four sub-classes. As one may notice, one of the classifying criteria is the presence or absence of the AGT; when there is no AGT, it is the INS that takes up the nominative case in the accusative set and genitive case in the ergative set. The lexicase grammar makes a distinction between Agent and Instrument in the case relation in spite of the occasional ambiguity found in sentences like (1.5a); as mentioned earlier, the former is regarded as an outer CR, while the latter is treated as an inner CR based on their immediacy with the Patient. The ambiguity of (1.5a) is resolved in sentences like (1.5b).

- (1.5) a. The storm destroyed the tree house.
(storm: AGT or INS, tree house: PAT)
- b. The storm destroyed the tree house with a powerful gust of wind.
(storm: AGT, tree house: PAT, gust of wind: INS)

Class IV verbs are further sub-categorized by the feature $[\pm ergv]$. The accusative class (i.e. Class IVa) corresponds to the “instrumental focus” (or “instrumental voice”)

¹⁵ In other words, there is no actor-undergoer distinction in these intransitive verbs within a lexicase-based analysis.

¹⁶ Chen (1987:179-184) lists sixteen subcategories for Class I based on the intrinsic semantic features of the verbs.

verbs found in other works.¹⁷

Class Va verbs can be further subcategorized by the feature [\pm motn] (motion) into information verbs (e.g. *pa-sabanq* ‘tell’) and transportation verbs (e.g. *pa-ta-ra* ‘send’). Class Vb verbs are indirect causative verbs (morphologically marked by *pa-pi-...-en*).

Class VI and VII are impersonal verbs that I have briefly discussed. Their only difference lies the presence/absence of a [+AGT], which will be marked the Genitive CF if it shows up. Class VI verbs do not have [+AGT]; they are phenomenal verbs, which can be further classified based on the feature [\pm mbnt] (ambient), [\pm exst] (exist), and [\pm sttv] (stative).

1.2.1.4 Transitivity

We have mentioned that Patient is treated as the fundamental case relation in lexibase grammar; that is, if a verb has only one co-occurring core argument that bears the Nominative case, it must be [+PAT]. The Patient subject may correspond to different situational roles in a Fillmorean-type of analysis (Chen 1987:63).¹⁸ Moreover, transitive verbs are defined in terms of the co-occurrence of [[+PAT]] with either [[+INS]] or [[+AGT]] or both, while intransitive verbs exclude their co-occurrence (Chen 1987:77).

As seen in Table 1.10, in each transitive verb class, there is always an accusative-ergative distinction, which depends on whether the nominative case marks the Patient or not. Such a distinction also reflects Chen’s claim that Amis is a split-ergative language. In particular, she mentions that Amis has transitive verbs belonging to the ergative type

¹⁷ The “locative focus” or “locative voice” verbs are not included in Chen’s classification, as she mentions that she only has one example with a locative subject, and that is why she places a “?” in Table 1.8 for the Nominative locus grid.

¹⁸ It may correspond to Experiencer, Agent, Instrument, Time, and Locative. Please refer to Chen (1987:63) for the examples.

(e.g. *melaw-en* ‘watch’ and *ma-melaw* ‘see’) as well as the accusative (or non-ergative type) (e.g. *mi-melaw* ‘see’); the former type has a co-occurring Genitive AGT and a Nominative PAT, while the latter has a Nominative AGT or Nominative INS.¹⁹ As for intransitive verbs, the subject is always PAT.

1.2.1.5 Verbal Derivations

The derivation rules discussed in Chen’s (1987) work are mainly related to those that affect the case features; in other words, these derivations will “incorporate a case notion, delete a CR, add a CR, or reinterpret the CR’s of the source without adding or subtracting of the total number of the case role” (Chen 1987:237). In total there are 29 such derivational rules postulated in her study.²⁰ These rules can derive a verb from nouns, including deverbal nouns, and also derive a verb from other verbs by either adding or reinterpreting the case relations of the source verbs through processes such as transitivization, causativization, and passivization. I will only focus on the discussion of the derivation from verbs, as displayed in the following figure (Chen 1987:250):

verb class	VI	VII	I	II	III	IV	V				
case frame	$\left(\begin{array}{l} -[+Nom] \\ -[+AGT] \\ -[+LOC] \\ -[+INS] \end{array} \right)$	$\left(\begin{array}{l} -[+Nom] \\ +[+AGT] \\ -[+LOC] \\ -[+INS] \end{array} \right)$	$\left(\begin{array}{l} +[+PAT] \\ -[+AGT] \\ -[+LOC] \\ -[+INS] \end{array} \right)$	$\left(\begin{array}{l} +[+PAT] \\ -[+AGT] \\ +[+LOC] \\ -[+INS] \end{array} \right)$	$\left(\begin{array}{l} +[+PAT] \\ +[+AGT] \\ +[+INS] \\ -[+LOC] \end{array} \right)$	$\left(\begin{array}{l} +[+PAT] \\ +[+AGT] \\ -[+LOC] \\ +[+INS] \end{array} \right)$	$\left(\begin{array}{l} +[+PAT] \\ +[+AGT] \\ +[+LOC] \\ +[+INS] \end{array} \right)$				
# of marked CRs	1	1	1	2	2	3	3				
Derivational Process	(a)			(b)	(c)	(c')	(d)	(e)	(f)	(g)	(h)

Figure 1.5 Derivational Processes Relating Amis Primary Verb Classes (Chen 1987)

¹⁹ Chen mentions that the accusative set obeys Fillmore’s subject choice hierarchy (Chen 1987:174).

²⁰ For a complete list of these rules, please refer to Chen (1987: 236-273).

As one can see, these processes can add a CR (e.g. Processes (b), (c), (c'), (d), (e), and (f)), reinterpret the case frame without adding a CR (e.g. Processes (a) and (g)), or delete a CR (e.g. Process (h)). The first type includes transitivization that adds either an AGT or an INS to the source verb, and causativization that adds an AGT. As for the second type, these processes may reinterpret a PLC or a TIM as a PAT subject for the source verb that does not have one (i.e. impersonal verbs in Class VI). They may also derive a passive form for transitive accusative verbs,²¹ ergativize a transitive accusative verb, or detransitivize a transitive verb. These derivational processes may or may not be accompanied by morphological changes. For example, passivization is indicated by the suffix *-en*, but detransitivization does not involve any morphological change. Notice that these derivational processes reveal an important viewpoint of Chen (1987) that is rather different from Huang (1988), a work that will be reviewed next. That is, the focus or voice morphology is treated as derivational in Chen (1987), as these focus affixes (e.g. *mi-*, *ma-*, *-en*) are analyzed as morphemes indicating various derivational processes in this work, which I have just pointed out.

There are a few comments I would like to make regarding Chen's discussion of these derivational processes, especially those related to detransitivization. I have found some discussion that is rather confusing in this part. For example, she mentions that to undergo the process of ergativization, a transitive accusative verb has to undergo an intermediate stage of detransitivization through zero derivation, and then the detransitivized verb will serve as the input for ergativization (also a type of transitivization). The whole process is illustrated in (1.6a-b) followed by sentence

²¹ Chen (1987) analyzes the suffix *-en* as the passive form for *mi-* verbs, while the prefix *ma-* marks a true ergative verbs.

As exemplified above, in order to derive a form like *ma-liakaway* ‘picked’ from *mi-liakaway* ‘pick’, the source verb has to undergo detransitivization through zero derivation and becomes a verb like the one in (1.6d). Regardless of whether this detransitivization process is well justified or not, a rather confusing part in the discussion is that, the verb in (1.6c) is not a “transitive” verb based on Chen’s definition; a transitive verb has to have a +AGT and +PAT, but the one in (1.6c) only has +AGT. In fact, Chen actually specifies this verb as a specific-object intransitive that belongs to Class II. Nevertheless, for a typical Class II verb, Chen has analyzed the NP marked by the nominative case as +PAT, not +AGT, as shown in *kiso* and *kako* in (1.7) below (Chen 1987:188, original transcription and gloss, emphasis mine). This seems to be an example of self-contradiction in the analysis of the same type of verbs and the notion of transitivity:

- (1.7) a. mi-angang to haw kiso iciraan?
 call already QM 2s 3s
 [+V] [+Adv] [Nom] [Lcv]
 [-trns] [+PAT] [+LOC]]
 have you called him?
- b. ma-talaw kako tira tamdaw-an
 afraid-of 1s that man
 [+V] [Nom] [Lcv]
 [-trns] [+PAT] [+LOC]]
 I am afraid of that man

In addition to the detransitivization process in (1.6a) that deletes a CR from the source verb, Chen mentions that there is another type of detransitivization that simply involves reinterpretation of the case relations (i.e. Process (g) in Figure 1.5) without any deletion of CR.²² This process turns a Class IIIa verb (i.e. accusative simple transitive) into a

²² Chen emphasizes the importance of a step like detransitivization and regards it as “a bridge for the accusative system and the ergative systems of the language which do not mix” (Chen 1987:271).

corresponding specific-object intransitive verb via zero derivation. The relevant examples are given below (Chen 1987:271-272, original transcription and gloss, emphasis mine):

(1.8) a. mi-kilim₁ cira to badal
 look-for 3s berry
 $\left(\begin{array}{c} +V \\ +trns \\ -ergv \end{array} \right)$ $\left(\begin{array}{c} Nom \\ +\mathbf{AGT} \end{array} \right)$ $\left(\begin{array}{c} Acc \\ +PAT \end{array} \right)$
 he is looking for berries

b. mi-kilim₂ cira itisoan
 look-for 3s 2s
 $\left(\begin{array}{c} +V \\ -trns \end{array} \right)$ $\left(\begin{array}{c} Nom \\ +\mathbf{PAT} \end{array} \right)$ $\left(\begin{array}{c} Lcv \\ +LOC \end{array} \right)$
 he is looking for you

c. ma-talaw₁ kako to kawas
 afraid-of 1s ghost
 $\left(\begin{array}{c} +V \\ +trns \\ -ergv \end{array} \right)$ $\left(\begin{array}{c} Nom \\ +\mathbf{AGT} \end{array} \right)$ $\left(\begin{array}{c} Acc \\ +PAT \end{array} \right)$
 I am afraid of ghosts

d. ma-talaw₂ kako tira tamdaw-an
 afraid-of 1s that man
 $\left(\begin{array}{c} +V \\ -trns \end{array} \right)$ $\left(\begin{array}{c} Nom \\ +\mathbf{PAT} \end{array} \right)$ $\left(\begin{array}{c} Lcv \\ +LOC \end{array} \right)$
 I am afraid of that man

As exemplified in (1.8), the same verb forms receive different analyses regarding transitivity based on the different coding of the second argument; (1.8a) and (1.8c) are (accusative) transitive, while (1.8b) and (1.8d) are intransitive. However, this analysis is rather difficult to comprehend, as the second argument in the intransitive verb is a “specific object”, which seems to counter our intuition about an intransitive predicate. Moreover, the argument marked by the nominative case in (1.8a-b) and (1.8c-d) receives different case relation analysis (i.e. AGT vs. PAT), which seems strange and ad hoc, as we

do not see any difference of this argument in the two versions of the same verb.

From the above discussion, one can clearly see the importance of the notion case, or more specifically case relations, in Chen's analysis of Amis verb classification and verbal derivation. It is the case relations that categorize the verbs, define the transitivity, and formulate the derivational processes. In particular, the CR Patient is deemed as the fundamental relation in the lexicase framework utilized in her analysis; it is regarded as the only CR for intransitive predicates. Although case relations do play an important role in Amis grammar, and Chen is right that Amis does show split-ergative phenomena in its verbal morphology, I will show later in this dissertation that Amis exhibits ergative features in the case marking patterns and in the syntactic constructions that involve grammatical relations. I will argue that the accusative transitive sentences in Chen's analysis should be analyzed as syntactically intransitive. In the above review, I have also pointed out some apparently unnatural or even self-contradictory treatment in her discussion of the derivational processes and the notion transitivity. These two issues will also be examined with different perspectives in the later chapters of this dissertation.

1.2.2 Huang (1988)

Huang (1988) is a master's thesis about verb classification in Amis. She collected 490 verbs from the dialect spoken in Yiwan, Taitung County, which is also a Coastal Dialect.²³

1.2.2.1 The Framework

Huang's analysis basically follows the framework of Fillmore (1968) and Jeng

²³ Although the dialect investigated in Huang's (1988) thesis also belongs to the Central dialect group, there are some vocabulary differences between the dialect used in I-wan Area and Changpin Area. As remarked by my informants, some examples in Huang's (1988) collection are not used in the Changpin area.

(1977; 1981). She utilizes three transformational properties, causativization, imperativization, and the attachability of the prefix *mi-*, termed as the source-focusing marker in her study, to classify Amis verbs into three major classes and further sub-categorize them by the case frames specifying the co-occurrence of 19 case relations. These case frames are represented by a set of phrase structure rules.

1.2.2.2 The Analysis

Huang first classifies Amis verbs into three classes, given in Table 1.11, based on the test of the transformational properties mentioned earlier:

Table 1.11 Major Verb Classes of Central Amis (Huang 1988)

Class	Sub-types	causativization with <i>pa-</i>	command imperativization with <i>pi-</i> ²⁴	affixation with source-focus marker <i>mi-</i>
I	negation words, modals, adverbs,	No	--	--
II	stative verbs and some action verbs	Yes	No	No
III	action verbs	Yes	Yes	Yes

These three classes are further categorized based on their case frames, which state the co-occurrence of 19 case relations that are postulated based on the case marking properties, Fillmore's principle of one-instance-per-clause, syntactic and semantic contrasts, and the focus constructions within the question-word sentences, if the previous three criteria are insufficient. The case relations and their correspondence in Chen's (1987) case relations are given in Table. 1.12:

²⁴ Huang (1988) differentiates the imperatives in Amis into command imperatives and suggestion imperatives (Huang 1988:20); the former is either marked by *pi-*, the source-focusing marker, or *-en*, the goal-focusing marker, while the latter is marked by *ka-*. She claims that all the verbs can undergo suggestion imperativization. However, for action verbs, they have to undergo command imperativization first before they can be imperativized by *ka-*; the whole process is expressed by the form *ka-pi-*. As I will show later in my analysis, the prefix *ka-* is morphologically related to *ma-*, which is notorious for its complicated semantics and functions. One of its major functions is to mark a state predicate (cf. Zeitoun and Huang 2000), and this function may explain why it gives a suggestion tone in imperativization. Notice that, however, based on my investigation, the suggestion tone is only found in the combination *ka-pi-*, not a plain *ka-* imperative verb. Hence, it raises the possibility that there are two *ka-s* discussed here; one shows up in the imperative form for state predicates and action predicates which are not marked by *mi-*, and the other *ka-* carries suggestion tone for the imperativization.

Table 1.12 Case Relations in Central Amis (Huang 1988)

Abbreviations	Case Relation	Correspondence in Chen's (1987) Case Relation (Huang 1988: 145)
A	the agentive case	Agent; Patient
B	the benefactive case	Place
Ds	the dative case as source	Patient
Dg	the dative case as goal	Instrument; Patient
I	the instrumental case	Instrument
Ls	the locative case as source	Patient
Lg	the locative case as goal	Locus; Patient
Lnd	the non-directional locative case	Locus; Patient
Lds	the directional locative case as source	--
Ldg	the directional locative case as goal	Locus
Ldist	the spatial distance case	--
Os	the object case as source	Patient
Og	the object case as goal	Patient
Ts	the temporal case as source	Patient
Tg	the temporal case as goal	Patient
Tnd	the non-directional temporal case	Time
Tds	the directional temporal case as source	--
Tdg	the directional temporal case as goal	--
Tdur	the temporal period case	Time

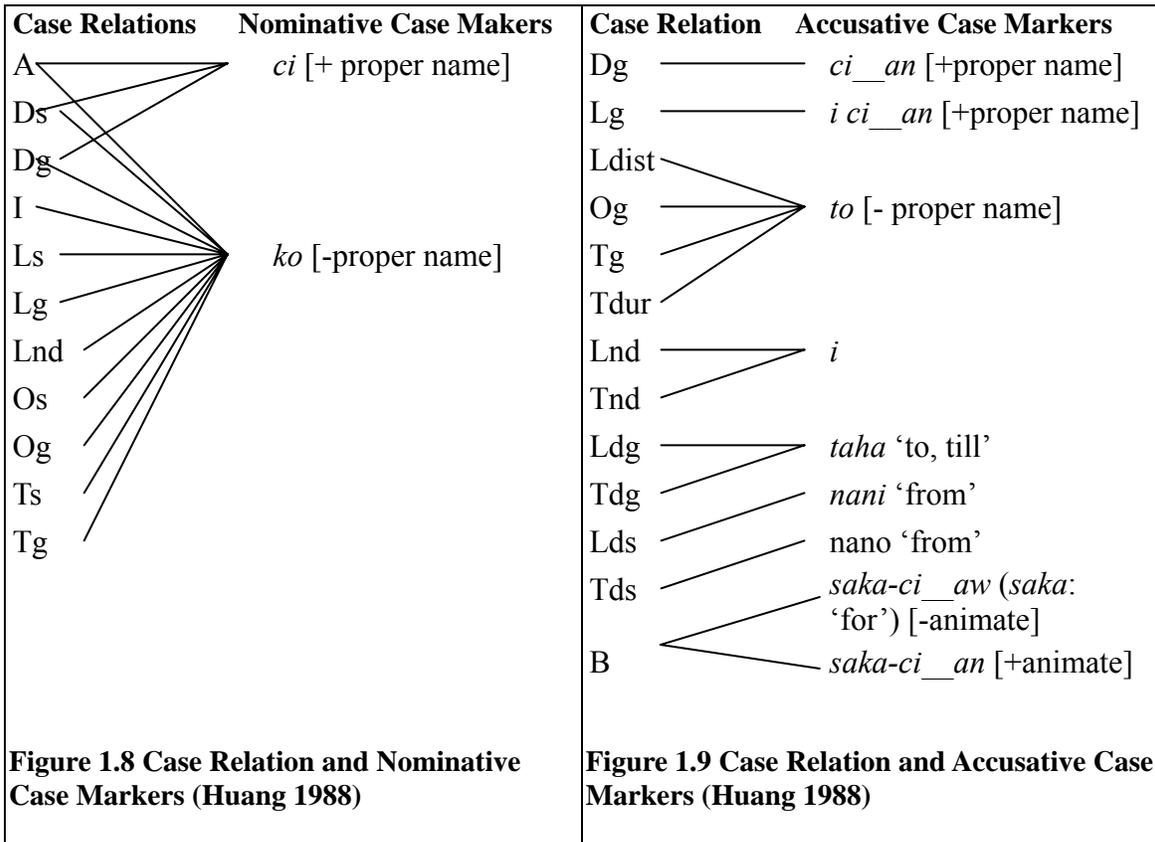
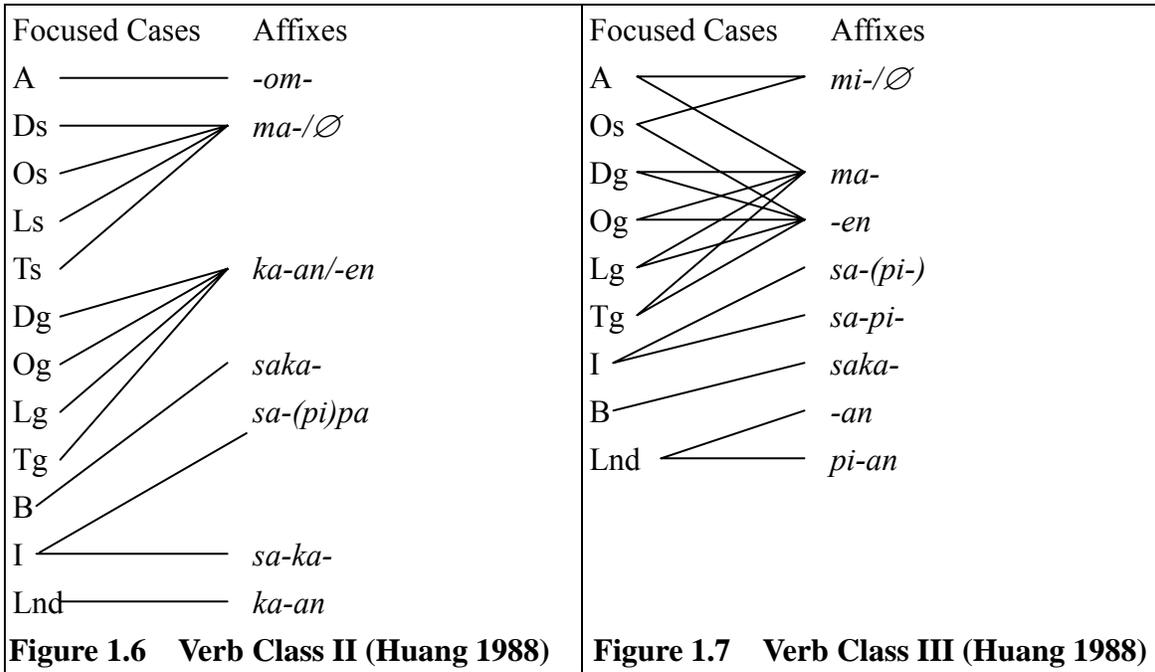
As shown on the table, Huang's case relations are much more in number than those postulated by Chen (1987). Huang further mentions that B, Lnd, Lds, Ldg, Ldist, Tnd, Tds, Tdg, and Tdur are peripheral cases, which are not found in her subcategorization of verb classes. Table 1.13 shows an example to illustrate how she utilizes the case frames to subcategorize Class II verbs:

Table 1.13 Some Classes and Examples in Huang's (1988) Verb Classification

Class	Sub-class	Case Frame	Examples (original transcription and gloss)
IIA		[_____ { A } { Os }]	a. t-om-erep ci dogi AF stop Dogi A 'Dogi is stopping.' b. t-om-erep ko kikay AF stop machine Os 'Dogi is stopping.'
	IIA2a	[_____ A]	c-om-ikay ci dogi AF run Dogi 'Dogi is running.'
	IIA2b	[_____ A + { Dg } { Og }]	k-om-aqen ci dogi to fotig/deteg AF eat Dogi fish / vegetable A Dg Og 'Dogi is eating the fish/vegetable.'
IIB		[_____ { Ds } { Os } { Ls } { Ts }]	a. 0-fagcal ci dogi DsF good Dogi Ds 'Dogi is good.' b. 0-fagcal ko nanom OsF good water Os 'The water is good.' c. 0-fagcal ko saqaniwan LsF good Saqaniwan 'Saqaniwan is good.' d. 0-fagcal ko dafak. TsF good morning Ts 'The morning is good.'

Note: AF: agent focus, DsF: dative case as source focus, OsF: object case as source focus, LsF: locative case as source focus, TsF: temporal case as source focus

As seen in Table 1.13, these case relations overlap quite a bit in terms of morphological marking (e.g. marked by the same focus affixes on verbs or case marking particles before nouns). The following figures (Huang 1988:70-72) provide some examples to illustrate such overlapping. Figures 1.6 and 1.7 show the case relations and their corresponding verbal affixes, while Figures 1.8 and 1.9 display the case relations and their corresponding case marking particles.



The morphological overlapping exemplified in the figures above poses some serious

challenges to Huang's (1988) analysis. To begin with, the distinctions that she claims for the case relations do not show up morphosyntactically. In other words, the validity of such distinctions cannot be justified in the structure, and making so many distinctions also runs the risk of missing generalizations. Furthermore, as shown in those figures, there seem to be some asymmetries between these markers; while some of them (e.g. *ma-* and *-en* in Figure 1.6-1.7 and *ko* in Figure 1.8) can mark more case relations than others, others seem to have a more restricted function (e.g. *sa-* in Figure 1.6 and *nani* in Figure 1.9). Such asymmetries suggest that functionally speaking, these markers may not belong to the same category. For example, it is difficult to conceive *taha* 'till', *nani* 'from', and *nanu* 'from' in Figure 1.9 as accusative case markers.

Besides the above-mentioned inadequacy, there is another problem in Huang's (1988) proposal; that is, unlike Chen (1987), she treats focus marking as an inflectional phenomenon, not a derivational one. As I will argue in this dissertation, these focus or voice markers do have important derivational functions in addition to indicating which semantic role is chosen to be the grammatical subject, as the affixation of these markers will change the semantics of the verb. Finally, Huang (1988) does not particularly explore the issues of transitivity and ergativity. The only place that she makes a transitive/intransitive distinction among verbs is in her discussion of imperative sentences, in which she classifies the verbs into nine types, displayed in Table 1.14 below (Huang 1988:21):

Table 1.14 Imperative Focus Marking System Amis (Huang 1988)

		Imperative		Causativized Imperative	
		Source-Focus	Goal-Focus	Source-Focus	Goal-Focus
Intransitive State	1. <i>'onig</i> 'dirty'			<i>(pi-)pa-</i>	<i>pa-...-en</i>
	2. <i>ki'mel</i> 'powerful'	<i>ka-</i>		<i>(pi-)pa-</i>	<i>pa-...-en</i>
Transitive State	3. <i>fokil</i> 'not to know'				<i>pa-pi-...-en</i>
	4. <i>godo</i> 'respect'	<i>ka-</i>		<i>(pi-)pa-pi-</i>	<i>pa-pi-...-en</i>
Intransitive Action	5. <i>tomireng</i> 'stand'	<i>ka-</i>		<i>(pi-)pa-ka-</i>	<i>pa-ka-...-en</i>
	6. <i>powar</i> '(water) spring'			<i>(pi-)pa-</i>	<i>pa-...-en</i>
	7. <i>kcod</i> 'jump'	<i>(ka-)pi-</i>		<i>(pi-)pa-pi-</i>	<i>pa-pi-...-en</i>
Transitive Action	8. <i>lalad</i> 'creep'			<i>(pi-)pa-...-en</i> ²⁵	<i>pa-...-en</i>
	9. <i>kiskis</i> 'scrape'	<i>(ka-)pi-</i>	<i>-en</i>	<i>(pi-)pa-pi-</i>	<i>pa-pi-...-en</i>

Judging from the examples that she provides, she seems to treat verbs that can have two core arguments as transitive verbs. As for “ergativity”, she only makes the following brief comment without further explication:

It is suggested here that in the framework I adopted, ergativity in Amis is explained in terms of focus, which is a phenomenon of verbs inflecting with the same case-focusing affix for goal cases (including Dg, Og, Lg, and Tg) of action verbs and source verbs (including Ds, Os, Ls, and Ts) of stative verbs when are subjectivized. (Huang 1988:146)

1.2.3 Yan (1992)

Yan’s (1992) work is also a master’s thesis in which he classifies Amis verbs in terms the coding of event and participant. He collected his data from Peinan Amis, a Southern dialect²⁶ spoken in Chenkung, Taitung County.

1.2.3.1 The Framework

Unlike Chen (1987) and Huang (1988), which heavily rely on the notion of case frame in verb classification, Yan (1992) adopts a rather different approach. Taking a more functional perspective, he categorizes the Amis verbs based on their semantic features, different “agent focus” (“actor voice” in this dissertation) markers (i.e. *ni-*, *ma-*, *-um-*)

²⁵ The form *(pi-)pa-en* should not be analyzed as source focus marker. It is suspected that this may be a typo.

²⁶ Yan is a native speaker of that dialect.

that verbs can take, the number participants, and the acceptability of the attachment of *ni-*, one of the “agent focus” markers.²⁷ He further employs the transitivity parameters postulated in Hopper and Thompson (1980) to evaluate the degree of transitivity manifested by these focus affixes.

1.2.3.2 The Analysis

Yan’s taxonomy of Amis verbs can be roughly summarized as Table 1.15 with some examples from each verb type.²⁸ ‘

Table 1.15 Verb Classes in Peinan Amis (Yan 1992)

	Semantic Features	Number of Arguments	Attachability of <i>ni-</i> to enhance the transitivity	Examples	Notes
<i>ma- I</i>	phenomenal or meteorological human propensity physical property	1	No.	<i>ma-cidal</i> ‘sun rise’ <i>ma-fali</i> ‘wind blow’ <i>ma-laluk</i> ‘diligent’ <i>ma-su’su</i> ‘fat’ <i>ma-lales</i> ‘blunt (for knife)’	
<i>ma- II</i>	Involuntary behavior	1	O.K.	<i>ma-futi</i> ‘sleep’ <i>ma-klu</i> ‘dance’ <i>ma-patay</i> ‘die’	<i>mi-futi</i> ‘rape’ <i>mi-klu</i> ‘tease’ <i>mi-patay</i> ‘kill’
<i>ma- III</i>	emotion psychological state cognition	2	O.K. for some of them.	<i>ma-ulah</i> ‘like’ <i>ma-ker</i> ‘angry’ <i>ma-ngudu</i> ‘ashamed’ <i>ma-fana</i> ‘know’	<i>mi-ulah</i> ‘like (expressed in words or actions)’ <i>mi-fana</i> ‘learn’ * <i>mi-ngudu</i> ²⁹
<i>ma- IV</i>	result state	2	O.K.	<i>ma-sti</i> ‘(be) beaten’ <i>ma-ala</i> ‘(be) taken’	passive form of <i>mi-</i> verbs
<i>ni-</i>	telic activity; always transitive	2	N/A	<i>mi-sti</i> ‘beat’ <i>mi-ala</i> ‘take’	
<i>-um-</i>	simple activity without involving external argument	1-2	O.K. for some of them.	<i>k-um-aen</i> ‘eat’ <i>r-um-adiw</i> ‘sing’ <i>t-um-angic</i> ‘cry’ <i>t-um-ireng</i> ‘stand’ <i>r-um-akat</i> ‘walk’ <i>c-um-ikay</i> ‘run’ <i>s-um-uwal</i> ‘say’	<i>mi-kaen</i> ‘go to a feast’ <i>mi-radiw</i> ‘sing’

²⁷ The focus or voice system in Amis will be introduced in Chapter 3.

²⁸ The focus (or voice) marker in *ma-IV* verbs in Table 3 is a patient focus marker (or undergoer voice marker), not an agent focus (or actor voice) marker.

²⁹ This form is found in the dialect that I investigated.

transitivity scale.

Besides proposing the verb classes for Amis, Yan (1992) also tries to represent the clause structure of Amis with what he calls as “prepositional circles” (Yan 1992: 103). Like Chen (1987) and Huang (1988), he also uses the case frame in the representation. Three case roles are particularly mentioned: Agent, Patient, and Dative (for three-place predicates). Within each prepositional circle, he makes the distinction between the core and the periphery. Only the participants that are marked by the nominative case and the accusative case are placed in the core of the circle. In other words, he does not treat the Agent or Actor that is marked by the genitive case in a patient focus (PF) or undergoer voice (UV) construction as a core argument; this participant is placed somewhere between the core and the periphery, analogous to an oblique core argument. Yan (1992) justifies his analysis by saying that in a PF or UV sentence, the argument marked by the genitive case can be omitted, but those marked by the nominative case and the accusative case have to show up.³¹ However, as I will show later, this argument plays an important role in control constructions, imperative sentences, and reflexivization. Its status is far more important than that acknowledged in Yan’s (1992) analysis.

Finally, Yan (1992) does not discuss ergativity in his work. Nevertheless, as he treats a type of *ma-* verb as the passive structure for *mi-* verbs, and he makes a tri-case distinction (nominative, genitive, and accusative) in his study, it seems that he regards Amis either as an accusative language or a split-ergative language.

1.2.4 Liu (1999)

Although Liu’s (1999) main concern is about the analysis of the cleft sentences in

³¹ Yan only cites PF verbs marked by *ma-* to illustrate the optionality of the Agent (or Actor) in such sentences.

Amis, she has some interesting discussion and findings regarding the case marking system and the voice/focus system in Amis.

To begin with, she is the first one who separates the noun classifiers from the case markers in the case marking system in Amis, following a similar proposal made in Chang et al. (1998) for the case markers in Kavalan. She removes the neutral case (cf. Chen 1987 and Huang 1995) from the case marking system, and instead treats the so-called neutral case marker as a common noun marker. Nevertheless, she still maintains the other three cases mentioned in Huang (1995) (i.e. nominative, genitive, and accusative/locative). Her analysis of case markers will be further discussed in Chapter 3 and Chapter 5.

She also reports some interesting observations in the voice system in Amis, especially regarding the asymmetry between the actor-voice (AV) and non-actor voice (NAV) sets. Such asymmetry is manifested in the following structures: word order and nominalization, which in turn is related to the formation of relative clauses, and cleft sentences.³² Issues related to this asymmetry will be further explored in Chapter 3 and Chapter 6.

Finally, Liu (1999) also comments on the issue of ergativity in Amis. She speculates that Amis is more like an ergative language than an accusative language in that:

“the subject of an AV making clause has the same case-marking with the patient of a non-actor voice (abbreviated as NAV henceforth) marking clause, And the agent of the NAV marking clause is marked by the genitive case. Also, the intransitive clause can only be attested in AV marking clause, which in turn is related to the characteristics of ergative language.” (Liu 1999:28).

³² Such an asymmetry actually has been reported in Wu (1995) regarding the marking of a verb in a relative clause in Amis; verbs affixed with Actor (or Agent) and Undergoer (or Patient) voice markers are coded differently from verbs taking Instrumental and Locative voice markers.

However, there are some problems in this statement. First, she does not mention whether the AV clause is always intransitive or not. In other words, the actor in an AV sentence is an S or an A. If it is always an S, the ergative analysis is well-supported. If it also has the possibility to be an A, then Amis should be treated as a split-ergative language, as there is more than one way to mark an A argument. However, since she also has an accusative case in her case marking system, it seems more likely that she treats Amis as a split-ergative language. Another problem in her analysis is that she regards all the intransitive clauses as AV-marking clauses; that is, the only argument in an intransitive clause is always an agent or actor. This seems irrelevant or even contradictory to the ergative nature of a language. Notice that this analysis contrasts with Chen (1987), in which the only argument of an intransitive clause is deemed as Patient.

1.2.5 Liu (2003)

Liu's (2003) work deals with the conjunction and modification constructions of Amis³³ in light of the neo-Davidsonian perspective (Parson 1990). In her section about a sketch of Amis grammar, she briefly gives a classification of Amis verbs. Liu (2003) follows the voice distinctions mentioned in Liu (1999) and Wu (2000) and proposes four major types of verbs based on their occurrence with voice affixes: *mi-* type, *ma-* type, *-um-* type, and \emptyset verbs (i.e. verbs taking covert voice affixes) (Liu 2003:8). Based on the case assignment properties and semantic nature, these classes of verbs can be further categorized. Liu's (2003:9) classification is shown in Table 1.16 (Liu 2003:9, original transcription and gloss).

³³ Both Liu (1999) and Liu (2003) collected their data from the same Amis community that I visited. Some of our language consultants are the same people.

Table 1.16 Verb Classes in Amis (Liu 2003)

Case-assignment properties	Affixial forms on the verb root	Examples	Semantic Properties
Accusative	mi-type	(1) activity verbs : <i>mi-kasuj</i> ‘chop wood’; <i>mi-futiN</i> ‘fish’; <i>mi-eadup</i> ‘hunt’; (2) cognitive verbs : <i>mi-neNneN</i> ‘look at’; <i>mi-harteN</i> ‘ponder’; <i>mi-nanam</i> ‘learn’	dynamic; volition ↑ ↓ stative
	-um ₁ -type	(3) activity verb : <i>k<um>aqen</i> ‘eat’; <i>r<um>adiw</i> ‘sing’	
Unergative (Intransitive)	-um ₂ -type	(4) activity verb : <i>r<um>akat</i> ‘walk’; <i>t<um>aNic</i> ‘cry’; <i>t<um>ireN</i> ‘stand’; <i>c<um>ikaj</i> ‘run’	
None	∅ ₁ -type	(5) movement verb : <i>tajra</i> ‘go’; <i>tajni</i> ‘come’	
Unaccusative Ergative	ma-type	(6) direction verb : <i>ma-qfer</i> ‘fly up’; <i>ma-lukulun</i> ‘go down’; <i>ma-sadak</i> ‘go out’ (7) perception verb : <i>ma-neNneN</i> ‘see’; <i>ma-harateN</i> ‘think of’; <i>ma-teNel</i> ‘hear’ (8) psyche-verb : <i>ma-ketereh</i> ‘angry/condemn’; <i>ma-’ulah</i> ‘like’; <i>ma-’ilul</i> ‘miss’; <i>ma-furaw</i> ‘hate’; <i>ma-talaw</i> ‘fear’ (9) stative verb : a. individual-level predicate : <i>ma-lahdaw</i> ‘extinct’ b. stage-level predicate : <i>ma-tueas</i> ‘old’; <i>ma-qukuk</i> ‘thin’	
		(10) stative verb : <i>eadadaq</i> ‘sick’; <i>ira</i> ‘be exist’; <i>faNcal</i> ‘good/beautiful’	
Unergative (Intransitive)	∅ ₂ -type		

There are a few interesting observations that one can find from her classification. First, she places four types of verbs in a single *ma-* category, which is quite different from Yan’s (1992) analysis, where there are four types of *ma-* verbs. However, as she does not further discuss her sub-classification, it is not clear whether these subclasses really all belong to the same class. Second, she includes a dynamic/volition--stative scale in her classification, which is reminiscent of the analysis argued in Huang (2000) for the verbs in Atayal, another Formosan language. Huang (2000) also argues for the

existence of such a continuum for different verb classes in that language. Third, she proposes the distinction between individual-level and stage-level predicates for certain *ma-* verbs. However, she does not provide any evidence for such a distinction. According to my investigation, individual-level predicates tend to appear unaffixed; *ma-* verbs are more likely to be stage-level or result state predicates. Finally, like Yan (1992), she does not include *-en* verbs in her classification.

In addition to her verb classification that is relevant to the present research, Liu's (2003) analysis about a particular structure, which is termed ideophone-forming construction in this dissertation, will be further discussed and explored in Chapter 4. As we shall see in the discussion, the structural diversity of this construction can serve as a criterion in classifying the root forms in Amis, especially root forms carrying a stative meaning.

1.2.6 Tsukida (2005b)

Tsukida's (2005b) manuscript presents a comparative study of the verb classes of two Formosan languages: Amis and Seediq. Here I will only review her discussion of the Amis verbs. The Amis dialect that she investigated is the Fataan dialect spoken in the mountain area of Hualien County. She assumes the traditional treatment of four-voice distinctions in the Amis voice system, and she classifies Amis verbs based on the four types of conjugation (i.e. *mi-*, *ma-*, *-om-*, and \varnothing (zero)) that the Agent Voice takes. She further differentiates the verb types, presented in (1.9) and Table 1.17 (Tsukida 2005:3), in terms of the following three features [\pm state], [\pm affected], and [\pm control]:

(1.9) mi, φ-A	-state, -affected, +control
om	-state, +affected, +control
ma	±state, +affected, ±control
φ-B	+state, -affected, -control

Table 1.17 Semantic Features of Each Conjugation in Amis (Tsukida 2005b)

	-state	+state
-affected	mi, φ-A (+control)	φ-B(-control)
+affected	om (+control), ma	ma

These features are defined in (1.10) (Tsukida 2005b:3):

- (1.10)a. ±state indicates whether the situation denoted by the verb is state or not.
- b. ±affected indicates either whether or not the verb expresses such a situation where the subject is the most affected entity, or whether or not the situation is caused through being affected by other entity.
- c. ±control refers to whether or not the Actor controls the situation denoted by the verb, as the situation might be instigated voluntarily or involuntarily, intentionally or unintentionally.³⁴

As one can see from the above analysis, unlike *mi-* and *-om-* verbs which can be categorized by a definite value of the features (i.e. either plus or minus), *ma-* verbs apparently exhibit more uncertainty. In fact, Tsukida further subcategorizes *ma-* verbs into the following sets:

Table 1.18 The Subcategories of *ma-* Verbs (Tsukida 2005b)

The subcategories of <i>ma-</i> verbs	Examples (original transcription and gloss)
Non-stative control verbs	a. <i>ma-fkac</i> ‘run’, <i>ma-’fer</i> ‘fly’, etc. b. non-emotional reciprocal verbs
Non-stative non-control verbs	a. <i>ma-fa’sig</i> ‘to sneeze’, <i>ma-tlook</i> ‘to hiccup’, etc. b. weather verbs
Stative agentive verbs	verbs expressing a stative situation that Actor controls such as cognition, emotion, or behavior patterns, and their reciprocal verbs, e.g. <i>ma-fana</i> ‘to know’ and <i>ma-foti</i> ‘to sleep’
Stative non-control verbs	verbs of non-controllable physical states not-controllable, e.g. <i>ma-pawan</i> ‘to forget’, <i>ma-lcad</i> ‘the same’

Besides *ma-* verbs, φ verbs are also subcategorized into two classes, as we have seen

³⁴ As remarked by Tsukida, the feature control is irrelevant to *ma-* verbs.

in (1.9). Generally speaking, ϕ -A verbs are motion verbs (e.g. *ta-ira* ‘to go’) and morphologically causative verbs that are prefixed with *pa-* (e.g. *pa-fli* ‘give’), while ϕ -B verbs are mainly inherent or permanent states (e.g. *fa’cal* ‘good’) and state verbs that are derived from attaching other affixes (e.g. *ci-gagan* ‘famous (i.e. have-name)’).

After postulating verb classes based on the features mentioned above, Tsukida (2005b) further compares the semantic differences among the verb types, and she shows that such differences can be described via the features that she utilizes to classify the verbs. Details of these differences will be referred to in later chapters when necessary.

Another major part in Tsukida’s (2005b) paper is the discussion of the case frames of *mi-* and *ma-* verbs. In particular, she points out the potential problem of regarding *ma-* verbs with a Genitive-Nominative case frame as a type of Goal Voice (or patient focus/voice in other studies); that is, there will be an imbalance of the GV construction for *mi-* and *ma-* non-GV verbs. This imbalance is illustrated by the following table (Tsukida 2005b:13):

Table 1.19 The Imbalance Caused by Regarding *ma-* Form as GV (Tsukida 2005b)

	<i>mi</i> with the case frame NOM A (OBL P)		<i>ma</i> with the case frame NOM A (OBL P)
AV	<i>mi-patay</i> NOM A (OBL P). A kills P.		<i>ma-fana’</i> NOM A (OBL P) A knows P.
GV	<i>patay-en</i> GEN A NOM P. A will surely kill P. A definitely killed P.	<i>ma-patay</i> (GEN C) NOM T. T is dead (of C). C killed T.	<i>ka-fana’-en</i> GEN A NOM P. A surely knows P

As shown in Table 1.19, while *mi-* verbs can have two corresponding GVs (i.e. *-en* and *ma-*), *ma-* verbs can only have *-en*. To resolve such an imbalance, she proposes that so-called *ma-* GV forms are derivational, not inflectional. In other words, they should be treated as another verb type instead of a GV form of *mi-*. Thus, *mi-* verbs only have one GV form, the *-en* form. This claim is very similar to the one proposed by Chen

(1987), in which *-en* is treated as a passive form of *mi-*. However, Chen (1987) still regards *-en* passivization as a kind of derivation, not inflection. This is different from what Tsukida (2005b) has claimed in her paper.

In the conclusion of her paper, Tsukida (2005b) draws an analogy between traditional split-intransitivity (cf. Van Valin (1990) and the *mi-/ma-* distinctions for intransitive stems in Amis. She notes that the former is like the A-marking verbs while the latter is like the P-marking verbs. Her claim is shown in the following table (Tsukida 2005b:24):

Table 1.20 Traditional Split Intransitivity and Verb Classification in Amis (Tsukida 2005b)

	intransitive	transitive		intransitive
Amis	<i>mi</i> -verb NOM S	<i>mi</i> -verb NOM A (OBL P)	<i>ma</i> -verb (GEN A) NOM P	<i>ma</i> -verb NOM S
Traditinal	A-verb	A-verb-P		verb-P
Semantics	-state, -affected, +control			+state, +affected, -control

The comments I would like to make about Tsukida's (2005b) analysis are stated as follows. To begin with, although she tries to capture the semantic differences among different verb classes with three explicit features, she does not provide much syntactic evidence to support such a classification. Furthermore, as one can see from Table 1.20, it seems a bit controversial to treat *mi-* verbs that have a Nominative-Oblique case frame as transitive, or at least as the same kind of transitive verbs like *ma-* verbs, which have a Genitive-Nominative pattern. Based on Tsukida's (2005b) analysis, such *mi-* verbs seem to be semantically transitive, but not syntactically, while *ma-* verbs with the Genitive-Nominative case frame seem to be both, though she does not discuss this issue. These two types of "transitive" verbs should be treated differently instead of placing them under the same category of "transitivity".

1.3 Overall Comments and Research Issues

The following similarities can be found in the works reviewed above in spite of their different theoretical approaches or frameworks adopted in the analyses.

1. All of them, except Tsukida (2005b), make the following case distinctions in their case marking system: nominative, genitive, and accusative.³⁵ The accusative case is treated as oblique by Tsukida (2005b).
2. Case frame and/or the affixation of the voice markers serve as the major criteria for classifying verbs.
3. Most of them (e.g. Chen 1987, Huang 1988, Liu 1999) acknowledge the ergative phenomenon of Amis. However, their case marking system (i.e. the existence of an accusative case) seems to suggest the existence of a split-ergative system in this language.
4. Transitivity seems to be defined based on the number of semantic roles rather than on the syntactic ground in these works. That is, they regard the existence of an agent role and a patient role as an index of transitivity, and the following two case frames can be both treated as transitive: Nominative Agent + Accusative/Oblique Patient and Genitive Agent + Nominative Patient.
5. Most, if not all, of these studies seem to assume that the NP marked by the nominative case is the grammatical subject in Amis.
6. For some studies following a four-voice or four-focus system (e.g. Yan 1992, Liu 1999, and Liu 2003), intransitive verbs all seem to be placed under the AV set regardless of the semantic role of the S argument in these verbs. That is, UV or PV is only restricted to two-place predicates, but not single-place predicates. Although

³⁵ Liu (1999), following Huang (1995), names this case as accusative/locative.

Tsukida's (2005b) analogy between split-intransitivity and Amis intransitive verbs seems to make a distinction between semantic roles of S, she still retains the AV terminology to name these intransitive verbs.

7. For the studies following the four-voice or four-focus system, the four voices or focuses are placed under the same "voice" category without further differentiation regarding their functions.

I have also found the following questions that seem to remain unclear or disputable in the above works:

1. Whether the voice markers (or focus markers) and their related morphology are derivational or inflectional or both is still under dispute.
2. Whether Amis is an accusative language, an ergative language, or both is not clear.
3. How the case relations and case forms are mapped into each other is not entirely clear.
4. The issue of grammatical relations has not been thoroughly explored. The existence of a grammatical subject in the Philippine-type languages has been questioned in Schachter (1977). Amis, being genetically related to the Philippine-type languages, may also exhibit similar uncertainty, and thus requires more investigation on this issue.

This dissertation, taking up the above-mentioned unsolved or unclear issues, will pursue the following research interests in the framework of RRG. To begin with, in addition to utilizing argument structure or case relations and voice morphology, Amis verbs will be classified based on the lexical aspect features of the verbs. Following this classification, verb classes will be represented with decomposition-based logical

structures, and these logical structures will serve as the basis for postulating the case assignment rules for Amis and the exploration of the issue of grammatical relations. Furthermore, a decompositional analysis for the voice markers will also be proposed in this dissertation to account for their derivational functions. Meanwhile, I will also discuss their specific voice marking functions. That is, I will show that while these markers are essentially derivational, they do play important inflectional functions as marking voice operations. This is especially true for *mi-*, *ma-* (both AV and UV), and *-en*, the three most frequently employed voice forms. Moreover, adopting the notion of macrorole and the definition of transitivity in RRG, I will re-examine the issues of transitivity and ergativity in Amis. Transitivity in RRG is determined by the number of macroroles that a verb takes, and such transitivity is termed macrorole transitivity or M-transitivity. It is possible that a verb has two core arguments but only one of them is selected as the macrorole and the other is realized as a non-macrorole (NMR) core argument. For such verbs, they are treated as intransitive. Hence, the two case marking patterns (i.e. NOM-DAT and GEN-NOM) that have long been treated as transitive may not be “equally” transitive in terms of macrorole transitivity. The exploration of this issue will help disambiguate whether Amis is an ergative language, an accusative language, or both. Finally, major grammatical constructions such as relativization and control constructions will be examined in this dissertation to see whether the arguments that can exhibit the behavioral properties of a subject (e.g. being a controller or a pivot) in these constructions are grammatically determined.

Chapter 2

The Framework: An Introduction to RRG

This chapter offers a brief introduction to Role and Reference Grammar (RRG) based on Van Valin & LaPolla (1997) (VVLP 1997 henceforth) and Van Valin (2005) (VV 2005 henceforth).¹ The general structure of the theory is given in Figure 2.1:

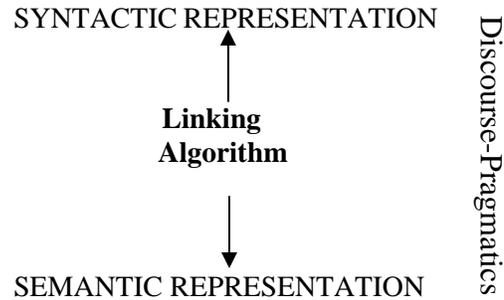


Figure 2.1 General Structure of Role and Reference Grammar

From this figure, we can see that there is a direct mapping, regulated by the linking algorithm, from the semantic representation to the syntactic representation without any bridging abstract syntactic representation. The linking algorithm that connects the two representations works bi-directionally, and the factors or considerations from discourse/pragmatics may come into play and affect the linking process. In addition to postulating general rules, principles, and constraints that govern the representations and various phases in the linking process, RRG also recognizes the idiosyncrasy that is pertinent to various “grammatical constructions” in every language. The grammatical constructions are deemed as a central part in the grammar, and these constructions are represented by “constructional schemas” in which the idiosyncratic syntactic, morphological, semantic and pragmatic information specific to the constructions are recorded.

¹ Unless specified, the English examples are all taken from VVLP (1997) and VV (2005). An earlier model of this theory can be found in Foley & Van Valin (1984) and Van Valin (ed.) (1993).

Among the four components presented in Figure 2.1, the semantic representation and the linking from semantics to syntax are the parts that this dissertation mainly relies upon. Therefore, the introduction made in the following sections will focus on the notions and issues related to these components.

This chapter is organized as follows. Section 2.1 presents the syntactic representation of RRG, and Section 2.2 introduces the component of semantic representation. Section 2.3 discusses issues related to the linking from semantic to syntax, and how RRG approaches the issue of grammatical relations and their related phenomena such as voice constructions. Let us begin with the syntactic representation.

2.1 Syntactic Representation

RRG assumes that the representation of clause structure should only capture universal features without imposing any feature on language. Such features include the distinctions between predicating and non-predicating elements, and the distinctions between core arguments and peripheral adjuncts of the predicate. These features are represented with syntactic units that form a layered structure. Their correspondence is given in Table 2.1 (VVLP 1997:27):

Table 2.1 Layered Structure of Clause (LSC)

Semantic element(s)	Syntactic unit
Predicate	Nucleus
Argument in semantic representation of predicate	Core argument
Non-arguments	Periphery
Predicate + Arguments	Core
Predicate + Arguments + Non-arguments	Clause (=Core + Periphery)

As shown in Table 2.1, there are three layers distinguished in the syntactic representation: nucleus, core, and clause. Each layer in the clause can be modified by one or more operators (i.e. functional categories) as diagrammed in Figure 2.2 (VVLP 1997:49):

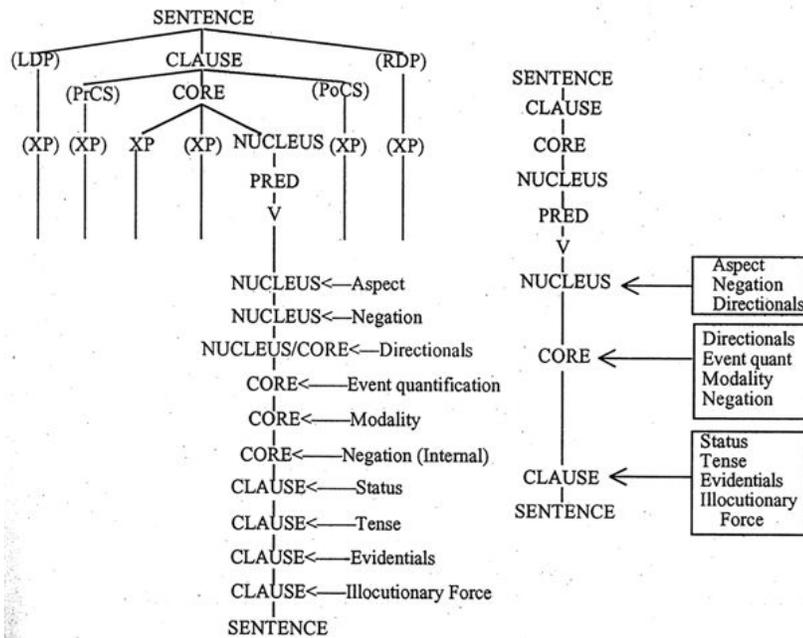


Figure 2.2 LSC with Constituent and Operator Projections

In addition to the representation of the universal features of a clause, there are some non-universal positions in the LSC for languages that manifest these language-specific features. Such positions include extra-core slots and detached positions. An example for the former is the precore slot (PrCS) for the WH-word in English, while the latter can be exemplified by the left-detached position (LDP) in English for the topical phrase “as for...”. The detached positions are normally set off from the following clause by a pause or intonation break. Figure 2.3 below gives an LSC of an English sentence with universal and non-universal features.

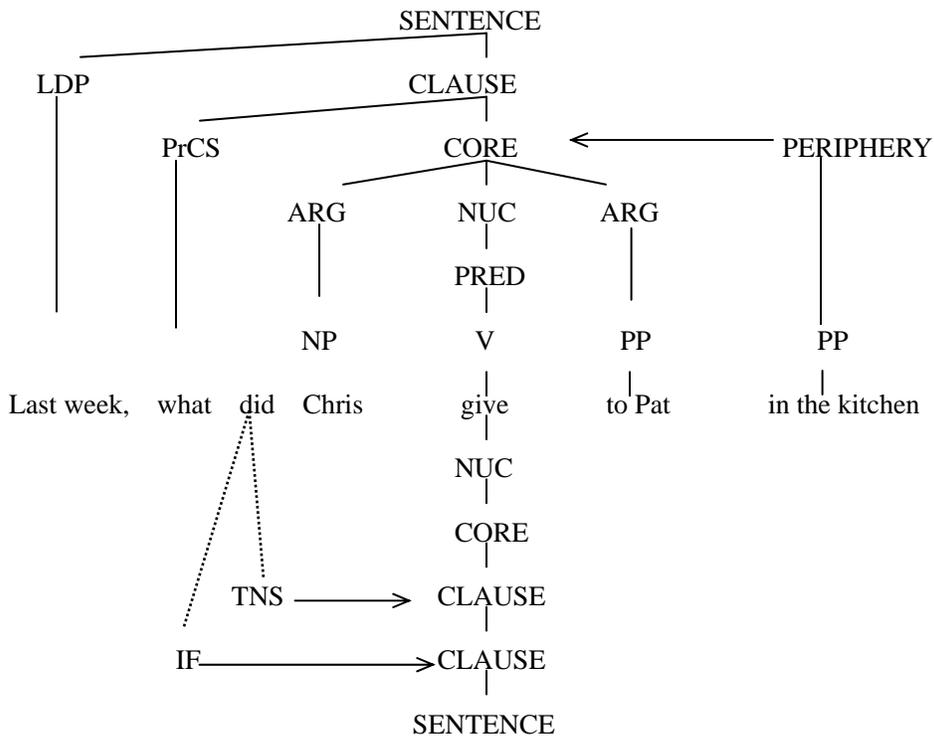


Figure 2.3 The LSC of an English Sentence

The syntactic representations of RRG are not specified by phrase-structure rules or something similar; rather, they are stored as syntactic templates in a syntactic inventory of every language. While the components of LSC in Table 2.1 are universal, the syntactic templates in a syntactic inventory exhibit substantial variations cross-linguistically. Figure 2.4 presents some examples from English (VV 2005:19):

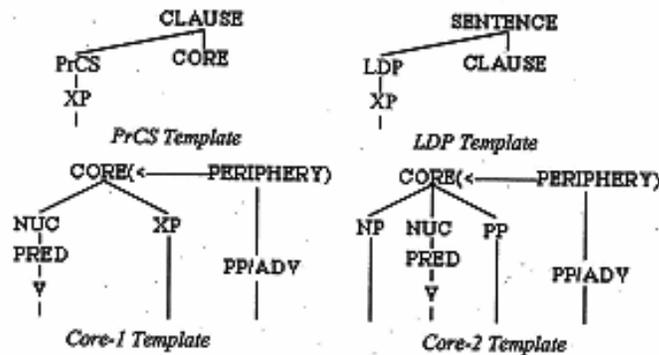


Figure 2.4 Some English Syntactic Templates (simplified) from the Syntactic Inventory

2.2 Semantic Representation

The main part of the semantic representation in RRG is a decompositional model of lexical representation, termed the logical structure, of the predicate. This analysis is built upon a theory of verb classification known as “Aktionsart”, which was firstly proposed by Vendler (1967) and later elaborated by Dowty (1979). The details of the verb classification will be laid out in this section. In addition, I will also discuss the semantic relation that an argument can bear with its predicate from the RRG perspective.

2.2.1 Verb Classification and the Logical Structures

In Vendler’s original taxonomy, verbs are classified into four basic classes based on their inherent temporal properties: states, activities, achievement, and accomplishments. Two more classes are added in RRG besides Vendler’s four basic classes: Semelfactive (Smith 1997) and active accomplishment. These classes and their Aktionsart features (i.e. lexical aspectual properties) are displayed in Table 2.2 with English examples that illustrate each type:

Table 2.2 Aktionsart Features of Each Verb Class

Class	Aktionsart Features	English Examples
State	[+static], [-dynamic], [-telic], [-punctual]	<i>be sick, be tall, be dead, love, know, believe, have</i>
Activity	[-static], [+dynamic], [-telic], [-punctual]	<i>march, walk, roll</i> (intransitive), <i>swim, think, snow, write, drink</i>
Achievement	[-static], [-dynamic], [+telic], [+punctual]	<i>pop, explode, collapse, shatter</i> (intransitive)
Semelfactive	[-static], [±dynamic], [-telic], [+punctual]	<i>flash, cough, tap, glimpse</i>
Accomplishment	[-static], [-dynamic], [+telic], [-punctual]	<i>melt, freeze, dry</i> (intransitive), <i>learn</i>
Active Accomplishment	[-static], [+dynamic], [+telic], [-punctual]	See (2.1)

Semelfactives are punctual events without a result state. Active accomplishment verbs are activity verbs with a telic feature, which may be contributed by the definite/indefinite status of the co-occurring argument (e.g. in English) or by other morphological means

(e.g. affixation in Amis as seen later). The examples in (2.1) demonstrate the differences between plain activity verbs and their active accomplishment counterparts:

- (2.1) Activity vs. Active Accomplishment
- a. The soldiers marched in the park. *Activity*
 - a'. The soldiers marched to the park. *Active Accomplishment*
 - b. Dana ate fish. *Activity*
 - b'. Dana ate the fish. *Active Accomplishment.*
 - c. Leslie painted (for several hours). *Activity*
 - c'. Leslie painted Mary's portrait. *Active Accomplishment*

Based on the properties described in Table 2.2, these verb classes can be differentiated by the diagnostic tests summarized in Table 2.3:

Table 2.3 Diagnostic Tests for Aktionsart Classes²

Criterion	States	Achieve	Accomp	Activity	Active Accomp	Seml
1. Occurs with progressive	No*	No*	Yes	Yes	Yes	No*
2. Occurs with adverbs like <i>vigorously</i> , <i>actively</i> , etc.	No	No	No	Yes	Yes	Some*
3. Occurs with adverbs like <i>quickly</i> , <i>slowly</i> , etc.	No	No*	Yes	Yes	Yes	No*
4. Occurs with <i>X for an hour</i> , <i>spend an hour</i> <i>Xing</i>	Yes*	No	Irrelevant*	Yes	Irrelevant*	No
5. Occurs with <i>X in an hour</i>	No	No*	Yes	No	Yes	No*
6. Can be used as stative modifier	Yes	Yes	Yes	No	Yes	No
7. Has causative paraphrase	No	No	No	No	No	No

Test 1 is only applicable for languages that have a progressive aspect. It works well with activity, accomplishment, and active accomplishment. When it occurs with semelfactive verbs, it yields an iterative reading, as illustrated in (2.2a), and the same situation happens when the progressive aspect co-occurs with an achievement verb that

² The “*” sign indicates that there may arise some complexities in the application of the test in a language and thus exceptions may exist.

has a plural subject (e.g. (2.2b-b')):

- (2.2) a. The light is flashing (*once).
b. *The balloon is popping.
b'. The balloons are popping.

The adverbs in Test 2 distinguish dynamic verbs from those that are not dynamic, and the pace adverbs in Test 3 separate the verbs with a durative feature from those without.

Test 4 and 5 are designed to differentiate telic from atelic verbs. The *for*-test works with verbs having a temporal duration, regardless of their telicity. The *in*-test diagnoses the telic feature of a verb, as it indicates the completion of an event. Meanwhile, it also indicates a temporal duration before the completion. Hence, for punctual verbs such as achievement and semelfactive, they can only co-occur with *in* + a very short of period of time (e.g. *in an instant*). Test 6 is for distinguishing the two types of punctual verbs; punctual verbs with a result state (i.e. achievement) can serve as stative modifiers (e.g. *a popped balloon*), while punctual verbs without a result state (i.e. semelfactive) cannot serve this function (e.g. **a flashed light*). As for the last test (i.e. the causative paraphrase test), it is designed for determining whether a verb is inherently causative or not. The causative paraphrase for a lexically causative verb should have the same number of NPs as the original sentence. Although the tests mentioned above are not all equally applicable in every language, and the application of certain tests may involve some complexity that may affect the diagnostic result, in general these tests can still help differentiate the Aktionsart classes. Some of these tests will be utilized to classify Amis verbs in Chapter 4.

Each of the six classes has a causative counterpart (e.g. state and causative state).³

So, in total, there are twelve verb classes differentiated in RRG. Each verb class is formally represented by a logical structure, as shown in Table 2.4:

Table 2.4 Lexical Representations for Aktionsart Classes

Verb Class	Logical Structure (LS)
State	predicate' (x) or (x, y)
Activity	do' (x, [predicate' (x) or (x, y)])
Achievement	INGR predicate' (x) or (x, y), <i>or</i> INGR do' (x, [predicate' (x) or (x, y)])
Semelfactive	SEML predicate' (x) or (x, y), <i>or</i> SEML do' (x, [predicate' (x) or (x, y)])
Accomplishment	BECOME predicate' (x) or (x, y), <i>or</i> BECOME do' (x, [predicate' (x) or (x, y)])
Active Accomplishment	do' (x, [predicate'₁' (x) or (x, y)]) & INGR predicate'₂' (z, x) or (y)
Causative	α CAUSE β , where α , β are LSs of any type

The lexical representations of the verbs in Table 2.4 are termed “logical structures” of the verbs.⁴ As shown in the table, state and activity are two most fundamental Aktionsart classes upon which the logical structures of other classes are based. For example, achievement verbs can be either the punctual changes of state or onsets of activity, and thus they can be expressed either by a state predicate or by an activity predicate plus an INGR (i.e. ingressive) operator. By the same token, semelfactives and accomplishments can also be based on either states or activities. As for active accomplishment, it is composed of an activity predicate and a change of state that indicates the telic feature; the “&” in the logical structures means “and then”. The causative predicate is expressed by

³ The causative predicates pass the diagnostic tests in a similar, but not identical manner as their non-causative counterparts except that for the causative paraphrase test, their results are all “yes”. As the tests I will employ in Chapter 4 are primarily related to the non-causative verbs, I will not go into the details of the Aktionsart tests for causative predicates in this section.

⁴ The logical structures are formulated in the conventions of formal semantics, in which constants (i.e. the predicates) are presented in boldface followed by a prime, while variable elements are presented in normal typeface. Notice that the elements in boldface + prime are metalinguistic vocabulary, not words from any particular language.

a complex structure containing a predicate (usually an activity) indicating the causing event and a predicate indicating the resulting state, and the two predicates are linked by the operator CAUSE.

The decompositional system in Table 2.4 will be employed to represent the semantic structures of Amis predicates in this dissertation. Nevertheless, as pointed out in VV (2005:46), this model is just an approximation to a decompositional system that is required for further and deeper semantic lexical analysis. In the later discussion, I will also point out the limit of the current system on the analysis of Amis verbs and propose some tentative solutions.

2.2.2 Semantic Roles

Another important issue in the discussion of the semantic representation is the semantic relation between a predicate and its arguments, namely, the semantic roles of the arguments. This issue, as mentioned in VV (2005), has been pursued under three different levels of generality. The first level is verb-specific semantic roles such as killer, hearer, broken, etc. The second level is concerned with the thematic relations generalized across the verb-specific semantic roles. Typical examples of this level include agent, instrument, experiencer, theme, and patient. The third type is generalized semantic roles that are generalizations across thematic roles. Figure 2.5 (VV 2005:54) summarizes relationships among the three levels of semantic roles in a continuum that indicates the generalization progressing from verb-specific semantic roles to grammatical relations:

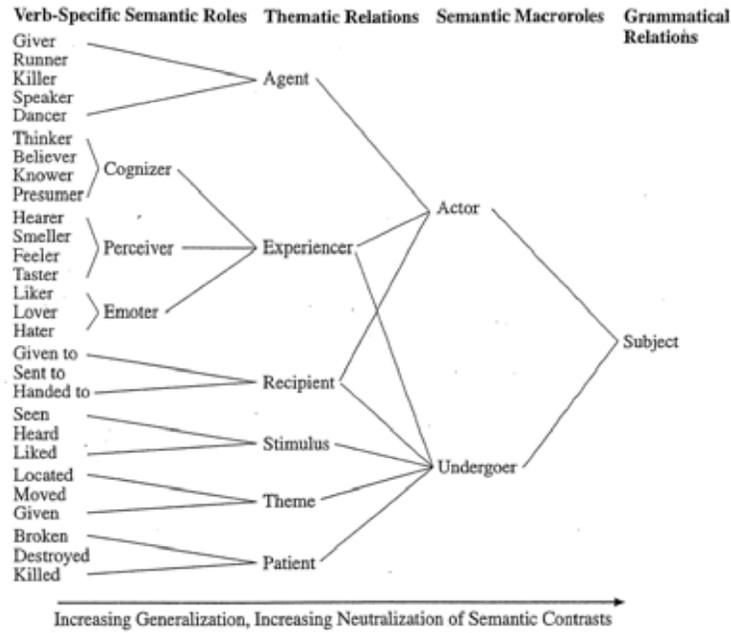


Figure 2.5 Continuum for Verb-specific Semantic Roles to Grammatical Relations

Only the last two levels of semantic roles are relevant to the RRG framework.

Nevertheless, unlike the thematic relations discussed in the traditional literature (cf.

Fillmore 1968), RRG makes only five distinctions among them in terms of the argument

positions in the LS. Figure 2.6 below shows the correspondence between traditional

thematic relations and the five argument positions in the LS (VV 2005:58):

Arg of DO	1st arg of $do'(x, \dots)$	1st arg of $pred'(x, y)$	2nd arg of $pred'(x, y)$	Arg of state $pred'(x)$
AGENT	EFFECTOR	LOCATION	THEME	PATIENT
	MOVER	PERCEIVER	STIMULUS	ENTITY
	ST-MOVER	COGNIZER	CONTENT	
	L-EMITTER	WANTER	DESIRE	
	S-EMITTER	JUDGER	JUDGMENT	
	PERFORMER	POSSESSOR	POSSESSED	
	CONSUMER	EXPERIENCER	SENSATION	
	CREATOR	EMOTER	TARGET	
	SPEAKER	ATTRIBUTANT	ATTRIBUTE	
	OBSERVER	IDENTIFIED	IDENTITY	
	USER	VARIABLE	VALUE	
			PERFORMANCE	
			CONSUMED	
			CREATION	
			LOCUS	
			IMPLEMENT	

Figure 2.6 Thematic Relations Continuum in Terms of LS Argument Positions

Only these five argument positions in the LS are deemed important in the RRG framework; the thematic relations, which presumably can be non-exhaustive in number, are treated merely as mnemonics for these positions. Notice that in Figure 2.6, there is an operator DO, which does not show up in the logical structures in Table 2.4. This operator signals agency of the logical structure of a verb that lexicalizes this feature. As argued in Van Valin and Wilkins (1996), in most cases, agency is only an implication of the way a particular verb is used in a sentence, not an inherent lexical property. The following examples demonstrate the contrast between verbs with agentive implicature and verbs with lexicalized agency:

- (2.3) (1) a. The man *killed* his neighbor.
 b. The man *intentionally killed* his neighbor.
 c. The man *accidentally killed* his neighbor.
 (2) a. The man *murdered* his neighbor.
 b. ?The man *intentionally murdered* his neighbor.
 c. *The man *accidentally murdered* his neighbor.
 (3) a. *A branch falling from Pat's tree killed* his neighbor.
 b. **A branch falling from Pat's tree murdered* his neighbor.

As illustrated in the examples, verbs with only the agentive implicature can co-occur with agency-canceling expressions such as *accidentally*, agentive expressions such as *intentionally*, and an inanimate actor (e.g. *a branch*), but true agentive verbs are either banned in these contexts or marginally acceptable. The operator DO only shows up in the logical structure for the verbs with lexicalized agency, such as English *murder*, but not verbs with agentive implicature. The contrast is given in (2.4):

- (2.4) a. *kill*: [**do'** (x, Ø)] CAUSE [BECOME **dead'** (y)]
 b. *murder*: DO (x, [**do'** (x, Ø)] CAUSE [BECOME **dead'** (y)])

In RRG, agent is strictly defined as the first argument of DO. As for the first argument

of **do'** (i.e. an activity predicate), it is called an effector, which can be animate or inanimate. Notice that this view is very different from many of the works reviewed in Chapter 1. In these works, agent is treated as a basic thematic relation, and even the only thematic relation that the single argument bears with the intransitive predicate, regardless of the nature of the argument and the predicate.

Besides the thematic relations displayed in Figure 2.6, RRG also posits two generalized semantic roles, termed macroroles: actor and undergoer. These two macroroles can be conceived as the two primary arguments of a transitive predicate, and either one of them can serve as the single argument of an intransitive predicate. This is another difference of RRG from some of the previous studies that only acknowledge one semantic relation for the single argument of intransitive verbs (e.g. Patient in Chen (1987) and Agent in Liu (1999)). The two generalized semantic roles are called macroroles because they represent two groups of thematic relations, as shown in Figure 2.5, that are treated alike in grammatical constructions. For example, the patient and the theme thematic relations in the undergoer group can both serve as the direct object in an active sentence and the subject in a passive sentence. If these grammatical phenomena are described in terms of individual thematic relations, some important generalizations shared by these thematic relations may be missing.

The realization of an argument as a macrorole is determined by the Actor-Undergoer Hierarchy (AUH) in Figure 2.7 and a set of principles stated in (2.5) (VV 2005:126):

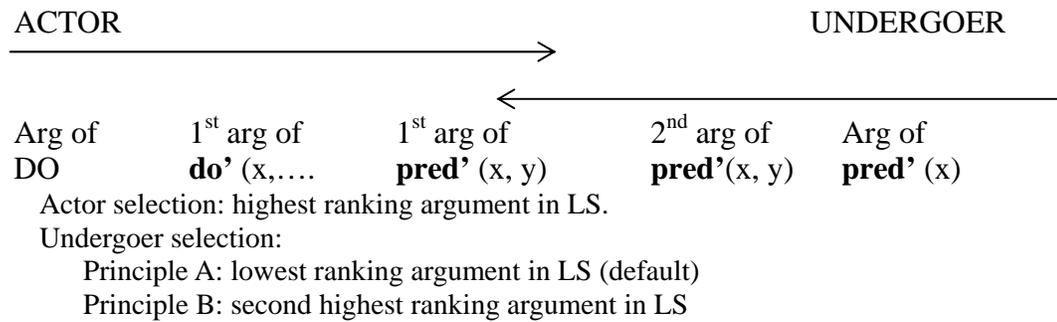


Figure 2.7 Actor-Undergoer Hierarchy (AUH)

(2.5) Default Macrorole Assignment Principles

- a. Number: the number of macroroles a verb takes is less than or equal to the number of arguments in its logical structure
 - 1. If a verb has two or more arguments in its LS, it will take two macroroles.
 - 2. If a verb has one argument in its LS, it will take one macrorole.

- b. Nature: for verbs which take one macrorole,
 - 1. If the verb has an activity predicate in its LS, the macrorole is actor.
 - 2. If the verb has no activity predicate in its LS, the macrorole is undergoer.

As seen in Figure 2.7, this hierarchy is closely related to the argument positions in the logical structure. By default, the higher the argument position is on the hierarchy, the more possibility that it will be realized as an actor; the lower the position is, the more likely this argument will be an undergoer. This hierarchy and the principles will be utilized in Chapter 5 for the discussion of the macrorole assignment in Amis in Chapter 5.

In RRG, transitivity of a verb is determined by the number of macroroles that the verb takes (i.e. M-transitivity). Notice that this number does not necessarily equal to the number of the core arguments of the verb (i.e. Semantic Valence, Syntactic-transitivity or S-transitivity).⁵ In other words, it is possible that a core argument of a verb is not

⁵ Here “semantic valence” and “syntactic-transitivity” are viewed as the same thing; both refer to the number of the core arguments. However, strictly speaking, semantic valence refers the number of the argument positions in the LS of a verb, while syntactic transitivity refers the number of the direct core arguments. It is possible to find a mismatch between the two. For example, in an English passive sentence, the semantic valence is two, but the S-transitivity value is one, as one of the core arguments in the LS (i.e. the effctor) is realized as an adjunct. Hence, syntactically, there is only one core argument.

assigned with a macrorole and thus becomes a non-macrorole (NMR) core argument.

The comparison of S-transitivity and M-transitivity is illustrated in the following table

with examples from English (VV 2005:64):

Table 2.5 Macrorole Number and Transitivity

English Example	Semantic Valence	Macrorole Number	M-transitivity
<i>snow</i>	0	0	Atransitive
<i>die</i>	1	1	Intransitive
<i>drink</i> [ACTIVITY]	1 or 2	1	Intransitive
<i>drink</i> [ACT ACCOMPL]	2	2	Transitive
<i>kill</i>	2	2	Transitive
<i>set</i>	3	2	Transitive
<i>send</i>	3	2	Transitive

As shown in the table, a good example that illustrates the mismatch between S-transitivity and M-transitivity is a plain activity verb that has a non-referential second argument (e.g. *beer* in *John drank beer*). Such activity verbs have only one macrorole, though they have two core arguments in the LS. Furthermore, as the maximum number of macroroles that a verb can take is two, it means that for three-place predicates, there is always at least one of the core arguments that is not assigned with a macrorole. The competition for obtaining the macrorolehood among the arguments of three-place predicates lies in the selection of the undergoer. There are two possible candidates, and as shown in Figure 2.7, there are two principles governing the selection. The English examples in (2.6) illustrate the application of two principles:

- (2.6) a. [**do**' (Pat, Ø)] CAUSE [BECOME **have**' (Chris, book)]
 b. Pat [actor] gave the book [undergoer] to Chris.
 c. Pat [actor] gave Chris [undergoer] the book

For the three-place predicate *give* in (2.6), the unmarked choice of the undergoer will be the theme participant *the book*, the lowest ranking argument in the LS, as predicted by the application of Principle A. However, the recipient participant *Chris* is also a possible

undergoer choice in the construction known as dative shift shown in (2.6c). This alternative undergoer selection is explained by the application of Principle B that selects the second highest ranking argument in the LS as the undergoer. The preference of either one of the principles in general corresponds to the distinctions of Direct-object/Indirect-object (DO/IO) languages and Primary-object/Secondary-object (PO/SO) languages proposed in Dryer (1986); the former follows Principle A by default regarding undergoer selection, while the latter, Principle B. However, as argued in Guerrero Valenzuela and Van Valin (2004), most languages tend to present a mixed system concerning the undergoer selection and thus need both principles to adequately account for all the patterns. I will discuss this issue of Amis in Chapter 5.

2.3 Grammatical Relations

Unlike many other theories, RRG does not view grammatical relations as a basic component for a language system, nor does it regard grammatical relations as a language universal. Many grammatical phenomena in a language can be accounted for solely by semantic roles, which are deemed universal in RRG.⁶ Instead of positing three grammatical relations (i.e. subject, direct object, and indirect object) as discussed in traditional grammar, RRG recognizes only one syntactic function, which is called “privileged syntactic argument” (PSA). This notion is related to the selection of two privileged syntagmatic functions, controllers and pivots, in various constructions. The controller refers to the argument that triggers verb agreement, serves as the antecedent of a reflexive, or controls the interpretation of a missing argument in a linked unit. As for the pivot, it usually serves as a missing argument in a linked core. The selection of the

⁶ In fact, there are languages (e.g. Achenese, as discussed in VVLP 1997:255-260) that do not have grammatical relations in their language system.

two privileged syntagmatic functions can be motivated by syntactic, semantic, or even pragmatic factors. Only a privileged syntagmatic function that is defined syntactically is counted as a privileged syntactic argument (i.e. a grammatical relation) in RRG; that is, a grammatical relation only exists when the distinction of two or more semantic roles is neutralized (i.e. a restricted neutralization) for syntactic purposes in a given construction. Otherwise, one cannot claim that there is grammatical relation in this language.

Take the following English sentences as an example:

(2.7) English Control Construction

- | | |
|---|--------------------------------------|
| a. Chris wants to drink a beer. | (Actor of transitive V) |
| b. Chris wants to sing in the park. | (Actor of intransitive V) |
| c. Chris wants to be stronger. | (Undergoer of intransitive V) |
| d. *Chris _i doesn't want the journalist to
interview ___ _i . | (Undergoer of transitive V, active) |
| e. Chris doesn't want to be interviewed by
the journalist. | (Undergoer of transitive V, passive) |

In the sentences in (2.7), there is a missing argument (i.e. a pivot) in the linked core (i.e. the core following *want*), and the semantic role of this missing argument is specified next to the example. As shown in the illustration, this missing argument can be an actor or an undergoer; in other words, there is a neutralization of the semantic roles. However, as shown in (2.7d), the pivot is an undergoer, just like the one in (2.7e), but (2.7d) is rendered ungrammatical. The contrast between (2.7d) and (2.7e) indicates that the neutralization is restricted, but the restriction cannot be stated in terms of semantic roles. The restriction is determined by the position of the NP; that is, the pivot has to be the core-initial argument, which is known as the traditional subject in English. Hence, there exists a grammatical relation in this control construction. However, consider another construction that also involves the control phenomenon:

(2.10) Accessibility to Privileged Syntactic Argument Principles

Accusative languages: highest ranking direct core argument in terms of (2.9) (default)

Ergative languages: lowest ranking direct core argument in terms of (2.9) (default)

Closely related to the markedness of PSA selection are the voice constructions found in different languages. Syntactically accusative languages can have a marked PSA choice by means of the passive construction; as for syntactically ergative languages, it is the antipassive construction that is often utilized to affect the PSA selection. There are two functions performed by voice constructions cross-linguistically, as stated in (2.11):

(2.11)a. PSA modulation voice: permits an argument other than the default argument in terms of the PSA selection hierarchy in (2.9) to function as the privileged syntactic argument.

b. Argument modulation voice: gives non-canonical realization to a macrorole argument.

A voice construction can perform either both functions (e.g. the passive voice in English) or just one of them (e.g. the antipassive voice of Sama, as discussed in VV 2005:117).

Notice that the non-canonical realization of a macrorole argument of an argument modulation voice includes realizing this argument as an adjunct or as a non-macrorole core argument. The former can be illustrated by the passive construction of English in which the actor is realized as an adjunct. As for the latter, it can be exemplified by the antipassive construction of Kalkutungu discussed in VV (2005:98 & 117). In this construction, the undergoer of the active voice seems to retain its core argument status in spite of being stripped of its macrorole status by the voice operation.

Based on the above discussion, we can see that traditional GR-based terms play no role in the RRG framework. Instead, the grammatical phenomena in a language are described by means of the status of an NP as a PSA, macrorole, and NMR core argument

in this theory. The following two sets of case marking rules are an example:

(2.12) Case assignment rules for accusative languages

- a. Assign nominative case to the highest ranking macrorole argument.
- b. Assign accusative case to the other macrorole argument.
- c. Assign dative case to non-macrorole arguments (default).

(2.13) Case assignment rules for ergative languages

- a. Assign absolutive case to the lowest ranking macrorole argument.
- b. Assign ergative case to the other macrorole argument.
- c. Assign dative case to non-macrorole arguments (default).

2.4 The Linking Algorithm: From Semantics to Syntax

In this section, I will briefly introduce the linking algorithm in RRG, in particular, the linking from semantics to syntax. The linking system of RRG is diagrammed in

Figure 2.8 (VV 2005:129):

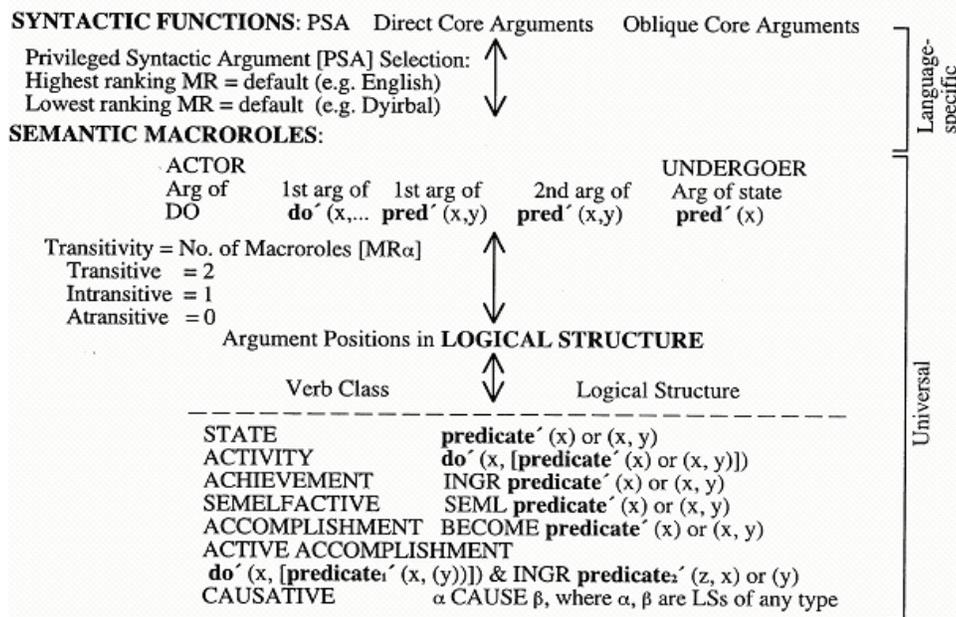


Figure 2.8 Summary of RRG Linking System

The linking from semantics to syntax follows a very general constraint “the completeness constraint”, stated in (2.14) (VV 2005:129-130):

(2.14) Completeness Constraint

All of the arguments explicitly specified in the semantic representation of a sentence must be realized syntactically in the sentence, and all of the referring expressions in the syntactic representation of a sentence must be linked to an argument position in a logical structure in the semantic representation of the sentence.

The semantic representation of a sentence is built around the logical structure of the predicate, and this information is stored in the lexicon. As for the syntactic representation, it is stored in the syntactic inventory that consists of various syntactic templates, which was introduced earlier. The information recorded in the semantic representation crucially influences the selection of the template, as one can see from the following principles that govern the selection of the syntactic template (VV 2005:130):

(2.15)a. Syntactic template selection principle:

The number of syntactic slots for arguments within the core is equal to the number of distinct specified argument positions in the semantic representation of the core.

b. Language-specific qualifications of the principle in (a):

1. All cores in the language have a minimum syntactic valence of 1.
2. Argument-modulation voice constructions reduce the number of core slots by 1.

As shown in Figure 2.8, there are two phases of linking from the argument positions in the LS to the syntactic representation. The first phase is concerned with the selection of macroroles. This phase makes crucial reference the AUH in Figure 2.7 and the principles stated in (2.5). The second phase is related to the linking of the macroroles and the NMR arguments to the syntactic functions. The case assignment and the selection of PSA are relevant to this phase of linking.

In this dissertation, I will argue that the previously established four-voice or four-focus system in Amis is actually composed of two voices: actor and undergoer. The

so-called instrumental voice and locative voice are applicative constructions that indicate a marked choice of undergoer. Functionally speaking, these two mechanisms affect different phases of linking. The applicative constructions affect the phase linking the argument positions to the macroroles, while the voice operations influence the phase linking the macrorole and NMR core arguments to the syntactic functions.

In the above introduction, I have presented rules and principles that capture the cross-linguistic and cross-constructional generalizations. However, there are still some idiosyncratic properties that are pertinent to a particular construction. These properties are recorded in the constructional schema of that particular construction. Table 2.6 shows an example of the constructional schema for the English passive construction (VV 2005:132):

Table 2.6 Constructional Schema for English Passive (Plain)⁷

CONSTRUCTION: English passive (plain)

SYNTAX:

- Template(s): (5.6b2)
- PSA: (4.15a,c2), Variable [\pm pragmatic influence]
- Linking: (4.43a)
- (4.43b): omitted or in peripheral *by*-PP

MORPHOLOGY:

- Verb: past participle
- Auxiliary: *be*

SEMANTICS:

- PSA is not instigator of state of affairs but is affected by it (default)

PRAGMATICS:

- Illocutionary force: Unspecified
- Focus structure: No restrictions; PSA = topic (default)

2.5 Summary

In this chapter, I briefly introduced the RRG framework that the discussion of this dissertation is based upon. As one can see, this theory approaches the three main

⁷ The numbers in the table refer to the example numbers in VV (2005).

research issues (i.e. verb classification, case marking, and grammatical relations) in ways very different from the previous studies of Amis. In light of this framework, Amis verbs will be classified based on their features of lexical aspect in addition to case frames and voice-related morphology, and they will be presented in the decomposition-based logical structures. Furthermore, besides being discussed under the level of thematic relations, semantic roles and case marking patterns will also be analyzed in terms of generalized semantic roles (i.e. macroroles). The incorporation of macrorole in the analysis will also lead us to a new definition of transitivity in Amis, which will help us better understand the ergative nature of this language. Finally, instead of assuming that the NP marked by the nominative case is the “subject” of Amis, the issue of grammatical relations will be re-addressed through investigating the controller or pivot types in some major grammatical constructions, and the functions of the two major voice constructions, actor voice and undergoer voice, will also be more thoroughly examined.

Chapter 3

A Sketch of Amis Grammar

This chapter presents a sketch of Amis grammar, focusing on the discussion of two types of issues: issues related to the grammar of nouns and issues related to the grammar of verbs.¹ The former includes the discussion of the case marking system and the pronominal systems, while the latter subsumes topics like the voice system, the temporal, aspectual, and modal (TAM) system, negative constructions, and imperative constructions. As one may find in the following discussion, the descriptions of many grammatical phenomena in Amis primarily concern how the coding of the participants in a sentence, mostly through the case markers, interact with the predicate. This interaction is usually indicated by a set of verbal affixes known as the focus markers, as termed in traditional Austronesian literature, or the voice markers in this dissertation. These voice affixes have long been argued to exhibit complicated semantics and functions other than just being a subject-selection mechanism found in a canonical voice construction (cf. Shibatani 1988).² These markers will be further discussed in Chapter 4, in which a decompositional analysis for each marker will be presented to account for their derivational functions as well as their other semantic features.

This chapter is organized as follows. Section 3.1 discusses the identification of three open word classes in Amis: verbs, noun, and adjectives. Section 3.2 presents the basic clause structure. In particular, I will discuss the word order and compare the structures beginning with different types of predicates. Section 3.3 addresses the issues

¹ For the topics and issues that should be included in this chapter, I have made reference to Tsukida's (2005a) grammar sketch of Seediq, another Formosan language.

² For an in-depth discussion about the history of the voice system in West Austronesian languages, please refer to Wouk and Ross (eds.) (2002).

related to the grammar of nouns, especially the case marking system and the pronominal systems. The grammar related to verbs is presented in Section 3.4, which includes the discussion of the voice system, the TAM system, the negative constructions, and the imperative constructions. A summary of this chapter is given in Section 3.5.

3.1 Word Classes

This section offers a general discussion of three open word classes in Amis: nouns, verbs, and adjectives. Notice that the term “word classes” is used as an equivalent to lexical categories, which include roots as well as derived words.³ I will begin with the distinctions between nouns and verbs. As pointed out by Wang (1976) in his study of Fataan Amis, another Amis dialect, all the root forms are syntactically nominal in this language. His observation can be supported by the following examples:

- (3.1) a. Na'on-en *k-u* ***rakat!***
 mind-UV NOM-CN walk
 ‘Good-bye.’
 Lit. ‘Mind your walk!’ (Imperative, UV)⁴
- a'. Na'on-en *k-u* ***wacu!***
 mind-UV NOM-CN dog
 ‘Mind the dog!’ (Imperative, UV)
- b. Tata'ak *k-u* ***palu*** *aku.*
 big NOM-NCM beat 1S.GEN
 ‘I was beaten severely.’
 Lit. ‘My beating was big.’
- b'. Tata'ak *k-u* ***qayam*** *aku.*
 big NOM-CN chicken 1S.GEN
 ‘My chicken is big.’

³ In the beginning of Chapter 4, I will offer a categorization of roots in Amis by incorporating the features from lexical aspects.

⁴ The actor, which is marked by the genitive case, is omitted in the imperative sentences. More discussion about the case marking patterns in Amis will be provided later.

- c. Ta'angay-ay k-u fali t-u *miming* anini.⁵
big-FAC NOM-CN wind DAT-CN little now
'It is a little windy today.'
Lit. 'The wind is a little big today.'

Presumably, the slot after a case marker (e.g. *ku* in (3.1a)) is a canonical position for a nominal element. As we can see in (3.1), the roots with various types of inherent meanings, such as activity (e.g. (3.1a) and (3.1b)), objects (e.g. (3.1a') and (3.1b')), and property (e.g. (3.1c)) can all appear in this position. These examples indicate that the ontological classes and syntactic categories are not well aligned in Amis.⁶ Nevertheless, once the activity roots are affixed with voice affixes, their morphosyntactic properties will be changed. Consider the following examples:

- (3.2) a. *Na'on-en *k-u* *r-um-akat!*
mind-UV NOM-CN walk<NEUT>
- a'. Na'on-en *k-u* *r-um-akat-ay* (a tamdaw)!
mind-UV NOM-CN walk<NEUT>-FAC LNK person
'Mind the one who is walking!' (Imperative, UV)
- b. *Tata'ak *k-u* *mi-palu* aku.
big NOM-CN AV-beat 1S.GEN
- b'. Tata'ak *k-u* *pi-palu* aku.
big NOM-CN PI-beat 1S.GEN
'My way of beating (people) is severe.'

As illustrated in (3.2), the activity roots that are marked by the voice marker such as *-um-*⁷ and *mi-* can no longer appear in a case marked position; instead, to be able to show up at this nominal position, these voice-marked forms have to be conjugated into

⁵ This sentence is taken from Tsai and Tseng (1997:215, transcription and gloss mine).

⁶ If we follow a traditional "notional analysis" (Croft 2000:65), we will expect a mapping between the word classes and the ontological categories: nouns denoting persons, places or things, verbs denoting actions/events, and adjectives denoting properties/quality.

⁷ Notice that the marker *-um-* in (3.2a) actually has no voice function, as it attaches to a root denoting an intransitive activity. For the "voice" affixes that have no voice functions, I will gloss them as "neutral". More discussion about this function and the voice system is given in Section 3.4.1.

one of the following forms in Table 3.1; these forms are all related to the voice markers that these roots appear with, as we will see later in the discussion of verbal morphology:

Table 3.1 The Possible Deverbal Forms of a Verb⁸

Functions as a Predicate	Forms	Deverbal Interpretations	Examples with the root <i>palu</i> 'beat'
Instrumental Applicative	<i>sa-pi-/ka-Root</i>	instrument or reason for doing something	<i>sa-pi-palu</i> 'beat (instrumental applicative)'
Locative Applicative	<i>mi-/pi-/ka-Root-an</i>	undergoer, goal, or location of doing something	<i>pi-palu-an</i> 'beat (locative applicative)'
Factual Mood	Voice Affix-Root- <i>ay</i>	someone who does something	<i>mi-plau-ay</i> 'beat (factual mood)'
Irrealis Mood	Ca RED-Voice affix-Root	someone who has been assigned to do something	<i>ma-mi-palu</i> 'beat (irrealis mood)'
Imperative mood or the form after <i>ca'</i> ay 'not'	<i>pi-/ka-Root</i>	manner or posture of doing something	<i>pi-palu</i> 'beat (imperative)'

Furthermore, while the roots affixed with the voice markers can appear in the predicate position, the bare roots are not allowed. The contrast is shown in the following examples:

- (3.3) a. **R-um-akat** kaku i lalan.
 walk<NEUT> 1S.NOM PREP road
 'I am walking on the road.'
- a'. ***Rakat** kaku i lalan.
 walk 1S.NOM PREP road
- b. **Mi-palu** Ø-ci sawmah ci mayaw-an.
 AV-beat NOM-PPN Sawmah PPN Mayaw-DAT
 'Sawmah is going to beat Mayaw.'
 'Sawmah is beating Mayaw.'
- b'. ***Palu** Ø-ci sawmah ci mayaw-an.
 beat NOM-PPN Sawmah PPN Mayaw-DAT

The above discussion shows that verbs are derived in Amis; that is, except for a set of unaffixed verbs, certain morphological devices such as voice markers are required to

⁸ A more complete verbal paradigm can be found in Tables 3.11 and 3.12.

form a verb.⁹ When occurring in the predicate position, these derived verbs also exhibit morphological properties different from nouns that appear in the predicate position. This is illustrated in (3.4), in which we can see that the noun *fafahian* ‘woman’ in (3.4b) is preceded by a noun classifier, but this noun classifier is not required for the derived verb in (3.4a). In the following discussion, the predicates like (3.4a) will be referred to as verbal predicates, and those like (3.4b), will be referred to as nominal predicates. More discussion about the two types of predicates is given in the next section.

- (3.4) a. **Mi-nanuy** kaku t-u safa.
 AV-swing 1S.NOM DAT-CN younger.sibling
 ‘I am swinging the younger brother/sister.’
 ‘I am going to swing the younger brother/sister.’
- b. **U fafahian** k-u singsi aku
 CN woman NOM-CN teacher 1S.GEN
 ‘That child is my younger brother/sister’

As for adjectives, they can be regarded as a sub-category of verbs as they also display similar morphosyntactic properties with the (derived) verbs. For example, most of the equivalents of the English adjectives in Amis appear with the prefix *ma-* or in an unaffixed manner. This morphological feature is similar to the stative verbs without an adjectival interpretation, such as *ma-ulah* ‘like’ and *maroq* ‘live’. Furthermore, when serving as a modifier, verbs with and without an adjectival interpretation are all marked in the same way. Consider:

- (3.4) a. **kuhting-ay/*kuhting** a wacu
 black-FAC/black LNK dog
 ‘black dog’

⁹ There are also morphemes other than voice affixes that can derive a verb from a root form. For example, the two prefixes *ci-* ‘have; grow’ and *hali-* ‘love to; be used to’ are also commonly found in verbal derivations. The derived verbs in general follow the same conjugation paradigm of unaffixed verbs. Tsai and Tseng (1997) have a rather comprehensive list of such affixes.

- b. **miming-ay/*miming** a siri
 little-FAC/little LNK goat
 ‘little goat’
- c. **mi-kalat-ay/*mi-kalat** a wacu
 AV-bite-FAC/AV-bite LNK dog
 ‘dog that bites’

The verbs in (3.4a-b) have an adjectival meaning, but the one in (3.4c) does not. All of them have to be suffixed with *-ay* when functioning as a modifier. Notice for unaffixed adjectival verbs such as *miming* ‘little; small’, their categorial status seems ambiguous, as the same form is used as a noun in (3.1e). Nevertheless, based on the same morphological requirement in (3.4b), it is reasonable to analyze *miming* in this example as a verb that is formed through zero derivation. In spite of sharing the similar morphosyntactic features with verbs in general, verbs with an adjectival interpretation (termed adjectival verbs in the discussion) do have some unique properties that are not found in verbs without an adjectival interpretation (termed non-adjectival verbs). For instance, in an identificational construction exemplified in (3.5), the adjectival verbs such as *ci-tangal* ‘smart’ in (3.5a) and *ma-laluk* ‘diligent’ in (3.5b) can appear without the factual marker *-ay*, but this suffix is required for non-adjectival verbs such as *ma-tayal* ‘work’ in (3.5c) in the same construction:

- (3.5) a. Ci panay k-u **ci-tangal-(ay).**
 PPN Panay NOM-CN have.head-FAC
 ‘Panay is more clever.’
 ‘The clever one is Panay.’
- b. Ci panay k-u **ma-laluk-(ay).**
 PPN Panay NOM-CN NEUT-diligent-FAC
 ‘Panay is more diligent.’
 ‘The diligent one is Panay.’

- c. Ci panay k-u **ma-tayal-ay/*ma-tayal.**
 PPN panay NOM-CN NEUT-work-FAC/NEUT-work
 ‘The one who works is Panay.’

The general distinction of the three open word classes in Amis is laid out in Table 3.2:

Table 3.2 The General Distinction of Three Open Word Classes in Amis

Word Classes		Derived or Not	Morphological feature in a case-marked position
Nouns		base-generated or derived	no additional marker
Verbs	Adjectival	derived	with or without <i>-ay</i> ¹⁰
	Non-adjectival	derived	with <i>-ay</i>

3.2 Basic Clause Structure

Like most of the Formosan languages, Amis is a verb-initial, or more precisely, a predicate-initial language. Based on the structures of the predicate, the clauses are divided into three types: clauses beginning with a verbal predicate, clauses beginning with a nominal predicate, and clauses beginning with a prepositional predicate. Let us begin with the verbal type. Following the verbal predicate usually comes the A argument or the S argument of the predicate, and then the P argument of the verb if there is one.¹¹

This is exemplified in (3.6).

- (3.6) a. Mi-palu Ø-ci sawmah ci mayaw-an.
 AV-beat NOM-PPN Sawmah PPN Mayaw-DAT
 ‘Sawmah is going to beat Mayaw.’
 ‘Sawmah is beating Mayaw.’
- b. Ma-palu n-i sawmah Ø-ci mayaw.
 UV-beat GEN-PPN Sawmah NOM-PPN Mayaw
 ‘Sawmah beat Mayaw.’

¹⁰ There are other possible deverbal forms, as listed in Table 3.1. But, I limit the discussion to the suffix *-ay* only.

¹¹ The S argument refers to the single argument of an intransitive clause. The A and P arguments refer to the two arguments of a traditional transitive clause. These two arguments in general correspond to the two thematic relations agent and patient discussed in the previous studies of Amis. As I will show later in this dissertation, while the A argument is always selected as the actor macrorole, the P argument may be realized as an undergoer or a non-macrorole core argument due to the voice operation. This is the reason why the macrorole-neutral terminology A, P, and S are utilized to describe the word order here.

Liu (1999) mentions that the word order of Amis actor-voice (AV) sentences (e.g. (3.6a)) can be either V-S-O or V-O-S, but non-actor voice (i.e. NAV) sentences (e.g. (3.6b)) can only be V-O-S. The following examples (Liu 1999:28-29, gloss mine) illustrate these word order restrictions.¹² As one can see in (3.7b-b'), the A argument in a UV sentence has to show up before the P argument.

(3.7) a. Mi-tilu Ø-ci aki t-u fafuy i lutuk
 AV-hunt NOM-PPN Aki DAT-CN pig PREP mountain
 anudafak.
 tomorrow
 'Aki will hunt pigs in the mountains tomorrow.'

a'. Mi-tilu t-u fafuy Ø-ci aki i lutuk
 AV-hunt DAT-CN pig NOM-PPN Aki PREP mountain
 anudafak.
 tomorrow
 'Aki will hunt pigs in the mountains tomorrow.'

b. La'op-en n-u kuyu k-u takulil.
 chase-UV GEN-CN leopard.cat NOM-CN rabbit
 'A leopard cat will chase the rabbit.'

b'. *La'op-en k-u takulik n-u kuyu.¹³
 chase-UV NOM-CN rabbit GEN-CN leopard.cat
 'A leopard cat will chase the rabbit.'

The sentences in (3.6) and (3.7) are examples of plain AV and UV sentences. As for the UV applicative sentences,¹⁴ my data shows that predominant word order is V-A-P, and the applied argument (e.g. instrument or location) shows up clause-finally, as shown in

¹² Liu's adoption of the term "VOS" for describing the Amis word order of NAV sentences is not very adequate. As we can see in (3.7b), the argument immediately following the verb is not the "object" of the verb; rather, it is the "A" argument of the verb, though it is not marked by the nominative case (i.e. the canonical marking for an Amis subject assumed by quite a few previous studies). Hence, using terms such as VAP or VPA will be more appropriate for describing the basic word order in Amis than VSO or VOS.

¹³ However, this word order is allowed in Nataoran Amis, according to Chen (1987). In fact, I also found a few similar examples in the investigation, though this word order is much less common than VAP.

¹⁴ The voice system and the applicative constructions will be discussed later in this chapter, and I will show that all the applicative sentences follow the undergoer voice pattern by default.

the examples in (3.8):

- (3.8) a. Sa-ka-k-um-a'en n-i aki t-u futing
 InA-KA-eat<UM>eat GEN-PPN Aki DAT-CN fish
- k-u-ni a alapit.
 NOM-CN-this LNK chopstick
 'Aki uses this (pair of) chopsticks to eat fish.' (Instrumental applicative, UV)
 'This (pair of) chopsticks are what Aki uses to eat fish.'
 (*V-A-P-Instrument*)
- b. Pi-diput-an n-i dongi t-u wawa k-u-ni
 PI-look.ater-LA GEN-PPN Dongi DAT-CN child NOM-CN-this
- a lumaq.
 LNK house
 'Dongi opens a daycare center at this house.' (Locative applicative, UV)
 Lit. 'This house is the place where Dongi takes care of children.'
 (*V-A-P-Location*)

Two examples from Liu (1999), given in (3.9),¹⁵ show that it is possible to switch the word order of the P argument and the applied argument in the instrumental applicative construction. However, I do not have examples showing such a flexible word order for the locative applicative constructions. More investigation is needed.

- (3.9) a. Sa-ka-raraw namu t-u ccay a raraw
 InA-KA-mistake 2P.GEN DAT-CN one LNK mistake
- k-u** **'epah.**
 NOM-CN wine
 'You made a mistake because of wine.' (Instrumental applicative, UV)
 'The wine is the reason why you made a mistake.'
 (*V-A-P-Instrument*)
- b. Sa-ka-raraw namu **k-u** **'epah** t-u ccay
 InA-KA-mistake 2P.GEN NOM-CN wine DAT-CN one
- a raraw.
 LNK mistake
 'You made a mistake because of wine.' (Instrumental applicative, UV)
 'The wine is the reason why you made a mistake.'
 (*V-A-Instrument-P*)

¹⁵ Sentences (3.8a) and (3.8b) are from Liu (1999:25 and 55, gloss and translation mine.)

Clauses beginning with a nominal predicate mostly are equational or identificational sentences. As mentioned earlier, these nominal predicates are preceded by a noun classifier (e.g. *ci* or *u*):¹⁶

- (3.10)a. U singsi cingra.
 CN teacher 3S.NOM
 ‘He is a teacher.’
- b. Ci sawmah kaku.
 PPN Sawmah 1S.NOM
 ‘I am Sawmah.’

Nominal predicates are also found in the cleft construction or displacement constructions, in which the nominal predicates are the cleft element, and the remaining clause following the nominal predicate is preceded by a case marker; in fact, this remaining clause is a headless relative clause as mentioned in Wu (1995) and Liu (1999). Examples follow:

- (3.11)a. **U fafahian a singsi k-u ka-ulah-an**
 CN woman LNK teacher NOM-CN KA-like-LA
 aku.
 1S.GEN
 ‘It is female teachers that I like (better).’
- b. **U sastiq** k-u sa-pi-palu n-i mayaw ci
 CN stick NOM-CN InA-PI-beat GEN-PPN Mayaw PPN
 dongi-an.
 Dongi-DAT
 ‘The stick is what Mayaw beat Dongi with.’

In (3.11), the boldfaced part indicates a nominal predicate, and it is followed by a case-

¹⁶ However, while the personal proper noun marker *ci* is obligatory before a personal proper noun, the presence of common noun marker *u* is sometimes optional, as illustrated in (3.10c):

(3.10) c. (U) ulah n-u kawas titanan ca’ay ka-ci-tulas.
 CN love GEN-CN god 1P.INCL.DAT NEG KA-have-limit
 ‘The love of God to us has no limit.’

As remarked by the informant, the appearance of *u* carries an emphatic interpretation. However, this emphatic sense might be contributed by the atypical word order of this sentence, in which the argument appears before the predicate. At the present moment, I am not sure when *u* can be optional, and whether its function has been undergoing some change. More investigation is required.

marked headless relative clause.

The last clause type I would like to introduce is the clause beginning with a prepositional predicate that is composed of the preposition *i* and a locative expression. In fact, such predicates can be regarded as a sub-category of the verbal predicate, as they follow the same conjugation patterns that we will see later in the discussion of verbal morphology. Consider the examples in (3.12):

- (3.12)a. **I** **lumaq** Ø-ci mayaw.
 PREP house NOM-PPN Mayaw
 ‘Mayaw is at home.’
- a’. **Ca’ay** **ka-i** **lumaq** Ø-ci mayaw.
 NEG KA-PREP house NOM-PPN Mayaw
 ‘Mayaw is not at home.’
- b. **I** **tini** mi-dateng kaku.
 PREP here NEUT-vegetable 1S.NOM
 ‘I am picking vegetables here.’
 ‘I am going to pick vegetable here.’
- b’. **Ka-i** **tini** mi-dateng!
 KA-PREP here NEUT-vegetable
 ‘Pick vegetables here!’ (Imperative, Neutral voice)

The main predicates in (3.12) are all composed of *i* + a locative expression. As shown in the data, the prepositional predicate is prefixed by *ka-* in the *ca’ay* negative construction in (3.12a’) and also in the imperative construction in (3.12b’). This is also the morphological marking found in *ma-*, *-um-*, and unaffixed verbs when they appear after *ca’ay* or in the imperative sentences. Notice that these prepositional phrases can also serve functions other than predicates, as exemplified in (3.13):

- (3.13) a. Ira Ø-ci mayaw **i** **lumaq**.
 exist NOM-PPN Mayaw PREP house
 ‘Mayaw is at home.’

- b. Awa Ø-ci mayaw **i** **lumaq.**
 not.exist NOM-PPN Mayaw PREP house
 ‘Mayaw is not at home.’
- c. Mi-dateng kaku **i** **tini.**
 AV-vegetable 1S.NOM PREP here
 ‘I am picking vegetables here.’
 ‘I am going to pick vegetable here.’
- d. Pi-dateng **i** **tini!**
 PI-vegetable PREP here
 ‘Pick vegetables here!’ (Imperative, AV)

The main predicates in sentences in (3.13a) and (3.13b) are *ira* and *awa*, which expresses existence, location, and possession in Amis (Zeitoun et al. 1999). In these two locative sentences, the prepositional phrase is a complement, not the main predicate. In (3.13c), the prepositional phrase is an adjunct, and the predicate of this sentence is *mi-dateng* ‘(go to) pick vegetables’. It is this predicate that conjugates into its imperative form in the imperative sentences in (3.13d), not the prepositional phrase (cf. (3.12d)). Once the prepositional phrases no longer function as predicates, they will not conjugate with the constructions in which they occur.

The grammatical and semantic status of the arguments in a clause is mainly indicated through a set of case markers in Amis. This will be discussed in the case system in the next section.

3.3 The Grammar of Nouns

In this section, three issues related to the grammar of nouns in Amis will be explored: the case marking system, the pronominal systems, and the noun phrase structures.

3.3.1 The Case Marking System

The “case markers” in Amis are actually composed of two parts: the case marker

and the noun classifiers, as shown in Table 3.3 and 3.4 (Wu 2001, 2003):¹⁷

Table 3.3 Amis Case Markers

Nouns	Case Markers		
	Nominative	Genitive	Dative
Common Nouns	<i>k-</i>	<i>n-</i>	<i>t-</i>
Personal Proper Nouns	\emptyset		<i>-an</i>

Table 3.4 Amis Noun Classifiers¹⁸

Common Nouns	<i>u</i>		
Personal Proper Nouns	<i>c-</i>	singular	<i>-i</i>
		plural	<i>-a</i>

As shown in Table 3.3, Amis distinguishes three cases: nominative, genitive, and dative.¹⁹ For the nominative and the dative sets, there is further distinction between common nouns and personal proper nouns; that is, the case markers for the two sets of nouns are different. The case markers combine with the respective noun classifiers displayed in Table 3.4 to form a complex marker. The composites of the two markers are shown in Table 3.5:

Table 3.5 The Composites of Case Makers and Noun Classifiers

Cases		Nominative	Genitive	Dative
Nouns				
Common		<i>k-u</i>	<i>n-u</i>	<i>t-u</i>
Personal Proper	Singular	\emptyset - <i>ci</i>	<i>n-i</i>	<i>ci ...-an</i>
	Plural	\emptyset - <i>ca</i>	<i>n-a</i>	<i>ci ...-an</i>

Among the noun classifiers, the personal proper nouns can be further differentiated into singular and plural sets; this distinction is not found for the common noun set. The personal proper nouns are used for personal names and kinship terms while the common noun classifiers are used elsewhere. Notice that the personal proper noun classifiers can

¹⁷ This analysis is a slight revision based on Liu (1999). A comparison between the two analyses will be presented in Chapter 5.

¹⁸ Notice that the singularity/plurality of the noun classifiers is not specified in the glosses.

¹⁹ The dative case has been treated as accusative or locative in some of the previous studies (e.g. Huang (1995) and Liu (1999)). I will discuss these competing theories about the Amis case marking system in Chapter 5.

also be used for an animal name. The example in (3.14) illustrates the functions of personal proper noun classifiers in marking a kinship term (e.g. *mama* ‘father’), a personal proper name (e.g. *Aki*), and the name of an animal (e.g. *Kolo*).

- (3.14) Ma-palu n-i mama Ø-ci aki atu Ø-ci
 UV-beat GEN-PPN father NOM-PPN Aki and NOM-PPN
- kolo.
 Kolo
 ‘Father beat Aki and Kolo (a dog’s name)’

The distribution of the cases in a clause closely interacts with the voice system that will be discussed in the section concerning the grammar of verbs. In general, the nominative case marks the argument that agrees with the voice affix or the applicative marker on the verb. For example, for an actor voice sentence, the nominative case appears before the noun phrase manifesting the actor (e.g. (3.15a)), while for an undergoer voice sentence, the nominative case shows up before the undergoer NP (e.g. (3.15b)). In the applicative UV constructions, the nominative case marks the argument that is indicated by the applicative marker; that is, this case shows up before an instrument in an instrumental applicative UV construction (e.g. (3.15c)), and a location in a locative applicative UV construction (e.g. (3.15d)).²⁰ As for the predicate with a single argument in which there is no voice marking involved (i.e. neutral), this single argument is almost always marked by the nominative case (e.g. (3.15e-f)).²¹ The examples in (3.15) illustrate the distribution of the nominative case marker.

- (3.15)a. **Mi**-la’up k-u wacu t-u wawa n-i panay.
 AV-chase NOM-CN dog DAT-CN child GEN-PPN Panay
 ‘The dog is chasing Panay’s child.’

²⁰ In addition to location, there are two more types of arguments that can be promoted by the locative applicative construction: patient and goal. The details will be discussed in Section 3.4 and Chapter 6.

²¹ The only exception is found in intransitive verbs marked by the suffix *-en*; the single argument for such verbs is marked by the genitive case. Such an exception will be discussed in Chapter 5.

- b. **Ma-la'up** n-u wacu *k-u* wawa n-i panay.
 UV-chase GEN-CN dog NOM-CN child GEN-CN Panay
 'Panay's child was chased by the dog'
- c. **Sa-pi-dohdoh** n-i mayaw t-u titi
 InA-PI-smoke GEN-PPN Mayaw DAT-CN meat

k-u falah.
 NOM-CN coal
 'The coal is what I am going to smoke the meat with'
- d. **Pi-adup-an** n-i mama t-u fafuy *k-u-ni*
 PI-hunt-LA GEN-PPN father DAT-CN pig NOM-CN-this

lutuk.
 mountain
 'This mountain is where Father hunted the boar.'
- e. **Ma-hemek** *k-u* *matu'asay.*
 NEUT-happy NOM-CN old.people
 'The old man is happy.'
- f. **R-um-akat** *k-u* *mitiliday.*
 walk<NEUT> NOM-CN student
 'The student is walking.'

As mentioned in Chapter 1, most, if not all, of the previous studies in Amis seem to assume that the NP marked by the nominative case is the grammatical subject of this language. Nevertheless, as I will show later in Chapter 6, for certain constructions, NPs marked by other cases may as well exhibit subject-like properties such as being a controller or a pivot.

The genitive case has two major functions: marking a possessor (e.g. *ni panay* in (3.15a)) and marking an actor in a non-actor voice sentence (e.g. *nu wacu* in (3.15b), *ni mayaw* in (3.15c), and *ni mama* in (3.15d)).

The NP types that can be marked by the dative case cover a fairly wide range. As shown in (3.15), this case marks the P argument in an AV sentence (e.g. *tu wawa* in

(3.15a)) and the same argument in the applicative UV sentences (e.g. *tu titi* in (3.15c), and *tu fafuy* in (3.15d)).²² In addition, this case also shows up before the theme and recipient NP in an AV three-place predicate, and even adjunct-like NPs such as time and reason. The relevant examples are given in (3.16) in which the roles of the NPs marked by the dative case are indicated in the parenthesis following each example.

- (3.16)a. Pa-fli k-u singsi **t-u-ra** **wawa**
 CAU-give NOM-CN teacher DAT-CN-that child
- t-u** **waneng.**
 DAT-CN candy
 ‘The teacher gave that child candy.’ (recipient and theme)
- b. Ma-pa-fli aku **t-u** **paysu** Ø-ci
 UV-CAU-give 1S.GEN DAT-CN money NOM-NCM
- mayaw.
 Mayaw
 ‘I gave the money to Mayaw already.’ (theme)
- c. Ma-pa-qaca n-u-ra wawa k-u hana
 UV-CAU-buy GEN-NCM-that child NOM-NCM flower
- t-u-ra** **kaying.**
 DAT-NCM-that young.lady
 ‘That child sold flowers to that lady.’ (goal)
- d. Ma-ulah kaku **t-u** **pusong.**
 AV-like 1S.NOM DAT-CN Taitung
- ‘I like Taitung.’ (target of emotion)
- e. Ma-utak kaku **t-u** **sanek n-u** **tusiya.**
 NEUT-vomit 1S.NOM DAT-CN smell GEN-CN car.
- ‘I feel sick for the smell of cars.’ (reason)
- f. Lipahak kaku **t-u** **palal** **n-i** **aki.**
 happy 1S.NOM DAT-CN wake.up GEN-PPN Aki
- ‘I am happy for Aki’s awakening.’ (reason)

²² Notice however, that the P argument in a type of locative applicative construction (i.e. the patient-locative construction) is marked by the nominative case. See the discussion in Section in 3.4.1.

- g. Ma-tayal kaku **t-u** **romi'ad/ro-mi'a-mi'ad.**
 NEUT-work 1S.NOM DAT-CN day/day<RED>
 'I work during the daytime.' (time)
 'I work every day.'
- h. Ma-nanam kaku **t-u** **dafak.**
 NEUT-get.use.to 1S.NOM DAT-CN village
 'I am used to (doing things) in the morning.' (time)
- i. Cenger-en aku k-u kiladum **t-u** **kuhting-ay.**
 color-UV 1S.GEN NOM-CN cloth DAT-CN black-FAC
 'I am going to color the cloth with the black color.' (instrument)

As shown in (3.16), the roles of the NPs following the dative case exhibit a great diversity, ranging from argument-like NPs (e.g. (3.16a-d)) to adjunct-like NPs (e.g. (3.16e-i)). In addition to the role types exemplified above, the dative case of the personal proper noun set can also express a location, as illustrated in (3.17). When the personal proper noun denotes a location, it is obligatorily preceded by the preposition *i*; this preposition is optional when the noun denotes a non-locative P argument, as seen in the comparison between (3.17a) and (3.17b).

- (3.17)a. Ma-ulah kaku *(i) **ci** **panay-an.**
 AV-like 1S.NOM PREP PPN Panay-DAT
 'I like to be at Panay's place.'
- b. Ma-ulah kaku (i) **ci** **panay-an.**
 AV-like 1S.NOM PREP PPN Panay-DAT
 'I like Panay.'

If the location is denoted by a common noun, then only the preposition appears before the expression, not the combination of the preposition and the dative case, as shown in (3.18b) and (3.18b'). Notice that the preposition can also mark a (benefactive) recipient or a goal argument of a three-place predicate. This is illustrated in (3.18c).

- (3.18)a. Ma-ulah kaku t-u pusong.
 AV-like 1S.NOM DAT-CN Taitung
 'I like Taitung.'

- b. Ma-ulah kaku i pusong.
 AV-like 1S.NOM PREP Taitung
 ‘I like (to live in) Taitung.’
- b’. *Ma-ulah kaku i t-u pusong.
 AV-like 1S.NOM PREP DAT-CN Taitung
 ‘I like (to live in) Taitung.’
- c. Pa-qaca kaku t-u cudad i wawa.
 CAU-buy 1S.NOM DAT-CN book PREP child
 ‘I sold the book to the child.’

The functions of each case are tentatively summarized in Table 3.6. More discussion about the case assignment will be given in Chapter 5.

Table 3.6a The Functions of Each Case (A Preliminary Summary)

Case	Functions	Example
Nominative	1. Marks the single argument of an intransitive predicate.	(3.15e-f)
	2. Marks the actor of an AV verb, the (patient) undergoer of a plain UV verb, the instrument of an instrumental applicative UV verb, and the location/patient/goal of a locative applicative verb.	(3.15a-d)
Genitive	1. Marks the possessor.	(3.15a)
	2. Marks the actor in a non-actor voice sentence.	(3.15b-d)
Dative	1. Marks the P argument of AV verbs and applicative UV verbs.	(3.15a,c, d)
	2. Marks the theme, benefactive, recipient, and goal for AV three-place predicates.	(3.16a)
	3. Marks the theme, benefactive, recipient, or goal NPs for some UV three-place predicates. (See the discussion in Chapter 5)	(3.16b-c)
	4. Marks (non-locative) adjuncts.	(3.16e-i)
	5. Marks location (for the personal proper noun set only).	(3.17b)

Table 3.6b presents the information in Table 3.6a in another way, in which it gives a very general summary of the case marking pattern for constructions with different voices; the details will also be further discussed in Chapter 5.

Table 3.6b The Case Marking Patterns of Constructions with Different Voices

Case	Semantic Role	A Argument (actor)	P Argument (patient)	Instrument	Location
Voice					
Actor Voice		Nominative	Dative	--	(preposition <i>i</i>)
Undergoer Voice	Plain	Genitive	Nominative		(preposition <i>i</i>)
	Instrumental applicative	Genitive	Dative	Nominative	(preposition <i>i</i>)
	Locative Applicative	Genitive	Dative	--	Nominative

3.3.2 The Pronominal Systems

The tri-case distinctions are also exhibited in the pronominal systems of Amis.

Observe the personal pronouns displayed in Table 3.7:

Table 3.7 Amis Personal Pronouns and Possessive Pronominal Nouns

Number	Person	Nominative	Genitive	Dative	Possessive Pronominal Noun	
Singular	1 st	<i>kaku</i>	<i>aku</i>	<i>takuwanan</i>	<i>maku</i>	
	2 nd	<i>kisu</i>	<i>isu</i>	<i>tisuwanan</i>	<i>misu</i>	
	3 rd	<i>cingra</i>	<i>nira</i>	<i>cingranan</i>	<i>nira</i>	
Plural	1 st	Inclusive (including the listener)	<i>kita</i>	<i>ita</i>	<i>kitanan</i>	<i>mita</i>
		Exclusive (excluding the listener)	<i>kami</i>	<i>niyam</i>	<i>kamiyanan</i>	<i>niyam</i>
	2 nd		<i>kamu</i>	<i>namu</i>	<i>tamuwanan</i>	<i>namu</i>
	3 rd		<i>cangra</i>	<i>nangra</i>	<i>cangraan</i>	<i>nangra</i>

As shown in the above table, Amis personal pronouns distinguish three persons, three cases, and two numbers. For the first person plural pronouns, a further distinction is made between inclusive pronouns (i.e. including the listeners) and exclusive pronouns (i.e. excluding the listeners). The three cases that we have seen in the nominal case marking system also manifest themselves in the personal pronouns. As observed in Huang (1995), the first and second person pronouns are coded more like common nouns as they contain either *k-* or *t-* in the forms; these two consonants also appear in the case markers for common nouns (i.e. *k-u* and *t-u*). On the other hand, the third person pronouns are marked more like personal proper nouns as they begin with either *ci-* or *ca-* in the nominative forms, and these two markers are exactly the noun classifiers for personal proper nouns. Another interesting observation is the co-occurrence of the two forms *t-* and *-an* in the dative case of the personal pronoun system. Such a combination

is not attested for full nouns (e.g. **t-u singsi-an*).²³

As shown in Table 3.7, besides personal pronouns, there is a set of possessive pronominal nouns in Amis. These pronominal nouns share the same function as the genitive pronouns in marking a possessor (e.g. (3.19a-a'))²⁴ and the actor in a non-actor voice sentences (e.g. (3.19b)). In addition, they can be preceded by the nominative or the dative case markers to express different types of arguments. Examples follow:

- (3.19)a. Fangcal k-u wawa aku.
 good NOM-CN child 1S.GEN
 ‘My child is good.’
- a'. Fangcal k-u wawa **n-u** **maku.**
 good NOM-CN child GEN-CN 1S.POSN
 ‘The child of mine is good.’
- b. Ma-nengneng **n-u** **maku** kisu.²⁵
 UV-watch GEN-CN 1S.POSN 2S.NOM
 ‘I saw you.’
- c. Nga'ay ho **k-u** **namu?**
 fine ASP NOM-CN 2P.POSN
 ‘How are you (all)?’
- d. Mi-ala Ø-ci aki **t-u** **maku** **atu**
 AV-take NOM-PPN Aki DAT-CN 1S.POSN and
 misu.
 2S.POSN
 ‘Aki is going to take mine and yours.’

This set of nouns has been treated as a sub-class of pronouns, termed possessive pronouns, in quite a few earlier studies (e.g. Huang (1995), Liu (1999), and Liu (2003)).

However, these forms actually behave just like nouns as they display the following

²³ However, this combination is reported in Huang's (1995) work. I am sure if this is due to some idiosyncratic or dialectal variation.

²⁴ As seen in (3.19a) and (3.19a'), the possessor can be expressed either by a genitive pronoun or by a genitive case marker plus a possessive pronominal noun. The difference between the two expressions is that the latter seems to lay more emphasis on the possession.

features that are also found in nouns but not in genuine personal pronouns. First, as mentioned, they can be preceded by case markers to express various kinds of argument. This is different from genuine pronouns, which cannot be preceded by the case markers. Second, when denoting a possessor, the phrase “*nu* + the possessive pronominal noun” can be placed before the possessum, with the linker *a* appearing in between. In this order, the case marker *nu* is optional and the resulted structure (e.g. *maku a wawa* in (3.20a) is similar to that of a noun modifier followed by the head. Consider the following examples:

- (3.20)a. (n-u) **maku** a wawa
 GEN-CN 1S.POSN LNK child
 ‘my child’
- b. **fafahiyan** a wawa
 man LNK child
 ‘boy’ (i.e. ‘male child’)
- c. ***aku** a wawa
 1S.GEN LNK child

As shown in the comparison, the possessive pronominal noun (e.g. *maku* ‘mine’) appears in the same slot as the non-pronominal noun (e.g. *fafahiyan* ‘man’). This structure is not allowed for the genitive pronoun (e.g. *aku* in (3.20c)). More discussion about the noun phrase structures is provided in the next section. The last unique feature displayed by the possessive pronominal nouns is that, unlike the genitive pronouns, they can be used independently as answers to questions. For instance:

- (3.21)a. Q: Nima wawa k-u-ni?
 who.GEN child NOM-CN-this
 ‘Whose child is this?’
- b. A: (N-u) maku.
 GEN-CN 1S.POSN
 ‘Mine.’

²⁵ The genitive pronoun (i.e. *aku*) is used more frequently than the possessive pronominal noun (preceded by the genitive case marker) in this kind of structure.

- c. A: *N-u aku.
 GEN-CN 1S.GEN
- d. A: *Aku.
 1S.GEN

The examples in (3.21) show another difference of the possessive pronominal nouns from the genitive pronouns. Therefore, instead of treating them as a sub-set of pronouns, I have singled them out as another category in Table 3.7. A re-classification like this also achieves better uniformity in the case marking system; that is, the same tri-case distinctions can be maintained for both nouns and personal pronouns.

Demonstrative pronouns are also case-marked as shown in Table 3.8:

Table 3.8 Amis Demonstrative Pronouns

		Nominative ²⁶	Genitive	Dative	Gloss
Proximal		<i>k-u-ni</i>	<i>n-u-ni</i>	<i>t-u-ni/t-u-ni-an</i>	“this”
Distal	Visible	<i>k-u-ra</i>	<i>n-u-ra</i>	<i>t-u-ra/t-u-ra-an</i>	“that”
	Invisible	<i>k-u-ya</i>	<i>n-u-ya</i>	<i>t-u-ya/t-u-ya-an</i>	“that”

As shown in Table 3.8, the demonstrative pronouns are treated like common nouns, as they are composed of a case marker, the common noun classifier, and a deictic. For the distal set of pronouns, there is a further distinction in terms of the visibility. These deitic morphemes are also used in the locative/temporal deitic expressions (e.g. *tini* ‘here’, *tira* ‘there; then’, and *tiya* ‘there; then’).

The tri-case distinctions are also found in the interrogative pronouns as shown in the bold-faced fonts in Table 3.9:

Table 3.9 Amis Interrogative Pronouns

Case	Nominative	Genitive	Dative
Form	<i>cima</i>	<i>nima</i>	<i>cimanan</i>
Gloss	who.NOM	who.GEN	who.DAT

²⁶ The two deitic expressions *ra* and *ya* can be used alone when they appear in the clause-initial position, but the deitic form *-ni* cannot be used independently.

The three interrogative pronouns display certain differences regarding their functions and distribution. The nominative interrogative pronoun always appears clause-initially. The structure following this interrogative form has to be a nominal element, either a noun (e.g. (3.22a)) or a nominalized structure, more specifically, a headless relative clause (e.g. (3.22b)).²⁷

(3.22)a. Cima *k-u-ni* *a* *tamdaw?*
 who.NOM NOM-CN-this LNK person
 ‘Who is this person?’

b. Cima *k-u* *ma-palu-ay* (*a* *tamdaw*)?
 who.NOM NOM-CN UV-beat-FAC LNK person
 ‘Who was beaten?’

Unlike the genitive personal pronouns and demonstrative pronouns, the genitive interrogative pronoun can only be used for the inquiry of a possessor but not an actor in a non-actor voice sentence. The genitive interrogative pronoun can be used alone (e.g. (3.23a)) or show up with a possessum. For the latter function, it can either precede or follow the possessum, as I have shown in (3.23b-b’):

(3.23)a. Nima *k-u-ni?*
 who.GEN NOM-CN-this
 ‘Whose is this?’

b. **Nima** **wawa** *k-u-ni?*
 who.GEN child NOM-CN-this
 ‘Whose child is this?’

b’. **Wawa** **nima** *k-u-ni?*
 child who.GEN NOM-CN-this
 ‘Whose child is this?’

As for the dative interrogative pronoun, it can either appear clause-initially (e.g. (3.24a)), or remain inside the clause (3.24c). Like the nominative interrogative pronoun, it can be followed by a nominal structure as seen in (3.24b), but it can also appear in a

²⁷ The structure of a relative clause will be presented in the section of the noun phrase structures.

non-nominal structure; that is, the clause where the dative interrogative pronoun appears is structurally unaffected as seen in (3.24a) and (3.24c). Compare the two examples with (3.24b), and we can see that the verbs in (3.24a) and (3.24c) are not preceded by a case marker, and they do not conjugate into the deverbal forms such as those in Table 3.1. Similar to the dative case in the nominal case marking system, the semantic roles manifested by the dative interrogative pronoun also cover a wide range. It can be a source argument for a transfer predicate, as shown in (3.24a-b) and a P argument for an AV verb (e.g. (3.24c)). As I will argue later in Chapters 5 and 6, these arguments are either non-macrorole core arguments or adjuncts.

- (3.24)a. Cimanan kisu *mi-caliw* t-u paysu?
 who.DAT 2S.NOM AV-borrow DAT-CN money
 ‘Whom did you borrow the money (from)?’
- b. Cimanan k-u *pi-caliw-an* *isu* *t-u*
 who.DAT NOM-CN PI-borrow-LA 2S.GEN DAT-CN

paysu?
 money
 ‘Whom did you borrow the money from?’
- c. Sa-pi-palu-an cimanan Ø-ci panay?
 InA-PI-beat-MOOD who.DAT NOM-PPN Panay
 ‘Who does Panay want to beat?’ (Optative, AV)

The two types of structures (i.e. the nominal type and the verbal type) that I have presented in the interrogative sentences with *cima* and *cimanan* are crucial indicators of the semantic status of the NPs referred to by the interrogative pronouns. I will have more discussion about these structures in Chapter 6.

3.3.3 Noun Phrase Structures

In this section, I will discuss the following types of modifiers that are often found in a noun phrase: possessive, demonstrative, numeral, noun, and clausal modifiers. These

modifiers may appear before the head (i.e. prenominal) or after the head (i.e. postnominal), depending on their types. In general, prenominal modifiers are more commonly found in my data. For such modifiers, there is usually a linker *a* showing up between the modifier and the head noun.²⁸ As for the postnominal modifier, it is preceded by a case marker to show its relation with the head.

We have seen some examples of possessive and demonstrative modifiers in the previous section concerning the pronominal systems. More examples of possessive modifiers are given in (3.25):

- (3.25)a. wawa **n-i** **dongi**
 child GEN-PPN teacher
 ‘Dongi’s child/children’
- b. paysu **n-u** **singsi**
 money GEN-CN teacher
 ‘the teacher’s money’
- c. Ta-tusa k-u **(n-u)** **maku** (a) wawa.
 PL-two NOM-CN GEN-CN 1S.POSN LNK child
 ‘I have two children.’
- d. Ta-tusa k-u ***(n-i)** **dongi** (a) wawa.
 PL-two NOM-CN GEN-CN Dongi LNK child
 ‘Dongi has two children.’
- e. *Ta-tusa k-u **aku** a wawa
 PL-two NOM-NCM 1S.GEN LNK child

As shown in the examples, when the possessive modifier appears before the possessum, the genitive case for a non-pronominal noun (e.g. *Dongi* in (3.25d)) has to be retained, while the case marker preceding the possessive pronominal noun (e.g. *maku* in (3.25c)) is

²⁸ The linker *a* is optional in general, though preferred when certain modifiers are used. However, its presence is obligatory before the head after a series of modifiers; that is, when there is more than one modifier appearing before the head, the linker has to show up between the last modifier and the head, as reported in Liu (1999). This linker is also found in the serial verb constructions, and its presence is also optional (Wu 1995).

- b. Mi-qaca kaku t-u **tulu** (a) waneng.
 AV-buy 1S.NOM DAT-CN three LNK sugar
 ‘I am going to buy three pieces of candy.’
- b’. *Mi-qaca kaku t-u waneng **tulu**.
 AV-buy 1S.NOM DAT-CN sugar three

As shown in (3.27a’) and (3.27b’), the postnominal position is not allowed for a numeral modifier.

The structure for an NP containing a noun modifier exhibits more structural complexity. Generally speaking, there are two types of noun modifiers: the one appearing with a genitive case (i.e. the genitive noun modifier), as exemplified in (3.28), and the one without (i.e. the bare noun modifier), as shown in (3.29):

- (3.28)a. lalan **n-u** **remes**
 road GEN-CN blood
 ‘vein’
- b. fafuy **n-u** **lutuk**
 pig GEN-CN mountain
 ‘mountain pig’
- (3.29)a. **kilang** a/??Ø kayakay
 tree LNK bridge
 ‘wood bridge’
- b. **tufu** a/??Ø siri
 baby.domesticated.animal LNK/Ø goat
 ‘lamb’

As shown in the two sets of examples, one of the primary differences of these two types of modifiers is their occurring position. The genitive noun modifier tends to appear after the head, while the bare noun modifier shows up before the head by default. Notice that although the modifier is preceded by a genitive case in (3.28), it is not a true possessor, strictly speaking. The genitive case indicates a sense similar to ‘of’ or ‘belong to’ in

English. Some modifiers are allowed to appear with both structures, but the meaning they contribute to the head is different. Compare:

- (3.30)a. **amis** a/??Ø singsi
 Amis LNK teacher
 ‘Amis teacher (the teacher is Amis)’
- b. singsi **n-u** **amis**
 teacher GEN-CN Amis
 ‘teacher of the Amis language (the teacher is not necessarily Amis)’

The two examples in (3.30) show that, compared with the genitive noun modifier, the bare noun modifier in (3.30a) seems to denote an inherent or a permanent property of the modified noun. The genitive noun modifier can also appear before the modified noun with the optional presence of the linker *a*. Examine:

- (3.31)a. tamdaw **n-u** **takaw**
 person GEN-CN Kaohsiung
 ‘person from Kaohsiung (i.e. currently living there)’
- b. **n-u** **takaw** (a) tamdaw
 GEN-CN Kaohsiung LNK person
 ‘person of the Kaohsiung team (in contrast with the Taipei team in a sports event)’

As illustrated in (3.31), when the genitive noun modifier shows up prenominal, it offers an emphatic tone on the modifier. Notice the contrast demonstrated in (3.30) also holds between a prenominal genitive noun modifier and bare noun modifier, as seen in the comparison between (3.31b) and (3.31c) below:

- (3.31)c. **takaw** a tamdaw
 Kaohsiung LNK person
 ‘person who was born and grew up in Kaohsiung’

Some of the (prenominal) bare noun modifiers can also appear after the modified noun, but the dative case will show up between the two elements in the NP. Observe:

(3.32)a. **fafahian** a kaka
 woman LNK older.sibling
 ‘older sister’

b. kaka t-u **fafahian**
 older.sibling DAT-CN woman
 ‘older sister’

It is not clear to me whether there is any semantic difference between the two examples in (3.32). However, the structure like (3.32a) seems to be found more often in my investigation.³¹ Moreover, not every prenominal bare noun modifier has a postnominal counterpart. For example, both (3.32a) and (3.33a) can be used to express the meaning of ‘older sister’. However, only (3.32a) has a corresponding postnominal dative noun modifier; this structure is not allowed for (3.33a).

(3.33)a. **kaka** a fafahian
 older LNK woman
 ‘older sister’

b. *fafahian **t-u** **kaka**
 woman DAT-CN older.sibling

More investigation is needed to fully account for the distribution of the postnominal dative noun modifier.

The last modifier type that I would like to introduce here is the clausal modifier, which manifests the Amis equivalents of English adjectival modifiers and relative clauses (RCs), as argued in Wu (2001, 2003). Some of the examples are given in (3.34):

(3.34)a. *kuhting-ay* (a) ayam
 black-FAC LNK bird
 ‘**black** bird’

³¹ Although the prenominal position is more common for the bare noun modifier in the elicitation, the postnominal dative noun modifier seems to appear more frequently in narration. It is possible that the choice between the two is pragmatically motivated. More investigation is needed.

- c. *Mi-cakay cingra t-u kuhting-ay tata'ak-ay tusa
 AV-buy 3S.NOM DAT-CN black-FAC big-FAC two
 (Adj-like modifier) (Adj-like modifier) (Numeral)
 a fafuy.
 LNK pig

On the contrary, the RC-like clausal modifiers can appear before (e.g. (3.36a)) or after (e.g. (3.36b)) a preposed head noun. For example:

- (3.36)a. Ya *mi-palu-ay* ci *mayaw-an* a ta-tusa-ay a
 that AV-beat-FAC PPN Mayaw-DAT LNK PL-two-FAC LNK
 (RC-like modifier)
 fa'inayan a **singsi** paka-araw ci sawmah-an.
 man LNK teacher ABLT-see PPN Sawmah-DAT
 (Head)
 'Those two man teachers who beat Mayaw saw Sawmah.'
- b. Ya ta-tusa-ay a fa'inayan a **singsi** (*a)
 that PL-two-FAC LNK man LNK teacher LNK
 (Head)
mi-palu-ay ci *mayaw-an* paka-araw ci sawmah-an.
 AV-beat-FAC PPN Mayaw-DAT be.able.to-see PPN Sawmah-DAT
 (RC-like Modifier)
 'Those two man teachers who beat Mayaw saw Sawmah.'

Moreover, the examples in (3.37a) and (3.37b) show that the RC-like modifier can appear before or after a numeral:

- (3.37)a. Ma-araw aku k-u-ya *mi-repel-an* n-i
 UV-see 1S.GEN NOM-CN-that MI-catch-LA GEN-PPN
 (RC-like Modifier)
mayaw a *ta-tulu* a tawinaan a kulong.
 Mayaw LNK PL-three LNK mother.animal LNK water.buffalo
 (Numeral)
 'I saw the three female water buffalos caught by Mayaw.'
- b. Ma-araw aku k-u-ya *ta-tulu* a
 UV-see 1S.GEN NOM-NCM-that PL-three LNK
 (Numeral)
 tawinaan a *mi-repel-an* n-i *mayaw*
 mother.animal LNK UV-catch-UV GEN-NCM Mayaw
 (RC-like Modifier)
 a kulong.
 LNK water.buffalo
 'I saw the three female water buffalos caught by Mayaw.'

As exemplified above, the non-restrictive clausal modifier in (3.38a) appears after the head and is preceded by a demonstrative, while the restrictive clausal modifier in (3.38b) appears before the head. Their different functions are revealed in the interpretations of the two examples. The sentence in (3.38c) illustrates a non-restrictive clausal modifier for a common noun, as a comparison to the one with a personal proper noun in (3.38a). The table below summarizes all the modifiers in a noun phrase that I have discussed so far:

Table 3.10 The Modifiers in a Noun Phrase in Amis

Types of Modifiers	Position	Structure	Word Order Restriction
Possessive	Postnominal	Genitive Case + Noun	Preposable
		Genitive Pronoun	Non-preposable
	Prenominal	Genitive Case + Noun	
Noun Modifier	Prenominal	Genitive Case + Noun	
		Noun	
	Postnominal	Dative Case + Noun	Non-preposable
Numeral	Prenominal	Number	always appear after demonstrative
Demonstrative	Prenominal	Demonstrative	always appear as the first modifier
Adjective-like Clausal Modifier	Prenominal	Clause with a gapped argument	tend to appear after numeral
RC-like Clausal Modifier	Prenominal	Clause with a gapped argument	can appear before or after the numeral modifier
	Postnominal	Clause with a gapped argument	Only in preposed head NP
Non-restrictive Clausal Modifier	Postnominal	Case-marked Demonstrative + Clause with a gapped argument	
		Non-case-marked Demonstrative + Clause with a gapped argument	
Headless Clausal Modifier	--	Case + Clause with a gapped argument	

3.4 The Grammar of Verbs

As mentioned in the section of word classes, verbs in Amis are derived, either through affixation or zero derivation. The mostly commonly found derivational affixes

are the voice affixes. The three actor voice affixes, *mi-*, *ma-*, and *-um-*, are of particular importance in that verbs conjugate based on the form among the three they appear with. For example, verbs appearing with *mi-* will follow a certain conjugation pattern that is different from verbs affixed with *-um-* or *ma-*. The root forms tend to appear with one of three voice affixes by default, but it is also possible for the same root to appear with the affix other than the default choice during the derivation. Notice that the infix *-um-* has a rather restricted distribution; only a handful of roots can appear with this infix. While the roots appearing with *-um-* by default may appear with either *mi-* or *ma-*, it is not vice versa. Moreover, it is no longer productive; innovative words never co-occur with this infix for further derivation. More details of the root classification based on their default voice affix are provided in Chapter 4.

The major conjugation patterns of verbs affixed with *mi-*, *-um-*, and *ma-*, and verbs formed by zero derivation (i.e. unaffixed) are shown in Table 3.11, for the affirmative sentences, and 3.12 for the negative sentences.³⁴ In each table, the conjugation patterns are classified based on various moods, and for each mood, further distinctions can be made regarding voice variations (e.g. AV or UV) and semantic differences (e.g. tense). The details of these two tables will be discussed at various places in the following subsections concerning the grammar of verbs.

³⁴ The negative sentences, in particular those beginning with *ca'ay* 'not', display a slightly different paradigm. In Table 3.12, only the patterns that are different from those in the affirmative sentences are listed.

Table 3.11 The Major Conjugations of Amis Verbs in Affirmative Sentences

Verbal Affixes			<i>mi-</i>	<i>-um-</i>		<i>ma-</i>		<i>unaffixed</i>			
Semantic Features			(motional purposive) activities	plain activities	plain activities	plain involuntary activities or states	plain, involuntary activities or states	motion activities or states			
Semantic Valence			1 or 2	1 or 2	1	1 or 2	1 or zero	1 or zero			
Affirmative	Non-Causative	Plain Mood	Neutral		<i>mi-</i>	<i>-um-</i>	<i>-um-</i>	<i>ma-</i>	<i>ma-</i>	<i>unaffixed</i>	
			AV		<i>mi-</i>	<i>-um-</i>	---	<i>ma-</i>	---	---	
		UV	Plain	Past /±Agentive		<i>ma-</i>	<i>ma- or ma-um-*</i>	---	<i>ma-ka-*</i>	---	--
				Future /+Agentive		<i>-en</i>	<i>-en</i>	---	<i>-en</i>	---	--
			Applicative	Instrument	Atemporal	<i>sa-pi-...</i>	<i>sa-ka-um-</i>	<i>sa-ka-um-</i>	<i>sa-ka-</i>	<i>sa-ka-</i>	<i>sa-ka</i>
					Past and ±agentive	<i>ma-sa-pi-</i>	<i>ma-sa-ka-...-um-</i>	<i>ma-sa-ka-...-um-*</i>	<i>ma-sa-ka-</i>	<i>ma-sa-ka-*</i>	<i>ma-sa-ka-*</i>
					Future and +agentive	<i>sa-pi-...-en</i>	<i>sa-ka-...-um-...-en</i>	<i>sa-ka-...-um-...-en*</i>	<i>sa-ka-...-en*</i>	<i>sa-ka-...-en*</i>	<i>sa-ka-...-en*</i>
				Locative	Goal	<i>mi-...-an</i>	---	---	---	---	---
		Patient	<i>mi-...-an</i>	<i>-um-...-an</i>		<i>ka-...-an</i>					
		Location	<i>pi-...-an</i>	<i>ka-...-um-...-an</i>	<i>ka-...-um-...-an</i>	<i>ka-...-an</i>	<i>ka-...-an</i>	<i>ka-...-an</i>			
	Factual Mood	AV or neutral		<i>mi-...-ay</i>	<i>-um-...-ay</i>	<i>-um-...-ay</i>	<i>ma-...-ay</i>	<i>ma-...-ay</i>	<i>...-ay</i>		
		UV		<i>ma-...-ay</i>	<i>ma-...(-um-)...-ay</i>	---	<i>ma-...-ay</i>	---	--		
	Irrealis Mood	AV or neutral		<i>Ca RED-mi- (=ma-mi-)</i>	<i>Ca RED-...-um-</i>	<i>Ca RED-...-um-</i>	<i>Ca RED-ma- (=ma-ma-)</i>	<i>Ca RED-ma- (=ma-ma-)</i>	<i>Ca RED-</i>		
		UV		<i>Ca RED-...-en</i>	<i>Ca RED-...-en</i>	---	<i>Ca RED-...-en</i>	--	--		
	Volitive Mood	Optative ₁ or timerative	AV or Neutral		<i>mi-...-aw</i>	<i>-um-...aw</i>	<i>-um-...aw</i>	<i>ma-...-aw</i>	<i>ma-...-aw</i>	--	
			UV	optative	<i>Root-aw</i>	<i>Root-aw</i>	---	<i>Root-aw</i>	---	<i>Root-aw*</i>	
				timerative	<i>ma-...-aw</i>	<i>ma-...(-um-)...-aw</i>	---	<i>ma-ka-...-aw*</i>	---	<i>Root-aw*</i>	
		Optative ₂	AV		<i>sa-pi-...-an</i>	<i>sa-ka-...-um-...-an</i>	<i>sa-ka-...-um-...-an</i>	<i>sa-ka-...-an</i>	<i>sa-ka-...-an</i>	<i>sa-ka-...-an</i>	
	UV (Instrumental)		<i>sa-pi-...-aw</i>	<i>sa-ka-...-um-...-aw</i>	<i>sa-ka-...-um-...-aw</i>	<i>sa-ka-...-aw</i>	<i>sa-ka-...-aw</i>	<i>sa-ka-...-aw</i>			
	Imperative Mood	Neutral		---	---	<i>ka-...-um-</i>	---	<i>ka-*</i>	<i>ka-*</i>		
AV		<i>pi-</i>	<i>ka-...-um-</i>	---	<i>ka-</i>	---	---				
UV		Plain	<i>-en</i>	<i>-en</i>	---	<i>-en</i>	---	---			
	Instrumental Applicative		<i>sa-pi-...-en</i>	<i>sa-ka-...-um-...-en</i>	<i>sa-ka-...-um-...-en</i>	<i>sa-ka-...-en</i>	<i>sa-ka-...-en*</i>	<i>sa-ka-...-en*</i>			
pa-causative	AV		<i>pa-pi-</i>	<i>pa-...-um-</i>	<i>pa-...-um-</i>	<i>pa-ka-*</i>	<i>pa-ka-*</i>	<i>pa-ka-*</i>			
	UV	Past	<i>ma-pa-pi-</i>	<i>ma-pa-...-um-</i>	<i>ma-pa-...-um-</i>	<i>ma-pa-ka-*</i>	<i>ma-pa-ka-*</i>	<i>ma-pa-ka-*</i>			
		Future; +Agentive		<i>pa-pi-...-en</i>	<i>pa-...-um-...-en</i>	<i>pa-...-um-...-en</i>	<i>pa-ka-...-en*</i>	<i>pa-ka-...-en*</i>	<i>pa-ka-...-en*</i>		

Table 3.12 The Major Conjugations of Amis Verbs in Negative Declarative Sentences

Verbal Affixes				<i>mi-</i>	<i>-um-</i>		<i>ma-</i>	<i>unaffixed</i>		
Semantic Features				(motional purposive) activities	plain activities	plain activities	plain, involuntary activities or states	plain involuntary activities or states	motion activities or states	
Semantic Valence				1 or 2	1 or 2	1	1 or 2	1 or zero	1 or zero	
Negative (Non-causative)	Plain Mood	Neutral		---	---	<i>ka...-um-</i>	---	<i>ka-</i>	<i>ka-</i>	
		AV		<i>pi-</i>	<i>ka...-um-</i>	---	<i>ka-</i>	---	---	
		UV	Plain	±Agentive	<i>ka-</i>	<i>ka-</i>	---	<i>ka-ka*</i>	---	---
				+Agentive	<i>(ka)...-en</i>	<i>(ka)...-en</i>	---	<i>(ka)...-en</i>	---	---
	Volitative Optative ₂	AV			<i>ka-sa-pi...-an</i>	<i>ka-sa-ka...-um...-an</i>	<i>ka-sa-ka...-um...-an</i>	<i>ka-sa-ka...-an</i>	<i>ka-sa-ka...-an</i>	<i>ka-sa-ka...-an</i>
		UV			<i>ka-sa-pi...-aw</i>	<i>ka-sa-ka...-um...-aw</i>	<i>ka-sa-ka...-um...-aw</i>	<i>ka-sa-ka...-aw</i>	<i>ka-sa-ka...-aw</i>	<i>ka-sa-ka...-aw</i>

A few notes need to be made regarding these two tables. First, as one may notice, the label “verbal affixes” is used in the first row of the tables for *mi-*, *-um-*, and *ma-* instead of a more pervasive term such as “actor voice” markers or “agent focus” markers found in earlier studies. There are at least two potential problems in using terms like those to name these affixes. To begin with, although it is true for two-place predicates marked by these markers that the NP bearing the nominative case is the actor, it is not necessarily true for a one-place predicate. In other words, for semantically intransitive verbs affixed by *mi-*, *-um-*, and *ma-*, especially by *ma-*, the only argument can be an actor or an undergoer. The role difference of the single argument is reflected in the interpretation of the *-en* form of the verb. As I will argue later in Chapter 4, the UV marker *-en* has an agentive feature. For semantically intransitive verbs with an actor, their *-en* forms receive a non-causative agentive reading, while for those with an undergoer, their *-en* forms usually get a causative agentive reading. Consider the following examples:

- (3.39)a. Ma-tayal kaku.
 NEUT-work 1S.NOM
 ‘I am working.’
- a’. Tayal-**en** aku k-u-ya demak.
 work-UV 1S.GEN NOM-CN-that matter
 ‘I will do that work.’
- b. Ma-ruhem k-u-ni a pawli.
 NEUT-ripe NOM-CN-this LNK banana
 ‘This banana is ripe.’
- b’. Ruhem-**en** aku k-u pawli.
 ripe-UV 1S.GEN NOM-CN banana
 ‘I will ripen the banana.’

Both *ma-tayal* ‘work’ in (3.39a) and *ma-ruhum* ‘ripe’ in (3.39b) have been labeled as AV

or AF verbs in many of the previous studies. This label may lead to a misconception that the only arguments of these two verbs have the same semantic role. However, as one can see from the examples, the single argument of *ma-tayal* ‘work’ in (3.39a), *kaku*, is interpreted as an actor of *tayal-en* in (3.39a’), while the only argument of *ma-ruhem* ‘ripe’ in (3.39b), *pawli*, is an undergoer in the *-en* form in (3.39b’). This contrast indicates that the single arguments of the two *ma-* verbs in (3.39) should be analyzed differently. The second potential problem of the AV or AF terminology is that sometimes these markers do not have a voice or focus marking function in a sentence. For example, in some serial verb constructions, a non-initial verb marked by these affixes may not have any voice marking function (Wu 1995). Under such circumstances, it is quite inappropriate to gloss these affixes as AV or AF markers. Consider:

- (3.40)a. Lepun-en **mi-tangtang** *k-u* *hemay!*
 finish-UV NEUT-cook NOM-CN rice
 ‘Finish cooking the rice!’
- b. Kalamkam-en aku **k-um-a’en** *k-u* *hemay.*
 fast-UV 1S.GEN eat<NEUT> NOM-CN rice
 ‘I will eat the rice fast.’

The two sentences in (3.40) both involve a serial verb construction in which the non-initial verb can only show up in its “AV” form. However, the “AV” markers of the non-initial predicate do not have any voice marking function as the voice choice of the sentence is determined by the first verb of the construction.³⁵ Therefore, it will be misleading to gloss the *mi-* and *-um-* affixes on the non-initial verbs as an AV marker in those sentences. In sentences like (3.40), only the derivational function of *mi-* and *-um-*

³⁵ The initial predicate is also the main predicate of the serial verb construction, as it is the one that conjugates in the imperative construction (e.g. (5.11) and the negative construction. The form of the second predicate remains unchanged. See Wu (1995, 2000) for more discussion. Chang (2006) also provides an investigation for similar constructions in other Formosan languages.

is retained. These derivational functions will be explicated in the next chapter. In Tables 3.11 and 3.12, for the verbal affixes that do not have a voice marking function in either one of the conditions exemplified above (i.e. marking predicates with one or zero arguments or showing up as a non-initial verb in certain serial verb constructions), I will label them as “neutral” in the voice category and gloss them as NEUT in the examples.

The second explanation that is needed to make about the two tables is that there are some forms which are logically possible but may be difficult to elicit in the data collection. The symbol “*” is used to indicate such forms. The difficulty in elicitation is either due to the semantic incompatibility between the meaning of the predicate and the function of the construction, or due to some idiosyncratic reasons of the verb types. The first possibility is illustrated by the imperative forms *ka-* and *sa-ka-...-en* for *ma-* or unaffixed verbs with one or zero core arguments. As these verbs are relatively stative in nature, it is less likely for them to appear in an imperative context. The second situation is exemplified by the absence of the causative form *pa-ka-* for *ma-* and unaffixed predicates. I do not yet have an explanation for why this prefix is only attested in certain types of *ma-* and unaffixed predicates but not in others.

Third, in these tables, I only list the AV and UV forms that do not change the number of the core arguments of the predicates. For some predicates with only one core argument, they may have a *mi-* (AV), a *ma-* (UV), and/or an *-en* (UV) form that adds a causer argument to the predicates. Some of such examples were given in (3.39d). More examples are provided below:

- (3.41)a. **Fa’edet** k-u-ra dateng.
 hot NOM-CN-that vegetable
 ‘That dish is hot.’

- b. **Mi-fa'edet** kaku t-u-ra dateng.
 AV-hot 1S.NOM DAT-CN-that vegetable
 'I am going to heat that dish.'
- c. **Ma-fa'edet** aku t-u-ra dateng.
 UV-hot 1S.GEN DAT-CN-that vegetable
 'That dish was heated by me.'
- d. **Fa'edet-en** aku t-u-ra dateng.
 hot-UV 1S.GEN DAT-CN-that vegetable
 'I will definitely heat that dish.'

The examples in (3.41b-d) show the *mi-*, *ma-* (UV), and *-en* forms of an intransitive predicate *fa'edet*, and these forms all have a causative reading. Forms like (3.41b-d) are not listed in the tables as possible conjugations for predicates with one core argument as they can be regarded as a type of *mi-* predicate and follow the morphological alternations of *mi-* verbs.

Finally, for the category of *pa-* causatives, I only list the forms that are derived from *mi-*, *-um-*, and *ma-* forms. However, it is also possible for *pa-* to appear with a root form, termed bare *pa-* verbs. These bare *pa-* verbs actually form another paradigm, and their conjugation patterns will be discussed in Chapter 4.

There are two major conjugation patterns displayed in Tables 3.11 and 3.12. In the first pattern, the form of the verbal or voice affix is retained, while in the second pattern, these affixes conjugate into *pi-* (for *mi-*) or *ka-* (for *ma-*, *-um-*, and unaffixed predicates). The first pattern, for instance, can be found in the irrealis form of the verb, which is formed by adding a reduplicant resulted from the Ca reduplication process to the source verb, which is marked by the verbal affix. The initial consonant of the reduplicant is actually copied from the initial consonant of the verbal affix (e.g. *ma-mi-palu* 'beat (irrealis)' > *mi-palu* '(going to) beat'). The second pattern can be illustrated by the

instrumental applicative form of the verbs in which the applicative marker *sa-* attaches to a stem that either begins with *pi-* (for *mi-* verbs) or *ka-* (for non-*mi-* verbs).

The variables and constructions displayed in Tables 3.11 and 3.12 will be discussed in greater detail in the following sections. I will begin with the discussion of the voice system in Amis.

3.4.1 The Voice System

Like most of the Formosan languages, Amis exhibits a “focus” phenomenon in which a set of affixes on the verb indicates the semantic role of the NP marked by the nominative case in a sentence (French 1988). This phenomenon is also discussed under the rubric “voice” (as in Chang 1997 for Kavalan and Seediq, Liu 1999 for Amis, and Liu 2003 for Amis). To avoid the terminological confusion with the pragmatic focus, I will also adopt the term “voice” in this dissertation. There are two voices in Amis: actor and undergoer. For the undergoer voice, a further distinction can be made between the plain and the applicative sets; the former is marked by the undergoer voice markers, while the latter is signaled by the applicative markers. The following two examples illustrate the actor voice (AV) construction and the (plain) undergoer voice (UV) construction:

(3.42)a. **Actor Voice**

Mi-adup	<i>Ø-ci</i>	<i>mama</i>	t-u	fafuy	n-u
AV-hunt	NOM-PPN	father	DAT-CN	pig	GEN-PPN

lutuk.

mountain

‘Father is hunting mountain pigs.’

‘Father is going to hunt mountain pigs.’

b. **(Plain) Undergoer Voice**

Ma-adup n-i mama k-u fafuy n-u
 UV-hunt GEN-PPN father NOM-CN pig GEN-PPN

lutuk.
 mountain
 ‘Father hunted the mountain pig.’
 ‘The mountain pig was hunted by Father.’

In (3.42a), the verb is marked by *mi-*. As mentioned in the case system, in an AV construction, the nominative case appears before the A argument of the sentence (e.g. *mama* ‘father’), and the P argument (e.g. *fafuy nu lutuk* ‘mountain pig’) is marked by the dative case. In the UV construction exemplified in (3.42b), the same root form is marked by *ma-*, and the nominative case now appears before the P argument while the A argument is marked by the genitive case. In addition to different case patterns, the two sentences also exhibit differences in the temporal readings of the event. I have shown this difference in the verbal paradigms in Tables 3.11 and 3.12. Further discussion will be given later in this section.

Table 3.13 shows the voice markers in Amis:

Table 3.13 Amis Voice Markers³⁶

Actor Voice (AV)	<i>mi-</i>	<i>-um-</i>	<i>ma-</i>
Undergoer Voice (UV)	<i>ma-</i>	<i>ma-</i> <i>ma-...-um-*</i>	<i>ma-ka-*</i> ³⁷
	<i>-en</i>		<i>-en</i> <i>ka-...-en</i>

As shown in Table 3.13, there are at least three forms in the AV set, and it has been

³⁶ Some verbs in Amis such as *tayra* ‘go (there)’ and *takaraw* ‘tall’ usually appear without any affix. In some of the previous studies such as Wu (1995), Liu (1999), and Liu (2003), such verbs are analyzed as being marked by a “zero affix” (marked by \emptyset), and this zero affix is classified as an actor voice marker (e.g. \emptyset -*tayra*, glossed as “AV-go”) in the above-mentioned studies. However, this zero marker is left out in Table 3.13, as there is no direct evidence showing that there is a zero morpheme on these verbs. These verbs will simply be referred to as unaffixed verbs in this dissertation. More discussion on these unaffixed verbs is given in Chapter 4.

³⁷ The “*” symbol in the table indicates that the form is less frequently found in the data.

pointed out that these three AV markers indicate different types of verbs. The general correspondence between the verb types and the three actor voice markers has been listed in Tables 3.11 and 3.12; *mi-* usually marks an activity verb with an optional motional/purposive reading, *-um-* goes with plain activities, and *ma-* is an AV marker for involuntary activities or psych predicates. A thorough exploration and analysis of these verb types and the semantics of three AV markers will be given in Chapter 4. Notice that, as mentioned earlier, it is possible that these three AV markers serve no voice functions in a sentence. This can happen in two possible environments. First, when these affixes co-occur with verbs with one or zero core arguments, the distinction between the semantic roles indicated by these affixes may be neutralized. Consider:

- (3.43)a. Mi-cedem k-u kuwaq.³⁸
 NEUT-sweet NOM-CN papaya
 ‘The papaya is sweet.’
- b. Ma-orad anini.
 NEUT-rain now
 ‘It is raining now/today.’
- c. Ma-tayal kaku.
 NEUT-work 1S.NOM
 ‘I am working.’

When these “AV” affixes show up with verbs with one or zero semantic valence, if there is a single argument, it can be actor-like (e.g. (3.43c)) or undergoer-like (e.g. (3.43a) and (3.43b)). As these affixes no longer serve as an index of the “actor” role for the nominative NP in the sentence, they are thus glossed as “neutral (voice)” marker. The second possibility is found when these affixes show up with a non-initial verb in certain

³⁸ *Mi-* state verbs like (3.43a) is very rare. So far, I have only found one example in my fieldnotes. Generally speaking, *mi-* verbs are either a (motional/purposive) activity when *mi-* attaches to an activity or an object root, or a causative accomplishment when *mi-* attaches to a state root. The latter derivation (i.e. the causative accomplishment) is found less frequently in my data than the former.

serial verb constructions, in which the voice operation is determined by the initial predicate. The relevant examples were given in (3.40) where the so-called voice affixes of the non-initial predicate are also glossed as “neutral”. In fact, the voice affixes have very robust derivational functions in addition to the function of marking voice operation. To begin with, they can derive a predicate from various types of roots, as I have pointed out. Furthermore, the AV markers serve as the conjugational basis for the derived verbs in many constructions, as shown in Tables 3.12 and 3.13. These functions will be further explored in Chapter 4.

As for the undergoer voice (UV) set, there are two major forms: *ma*³⁹ and *-en*. The two UV forms differ from each other in terms of agency and unmarked temporal reading; *ma*- often indicates a past event and is unmarked for agency while *-en* indicates a future event and is lexicalized with agency. In addition, *-en* is found very frequently in the imperative contexts while the UV *ma*- is never used in imperativization. *Ma*- and *-en* are the most productive UV markers compared with other forms such as *ma*-...-*um*-, *ma*-*ka*-, and *ka*-...-*en*, which are restricted to certain verbs or verb types. For example, the form *ma*-...-*um*- is found with *-um*- verbs, which usually can also have a *ma*- UV form. As for *ma*-*ka*- and *ka*-...-*en*, they usually appear with psych-predicates such as *ma*-*ulah* ‘like’ and *ma*-*ngudu* ‘embarrassed; respect’.

The applicative markers are given in Table 3.14 with examples given in (3.43).

Notice that these applicative markers (the bold-faced part in the table) have to co-occur

³⁹ Notice that the dual presence of the form *ma*- in both AV and UV sets is only found in Amis but not in other Formosan languages. Based on the voice/focus affixes listed in Zeitoun et al. (1996), the form *ma*- is only found in the AV (AF) set in other Formosan languages investigated in their study. The use of *ma*- as a UV marker makes Amis a bit like the Philippine languages, as this prefix also appears in the NAV set (e.g. goal voice) in the Philippine languages such as Tagalog (for potentive aspect/mood as discussed in Himmelmann (2005b)) and Cebuano (for abilitative (+intention) as seen in Payne (1994)).

with some affixes that are resulted from the conjugation of the stem verbs, and these co-occurring affixes may affect the semantic role of the argument promoted by the applicative markers. This is especially true for the locative applicative, as we can see that the semantic role (e.g. goal, patient, or location) of the enhanced argument is indicated by the co-occurring affixes such as *mi-*, *pi-*, or *ka-*.

Table 3.14 Amis Applicative Markers and the Co-occurring Affixes

Instrumental applicative		<i>sa-pi-</i> , <i>sa-ka-</i> , <i>sa-ka-...-um-</i>		
Locative Applicative	Goal	<i>mi-...-an</i>		
	Patient	<i>mi-...-an</i>	<i>-um-...-an</i>	<i>ka-...-an</i>
	Location	<i>pi-...-an</i>	<i>ka-...-um-...-an</i>	<i>ka-...-an</i>

(3.43) a. **Undergoer Voice Instrumental Applicative**

Sa-pi-adup n-i mama t-u fafuy n-u
 InA-PI-hunt GEN-PPN father DAT-CN pig GEN-CN

lutuk *k-u* *iduc*.
 mountain NOM-CN spear
 ‘Father hunts mountain pigs with the spear.’
 ‘The spear is what Father hunts mountain pigs with.’

b. **Undergoer Voice Instrumental Applicative**

Sa-ka-raraw namu t-u ccay a raraw
 InA-KA-mistake 2P.GEN DAT-CN one LNK mistake

k-u ’*epah*.⁴⁰
 NOM-CN wine
 ‘You made one mistake because of the wine.’
 ‘The wine is the reason for why you made a mistake.’

c. **Undergoer Voice Goal-Locative Applicative**

Mi-cikay-an n-i mama i pitilidan
 MI-run-LA GEN-PPN father PREP school

k-u-ni *a* *ciudad*.
 NOM-CN-this LNK book
 ‘Father ran to school to (get) this book.’
 ‘This book is what Father ran to school (to get).’

⁴⁰ This example is from Liu (1998: 25), gloss and translation mine.

d. **Undergoer Voice Location-Locative Applicative**

Pi-adup- an	n-i	mama	t-u	fafuy	<i>k-u-ni</i>
PI-hunt-LA	GEN-PPN	father	DAT-CN	pig	NOM-CN-this

a lutuk.
 LNK mountain
 ‘Father hunts mountain pigs in this mountain.’
 ‘This mountain is where Father hunts (mountain) pigs.’

e. **Undergoer Voice Patient-Locative Applicative**

Mi-adup- an	n-i	mama	<i>k-u</i>	<i>fafuy</i>	<i>n-u</i>
MI-hunt-LA	GEN-PPN	father	NOM-CN	pig	GEN-PPN

lutuk.
 mountain
 ‘Father hunted the mountain pig.’
 ‘The mountain pig was what Father hunted.’

As illustrated in (3.43), the applicative markers have two functions; they either make a non-argument (e.g. instrument in (3.43a), reason in (3.43b), goal in (3.43c), or location in (3.43d)) a core argument, or enhance the semantic status of a non-macrorole core argument (e.g. patient in (3.43e)) to become a macrorole.⁴¹ The NP gets promoted by the applicative construction becomes the undergoer of the sentence. The undergoer status of this argument is supported by the fact that when the instrumental applicative marker *sa-* co-occurs with the UV marker *ma-* or *-en*, the nominative case still appears before the instrument (i.e. the undergoer), not the patient (i.e. a more unmarked choice of undergoer) as is found in the plain UV construction. In other words, in the applicative constructions, there is a marked choice of undergoer. The relevant examples are given in (3.44):

(3.44)a. Aka **sa-pi-litek-en** *k-u-ra* *caklis*
 NEG.IMP InA-PI-chop.tree-UV NOM-CN-that ax

t-u-ra kilang!
 DAT-CN-that tree
 ‘Don’t use that ax to chop down the tree!’

⁴¹ The non-macrorole status of this argument will be discussed in Chapters 5 and 6.

- b. **Ma-sa-pi-sanga** n-i aki t-u takid
 UV-InA-PI-make GEN-PPN Aki DAT-CN bottle
- k-u-ya* *aol*₂
 NOM-CN-that bamboo
 ‘Aki used use that bamboo to make the bottle.’

In (3.44), the nominative case marks instrument (e.g. *caklis* ‘ax’ and *aol* ‘bamboo’), not the patient (e.g. *kilang* ‘tree’ and *takid* ‘bottle’). These two sentences show that the instrument is now the undergoer, not the patient. As one can compare (3.43a-b) with (3.44), with or without the presence of the UV markers, the nominative case always goes with the applied argument, which indicates that applicative constructions follow the UV pattern by default. In these applicative constructions, the actor argument in (3.43) (e.g. *mama* ‘father’) is marked by the genitive case, just like the one in the plain UV sentences in (3.42b). As for the patient argument, it is marked by the dative case, as seen in (3.43a-d), unless it appears in the patient-locative applicative construction where it is marked by the nominative case (e.g. (3.43e)).

As mentioned, to form an applicative verb, a verb has to be conjugated into *pi-* or *ka-* in addition to the affixation of the applicative markers. This conjugation is illustrated in Table 3.15 (i.e. the bold-faced part). As shown in the table, verbs that appear with *mi-* are conjugated into *pi-* or *mi-* in the applicative constructions; verbs that appear with *-um-* or *ma-* become *ka-...-um-* or *ka-* in the applicative constructions.

Table 3.15 The Forms of the Verbs in The Applicative Constructions

Actor Voice (AV) Markers		<i>mi-</i>	<i>-um-</i>	<i>ma-</i>
Instrumental Applicative		<i>sa-pi-</i>	<i>sa-ka-...-um-</i>	<i>sa-ka-</i>
Locative Applicative	Goal	<i>mi-...-an</i>	--	--
	Patient	<i>mi-...-an</i>	<i>-um-...-an</i>	<i>ka-...-an</i>
	Location	<i>pi-...-an</i>	<i>ka-...-an</i>	<i>ka-...-an</i>

The applicative markers have been treated as voice or focus markers in quite a few

previous studies of Amis (e.g. Yan 1992, Wu 1995, Liu 1999, and Liu 2003).

Consequently, Amis has been claimed to make a four-voice or four-focus distinctions in these studies. The following table exemplifies such an analysis:

Table 3.16 An Example of the Previous Analysis of Amis Voice System⁴²

Actor Voice (AV) Markers	<i>mi-</i>	<i>-um-</i>	<i>ma-</i>
Undergoer Voice (UV) Markers	<i>ma-</i>	<i>ma-</i> <i>ma-...-um-*</i>	<i>ma-ka-*</i> ⁴³
	<i>mi-...-an</i>		<i>ka-...-an</i>
	<i>-en</i>		<i>-en</i> <i>ka-...-en</i>
Instrument Voice (InV) Markers (the bold-faced part)	<i>sa-pi-</i>	<i>sa-ka-...-um-</i>	<i>sa-ka-</i>
Locative Voice (LV) Markers (the bold-faced part)	<i>pi-...-an</i>	<i>ka-...-um-...-an</i>	<i>ka-...-an</i>

However, these so-called voice markers in Table 3.16 exhibit asymmetrical semantic and morphosyntactic properties among themselves, which indicates that these markers should not be placed under a single category. Semantically speaking, while the voice markers displayed in Table 3.13 have been reported to be closely related to the semantics of the verbs, the applicative markers in Table 3.14 have not been found to carry such functions. The close relation between the voice markers and verbal semantics is that they may serve as the verb class indicators, carry default temporal readings for the verbs, or affect the transitivity (in the sense of Hopper and Thompson (1980)) and the agentivity of the verbs. These features will be further discussed in the subsequent sections in this chapter and continue to be the research focus of Chapter 4. Morphologically, as I have demonstrated in Table 3.15, the forms of the applicative verbs seem to depend on the form of the voice-marked verbs. This relative dependence shows that voice markers and applicative markers should not be placed under the same category during the derivational process.

⁴² This table is a revised version from Liu (1999) and Liu (2003).

⁴³ The symbol “*” indicates the restricted or infrequent occurrence of this form in my data.

More morphosyntactic differences between the two sets of markers can be found in at least the following two constructions: the relative clause and the negative construction beginning with *ca'ay*. The structures of the relative clauses (i.e. the RC-like clausal modifiers) have been discussed in the discussion of the NP structures in Section 3.3.3.

Some examples are repeated below:

(3.45)a. Ma-patay tu k-u-ya *mi-kalat-ay* ci aki-an
 NEUT-dead ASP NOM-CN-that AV-bite-FAC PPN Aki-DAT

(a) wacu.
 LNK dog
 'That dog that bit Aki is dead'

b. Mi-licay Ø-ci aki t-u *fa-fafa-en*
 AV-ask NOM-PPN Aki DAT-CN IRR-carry.on.the.back-UV

n-i panay (a) matu'asay.⁴⁴
 GEN-PPN Panay LNK old.man
 'Aki is asking the old man whom Panay will carry on the back.'

As shown in (3.45), the verbs affixed by the voice markers in Table 3.13 never appear in the RC (the italicized part in the sentence) in the plain mood form; they have to be marked by the mood markers such as the factual mood suffix *-ay* (as seen in (3.45a)) or the Ca reduplicant that manifests the irrealis mood (as shown in (3.45b)). On the contrary, the applicative verbs in (3.46) can appear in the RC without any formal changes. In fact, neither the suffix *-ay* nor the Ca reduplicant has ever been found to show up with the applicative forms.

(3.46)a. Ma-pitek aku k-u *sa-pi-cikcik* *n-i* aki
 UV-break 1S.GEN NOM-CN InA-PI-cut GEN-PPN Aki

t-u dateng (a) pu'ut.
 DAT-CN vegetable LNK knife
 'I broke the knife with which Aki cuts the vegetable'

⁴⁴ This sentence is taken from Liu (1999:70), gloss mine.

- b. Tayra Ø-ci panay mi-ladum i
 go.there NOM-PPN Panay AV-fetch.water PREP
- pi-ladum-an* *n-i* *aki* (a) tefun.
 PI-fetch.water-LA GEN-PPN Aki LNK well
 ‘Panay went to fetch water at the well where Aki fetched water’
- c. Tati’ih k-u-ya *mi-ka’en-an* *n-i* *aki* (a)
 bad NOM-CN-that MI-eat-LA GEN-PPN Aki LNK
- tali.
 taro
 ‘That taro that Aki ate was bad.’
- d. Tati’ih k-u-ya *k-um-a’en-an* *n-i* *aki*
 bad NOM-CN-that eat<UM>-LA GEN-PPN Aki
- (a) tali.
 LNK taro
 ‘That taro that Aki ate tasted bad.’
- e. Ma-futiq k-u-ya *ka-ulah-an* *n-i* *panay*
 MA-sleep NOM-CN-that KA-like-LA GEN-PPN Panay
- (a) wawa.
 LNK child
 ‘That child who Panay likes is sleeping.’

Tables 3.17a and 3.17b below summarize the coding difference displayed above:

Table 3.17a The Forms of the Plain Voice Verbs in the RC

		Actor Voice Markers			UV Markers	
		<i>mi-</i>	<i>-um-</i>	<i>ma-</i>	<i>ma-</i>	<i>-en</i>
Forms in the RC	Factual	<i>mi-...-ay</i>	<i>-um-....-ay</i>	<i>ma-...-ay</i>	<i>ma-...-ay</i>	---
	Irrealis	<i>ma-mi-</i>	<i>Ca RED-...-um-</i>	<i>ma-ma-</i>	<i>ma-ma-</i>	<i>Ca RED-....-en</i>

Table 3.17b The Forms of the Applicative Verbs in the RC

	Instrumental Applicative	Locative Applicative		
	<i>sa-pi-</i> <i>sa-ka-</i> <i>sa-ka-...-um-</i>	goal	patient	location
Forms in the RC	unchanged	<i>mi-...-an</i>	<i>mi-...-an</i> <i>-um-...-an</i> <i>ka-...-an</i>	<i>pi-...-an</i> <i>ka-...-um-...-an</i> <i>ka-....-an</i>

I will come back for more discussion of such morphosyntactic asymmetries between plain voice verbs and applicative verbs in the negative constructions beginning with

ca'ay in Sections 3.4.3. These formal asymmetries show further support to break a four-voice system like the one in Table 3.16 into the voice markers and the applicative markers, in addition to the functional differences of the two sets of markers that I have discussed in examples (3.42-3.44), in particular (3.44). In other words, Amis only makes two voice distinctions, actor and undergoer. For the latter, it is possible to have multiple undergoer choices through applicative constructions.⁴⁵ The various choices of undergoer also imply that the undergoer voice is the unmarked voice construction based on the theory of markedness. More discussion regarding this issue is given in Chapter 6.

3.4.2 The Temporal, Aspectual, and Modal System

In this section, I will discuss how different temporal, aspectual, and modal (TAM) information is expressed in Amis. Generally speaking, there are two ways for such expressions. First, the voice markers may carry default, inferable temporal readings for the verbs they attach to when there is no explicit temporal information provided in the context. Second, various TAM information can also be expressed by specific affixes, aspectual particles, and reduplication. These strategies will be discussed below.

3.4.2.1 TAM Information and the Voice Affixes

Previous studies in Amis have already pointed out that the voice markers may carry the default TAM interpretation when there is no other contextual information available in the sentence. The following table summarizes such findings that are primarily based on

⁴⁵ Payne (1997) proposes a similar analysis for the voice system in Tagalog. He mentions that “some verbs in Tagalog are said to have up to seven different forms that indicate seven different semantic roles. Many of these constructions may be insightfully analyzed as **applicatives**.” (Payne 1997:54, original emphasis) Huang (2005) also makes a similar claim for the focus system of the Formosan languages investigated in his work as he mentions, “...These ‘focus constructions’ contain affixes that function to derive transitive clauses from intransitive or transitive clauses and thus can be viewed as applicative constructions.’ (Huang 2005:783).

Tsukida's (1993) review of the prior research:

Table 3.18 The TAM Information of Different Voice Markers

Voice Marker	Temporal Information
<i>mi-</i> (AV)	active imperfect expressing future events, habitual actions, facts which are true in general (Tseng 1991 and He et al. 1986) [-perfective] for action verbs (Huang 1988:31)
<i>ma-</i> (UV)	[+perfective] for action verbs (Huang 1988:31) the action is over and the undergoer is affected by the action (Tsukida 1993:131)
<i>-en</i> (UV)	Disposal passive imperfect (Tseng 1991)

Zeitoun et al. (1996) also report a similar finding about the TAM readings that go with the AV markers in Amis. Their finding is as shown in Table 3.19:

Table 3.19 Default TAM Interpretations of Verbs Affixed by Different AV Markers

Verbs Marked by Different AV Markers	Default TAM Readings
<i>mi-</i> verbs	on-going or future
<i>ma-</i> verbs	on-going
<i>-um-</i> verbs	on-going
∅ verbs (i.e. unaffixed verbs in this dissertation)	on-going or future

The following examples are cited from Zeitoun et al. (1996, gloss mine) to illustrate the information indicated in Table 3.19:⁴⁶

- (3.47)a. **Mi**-kilim kaku ci panay-an.
 AV-search 1S.NOM PPN Panay-DAT
 'I am looking for Panay.'
 'I am going to look for Panay.'
- b. **Ma**-tayal ∅-ci aki.
 NEUT-work NOM-PPN Aki
 'Aki is working.'
 *'Aki is going to work.'
- c. **K-um-a**'en kaku t-u pawli.
 eat<AV> 1S.NOM DAT-CN banana
 'I am eating a banana.'
 * 'I am going to eat a banana.'

⁴⁶ As seen in the gloss of the examples, some of the AV affixes in the examples are glossed as neutral voice marker, with reasons that I have mentioned in the previous discussion of the voice system.

- d. Tayra Ø-ci aki.
 go.there NOM-PPN Aki
 ‘Aki is on his way.’
 ‘Aki is going to go/leave.’

These studies show that there is a correlation between the AV markers (e.g. *mi-*, *-um-*, and *ma-*) and a non-past interpretation of the event, as verbs such as those in (3.47) are either interpreted as on-going or future events but not past. As for the UV markers, they seem to make a distinction between the past tense (or perfective), which is indicated by *ma-*, and the future tense (or imperfective), which is indicated by *-en*. Interestingly enough, the unmarked TAM readings associated with voice affixes that I have just demonstrated above will be neutralized when the context is made clear with the provision of explicit temporal expressions such as *anini* ‘now’, *inacila* ‘yesterday’, and *anudafak* ‘tomorrow’. Examples follow:

- (3.48)a. **Mi**-palu Ø-ci kilang ci canglah-an anini/anudafak/
 AV-beat NOM-PPN Kilang PPN Canglah-DAT now/tomorrow/
 inacila.
 yesterday
 ‘Kilang is beating Canglah now.’
 ‘Kilang is going to beat Canglah tomorrow.’
 ‘Kilang beat Canglah yesterday.’

- b. **Ma**-palu n-i kilang Ø-ci canglah anini/
 UV-beat GEN-PPN Kilang NOM-PPN Canglah now/
 anudafak/inacila.
 tomorrow/yesterday
 ‘Canglah is being beaten by Kilang now’
 ‘Canglah is going to be beaten by Kilang tomorrow.’
 ‘Canglah was beaten by Kilang yesterday.’

- c. Ro-mi’a-mi’ad **mi-palu** Ø-ci kilang ci canglah-an.
 day<RED> AV-beat NOM-PPN Kilang PPN Canglah-DAT
 ‘Kilang beats Canglah every day.’

As shown in (3.48), the temporal interpretations of the events solely depend on the time

expressions (e.g. *inacila* ‘yesterday’) appearing in the sentences, and there is no co-occurrence restrictions between the voice markers and the time expressions; in other words, the default temporal readings associated with the voice markers are neutralized in these sentences.

Although the observation reported in Zeitoun et al. (1996) is essentially correct, it seems oversimplified by saying that unaffixed verbs or verbs marked by zero affix usually carry ‘on-going’ or ‘future’ temporal information. In fact, the ‘on-going’ or ‘future’ reading is only restricted to the activity-like unaffixed verbs, and most of them are motion verbs such as *tayra* ‘go (there)’ and *tayni* ‘come (here)’. For the unaffixed state predicates⁴⁷ exemplified in (3.49), the future interpretation is not found.

- (3.49)a. Fangcal k-u singsi.
 good NOM-CN teacher
 ‘The teacher is good.’
 *‘The teacher is going to be good.’
- b. Kuhting k-u wacu.
 black NOM-CN dog
 ‘The dog is black.’
 *‘The dog is going to be black.’

Therefore, the default temporal information carried by the voice markers is affected by the types of the verbs that these markers derive, and such information should be inferred from the semantics of the derived verbs rather than a basic function of the voice markers. This then triggers a further question: how are these temporal interpretations induced from these voice markers?

A similar inquiry is addressed in Tsukida (1993) regarding the function of *-en* in

⁴⁷ As I have pointed out in the discussion of word classes, such unaffixed verbs are derived from zero derivation. Although they are not affixed with any voice markers, they follow most the conjugation patterns of the verbs, as displayed in Tables 3.11 and 3.12.

verbal semantics. She makes a comparison between the functions of *mi-* and *-en* verbs under the same contexts. She finds that both *mi-* and *-en* can have a [+perfective] interpretation even when there is no such expression of the past time as *inacila* ‘yesterday’ in the sentence. This further supports the idea that the non-past and future readings associated with *mi-* and *-en* are induced from their semantics but not an absolute temporal value that goes with these markers. Table 3.20 displays part of Tsukida’s comparison for *mi-* and *-en* verbs:

Table 3.20 The Comparison Between *mi-* and *-en* Verbs (Tsukida 1993)⁴⁸

Context	Sentences	Implication ⁴⁹
He went to a night market and bought a pair of shoes	a. Cakay-en nira k-o koko. buy-UV 3S.GEN NOM-CN shoes ‘He bought a pair of shoes’	He somehow needed a new pair of shoes, had been thinking of buying one, and at last bought one at the very time when he went to the market.
	b. Mi-cakay cira t-o koko. AV-buy 3S.NOM DAT-CN shoes ‘He bought a pair of shoes.’	No such implication, simply reporting the event.
A shoe shop is having a clearance sale and one can buy shoes cheap during the clearance sale period. I have been there before and I have a pair of shoes in my mind that I want to buy. I will positively buy the pair during the period.	a. Cakay-en ako kirana koko. buy-UV 1S.GEN NOM.that shoes ‘I will buy that (pair of) shoes’	
	b. *Mi-cakay kako tirana koko. AV-buy 1S.NOM DAT.that shoes	

Based on the above comparison, Tsukida (1993) claims that *-en* signals the increase of the volition of the agent. It is possible that the future interpretation of *-en* is inferred from this function. Now let us consider the following pair of sentences:

- (3.50)a. Mi-nanum-an n-i aki (a) sayta u haysong.
MI-water-LA GEN-PPN Aki LNK soda CN Haysong
‘What Aki drinks is Haysong soda.’ (Don’t give him other brand.)

⁴⁸ The examples in the table are taken from Tsukida (1993), original transcription, gloss mine.

⁴⁹ The implicature here seems to have something to do with the status of the undergoer NP. The undergoer NP in the *-en* sentences, marked with nominative case, seems to serve as the pragmatic pivot as seen in the illustration of the context. As the undergoer is not marked with the nominative case (i.e. having a less significant syntactic status) in the *mi-* sentences, such implicature may be absent.

- b. Ma-nanum-ay n-i aki (a) sayta u haysong.
 UV-water-FAC GEN-PPN Aki LNK soda CN Haysong
 ‘What Aki drank is Haysong soda.’ (There were many brands of soda here.
 What he drank is Haysong.)

Sentences in (3.50) show that the verb marked by *mi-* carries a habitual reading, while its *ma-* counterpart is rendered as a perfective/past event. The habitual reading of *mi-...-an* implies that the *mi-* form tends to be atelic, while the one marked by *ma-* is telic. The distinction of telicity is also implied in Table 3.19 for *mi-* and *-en* verbs. When both refer to imperfective events, *-en* seems to entail an ending point for the verb, while there is no such entailment for the *mi-* verbs. Hence, it might be the case that the AV markers actually indicate the [-telic] feature of the verb while the UV affixes *ma-* and *-en* mark the [+telic] feature for the verbs. The further distinction between the two UV forms lies in that *-en* also signals the volition of the actor, while *ma-* carries no such information but emphasizes the completion of the event and the effect on the undergoer. It is the difference of telicity carried by the voice markers that helps explain why we can get those default temporal inferences, since the [-telic] feature for activity verbs usually induces imperfective interpretation for the verbs, and it is easier to get a perfective interpretation for the [+telic] verbs. When a [+telic] verb combines with [-perfective] as indicated by *-en*, the future ending point is foreseen through the actor’s strong volition. The interaction of voice markers and the lexical aspects of the verbs will be further explored in Chapter 4.

3.4.2.2 Time Expressions and Aspectual Markers

As mentioned previously, the temporal information of an Amis sentence can also be expressed morphologically by time words, aspectual markers, or a morphological process on the predicates, such as reduplication. We have seen the words that indicate various

temporal frames (e.g. *anini* ‘now’, *inacila* ‘yesterday’, and *anudafak* ‘tomorrow’) in Amis in the examples in (3.48). In addition to these time words, there are also particles that carry the temporal information. For example, the particle *na* signals the past tense of the verb (relative past and absolute past):⁵⁰

- (3.51) a. **Na** mi-qaca kaku t-u cudad, pafusut
 PAST AV-buy 1S.NOM DAT-CN book directly
- kaku mi-nukay.
 1S.NOM AV-return.home
 ‘After I bought the book, I went home directly.’
- b. **Na** ci aki k-u ngangan nira.⁵¹
 PAST PPN Aki NOM-CN name 3S.GEN
 ‘His name used to be (called) Aki.’

The examples in (3.51) show that the appearance of *na* in a two-event sentence can show the relative order of the two events (e.g. (3.51a)), while in a single-event clause, this particle emphasizes the past status of the event.

In addition, there are two aspectual markers *tu* and *ho* in Amis, and these markers play important roles in the verb classes that will be discussed in Chapter 4. These two aspectual markers always appear immediately after the predicate.⁵² While *tu* signals a perfective or an inchoative aspect for the predicate it follows (e.g. (3.52a-b)), *ho* manifests an “incomplete” sense for the predicate preceding it (e.g. (3.52c-d)):

⁵⁰ Tsai and Tseng analyze this particle as a prefix and claim that it manifests the “experiential aspect” for the verb (Tsai and Tseng 1997: 227).

⁵¹ This example is taken from Liu (2003: 30), gloss and interlinear analysis mine.

⁵² The morphological status of the two aspectual markers is not very clear at the present moment. They have been analyzed as free morphemes (e.g. an adverb or an aspectual marker) in most of the previous studies. The only exception is found in Chu (2005), who analyzes them as inflectional suffixes (p. 43). It seems that the two morphemes are becoming part of a word, as I have found verb complexes containing a verb plus *tu* or *ho* but are treated as one single word. For example:

(3.52) e. Ma-mi-palal kaku ci kacaw-an, **awatu** **tu.**
 IRR-AV-wake.up 1S.NOM PPN Kacaw-DAT no.longer.there ASP
 ‘When I was about to wake up Kacaw, he was already no longer there.’

As we can see in this example, *awatu* (*awa* + *tu*) has become a single predicate, and it can be followed by another *tu*. Since this issue is not the main concern of the present work, I will leave it for further research.

- (3.52)a. *Ma-su'su' tu kisu.*
 NEUT-fat ASP 2S.NOM
 'He has become fat.'
- b. *Ma-tayal tu kita.*
 NEUT-work ASP 1P.INCL.NOM
 'Let's work!'
- c. *Mi-nanum ho Ø-ci panay t-u sayta.*
 AV-water ASP NOM-PPN Panay DAT-CN soda
 'Panay is still drinking soda.'
 'Panay will go to drink water first.'
- d. *Nanum-en ho aku.*
 water-UV ASP 1S.GEN
 'I will drink it first.'

The examples in (3.52) show that the interpretation of *tu* and *ho* seems to depend on types of the preceding verbs. For example, for a state predicate like *ma-su'su'*, the aspectual marker *tu* gives a result state or change of state reading, while for an activity verb (e.g. *ma-tayal* 'work'), this aspectual marker is interpreted with an inchoative sense. As for *ho*, when following an activity verb (e.g. *mi-nanum* '(go to) drink water'), it can generate a progressive sense (rendered as 'still' in English), or an anticipatory telicity, (corresponding to 'yet' in English), but when following a telic verb such as *nanum-en* '(definitely) drink (up) something', only the anticipatory telicity reading of the activity is possible. More exploration about these readings is given in Chapter 4.

3.4.2.3 The Expressions of Moods

Amis possesses a very complicated mood system, though this topic has not yet been thoroughly explored. In this section, I will only focus on the discussion of the following mood expressions: the factuality indicated by the suffix *-ay*, the irrealis status expressed by the Ca reduplication of the predicate, the volitive mood manifested by the suffix *-aw*,

and optative mood manifested by the *sa-...-aw* and *sa-...-an*.⁵³

We have seen the factual marker *-ay* in the discussion of the verbal paradigms and the structures of the clausal modifiers in the section of NP structures. This suffix most often appears when a verb serves as a modifier for a noun, as shown in the example of the relative clause in (3.45a). It has been treated as a nominalizer in Lin (1995) and Liu (1999). However, as argued in Wu (2001, 2003), this suffix is better analyzed as a marker indicating factuality. Relevant examples are provided in (3.53):

- (3.53)a. Mi-kilim kaku ci panay-an.
 AV-search 1S.NOM PPN Panay-DAT
 ‘I am looking for Panay.’
 ‘I will look for Panay.’
- a’. Mi-kilim-**ay** kaku ci panay-an.
 AV-search-FAC 1S.NOM PPN Panay-DAT
 ‘I did look for Panay.’
- b. Kimulmul-**ay** k-u cidal.
 round-FAC NOM-CN sun
 ‘The sun is round.’
- b’. *Kimulmul k-u cidal.
 round NOM-CN sun
- c. Q: Pa-pina k-u wawa isu?
 PL-how.many/how.much NOM-CN child 2S.GEN
 ‘How many children do you have?’
- A: (i) La-lima-ay aca.
 PL-five-FAC only
 ‘Five only.’ (The speaker can’t have children any more)
- (ii) La-lima aca.
 PL-five only
 ‘Five only.’ (It is possible that the speaker will have more children in the future.)

Compared with the verb in (3.53a), the verb with *-ay* in (3.53a’) emphasizes more on the

⁵³ For a more comprehensive list of mood expressions, please refer to Tsai and Tseng (1997).

happening of the event. Moreover, when describing a permanent state, the suffix *-ay* is required, as shown in the comparison of (3.53b) and (3.53b'). Another contrast between the predicates with or without *-ay* is found in (3.53d), where the numeral with *-ay* indicates an unchangeable state while the one without *-ay* has no such a denotation.

This suffix can also appear in counterfactual clauses to indicate the hypothetical existence of a condition prior to the happening of another event. For example:

- (3.54)a. Anu ira-**ay** k-u limaw aku, pa-ka-fanaq-en
 if exist-FAC NOM-CN time 1S.GEN CAU-KA-know-UV
 aku kisu.
 1S.GEN 2S.NOM
 'If I had time, I would explain the matter to you.'
- b. Anu ma-araw-**ay** aku Ø-ci aki itiyaho,
 if UV-see-FAC 1S.GEN NOM-PPN Aki before
 pa-suwal-en aku kisu.
 CAU-say-UV 1S.GEN 2S.NOM
 'If I had seen Aki, I would have told you.'

In contrast to the function of *-ay*, the Ca reduplication form of a verb manifests an irrealis interpretation for the event or the state denoted by the verb. Examples follow:

- (3.55)a. **Pa-palu-en** n-i sera Ø-ci kuyu.
 IRR-beat-UV GEN-PPN Sera NOM-PPN Kuyu
 'Sera will beat Kuyu.'
- b. **Ma-mi-nanum** kaku, mi-tapadang kisu.
 IRR-AV-water 1S.NOM AV-call 2S.NOM
 'When I was about to drink water, you called me. (So I didn't drink.)'
- c. **Ma-ma-palu** n-i aki Ø-ci panay, piyoc
 IRR-UV-beat GEN-PPN Aki NOM-PPN Panay soon
 mi-laliw.
 AV-run.away
 'When Panay was about to be beaten by Aki, she ran away quickly (and did not get beaten.)'

- d. **Ma-ma-su'su'** Ø-ci aki, tala-adada, saka ma-kuli
 IRR-MA-fat NOM-PPN Aki, get.sick so MA-thin

anini.

now

'When Aki was about to become fat, (he) got sick, so (he) is very thin now.'

As seen in the examples, the Ca reduplication form designates an irrealis status of the event/state denoted by the verb; it can either express a not-yet-happening event/state in the future (e.g. (3.55a)) or non-happening event/state in the past (e.g. (3.55b-d)).

Another mood construction introduced here is manifested by the suffix *-aw*. This suffix has two readings: the optative reading that indicates a suggestion or a plea for the speaker, or a timerative reading that states the speaker's fear concerning the happening of an undesirable event or state. The first reading is illustrated in (3.56), and the second reading is exemplified in (3.57):

- (3.56)a. **Dateng-aw** ho aku/nira/*isu k-u
 vegetable-MOOD ASP 1S.GEN/3S.GEN/2S.GEN NOM-CN

tefoq.

bamboo.shoot

'I/He/*You want/wants to pick the bamboo shoots first.' (Optative, UV)

- b. **Mi-dateng-aw** ho kaku t-u tefoq.
 AV-vegetable-MOOD ASP 1S.NOM DAT-CN bamboo.shoot
 'I want to go to pick the bamboo shoots first.'

- c. **Pa-nanum-aw** ho aku k-u kulong.
 CAU-water-MOOD ASP 1S.GEN NOM-CN cow
 'I want to feed the cow first.' (Optative, UV)

- d. **Mi-pa-nanum-aw** ho kaku t-u kulong
 AV-CAU-water-MOOD ASP 1S.NOM DAT-CN cow
 'I want to go to feed the cow first.'

- e. **Ngudu-aw** aku cingra.
 embarrassed-MOOD 1S.GEN 3S.NOM
 'I want to be polite to him.' (Optative, UV)

- f. Su'su'-**aw** aku cingra.
fat-MOOD 1S.GEN 3S.NOM
'I want to make him gain some weight.' (Optative, UV)
- (3.57)a. Ma-dateng-**aw** n-u tao k-u tefoq.
UV-vegetable-MOOD GEM-CN others NOM-CN bamboo.shoot
'(I am afraid that) the bamboo shoot will be picked by others.'
*‘Others want to pick the bamboo shoots.’
- b. Ma-ngudu-**aw** kaku cingraan.
AV-embarrassed-MOOD 1S.NOM 3S.DAT
'(I am afraid that) I will be embarrassed to him.'
*‘I want to be polite to him.’
- c. Ma-su'sa'-**aw** kaku/cingra/kisu.
NEUT-fat-AW 1S.NOM/3S.NOM/2S.NOM
'(I am afraid that) I/he/you will gain weight.'
*‘I/he/you want/wants to gain weight.’

As one can see from the two sets of examples, the reading of *-aw* crucially depends on the context, in particular, the form of the predicate it attaches to and the person of the co-occurring participants. The contextual differences of the two readings are summarized in Table 3.21:

Table 3.21 The Contextual Differences between the Two Readings of V-aw

Reading of V-aw	Form of V	Preference of the Person of the First Argument of V-aw	Other Contextual Information
Optative	unaffixed form; <i>pa-</i> ; <i>mi-</i>	1 st person preferred	often occurs with <i>ho</i>
Timerative	affixed form only (e.g. <i>mi-</i> , <i>-um-</i> , <i>ma-</i> , etc.)	no preference	never occurs with <i>ho</i>

As shown in (3.56) and (3.57), there are two case patterns in this construction: Genitive-Nominative (e.g. (3.56a) and (3.57a)) and Nominative-Dative (e.g. (3.56b)); the former is the UV pattern, while the latter is the AV pattern. An intriguing feature of this mood construction is that the attachment of *-aw* will change the case frame of some verbs, as illustrated in (3.56c). A *pa-* verb without *-aw* appears with the AV case marking pattern,

but when it co-occurs with *-aw*, it will show up with the UV case pattern. This feature is important regarding the voice system of Amis as it reveals the unmarked voice of the predicate, affixed or unaffixed. I will further explore this issue in Chapter 6.

The suffix *-aw* can also co-occur with *sa-* to express an optative mood. This mood has another variant *sa-...-an* that has a different voice pattern. Examples follow:

- (3.58) a. **Sa-pi-nanum-aw** n-u wawa t-u-ni/*k-u-ni
 InA-PI-water-MOOD GEN-CN child DAT-CN-this/ NOM-CN-this

sayta.

soda

‘The child wants to drink this soda. (indicating stronger desire and a more specific and remote desired object than (3.58b))’

(Optative, Instrumental applicative, UV)

- a’. **Sa-pi-nanum-an** k-u wawa t-u-ni sayta.
 InA-PI-water-MOOD.AV NOM-CN child DAT-CN-this soda
 ‘The child wants to drink this soda.’

- b. **Sa-ka-fanaq-aw** aku (i) kisuwannan/*kisu
 InA-KA-know-MOOD 1S.GEN PREP 2S.DAT 2S.NOM
 ‘I want to know you.’ (Optative, Instrumental applicative, UV)

- b’. **Sa-ka-fanaq-an** kaku (i) kisuwannan
 InA-KA-know-MOOD.AV 1S.NOM PREP 2S.DAT
 ‘I want to know you.’

- c. **Sa-ka-orad-aw** n-u kakarayan/romi’ad
 InA-KA-rain-MOOD GEN-CN sky/day
 ‘It looks like rain. (indicating an unexpected weather change)’
 (Optative, Instrumental applicative, UV)

- c’. **Sa-ka-orad-an** k-u kakarayan/romi’ad
 InA-KA-rain-MOOD.AV NOM-CN sky/day
 ‘It looks like rain.’

As the examples show, compared with the *sa-...-an* counterpart, the *sa-...-aw* version implies a stronger desire, yet a less degree of control, from the actor over a certain object, or a judgment from the speaker about a situation that is out of his/her expectation. What

is interesting about this construction is that there is no argument marked by the nominative case in the *sa-...-aw* sentence. This lack of a nominative argument is significant regarding the issue of “grammatical relations” in Amis. As mentioned in Chapter 1, Chen (1987) also reports the absence of a nominative argument in her impersonal verbs (or subjectless verbs) class in Amis. There are two subcategories in this verb type: intransitive and transitive; the former usually refers the phenomenal verbs depicting weather (e.g. *ma-orad* ‘rain’), while the latter primarily refers to intransitive verbs that are suffixed with *-en* (e.g. *rakat-en* ‘walk’ > *rakat* ‘walk’). The relevant examples are provided below:

(3.59)a. *Ma-orad tu.*
 NEUT-rain ASP
 ‘It has rained.’

a’. *Ma-orad tu k-u kakarayan.*
 NEUT-rain ASP NOM-CN sky
 ‘The sky has rained.’

b. *Rakat-en aku.*
 walk-UV 1S.GEN
 ‘I will walk (not by other ways).’

b’. *Rakat-en aku k-u-ni a kayakay.*
 walk-UV 1S.GEN NOM-CN-this LNK bridge
 ‘I will walk to pass the bridge.’

However, even for these subjectless verbs mentioned by Chen (1987), it is still possible to add a nominative argument to the sentence (through zero derivation in her analysis), as seen in (3.59a’) and (3.59b’). For the *sa-...-aw* construction discussed here, there is no such possibility. Hence, the *sa-...-aw* sentences present a very unusual pattern in Amis regarding the case marking system and grammatical relations.

A possible answer lies in the function of the prefix *sa-*. Previous works that have mentioned this structure (e.g. Tsai and Tseng (1997)) seem to treat *sa-...-aw* and *sa-...-an* as two circumfixes. However, a more appropriate analysis of these two forms should be a composite of the applicative marker *sa-* and the mood markers *-aw* and *-an* instead of a single circumfix denoting just one meaning. Consider the following examples:

- (3.60)a. U maan k-u **sa-ka-fanaq-aw** isu
 CN what NOM-CN InA-KA-know-MOOD 2S.GEN
- ci sawmah-an?
 PPN Sawmah-DAT
 ‘Why did you **want** to know about Sawmah?’
- b. U maan k-u **sa-ka-fanaq** isu ci
 CN what NOM-CN InA-KA-know 2S.GEN PPN
- sawmah-an?
 Sawmah-DAT
 ‘Why did you know about Sawmah?’

The sentences in (3.60) show that *sa-...-aw* and *sa-* verbs can appear in the same slot, and the suffix *-aw* adds an optative reading to the verb, which is exactly one of the possible mood readings of *-aw* as shown in (3.56). The *sa-* predicate in the clause following *ku* indicates that a reason NP is the focus of the inquiry in this WH-question. Recall that in the earlier discussion, I mentioned that “reason” is also a type of NP that is promoted by the *sa-* applicative construction to the core of the verb, as seen in (3.43b). Therefore, it is legitimate to regard the *sa-* prefix in (3.60) as the same applicative marker *sa-* discussed earlier. Treating *sa-* in *sa-...-aw* as an applicative marker also gives a natural account for why *sa-...-aw* has a peculiar case marking pattern, as in the *sa-* applicative construction, the actor is marked by the genitive case and the patient argument is always marked by the dative case. This analysis has an interesting consequence regarding the analysis of

Table 3.22 Some of The Negative Predicates in Amis

Negative Predicates	Meaning	Structure
<i>ca'ay</i> ⁵⁶	not	1. used in declarative sentences. 2. verb following it changes forms
<i>awa</i>	not exist, not there	used in existential, locative, and possessive constructions
<i>aka</i>	don't	1. used in imperative sentences 2. verb following it changes forms
<i>na'ay</i>	don't want	can be followed by a verb or a noun
<i>tatiih</i>	not good; may not	can be followed by a noun or a nominal clause
<i>ma-fukil</i>	unable to	can be followed by a verb

I will focus on the discussion of *ca'ay*, which means “not”, in this section. The feature of this construction is that verbs following this negator are conjugated into either *pi-* or *ka-* depending on the voice markers of the verb in the affirmative declarative counterparts. The conjugation is shown in Table 3.23. A similar conjugation is also found in the imperative sentences that will be discussed later.

Table 3.23 Verbs in the Affirmative Declarative Sentences and their Forms after *Ca'ay*

	Actor Voice			Undergoer Voice		
				Plain		Instrumental Applicative
Predicate Forms in Affirmative Declarative Sentences	<i>mi-</i>	<i>-um-</i>	<i>ma-</i>	<i>ma-</i>	<i>-en</i>	<i>sa-...</i>
Predicate Forms Following <i>ca'ay</i>	<i>pi-</i>	<i>ka-...-um-</i>	<i>ka-</i>	<i>ka-</i>	<i>(ka-)...-en</i>	<i>ka-sa-...</i>

Notice that the forms listed in the table is non-exhaustive; it only shows how the verbs marked by the voice markers and the instrumental applicative marker conjugate after *ca'ay*. In Amis, there are also many unaffixed verbs and verbs that are derived from affixes other than the voice markers, but such verbs are not discussed in this table. The examples in (3.62) illustrate the conjugation displayed in Table 3.23:

⁵⁶ This negative predicate sometimes appears in the forms of *'eca* and *ca'ay-ay*. While these forms generally mean the same thing, the form *ca'ay-ay* is more emphatic than the others.

- (3.62)a. **Mi-tangtang** kaku t-u futing.
 AV-cook 1S.NOM DAT-CN fish
 ‘I am going to cook fish.’
 ‘I am cooking fish.’
- a’. Ca’ay **pi-tangtang** kaku t-u futing.
 NEG PI-cook 1S.NOM DAT-CN fish
 ‘I didn’t cook fish.’ (Negative Declarative, AV)
- b. **Ma-palu** n-i ina kaku.
 UV-beat GEN-PPN mother 1S.NOM
 ‘Mother beat me.’
- b’. Ca’ay **ka-palu** n-i ina kaku.
 NEG KA-beat GEN-PPN mother 1S.NOM
 ‘Mother didn’t beat me.’ (Negative Declarative, UV)
- c. **Palu-en** n-i mayaw Ø-ci dongi.
 beat-UV GEN-PPN Mayaw NOM-PPN Dongi
 ‘Mayaw will beat Dongi.’
- c’. Ca’ay **(ka)-palu-en** n-i mayaw Ø-ci dongi.
 NEG KA-beat-UV GEN-PPN Mayaw NOM-PPN Dongi
 ‘Mayaw never beats Dongi.’
- d. **Sa-pi-tukas** n-i ina k-u-ni a
 InA-PI-cleave GEN-PPN mother NOM-CN-this LNK
 pu’ut t-u futing.
 knife DAT-CN fish
 ‘Mother used this knife to cleave the fish.’ (Instrumental applicative, UV)
- d’. Ca’ay-ay **ka-sa-pi-tukas** n-i ina k-u-ni
 NEG-FAC KA-InA-PI-cleave GEN-PPN mother NOM-CN-this
 pu’ut t-u futing.
 knife DAT-CN fish
 ‘Mother didn’t use this knife to cleave the fish.’
 (Negative Declarative, Instrumental applicative, UV)

As shown in (3.62), the verbs following the negator are prefixed with either *pi-* or *ka-* depending on their corresponding forms in the affirmative declarative sentences. As we can see from the table and the examples, except for the *mi-* verbs, all other types of

predicate are prefixed with *ka-*. In fact, *ka-* is also the prefix that is found in unaffixed predicates (e.g. (3.63a-a')), prepositional predicates (e.g. (3.63b-b')), and nominal predicates (e.g. (3.63c-c')) when they show up after *ca'ay*.⁵⁷

- (3.63)a. **Fa'edet** k-u-ni a kuhaw.
hot NOM-CN-this LNK soup
'This soup is hot.'
- a'. Ca'ay **ka-fa'edet** k-u-ni a kuhaw.
NEG KA-hot NOM-CN-this LNK soup
'This soup is not hot.'
- b. **I lumaq** n-a aki k-um-a'en⁵⁸ Ø-ci
PREP house GEN-PPN Aki eat<NEUT> NOM-PPN
mama t-u 'epah.
father DAT-CN wine
'Father had wine at Aki's place.' (Serial Verb Construction, AV)
- b'. Ca'ay **ka-i lumaq** n-a aki k-um-a'en
NEG KA-PREP house GEN-PPN Aki eat<NEUT>
Ø-ci mama t-u 'epah.
NOM-PPN father DAT-CN wine
'Father didn't have wine at Aki's place.'
(Negative, Serial Verb Construction, AV)
- c. **Ci panay** kaku.
PPN panay 1S.NOM
'I am Panay.'
- c'. Ca'ay **ka-ci panay** kaku.
NEG KA-PPN Panay 1S.NOM
'I am not Panay.'

⁵⁷ As mentioned, there are many predicates in Amis that can be derived by affixes other than voice markers. The conjugation patterns of such predicates need further investigation.

⁵⁸ Based on the case marking pattern of this sentence, it is also possible to gloss the infix *-um-* in (3.63b-b') as an AV marker. However, as mentioned earlier, the non-initial predicate in a serial verb construction most of time does not carry the voice function, even though it is marked by the AV marker. In this example, the main predicate is the prepositional predicate *i lumaq* 'at home' and it should control the voice choice of the whole sentence. The main predicate status of this prepositional predicate in this construction is indicated by the observation that it is the only predicate that conjugates after *ca'ay*; the non-initial verb *k-um-a'en* 'eat' is not conjugated. Thus, we can see that the form of this non-initial verb is restricted, and it is quite likely that its voice marking function is also absent.

In addition to the structures discussed above, there is another constructional possibility following *ca'ay*; the element that is negated is preceded by the nominative case marker. This is usually found in the nominal predicate formed by a common noun and also the applicative verbs, as seen in (3.64) below:

- (3.64)a. **U singsi** cingra.
 CN teacher 3S.NOM
 'He is a teacher.'
- a'. **Ca'ay k-u singsi** cingra.
 NEG NOM-CN teacher 3S.NOM
 'He is not a teacher.'
- b. **Sa-pi-palu** n-i mayaw ci dongi-an
 InA-PI-beat GEN-PPN Mayaw PPN Dongi-DAT
 k-u-ni a sastiq.
 NOM-PPN-this LNK stick
 'Mayaw beat Dongi with this stick.' (Instrumental applicative, UV)
- b'. **Ca'ay k-u sa-pi-palu** n-i mayaw ci
 NEG NOM-CN InA-PI-beat GEN-PPN Mayaw PPN
 dongi-an k-u-ni a sastiq.
 Dongi-DAT NOM-CN-this LNK stick
 'It is not this stick that Maywa beat Dongi with.'
 (Negative declarative, Instrumental applicative, UV)
- c. **Pi-palu-an** n-i mayaw ci dongi-an
 PI-beat-LA GEN-PPN Mayaw PPN Dongi-d-DAT
 k-u-ni anudafak.
 NOM-CN-this tomorrow
 'Mayaw is going to beat Dongi tomorrow at this (place).'
 (Locative Applicative, UV)
- c'. **Ca'ay k-u pi-palu-an** n-i mayaw ci
 NEG NOM-CN PI-beat-LA GEN-PPN Mayaw PPN
 dongi-an k-u-ni anudafak.
 Dongi-DAT NOM-CN-this tomorrow
 'This is not the place where Mayaw is going to beat Dongi tomorrow.'
 (Negative declarative, Locative Applicative, UV)

In (3.64), the predicates following *ca'ay* are all preceded by the nominative case marker *ku*, which indicates a nominal property of these predicates. As mentioned in the discussion of the voice system, this structure shows a major morphosyntactic difference between the plain voice verbs and the applicative verbs; the former follows the *pi-/ka-* conjugation patterns in the *ca'ay* construction, while the latter appears in the nominal structure presented in (3.64) after *ca'ay*. Such nominal property of the applicative forms was also mentioned in the formation of relative clauses in an earlier discussion. Notice that the instrumental applicative form is allowed to appear in both structures when following *ca'ay*, as we have seen in the example (3.62d'). One more example is given in (3.65a) as a comparison with (3.64b').⁵⁹ However, unlike the instrumental applicative, the locative applicative can only appear with the nominal structure in the *ca'ay* negative construction. This is indicated by ungrammaticality of (3.65b).

- (3.65)a. Ca'ay **ka-sa-pi-palu** n-i mayaw ci
 NEG KA-InA-PI-beat GEN-PPN Mayaw PPN
- dongi-an k-u-ni a sastiq.
 Dongi-DAT NOM-CN-this LNK stick
 'Mayaw didn't use this stick to beat Dongi.'
 (Negative Declarative, Instrumental applicative, UV)
- b. *Ca'ay **ka-pi-palu-an** n-i mayaw ci
 NEG KA-PI-beat-LA GEN-PPN Mayaw PPN
- dongi-an k-u-ni anudafak.
 Dongi-DAT NOM-CN-this tomorrow
 'Mayaw is not going to beat Dongi at this place tomorrow.'

3.4.4 The Imperative Constructions

The predicates in the imperative constructions follow a similar paradigm with the

⁵⁹ As remarked by the informants, the two sentences differ in the scope of negation. In (3.65a), it is the whole event that is negated, while in (3.64b), it is the argument (i.e. *kuni a pu'ut* 'this knife') that is negated.

ca'ay negative sentences discussed in the previous section. That is, predicates are also conjugated into *pi-* or *ka-* in the imperative sentences. However, this conjugation is slightly different as illustrated in Table 3.24.

Table 3.24 Verbs in the Affirmative Declarative Sentences and their Forms in the Imperative Sentences

	Actor Voice			Undergoer Voice		
				Plain		Instrumental applicative
Predicate Forms in Affirmative Declarative Sentences	<i>mi-</i>	<i>-um-</i>	<i>ma-</i>	<i>ma-</i>	<i>-en</i>	<i>sa-...</i>
Predicate Forms in Imperative Sentences	<i>pi-</i>	<i>ka-...-um-</i>	<i>ka-</i>	<i>-en</i>		<i>sa-...-en</i>

Compare Table 3.23 with Table 3.24. We can see that the UV prefix *ma-* has no corresponding imperative form;⁶⁰ the only UV marker in the imperative sentences is *-en*, which is found in the plain UV set and the instrumental applicative UV set. This UV marker can also be used in the declarative sentences, but it is found more frequently in the imperative context. The sentences in (3.66) exemplify the information presented in Table 3.24:

- (3.66)a. **Mi-canuy** kaku t-u safa.
 AV-swing 1S.NOM DAT-CN younger.sibling
 ‘I am swing the younger sister/brother.’
 ‘I am going to swing the younger sister/brother.’
- a’. **Pi-canuy** t-u safa!
 PI-swing DAT-CN younger.sibling
 ‘(Go to) swing the younger sister/brother!’ (Imperative, AV)
- b. **Canuy-en** k-u safa!
 swing-UV NOM-CN younger.sibling
 ‘Swing the younger sister/brother!’ (Imperative, UV)
- c. **Ma-tayal** kaku i taypak.
 NEUT-work 1S.NOM PREP Taipei
 ‘I am working in Taipei.’

⁶⁰ Recall that in the discussion of the TAM system, I pointed out that UV *ma-* usually indicate a past event; this default temporal reading seems incompatible with the nature of the imperative sentences.

- c' **Ka-tayal** i taypak!
 KA-work PREP Taipei
 'Work in Taipei!' (Imperative, Neutral Voice)
- d. **Sa-pi-litek-en** k-u-ra caklis t-u-ra
 InA-PI-chop.down-UV NOM-CN-that ax DAT-CN-that
 kilang!
 tree
 'Use that ax to chop down that tree!' (Imperative, Instrumental applicative, UV)

Like the *ca'ay* negative sentences, the prepositional predicates and the unaffixed predicates follow the *ka-* conjugation pattern in the imperative sentences. Some of the examples are given in (3.67). However, as unaffixed predicates are relatively stative in nature, it is difficult to imperativize most of them. By the same token, I have not found examples of imperativized nominal predicates in my data.

- (3.67)a. **Tayra** kaku i taypak.
 go.there 1S.NOM PREP Taipei
 'I am going to Taipei.'
- a'. **Ka-tayra** i taypak!
 KA-go.there PREP Taipei
 'Go to Taipei!'
- b. **I demiq** Ø-ci mama t-u 'epah.
 PREP kitchen NOM-PPN father DAT-CN wine
 'Father had wine in the kitchen.'
- b'. Aka **ka-i demiq** k-um-a'en⁶¹ t-u 'epah!
 NEG.IMP KA-PREP kitchen eat<NEUT> DAT-CN wine
 'Don't be in the kitchen to have the wine.'

⁶¹ Like what was mentioned in Footnote 58, it is possible to gloss the infix *-um-* in as an AV marker here based on the case marking pattern. However, in this serial verb construction, the initial prepositional predicate is the main predicate, as it is the only predicate that conjugates in this imperative sentence, and thus this predicate also determines the voice choice of this sentence. It is highly possible that the non-initial predicate *k-um-a'en* does not have any voice marking function, though it still takes voice morphology. We will see more examples of imperativized serial verb constructions later.

Interestingly enough, unlike the instrumental applicative, the locative applicative verbs do not have imperative counterparts. To express an imperativized action with a specific location, one has to use the prepositional predicate like the one in (3.67b’).

Finally, in this section, let us take a look at the imperative sentences with more than one predicates. Structurally speaking, there are two possibilities for such imperative sentences, and the choice between them depends on the semantic relations between or among the predicates. In the first possibility, only the initial predicate gets conjugated in the imperative form, while the non-initial predicate(s) are restricted to show up in its AV form in the affirmative sentences. We have seen one example in (3.67b’). More such examples are given in (3.68):

- (3.68)a. **Pi-lingatu** tu **k-um-a’en** t-u futing.
 PI-start ASP eat<NEUT> DAT-CN fish
 ‘Start to eat fish!’ (Imperative, Serial Verb Construction, AV)
- a’. ***Pi-lingatu** tu **ka-k-um-a’en** t-u futing!
 PI-start ASP KA-eat<AV> DAT-CN fish
- a’’. ***Pi-lingatu** tu **ka’en-en** t-u futing!
 PI-start ASP eat-UV DAT-CN fish
- b. **Lingatu-en** tu **k-um-a’en** k-u futing!
 start-UV ASP eat<NEUT> NOM-CN fish
 ‘Start to eat the fish!’ (Imperative, Serial Verb Construction, UV)
- b’. ***Lingatu-en** tu **ka-k-um-a’en** k-u futing
 start-UV ASP KA-eat<AV> NOM-CN fish
- b’’. ***Lingatu-en** tu **ka’en-en** k-u futing
 start-UV ASP eat-UV NOM-CN fish
- c. ***Lingatu-en** tu **ka-k-um-a’en** t-u futing
 start-UV ASP KA-eat<AV> DAT-CN fish

The examples in (3.68) are serial verb constructions beginning with aspectual verbs such as *mi-lingatu* ‘(go to) start’ or *lingatu-en* ‘start (for sure)’. As one can see, only the initial

verb appears in the imperative form, and the second verb has to show up in its AV form that is used in the affirmative declarative sentence. Also notice that it is the voice marking of the first verb that controls the case marking pattern of the sentence; in other words, the second verb has no voice operation function despite its voice morphology. As argued in Wu (1995), the tighter the semantic bond between or among the predicates in a serial verb construction, the more likely the second predicate is formally constrained as those illustrated in (3.68).

The other possibility in an imperativized serial verb construction is that both or all the verbs can be imperativized, and the non-initial verbs may retain its voice marking function. This possibility is illustrated in (3.69b):

- (3.69)a. **Ka-tayra** i taypak **mi-qaca** t-u cudad.
 KA-go PREP Taipei NEUT-buy DAT-CN book
 ‘Go to Taipei to buy books!’
- b. **Ka-tayra** i taypak, **qaca-en** k-u cudad.
 KA-go PREP Taipei buy-UV NOM-CN book
 ‘Go to Taipei and buy the book!’

The serial verb construction contains two verbs sharing a purposive relation. In its imperative construction, both structural possibilities are allowed. The first possibility with a more constrained non-initial predicate is found in (3.69a), where the second verb shows up in the affirmative declarative form, not the imperative form. The second possibility with a less constrained non-initial predicate is found in (3.69b), where we can see that the second verb is suffixed with *-en*, and it also controls the case marking of its core argument (i.e. *cudud* ‘book’ in the example). Notice that although this serial verb construction allows both structures in the imperative context, the two structures indicate different degrees of tightness between the two predicates; the two verbs in (3.69a) share a

tighter relation than the ones in (3.69b), as one can see from the translation.

The examples in (3.68) and (3.69) also reveal some important information about the grammatical relations in Amis; that is, the actor of the first core, whether it is marked by the nominative case or not, can be the controller of the missing argument in the second core. This issue will be further explored in Chapter 6.

3.5 Summary

In this chapter, I have presented a sketch of Amis grammar. Starting from the issue of word classes, I have showed that the root forms in Amis are syntactically nominal; verbs are derived in this language either through a set of verbal affixes (e.g. voice affixes) or zero derivation (i.e. for unaffixed verbs). As for adjectives, they are treated as a sub-category of verbs. Then, three predicate types have been distinguished in the discussion of the basic clause structure: the verbal predicate, the nominal predicate, and the prepositional predicate, which can actually be regarded as a sub-type of the verbal predicate as it also follows similar conjugation patterns.

The two major components of this grammar sketch are the grammar of nouns and the grammar of verbs. For the former, I have discussed the case marking system in Amis, the pronominal systems, and the NP structures. A tri-case system has been proposed for this language: nominative, genitive, and dative. The functions of the three cases are closely related to the voice system in Amis. In general, the nominative case marks the NP of which the semantic role agrees with the voice constructions or the applicative constructions. The genitive case can signal possessor in a noun phrase or indicate an actor in a non-actor voice sentence. As for the dative case, it marks NPs that display a great variety in terms of semantic as well as syntactic status; the NP that is marked by the

dative case can be argument-like or adjunct-like, depending on the semantics of the verbs, and their semantic roles may include patient, theme, recipient, time, and location. These three cases are also found in the in the pronominal systems. Regarding the NP structures, two positions have been differentiated concerning the relative order of different types of modifiers and their head. Generally speaking, the pronominal (i.e. before the head) position is more commonly found. In such an order, there is usually a linker appearing between the modifier and the head. This linker is optional most of the time, but it is preferred or even required under some conditions. The postnominal modifier is usually preceded by a case marker that indicates its relation with the head. The modifier types examined in this section include the possessive, demonstrative, numeral, noun, and clausal modifiers. The clausal modifiers can be subcategorized into the adjective-like clausal modifiers and the RC-like clausal modifiers; they denote the Amis equivalents of English adjectives and relative clauses. Although these clausal modifiers are structured in the same way, they are subject to different word order restrictions due to their relation with the head noun. Following the analysis proposed by Wu (2001, 2003), the adjective-like clausal modifiers are treated as the modifiers for the core of a noun, while the RC-like clausal modifiers behave more like modifiers in the periphery of a noun. This peripheral position has granted more word order flexibility for RC-like clausal modifiers.

The following issues have been explored regarding the grammar of verbs in Amis: the voice system, the TAM system, negative constructions, and imperative constructions. Instead of adopting the four-voice system that has been proposed in quite a few previous studies of Amis, it is claimed in this dissertation that there are two voice distinctions in Amis, actor and undergoer. For the undergoer set, there is a further distinction between

the plain UV construction and the applicative UV construction. The former is signaled by the voice markers, while the latter is indicated by two sets of applicative markers, the instrumental applicative and the locative applicative markers. These two applicative constructions have been treated as two types of voice constructions (i.e. instrumental voice and locative voice) in the four-voice system mentioned above. The voice markers play a very important role in the verbal system of Amis; they derive predicates from various types of roots, and they, in particular the actor voice affixes, also serve as the basis of the major verbal conjugation patterns. These conjugation patterns can be found in the TAM systems, negative constructions, and imperative constructions. The semantics and functions of these voice markers are the focus of the discussion in the next chapter. As to the applicative markers, they promote the semantic status of an NP by either making a non-argument become a core argument or making a non-macrorole argument become a macrorole. The functions of the applicative markers will be further explored in Chapter 6.

Chapter 4

Verb Classification and Verbal Derivations

This chapter discusses the classes of Amis verbs in terms of the following semantic and morphosyntactic properties: the morphological features (i.e. the affixation of different voice markers and the derived interpretation), case frames, and their performance in various tests related to their lexical aspects, which include the RRG-based Aktionsart tests and language-specific tests such as the occurrence with the aspectual markers *ho* and *tu* and the morphological marking in the ideophone-forming construction *X sa*. While the first two properties have been extensively discussed or exploited as major verb classification criteria in the previous studies of Amis, other properties, in particular the lexical aspect features (Aktionsart), have not received due attention in the past. Nevertheless, as we have seen in the discussion of the TAM system in Amis, different verb classes seem to induce various temporal readings when contextual information is not available. Such temporal inference indicates that lexical aspects are crucial in differentiating verb classes in Amis. Furthermore, it seems that the finer distinctions within a single verb class still remain unclear in the prior research. This is especially true regarding the state predicates in Amis, which are usually marked by *ma-* or appear unaffixed. For example, both of the verbs *lipahak* ‘happy’ and *ma-hemek* ‘happy’ denote a state of emotion, but while one of them is unaffixed, the other is marked by *ma-*. A natural inquiry thus arises about what distinctions there are between these two verbs. Hence, the purpose of this chapter is two-fold. First, I would like to classify Amis verbs from perspectives besides case frames and voice-related morphology; that is, the lexical aspect features will be incorporated as one classifying criterion, and I will

demonstrate that this criterion can shed a great deal of insight on the understanding of other components of the Amis grammar. Second, I would like to propose a decompositional analysis for the voice markers in Amis. As I will show later, such a decompositional analysis plays an important role in explaining the derivational processes initiated by these voice affixes that have not yet been thoroughly accounted for so far. Take the form *ma-*, which appears in the AV set and also the UV set, as an example. I will argue that this form can actually be further decomposed into different logical structures, and the distinctions among these logical structures provide a natural account for why various *ma-* verbs behave differently in some derivational processes (e.g. the prefixation of *sa-* in the ideophone-forming construction) and constructions (e.g. the co-occurrence with *ho* and *tu*).

This chapter is organized as follows. To begin with, I will present a preliminary classification of the root forms based on the structure of the *X* element in *Xsa* construction. This construction forms an ideophone or expressive in Amis. The *X* part in the frame can either be a root form (bare form or reduplicated) or co-occur with other affixes, as investigated quite extensively in Tsai and Tseng (1997) and Liu (2003). One of such co-occurring affixes with the root is the prefix *sa-*, of which the presence/absence and interpretations depend on the semantic categories of the roots that it attaches to. Therefore, this construction will be employed to make a preliminary classification of the roots in Amis. Based on this preliminary classification, I move on to discuss the verb classes in light of different perspectives. Section 4.2 offers a classification based on how voice markers interact with different verb classes morphologically and semantically. These voice markers will be decomposed and presented with logical structures. Such a

decompositional analysis will facilitate the identification of the subclasses in each Aktionsart type (e.g. result state vs. non-result state, agentive vs. non-agentive activity). Section 4.3 discusses the Aktionsart tests (RRG-based as well as language-specific) that help us classify the Amis verbs. Section 4.4 is dedicated to the discussion of two special verb classes: involuntary activities and psych-predicates. The behavioral properties of these two classes reveal significant information about the issue of agentivity in Amis. In Section 4.5, I look into different verbal derivational processes such as denominalization and causativization and postulate lexical rules for these derivations. Section 4.6 summarizes the discussion of this chapter.

4.1 A Preliminary Classification of the Lexical Categories

As mentioned in Chapter 3, the roots in Amis have been claimed to be syntactically nominal (Wang 1976), and there is a mismatch between the ontological classes and the grammatical classification.¹ Nevertheless, although the syntactic distinctions among the roots are neutralized, there are constructions of which the morphological structures can reflect the semantic categories of the root forms. One of such constructions is what I call an ideophone-forming construction,² or the *Xsa* construction, which will be discussed in the following section. In other words, I am arguing for a categorical status for the roots.³ Although a clear and absolute demarcation among the categories might not be possible at the present moment, a general picture of the major classes of the roots can still be gained from the discussion, and the distinctions of these root classes are very important to the

¹ Ontologically-based parts of speech systems have been presented in some Amis grammars or works such as Tsai and Tseng (1997) and Chu (2005), though these authors do not explicitly mention their criteria. Their classification, in spite of intuitional justification, is not well supported by morphological evidence.

² I will use the term ideophone to cover both ideophone and expressive, and things alike in the discussion. Although “ideophone” might suggest an onomatopoeic nature of these words, based on Doke’s (1935) definition, it should be general enough to cover both onomatopoeic words and non-onomatopoeic expressions.

verbal derivations discussed later.

4.1.1 The Ideophone-Forming Construction and the Categories of the Roots

Consider the following sentences:⁴

(4.1) a. **Root *sa***

<i>Harakat</i>	<i>sa</i>	kisu	mi-nukay.
fast	say.so	2S.NOM	NEUT-return
'You return fast.'			

a'. ***sa-Root sa***

<i>Sa-harakat</i>	<i>sa</i>	kisu	mi-nukay.
INT-fast	say.so	2S.NOM	NEUT-return
'You return so fast.'			

b. **Reduplicated Root *sa***

<i>*Ha-raka-rakat</i>	<i>sa</i>	kisu	mi-nukay.
fast<RED>	say.so	2S.NOM	NEUT-return
'You return fast.'			

b'. ***sa-Reduplicated Root sa***

<i>Sa-ha-raka-rakat</i>	<i>sa</i>	cingra	k-um-a'en	t-u	hemay.
seem-fast<RED>	say.so	3S.NOM	eat<NEUT>	DAT-CN	rice.
'He is pretending to eat fast.'					

The construction exemplified in (4.1 a-d) has received much discussion in Tsai and Tseng (1997) and Liu (2003), and the free morpheme *sa* 'say so' in (4.1) has been treated as a suffix (i.e. *-sa*) or part of a circumfix (i.e. *sa-...-sa*) in both studies. As indicated in the translation, this construction usually denotes an (intensified) manner for an activity, and it often occurs with onomatopoeic words (e.g. '*ek'ek sa* 'in the manner of giggling' ('*ek'ek* 'giggle'), from Tsai and Tseng 1997:24)). In fact, Liu (2003), based on the Neo-

³ This is similar to the claim made by Himmelmann (in press) for the root forms in Tagalog.

⁴ Notice that voice markers of the verb following the *X sa* construction are all glossed as "NEUT" in the examples. The sentences in (4.1) are a type of a serial verb construction, where the initial predicate (i.e. *sa* 'say so') controls the voice pattern of the sentence. As for the non-initial predicate, it has no voice marking function, and that is why *mi-* and *-um-* in (4.1) are glossed as "NEUT".

Davidsonian model, analyzes *sa-X-sa* and *X-sa* (*sa-X sa* and *X sa* in my discussion) as subordinate manner adverbials that modify the VP (Liu 2003:142), and *sa-...-sa* and *-sa* are analyzed as adverbial markers; implicitly, she seems to regard *sa-...-sa* and *-sa* as allomorphs.

As (4.1) shows, there is more than one way to construct the part before *sa*, and each way is labeled in the examples. These structural possibilities vary among themselves in terms of two features: the presence/absence of the prefix *sa-* and the possibility to reduplicate the root. In general, the following four structural variances can be found for the part before *sa* ‘say so’: only the bare root (i.e. “*Root sa*” in (4.1a)), the root with the prefix *sa-* (i.e. “*sa-Root sa*” as in (4.1a’)), the reduplicated root without the prefix *sa-* (i.e. “*Reduplicated Root sa*” as in (4.1b)), and the reduplicated root with the prefix *sa-* (i.e. “*sa-Reduplicated Root sa*” as in (4.1b’)). Notice that although the prefix *sa-* may show up with either a bare root (i.e. *sa-Root sa*) or a reduplicated one (i.e. *sa-Reduplicated Root sa*), the interpretations of this prefix are different in the two structures, as one may compare (4.1a’) and (4.1b’); the *sa-* in *sa-harakat sa* is rendered like an intensifier, while the *sa-* in *sa-harakarakat sa* receives a reading of ‘seem; pretend’.

The plausibility to show up with each of the four structures in this construction varies among the roots. For example, the root *harakat* ‘fast’ cannot appear with the structure *Reduplicated Root sa*, as indicated by the ungrammaticality of (4.1b), but this root can show up with the rest of the three structures. However, for the root *rayaray* ‘row’ exemplified in (4.2), only the *sa-Root sa* structure is allowed:

(4.2) a. **Root sa**

*Rayaray sa kita pa-sasuluy t-u-ni
row say.so 1P.INCL.NOM CAU-pass DAT-CN-this

a anengang i tiya⁵ kalamkam.
LNK chair PREP there fast

‘Let’s line up (and in this way) and we can pass this chair quickly.’

a’. **sa-Root sa**

Sa-rayaray sa kita pa-sasuluy t-u-ni
form-row say.so 1P.INCL.NOM CAU-pass DAT-CN-this

a anengang i tiya kalamkam.
LNK chair PREP there fast

‘Let’s line up (and in this way) and we can pass this quickly.’

b. **Reduplicated Root sa**

*Ra-yara-yaray sa kita pa-sasuluy t-u-ni
row<RED> say.so 1P.INCL.NOM CAU-pass DAT-CN-this

a anengang i tiya kalamkam.
LNK chair PREP there fast

‘Let’s line up (and in this way) and we can pass this chair quickly.’

b’. **sa-Reduplicated Root sa**

*Sa-ra-yara-yaray sa kita pa-sasuluy t-u-ni
seem-row<RED> say.so 1P.INCL.NOM CAU-pass DAT-CN-this

a anengang kalamkam.
LNK chair fast

‘Let’s line up (and in this way) and we can pass this quickly.’

Unlike the root *harakat* ‘fast’, the root *rayaray* ‘row’ has to show up with the prefix *sa-* in this construction, as indicated by the ungrammaticality of (4.2a), and moreover, this root is not allowed to be reduplicated as we can see in (4.2b) and (4.2b’). In addition to the structural difference, the interpretation of the prefix *sa-* is also different for *rayaray* ‘row’; it is rendered as ‘form’ instead of an intensifier like the one for *harakat* ‘fast’.

Now let us examine three more roots: *patay* ‘dead’, *celiq* ‘shout’, and *tetek* ‘peck once’:

⁵ This prepositional phrase *i tiya* is used in a colloquial manner in the examples. Its function is not clear to me at this moment.

(4.3) a. **Root sa**

Patay sa cingra.
dead say.so 3S.NOM
'He died that way.'

a'. **sa-Root sa**⁶

*Sa-patay sa cingra.
SA-dead say.so 3S.NOM

b. **Reduplicated Root sa**

*Pata-patay sa cingra.
RED-dead say.so 3S.NOM

b'. **sa-Reduplicated Root sa**

Sa-pata-patay sa cingra.
seem-RED-dead say.so 3S.NOM
'He is playing dead.'

c. **Root sa**

Celiq sa Ø-ci kacaw ci aki-an.⁷
shout say.so NOM-MCM Kacaw PPN Aki-DAT
'Kacaw is shouting to Aki with great effort.'

c'. **sa-Root sa**

*Sa-celiq sa Ø-ci kacaw ci aki-an.
SA-shout say.so NOM-MCM Kacaw PPN Aki-DAT

d. **Reduplicated Root sa**

Celi-celiq sa Ø-ci kacaw ci aki-an.
RED-shout say.so NOM-MCM Kacaw PPN Aki-DAT
'Kacaw keeps on shouting to Aki with great effort'

d'. **sa-Reduplicated Root sa**

Sa-celi-celiq sa Ø-ci kacaw ci aki-an.
seem-RED-shout say.so NOM-MCM Kacaw PPN Aki-DAT
'Kacaw keeps on shouting to Aki with great efforts (for unknown reasons)'

e. **Root sa**

Tekek sa k-u qayam t-u panay.
peck.once say.so NOM-CN chicken DAT-CN rice
'The chicken is pecking the rice continuously.'

⁶ As this structure is ungrammatical, I do not know which gloss that the prefix *sa-* takes in this example.

⁷ This sentence is taken from Liu (2003:85), gloss mine, original translation.

- e'. ***sa-Root sa***
*Sa-tekek sa k-u qayam t-u panay.
 SA-peck.once say.so NOM-CN chicken DAT-CN rice
- f. ***Reduplicated Root sa***
Teke-tekek sa k-u qayam t-u panay.
 RED-peck.once say.so NOM-CN chicken DAT-CN rice
 'The chicken seems to peck the rice continuously.'
- f'. ***sa-Reduplicated Root sa***
Sa-teke-tekek sa k-u qayam t-u
 seem-RED-peck.once say.so NOM-CN chicken DAT-CN
- panay.
 rice
 'The chicken seems to peck the rice continuously.'

As shown in (4.3), these three roots display various co-occurring possibility with each of the four structures of the *X sa* construction. For the root *patay* 'dead', the co-occurrence with the prefix *sa-* is not allowed unless it is reduplicated. For both roots *celiq* 'shout' and *tekek* 'peck once', all but the *sa-Reduplicated Root sa* structure are allowed to co-occur with them, but their *Root sa* forms are interpreted with slight difference; *celiq sa* in (4.3c) is rendered like an on-going activity, but *tekek sa* in (4.3e) gets an iterative reading.

The structural possibilities of *X sa* construction with different roots are summarized in Table 4.1:

Table 4.1 Different Roots and The Structures of the *X sa* Construction

Form of the <i>X sa</i> Construction Example of the Root	Bare Root <i>sa</i>		Reduplicated Root <i>sa</i>	
	without <i>sa-</i>	with <i>sa-</i>	without <i>sa-</i>	with <i>sa-</i>
<i>rayaray</i> 'row'	No	Yes	No	No
<i>harakat</i> 'fast'	Yes	Yes	No	Yes
<i>patay</i> 'dead'	Yes	No	No	Yes
<i>celiq</i> 'shout'	Yes	No	Yes	Yes
<i>tekek</i> 'peck once'	Yes	No	Yes	Yes

In fact, the structural variation has been noted in both Tseng and Tasi (1997) and Liu (2003). However, none of these two studies have offered a satisfactory account for this

observation, though Liu (2003) does notice that the form of *X* in *X sa* varies according to the types of verb that appear in *X*.

In this section, I will reexamine this construction with an attempt to account for the structural complexities mentioned above.⁸ To begin with, I propose that this construction functions as a frame that introduces ideophones or expressives, which are defined as words describing “a predicate, qualificative or adverb in respect to manner, colour, smell, action, state, or intensity” (Doke 1935:118). This proposal is made not only based on the observations reported in Tsai and Tseng (1997) and Liu (2003) concerning the functions of this construction, but also based on the fact that the verb *sa* (or *-sa* in the previous studies) actually originates from a verb meaning ‘say so’ that often introduces a direct quote (Wu 1995), as exemplified in (4.4). This conforms to the claim made by Childs (1994) that ideophones are often “introduced by a dummy verb with meanings such as ‘do’, ‘say’, ‘quote’, or ‘think’” (Childs 1994: 187).

- (4.4) a. **Sa/Saan** kaku cingraan
 say.so/said.so 1S.NOM 3S.DAT
 ‘I want to say/said to him.’
- b. S-um-uwal Ø-ci aki ci panay-an ma-ulah
 say<AV> NOM-PPN Aki PPN Panay-DAT AV-like
- kaku i tisuwanan **saan** cingra.
 1S.NOM PREP 2S.DAT said.so 3S.NOM
 ‘Aki_i said to Panay_j, ‘I_i like you_j.’ So he_i said.’

⁸ This construction is often discussed with another similar construction introduced by *han* (i.e. *sa-Root han* or *Root han*), in which *han* also originates from an utterance verb that introduces a direct quote (Wu 1995). Functionally speaking, the *han* construction seems to designate a certain manner of handling things for the co-occurring predicates or arguments. In addition to this semantic difference, it also exhibits the following two features different from the *sa* construction. First, the *sa* construction is treated as an AV construction, while the *han* construction, a UV one. Second, some roots that can appear with the *sa* construction cannot appear with the *han* construction. In this section, I will only focus on the discussion of the *sa* construction. Interested readers may refer to Liu (2003) for the discussion of the *han* construction.

c.	Ka-tayra	sa/saan	Ø-ci	sawmah	t-u
	KA-go.there	say.so/said.so	NOM-PPN	Sawmah	DAT-CN

wawa.

child.

‘Sawmah asked the child to go there.’

Lit. ‘Sawmah said, “Go there” to the child.’

Besides this analysis, the following two revisions are proposed concerning the analysis of this structure. First of all, as mentioned, *sa* in the *X sa* construction is treated as an independent morpheme instead of a suffix, which is the analysis postulated in Tsai and Tseng (1997) and Liu (2003). The independent status of this morpheme is supported by the fact that it is still used independently as an utterance verb that introduces a direct quote, as illustrated in (4.4). Moreover, it exhibits tense/aspect distinctions (i.e. *sa* and *saan*) even when it is used in the ideophone-forming construction. For example:⁹

(4.4) d.	Rara	saan	ma-fadi	k-u	hana.
	slow	said.so	NEUT-wither	NOM-CN	flower
	‘The flower withered slowly.’				

The second revision in my analysis is the multiple meanings of the prefix *sa-*. While previous studies seem to treat the prefix *sa-* as a single morpheme in this construction and view *sa-X sa* and *X sa* as allomorphs, I argue that there is more than one *sa-* found in this construction, and the interpretation and distribution of this prefix depend on the semantic categories of the root. As shown in the examples in (4.1-4.3), I propose that there are at least three meanings that go with *sa-*: the *sa-* serving as an intensifier as in *sa-harakat* in (4.1a), the *sa-* meaning ‘form; create’ as in *sa-rayaray* in (4.2a’), and the *sa-* meaning ‘seem; pretend’ as in *sa-harakarakat* in (4.1b’). While the first two readings can be found with the bare root, the third reading is only found with the reduplicated root. The

⁹ This verb might have undergone some kind of grammaticalization as the argument following it does not have to be animate. This is incompatible with an utterance verb. I will leave this issue for future study.

three *sa*-s not only differ in their interpretations but also behave distinctively in this construction, as I have shown in Table 4.1. Moreover, the roots displayed in Table 4.1, can be roughly classified into three categories: object (e.g. *rayaray* ‘row’), state (e.g. *harakat* ‘fast’ and *patay* ‘dead’), and activity (e.g. *celiq* ‘shout’). The intensifier *sa*- only goes with the state roots. It is optional with an attribute state like *harakat* ‘fast’, but is not allowed with a result or transient state (e.g. *patay* ‘dead’). The *sa*- meaning ‘form’ or ‘create’ can only go with objects, and it is obligatory in this construction. As for the *sa*- meaning ‘seem’ or ‘pretend’, it obligatorily shows up with the reduplicated form of a state root (e.g. *patay* ‘dead’) but optionally appears with the reduplicated form of an activity root (e.g. *celiq* ‘shout’).

Furthermore, as seen in the above examples, the reading of *Root sa* is subject to the static/dynamic feature of the roots. The *Root sa* structure of state roots such as *harakat* ‘fast’ and *patay* ‘dead’ is either rendered as a plain state or the completion of a result state. For dynamic roots such as *celiq* ‘shout’ and *tekek* ‘peck once’, the same structure receives an on-going reading for the events designated by the roots. Notice that for the dynamic roots with a punctual feature (e.g. *tekek* ‘peck once’), this structure obtains an iterative reading. More examples are given below; the static roots are provided in (4.5), and the dynamic roots are given in (4.6).

- (4.5) a. Hemek sa cingra.
 happy say.so 3S.NOM
 ‘He is very happy.’
- b. Palal sa cingra.
 wake.up say.so 3S.NOM
 ‘He (then) woke up.’

- c. Iclang sa k-u rikor.
dry say.so NOM-CN clothes
'The clothes became dry (then).'
'The clothes become so dry.'¹⁰
- (4.6) a. Tawa sa cingra.
laugh say.so 3S.NOM
'He is laughing.'
- b. Tepoc sa kaku t-u 'aol.
chop.down.at.once say.so 1S.NOM DAT-CN bamboo
'I am chopping bamboo continuously.'
- c. Faha sa k-u-ni a wawa.
cough say.so NOM-CN-this LNK child
'The child is coughing continuously.'

Table 4.2 below summarizes the categories of the roots and the structures and interpretations of the ideophone-forming *X sa* construction in which each type of root appears.

Table 4.2 Categories of the Roots and the Structures and Interpretations of *X sa*

Category of the Roots ¹¹	Examples of the Root	<i>Bare Root sa</i>		<i>Reduplicated Root sa</i>	
		<i>without sa-</i>	<i>with sa-</i>	<i>without sa-</i>	<i>with sa-</i>
Object [-dynamic] [-static]	<i>rayaray</i> 'row' <i>nanum</i> 'water'	No	Yes <i>sa-</i> : form; create	No	No
State (attribute) [-dynamic] [+static] [-telic]	<i>harakat</i> 'fast' <i>usuy</i> 'slow'	Yes (plain state)	Yes <i>sa-</i> : intensifier	No	Yes <i>sa-</i> : seem or pretend
State (transient/result) [-dynamic] [+static] [+telic]	<i>hemek</i> 'happy' <i>patay</i> 'dead'	Yes (result state)	No	No	Yes <i>sa-</i> : seem or pretend
Activity [+dynamic] [-static] [-telic]	<i>celiq</i> 'shout' <i>tawa</i> 'laugh'	Yes (oning activity)	No	Yes	Yes <i>sa-</i> : seem or pretend
Achievement and Semelfactive [+dynamic] [-static][±telic] [+punctual]	<i>tekek</i> 'peck once' <i>tepec</i> 'chop once' <i>faha</i> 'cough'	Yes (iterative activity)	No	Yes	Yes <i>sa-</i> : seem or pretend

¹⁰ This translation is cited from Liu (2003:85). Both (4.5b) and (4.5c) are uttered at the moment when the state is resulted. The past tense in the translation indicates the perfectiveness of the state.

¹¹ The terms for the categories are adopted from Janet Allen (p.c.) in her discussion of parts of speech in Kankanaey, a Philippine language.

As shown in Table 4.2, the roots are classified by incorporating the Aktionsart features introduced in Chapter 2, such as [\pm dynamic], [\pm static], [\pm punctual], and [\pm telic]. There are five root categories differentiated based on the structural features and the interpretations of the *Xsa* construction. As mentioned in Chapter 3, although some of the roots are ontologically verbal, except for a portion of state predicates and some motion verbs, most of the roots have to appear with a voice marker when serving as a predicate. This derived voice-marked predicate may then appear in different conjugations in various constructions (e.g. imperative or negative). It has also been pointed out that the voice markers, especially the actor voice set, also reflect the categories of the roots as there are some selectional restrictions between certain voice markers and certain root types. Furthermore, different root categories may get different interpretations even when they are attached by the same affix. These points will be further discussed in Section 4.2. Before that, let us first examine the unaffixed predicates, namely, predicates that are derived through zero derivation.

4.1.2 Unaffixed Predicates

Generally speaking, there are two types of unaffixed predicates in Amis: the one with the co-occurrence of a locative core argument and the one without. The former consists of motion verbs and existential/possessive/locative verbs, and the latter is mainly composed of state predicates that in general denote permanent properties.¹² In the following discussion, I will refer to the two major types of unaffixed predicates as unaffixed locative predicates and unaffixed non-locative state predicates.

¹² As we can see later, the transient state and/or result states are mostly affixed with *ma-*.

4.1.2.1 Unaffixed Locative Predicates

Unaffixed predicates that have a locative core argument in their semantics such as *ira* ‘exist; there is/are; be at’ and *maroq* ‘live’ are actually more like a combination of morephemes. For instance, the word *ira* can be regarded as a fossilized expression¹³ of the preposition *i* plus the distal deictic *ra*, and it is highly possible that *maroq* is formed from the combination of the voice marker *ma-* plus *aroq* ‘seat’, though it is also used as a single morpheme now.¹⁴ Examples follow:

- (4.7) a. Ira k-u ta-tulu a wawa (i la-lumaq).
 exist NOM-CN PL-three LNK child PREP RED-house
 ‘There are three children (inside the house).’
- b. Ira Ø-ci aki i lumaq.
 exist NOM-PPN Aki PREP house
 ‘Aki is at home.’
- c. Ira k-u paysu aku.
 exist NOM-CN money 1S.GEN
 ‘I have money.’
 Lit. ‘My money exists.’
- d. Awa Ø-ci aki i lumaq.
 not.exist NOM-PPN Aki PREP house
 ‘Aki is not at home.’
- e. Awa k-u paysu aku.
 not.exist NOM-CN money 1S.GEN
 ‘I have no money.’
 Lit. ‘My money does not exist.’
- f. Maroq kaku i taypak.
 live 1S.NOM PREP Taipei
 ‘I live in Taipei.’

As shown in the data, the predicate *ira* can express three concepts: existence, as in (4.7a),

¹³ The combination of *i* and *ra* is conceived as a unit as it has a corresponding negator *awa*, which cannot be further decomposed.

¹⁴ The imperative form for *maroq* is *ka-maroq*, not **ka-aroq*.

location, as in (4.7b), and possession, as in (4.7c). This is not something uncommon as cross-linguistically, existential, locative, and possessive predicates are often coded by the same lexicon (Clark 1978). This phenomenon is also found in Formosan languages other than Amis, as reported in Zeitoun et al. (1999). When *ira* serves as a pure locative predicate, the locative argument is obligatory; the locative argument is optional when *ira* denotes “existence”, as seen in (4.7a). When *ira* is used to express “possession”, the locative argument is expressed by a possessor that is marked by the genitive case. As shown in the logical structures of three readings of *ira* in (4.8), the locative arguments of *ira* all appear at the same position in the logical structures; that is, they all appear as a first argument of the **pred'** that is embedded in **exist'**. More discussion about these logical structures will be offered when I explore the issue of macrorole assignment and case marking in Chapter 5.

(4.8) a. Ira k-u ta-tulu a wawa.
 exist NOM-CN PL-three LNK child
 ‘There are three children.’

a'. **exist'** (ta-tulu a wawa)

b. Ira Ø-ci aki i lumaq.
 exist NOM-PPN Aki PREP house
 ‘Aki is at home.’

b'. **exist'** ([**be-at'** (lumaq, aki)])

c. Ira k-u paysu aku.
 exist NOM-CN money 1S.GEN
 ‘I have money.’
 Lit. ‘My money exists.’

c'. **exist'** ([**have'** (aku, money)])

Another major category of unaffixed locative predicates consists of motion verbs.

These verbs are composed of three elements: the verb *ta* ‘go or move’¹⁵ or *tala-* ‘(move) toward’, the preposition *i*, and a deictic (i.e. *ni* ‘the proximal deictic’ or *ra* ‘the distal deictic’) or a directional word.¹⁶ For example:

(4.9) Motion verbs

a. <i>tayra</i> > <i>ta-i-ra</i> ‘go (i.e. move there)’	b. <i>tayni</i> > <i>ta-i-ni</i> ‘come (i.e. move here)’
c. <i>tahira</i> ‘arrive there’	d. <i>tahini</i> ‘arrive here’
e. <i>ta-rikor</i> ‘move to the back’	f. <i>tala-cuwa</i> ‘go where?’

Notice that the motion verbs exemplified in (4.9) do not all belong to the same Aktionsart class. Some of these motion verbs are activities (e.g. *tayra* ‘go’) while others are more like accomplishments (e.g. *tahira* ‘arrive there’).

4.1.2.2 Unaffixed Non-locative State Predicates

As mentioned in the discussion of the ideophone-forming construction, there is a distinction between the state predicates that designate a permanent property and those that depict a transient or result state. The former group mostly appears unaffixed in the predicate position while the latter is mostly coded by *ma-*. Commonly found examples are given below, with reference to the adjective types proposed by Dixon (1977):

(4.10) a. Examples of the unaffixed state predicates:

Dixon’s semantic types	Amis examples
1. dimension	<i>tata’ang</i> ‘big’; <i>miming</i> ‘small’; <i>puener</i> ‘short’
2. physical property	<i>kerteng</i> ‘heavy’; <i>’atekak</i> ‘hard’; <i>kumaying</i> ‘soft’
3. color	<i>kuhting</i> ‘black’; <i>kahemang</i> ‘red’; <i>kuhcal</i> ‘white’
4. human propensity	<i>fangcal</i> ‘good; kind’; <i>lipahak</i> ‘happy’
5. value	<i>nga’ay</i> ‘fine’; <i>ka’suq</i> ‘delicious’; <i>tati’ih</i> ‘bad’
6. speed	<i>harakat</i> ‘fast’

The forms in (4.10), which are listed based on Dixon’s (1977) classification, all appear without any affix in the predicate position. For a comparison, state predicates affixed

¹⁵ This verb is seldom used alone; it often appears in a reduplicated manner (e.g. *ta-ta-ta* ‘go, go, go’ as an expression to urge somebody to move).

¹⁶ While it is easy to break down some of the motion verbs such as *tayra* and *tayni*, it is not easy to come up with a morphemic analysis for others like *tahira* ‘arrive’.

with *ma-* are provided in (4.11):¹⁷

(4.11) b. Examples of the *ma-* state predicates:

Dixon's semantic types	Amis examples
1. physical property	<i>ma-talem</i> 'sharp'; <i>ma-su'su</i> 'fat'
2. human propensity	<i>ma-hemek</i> 'happy'; <i>ma-li'ang</i> 'mean'
3. age	<i>ma-tu'as</i> 'old'; <i>ma-kapah</i> 'young; pretty'
4. value	<i>ma-kapah</i> 'pretty'
5. speed	<i>ma-rarar</i> 'slow'
6. cognition	<i>ma-fanaq</i> 'know; able'; <i>ma-fukil</i> 'not know; unable'
7. emotion	<i>ma-ulah</i> 'like'; <i>ma-osi</i> 'hate'; <i>ma-keter</i> 'angry'
8. experiential verbs	<i>ma-talaw</i> 'afraid'

It seems that there is not much overlap between the semantic types designated by the unaffixed verbs and the *ma-* verbs. While the unaffixed state predicates seem to all fall in the verbs corresponding to Dixon's (1977) adjective types, *ma-* state verbs cover more varieties. I have demonstrated how attribute and result or transient states can be differentiated based on the *Xsa* construction. There are two more differences between them. First, as seen in (4.11), two-place state predicates (e.g. *ma-fanaq* 'know' and *ma-ulah* 'like') all belong to the *ma-* group, while unaffixed states are one-place predicates. Second, in the derivation of nicknames, the unaffixed set is suffixed with *-an*, but such a structure is not allowed for the *ma-* set. The comparison is shown in the following table:

Table 4.3 Different Structures in Nicknaming and Nominalization of State Predicates¹⁸

State Predicates	Nicknaming with <i>-an</i>	Nominalization with <i>-ay</i>
<i>tata'ang</i> 'big'	<i>tata'ang-an</i> 'big guy; fatty'	<i>tata'ang-ay</i> 'something big'
<i>kuhting</i> 'black'	<i>kuhting-an</i> 'black guy'	<i>kuhting-ay</i> 'something or someone black'
<i>ma-su'su</i> 'fat'	* <i>su'su'-an</i>	<i>ma-su'su'-ay</i> 'someone fat'
<i>ma-lasang</i> 'drunk'	* <i>lasang-an</i> <i>ka-lasang-ay</i> 'drunkard'	<i>ma-lasang-ay</i> 'someone who is drunk'

As seen in Table 4.3, the root form of the *ma-* state predicates do not take the suffix *-an*

¹⁷ The *ma-* prefix in (4.10) is the *ma-* in the AV voice set in Table 3.13.

¹⁸ There are other ways of nicknaming. Another common way is to prefix *ka-* to the root form (e.g. *ka-mata* 'Big Eye' (from *mata* 'eye'), *ka-tangic* 'Cry Baby' (from *tangic* 'cry'), *ka-su'su* 'Fatty' (from *su'su*)). For this process, there does not seem to be categorical distinctions involved, as *mata*, *tangic* and *su'su* belong to different root categories.

to form a nickname. The suffix *-an*, which makes the state root it attaches to become a generic noun, can also affix to the object roots and derive a generic expression. Some examples are given in (4.12):

- (4.12) a. *futing* ‘fish’ → *futing-an* ‘fish kind’
 b. *fafahi* ‘wife’ → *fafahiyan* (> *fafahi-an*) ‘woman’
 c. *fa’inay* ‘husband’ → *fa’inay-an* ‘man’

In this regard, the attribute states behave more like object roots. The distinction between the two types of state predicates seems to be the distinction between individual-level predicates and stage-level predicates. Individual-level predicates usually depict inherent properties of a noun, and this semantic feature might make it easier to the source for the derivation of a generic noun than a stage-level predicate, which usually denotes the episodic properties of an object. In RRG, this distinction is expressed by the following logical structures (VVLP 1997:103; VV 2005:48-49):

- (4.13)a. for non-episodic states or individual-level states: **be’** (x, [**pred’**])
 b. for transient, episodic, result state or stage-level states: **pred’** (x, (y))¹⁹

The only difference between the two lies in the metalinguistic operator **be’**, which indicates the attribute nature of this predicate.²⁰ I will return for more discussion of state predicates later in this chapter.

4.2 Voice Affixes and Verb Classes

In the previous section, I have shown that the categories of roots in Amis can be defined in terms of lexical aspect features. In this and the following sections, I will go further to discuss the interaction between these root classes and the voice markers when

¹⁹ However, in the later analysis, further differentiation between the transient states and the result states will be made. For the former, I will use **pred’** (x, (y)); for the latter, I will use (INGR/BECOME) **pred’** (x, (y)).

²⁰ The distinction between attribute and non-attribute state predicates is also reported in Tsukida’s (2005b) paper, as reviewed in Chapter 1.

they form a predicate, and how these derived predicates can be classified morpho-syntactically and semantically. This section discusses the compatibility of the roots with various voice markers and their derived interpretations. The significance of these two criteria is revealed in the following two facts. First, there are some co-occurrence restrictions between the roots and the voice affixes, especially the AV set;²¹ that is, some roots only or more easily appear with certain (actor) voice affixes but not others. Furthermore, the roots tend to have a default choice among the AV affixes. For example, some roots tend to appear with *mi-* by default, while others may have *ma-* or *-um-* as their unmarked choice, though these roots may also appear with other voice affixes in the AV group. The co-occurrence restriction and the default association between the roots and the voice markers have been the research interest of some previous studies reviewed in Chapter 1 (e.g. Huang 1988 and Yan 1992), and this issue will be further discussed in this section. Second, even if the root forms can be attached to by the same affix, the derived verb types will not be the same. Consider the following two examples that are both derived by affixing the AV marker *mi-* to the roots:

(4.14)a. *mi-palu* ‘beat’ (from *palu* ‘beat’)

b. *mi-kuhcal* ‘whiten; cause to become white’ (from *kuhcal* ‘white’)

As illustrated in (4.14), while there is a causative reading in the *mi-* verb in (4.14b), there is no such reading in the *mi-* verb (4.14a) even though both roots are affixed by *mi-*. This difference is semantically motivated as the root *palu* designates an activity while the form *kuhcal* refers to an attribute, and such a semantic distinction accounts for why they get

²¹ As I have mentioned in Chapter 3, sometimes the “AV” markers do not have any voice marking functions, and they will be glossed as “NEUT” in the examples. However, in the discussion, I will simply refer to this set of voice markers as “AV” markers without any specification.

different interpretations when being affixed with *mi-*.

The discussion in Chapter 3 has clearly shown the crucial status of the voice markers, especially the actor voice set, in the verbal morphology of Amis. In spite of the recognition of the importance of these markers in many of the previous studies, their internal semantics and derivational functions still call for more research. Among these voice markers, the AV marker *mi-*, *ma-* (both the AV form and the UV form),²² and the UV suffix *-en* are especially important due to their high productivity and their great influence on the verbal semantics. Such influence is clearly manifested from the following observations, repeated from the discussion in Chapter 3. First, these affixes, especially the AV marker *mi-* and the form *ma-* (in both the AV and UV sets), have been treated as the major verb class differentiators in a couple of the previous studies (e.g. Huang 1988 and Yan 1992). Second, these affixes often affect the semantics of the verbs they attach to. For example, the UV suffix *-en* has been claimed to signal the rising possibility of the happening of an event and the intention of the actor (Tsukida 1993). Third, these voice affixes usually carry inferable TAM information for the attached predicates (Tsukida 1993; Zeitoun et al. 1996). Such inferred TAM information, however, will be overridden once when the temporal context in the sentence is made explicit.

In this section, I will focus on how different verb classes can be identified based on their interactions with the following affixes: the AV marker *mi-*, the form *ma-* that appears in the AV and UV sets, and the UV marker *-en*. Although previous studies have pointed out the importance of these affixes in categorizing Amis verbs, few of these

²² The discussion here actually includes the *ma-* that has no voice function; that is, the *ma-* that appears with intransitive verbs such as *ma-hemek* 'happy'. It is glossed as "neutral" in such examples.

studies make finer distinctions among the verbs marked by the same affix. For example, Yan (1992) places all the verbs prefixed by *mi-* in one class without further sub-categorization. But, as we have seen from (4.14), there are at least two classes of *mi-* verbs: causative and non-causative, and thus further distinctions should be made among the *mi-* verbs. Moreover, equal attention has not been paid to every voice affix in the discussion of verb classification. An instance like this is the suffix *-en*, which, in spite of being extensively discussed in Tsukida (1993) regarding its semantics, has not received much discussion on its function as a verb class differentiator. Furthermore, Tsukida (2005b) regards *-en* as an inflectional morpheme in the conjugation (similar to Chen 1987). Her analysis does not seem very appropriate since *-en* does change the meaning of the derived verb in addition to marking the voice opposition, as shown in (3.39). In this section, the properties of the voice markers will be further explored in order to fill in the gaps that have been missed in the previous research. In particular, a decompositional analysis for these voice affixes will be proposed. As I will show later, the derivation and interaction among verb classes can be better understood through such decomposition. Let us begin with the AV marker *mi-*.

4.2.1 The Meaning and Functions of the AV Marker *Mi-*

The prefix *mi-* is found most frequently in the following two types of derivation:

- (4.15)a. Mi-nanum Ø-ci aki t-u nanum.²³
 AV-water NOM-PPN Aki DAT-CN water
 ‘Aki is going to drink water.’
 ‘Aki is drinking water.’

²³ According to Yan (1992), the *mi-* affix (equivalent to *ni-* in his paper) can be omitted in his dialect (one of the Southern dialects). However, as remarked by my informants, such kinds of sentences, though understandable, sound very childish.

- b. Mi-palu Ø-ci sawmah ci mayaw-an.
 AV-beat NOM-PPN Sawmah PPN Mayaw-DAT
 ‘Sawmah is going to beat Mayaw.’
 ‘Sawmah is beating Mayaw.’

As seen in (4.15a), this prefix attaches to a root denoting an object and derives a verb expressing an activity with the object denoted by the root as its generic object. It can also attach to a root expressing an activity and derive a verb expressing that activity (e.g. (4.15b)). Notice that the *mi-* verbs in (4.15) can have a progressive reading or a motional/purposive reading. This has been pointed out in Zeitoun et al. (1996).²⁴

An activity verb in Amis is not necessarily derived from the affixation of *mi-*; other affixes such as *ma-* (AV) or *-um-* can also derive an activity verb. Unlike *mi-* activity verbs, *ma-* and *-um-* activity verbs only get the progressive reading, as reported in Zeitoun et al. (1996). While most roots tend to occur with only one of them to form an activity verb, some roots can have more than one possibility. However, the *mi-* form for roots that take either *-um-* or *ma-* by default to form an activity predicate only gets a motional/purposive reading,²⁵ and the goal is preferably specified in the sentence.

Consider:

- (4.16)a. Ma-ranam kaku.
 NEUT-have.breakfast 1S.NOM
 ‘I am having my breakfast.’
- a’. Mi-ka-ranam²⁶ kaku i ci kaka-an
 AV-KA-have.breakfast 1S.NOM PREP PPN older.sibling-DAT
 ‘I am going to Brother’s place to have (a special) breakfast.’
- b. K-um-a’en kaku t-u pawli.
 eat<AV> 1S.NOM DAT-CN banana
 ‘I am eating a banana.’

²⁴ The same feature is also found in motion verbs such as *tayra* ‘go (there)’ and *tayni* ‘come (here)’.

²⁵ This purposive reading is also obtained for some *ma-* predicates (e.g. *mi-ulah*, *mi-liyang*).

²⁶ As remarked by the informant, such *mi-* forms are used in a relatively restricted way. For example, it is difficult to elicit the progressive expression of verbs like *mi-ka-ranam* and *mi-ka’en*.

- b'. Mi-ka'en kaku i ci panay-an
 AV-eat 1S.NOM PREP PPN Panay-DAT
 'I am going to Panay's place to have a banquet.'
- c. Ma-tayal kaku.
 NEUT-work 1S.NOM
 'I am working.'
- c'. Mi-tayal kaku t-u demak n-i panay.
 AV-work 1S.NOM DAT-CN matter GEN-PPN Panay
 'I am going to do Panay's work.'

As we can see in (4.16), the *mi-* form adds a specific goal for the verb (e.g. *k-um-a'en* 'eat' → *mi-ka'en* 'go for a banquet at someone's place'). This also explains why only the *mi-* form can co-occur with the (goal) applicative marker *-an*, but not *-um-* and *ma-* verbs.²⁷ This contrast is illustrated in (4.17):

- (4.17)a. Mi-tayal-an/*ma-tayal-an n-i aki k-u-ni.
 MI-work-LA/MA-work-LA GEN-PPN Aki NOM-CN-this
 'Aki did this.'
 'This is what Aki did.' (Locative Applicative, UV)
- b. Mi-cikay-an/?c-um-ikay-an aku tayra i lumaq
 MI-run-LA/run<UM>-LA 1S.GEN go PREP house
- n-i panay k-u-ni qayam.
 GEN-PPN Panay NOM-CN-this chicken
 'I ran to Panay's place to get this chicken.'
 'This chicken is what I ran to Panay's place to get.' (Locative Applicative, UV)

Based on the above observations, I propose the following logical structure for *mi-*:

- (4.18) The Logical Structure of *mi-*:
mi-: (**do'** (x, [**go'** (x)]) & INGR **be-at'** (z, x) PURP) **do'** (x, [**pred'** (x, y)])

The LS in (4.18) is composed of two parts. The first part captures the motional/ purposive reading that *mi-* activity verbs almost always get, while the second part

²⁷ In fact, the *-an* form for *ma-* and *-um-* verbs are *ka-...-an* and *ka-...-um-...an*, both of which contain a location argument, not a goal. The locative applicative form of *mi-* verbs is *pi-...-an*. These *-an* applicative constructions will be further explored in Chapter 6.

represents the plain activity reading that can be found in some of the *mi-* verbs. Notice that the motional/purposive part is placed in parentheses to indicate the fact that for some *mi-* verbs that allow two readings, the motional/purposive part is optional. However, the second part is indispensable for all the *mi-* verbs. The examples in (4.19) illustrate the application of the LS of *mi-*:

(4.19) a. Mi-palu Ø-ci sawmah ci mayaw-an.
 AV-beat NOM-PPN Sawmah PPN Mayaw-DAT
 ‘Sawmah is going to beat Mayaw.’
 ‘Sawmah is beating Mayaw.’

a’. **do’** (sawmah, [**go’** (sawmah)]) & INGR **be-at’** (y, sawmah) PURP **do’** (sawmah, [**beat’** (sawmah, mayaw)])

a’’. **do’** (Sawmah, [**beat’** (Sawmah, Mayaw)])

b. Mi-ka’en kaku i ci panay-an
 AV-eat 1S.NOM PREP PPN Panay-DAT
 ‘I am going to Panay’s place to have a banquet.’

b’ **do’** (kaku, [**go’** (kaku)]) & INGR **be-at’** (ci panay-an, kaku) PURP **do’** (kaku, [**eat’** (kaku, y)])

c. Mi-tayal kaku i ci panay-an
 AV-work 1S.NOM PREP NOM Panay-DAT
 ‘I am going to do the work at Panay’s place.’
 (i.e. I am going to do the work for Panay’s family.)

c’ **do’** (kaku, [**go’** (kaku)]) & INGR **be-at’** (ci panay-an, kaku) PURP **do’** (kaku, [**do.work’** (kaku, y)])

Now at least two verb classes can be identified in terms of the temporal readings of the *mi-* forms. The first class can have two possible readings with *mi-* (i.e. the motional/purposive and the progressive) (e.g. *mi-palu* > *palu* ‘beat’, *mi-nanum* > *nanum* ‘water’), while the second class only allows the motional/purposive reading (e.g. *mi-tayal* > *tayal* ‘work’ and *mi-ka’en* > *ka’en* ‘eat’). As one may notice in (4.16), the second class usually appears with actor voice affixes other than *mi-* (e.g. *-um-* and *ma-*). When they show up

with *ma-* or *-um-*, they will get the progressive reading. The second class can be further categorized into two sub-classes based on the attachment of *{paka-}*. This phonological string has at least three interpretations: ‘be able to; happen to’, ‘cause to become’, and ‘through; by means of’. For the sake of the main concern, I only discuss the first two interpretations of *{paka-}*. The first meaning is similar to the “agency canceller” discussed in Walton (1986)²⁸ for the verbs in Sama, a Philippine language, as this prefix cancels the agentive implicature carried the verbs. The second meaning of *{paka-}* is derived from *pa-ka-*, which contains the causative morpheme *pa-* and the prefix *ka-*.²⁹ The *mi-* verbs that only allow the motional/purposive reading behave differently when being prefixed with *{paka-}*. As illustrated in (4.20), for verbs that usually appear with *-um-*, their *{paka-}* form gets the agency canceling reading, glossed ABLT for ‘abilitative’, while for verbs that usually co-occur with *ma-* (AV or neutral voice), *{paka-}* is rendered as *pa-ka-*, the form with the causative reading, by default:

- (4.20)a. **mi-nengneng**
 AV-watch
 ‘(go to) watch’
- a’. **{paka-}nengneng**
 paka-nengneng
 ABLT-watch
 ‘happen to see; able to see’

²⁸ Walton (1986: 83-86) calls them “DO Cancellers”. There are two such markers in Sama; one is *ka-* and the other one is *-um-*, with the latter occurring in a very limited class of verbs. In fact, the forms *maka-/paka-* or their phonological variants are quite wide spread in the Philippine languages (Hsiu-chuan Liao, p.c.). These forms are also called potentives, as seen in Himmelmann (2005a). As remarked by Himmelmann (2005a), these forms may refer to accidental actions, involuntary actions, and they may convey an abilitative meaning. The existence of such markers in Amis indicates the possibility that Amis is closer to the Philippine languages in terms of sub-grouping, though it is not clear to me if such markers also exist in other Formosan languages. However, as the issue of sub-grouping is not the main concern of this dissertation, I will leave it for further research.

²⁹ As discussed in Chapter 3, *ka-* is found in many syntactic constructions (e.g. *ca’ay* negative sentences and imperative sentences) related to verbs that take prefixes other than *mi-*. More discussion is given later in this chapter.

- b. **k-um-a**'en
eat<AV>
'eat'

- b'. {paka-}ka'en
paka-ka'en
ABLT-eat
'able to eat; dare to eat'

- c. **ma-tayal**
NEUT-work
'work'

- c'. {paka-}tayal
pa-ka-tayal
CAU-KA-work
'cause to do something'

The comparison in (4.20) shows that the activity verbs in Amis can be further sub-categorized into two classes: the one with potential agentivity (i.e. the *mi-* and *-um-* classes in (4.20a-b)) and the one without (i.e. the *ma-* class in (4.20c)). The reason why the term “potential” is used here is because such agentivity is cancelable with the attachment of *paka-* and an expression such as *ca'ay ku patudaan* ‘unintentionally (or not the intention)’, while true agentivity marked by the UV marker *-en* cannot be cancelled by the two contexts. I will have more discussion of *-en* in a later section. Notice that not every *-um-* verb inherently contains the inducible agentivity. The agency-canceling reading has to be in a construable occasion. It is also possible to get the causative reading for *-um-* verbs if the agency-canceling reading is not so conceivable. For example, for the verb *t-um-angic* ‘cry’, the form {*paka-*}*tangic* is more likely to be interpreted as ‘cause to cry’ than ‘able to cry’, as the latter is used under very limited contexts.³⁰ By the same token, it is also possible for the {*paka-*} form of *ma-* activity verbs to get an

³⁰ In fact, forms like *pa-ka-palu* ‘cause to beat thoroughly’ are also attested in Amis, but they more often appear with *-en* (i.e. *pa-ka-palu-en*) than occurring alone. More discussion of *pa-ka-* can be found later.

agency-canceling reading if the patient-argument is also provided in a sentence, like (4.21) below. However, the causative reading of {*paka-*}*tayal* is the unmarked one.

- (4.21) {*Paka-*}*tayal* kaku t-u-ya demak.
 ABLT-work 1S.NOM DAT-CN-that thing
 ‘I am able to do that work.’ (Abilitative, AV)

A tentative conclusion that can be drawn here is that the activity verbs in Amis vary in degrees of agentivity. Those which take *mi-* by default have the highest degree of inducible agency, those which appear with *-um-* have the second highest, and those which tend to show up with *ma-* exhibit the lowest degree of agency. This observation conforms to the scale of transitivity postulated in Yan (1992), as mentioned Chapter 1.

The prefix *mi-* not only derives the activity verbs examined above; it can also derive a causative accomplishment verb when attached to a root denoting a state. For instance:

- (4.22)a. *Ma-patay* tu k-u-ni oner.
 NEUT-dead ASP NOM-CN snake.
 ‘The snake is dead.’
- a’. *Mi-patay* k-u matu’asay t-u oner
 AV-dead NOM-CN old.man DAT-CN snake
 ‘The old man is going to kill a snake.’
 ‘The old man is killing a snake.’
- b. *Ma-tunig* k-u ti’ti’.
 NEUT-soft NOM-CN meat
 ‘The meat is soft.’
- b’. *Mi-tunig* k-u kuwaq t-u ti’ti’.
 AV-soft NOM-CN papaya DAT-CN meat
 ‘The papaya will tenderize meat.’
- c. *Kuhcah* k-u hana.
 white NOM-CN flower
 ‘The flower is white.’
- c’. *Mi-kuhcah* k-u safun t-u pising isu.
 AV-white NOM-CN soap DAT-CN face 2S.GEN
 ‘The soap will whiten your face.’

As shown in (4.22), when prefixing to a root expressing a state (either attribute or transitory/result states), *mi-* creates a causative accomplishment verb (i.e. cause to become) in which an inanimate causer brings about the existence of the state. This seems to be a natural interpretation for such a combination, as an inanimate causer is incompatible with the motional/purposive part in *mi-*, and consequently only the activity component (i.e. **do'** (x, [(**pred'**)])) in the LS of *mi-* is retained in the derivation of *mi-* + state. For an activity to be able to co-occur with a state, the desired result will be the activity bringing about the state (hence, causative accomplishment). Moreover, as illustrated in (4.22), most *mi-* causative verbs have inanimate effectors, and this indicates that the actor argument of *mi-* verbs is not necessarily a true agent. In other words, the agentivity of *mi-* predicates is construed through the context, which includes the animacy of co-occurring NPs. As I will present later, the agentive accomplishment marker *-en*, which is also a UV marker, also derives causative accomplishments when attaching to state roots. However, unlike *mi-*, the causer in *-en* causative accomplishment verbs has to be human, which, as I will argue in this dissertation, has to be attributed to the agentivity pertaining to *-en*.

The following table summarizes the classes of verbs that have been identified based on the attachment of *mi-* and the derived interpretation:

Table 4.4 Verb Types Differentiated by *mi-*

Default marking ³¹	Verb types	<i>Mi-</i> form reading	Induced agency (the <i>paka-</i> test)	Unmarked temporal reading	Attachment with applicative marker <i>-an</i>
<i>mi-</i>	transitive activity, very productive	progressive, or motional/purposive	yes	motional/purposive progressive	yes
<i>-um-</i>	spontaneous and mostly activity verbs (e.g. eat, run, stand, walk,..), limited in number	motional/purposive	yes/no	progressive	no
<i>ma-</i>	intransitive activity (state-like) (e.g. work, sleep ...)	motional/purposive	yes/no	progressive	no
<i>ma-</i> or unaffixed	state	causative accomplishment	DNA	stative	no

These classes of *mi-* verbs will be even more distinctive based on their readings when they appear with the aspectual markers *ho* and *tu*. This issue will be discussed later.

4.2.2 The Meaning and Functions of the UV Marker *-En*

The UV suffix *-en* is also found with a variety of roots; it can derive a verb from roots denoting an object, an activity, and a state. Observe:

- (4.23)a. Nanum-en aku k-u-ra sayta.
 water-UV 1S.GEN NOM-CN-that soda
 ‘I will drink (up) that soda (for sure).’
- b. Palu-en n-i aki Ø-ci panay.
 beat-UV GEN-PPN Aki NOM-PPN Panay
 ‘Aki will beat Panay (for sure).’
- c. Fa’det-en aku k-u-ya dateng.
 hot-UV 1S.GEN NOM-CN-that vegetable
 ‘I will heat up that dish (for sure).’

As shown in the above examples, like the prefix *mi-* discussed in the previous section, *-en*

³¹ “Default marking” refers to the voice form that the verb appears with by default; this form usually is the form that one tends to get during the elicitation of the data. The default marking is crucially related to the types of the verb that they derive, and that is why this marking has been frequently employed as a verb class index by quite a few earlier studies (e.g. Yan 1992, Wu 1995, and Liu 1999, etc.).

also derives an activity-like predicate from a root denoting an object (e.g. *nanum* in (4.23a)), or from a root designating an activity (e.g. *palu* in (4.23b)). This suffix can also derive a causative accomplishment verb from a root designating a state (e.g. *fa'det* in (4.23c)). These similarities seem to suggest that *-en* and *mi-* share the same meaning and function but differ in voice.³²

However, there are some crucial differences between *mi-* and *-en* verbs. First, there is no “motion” component implied in the *-en* verbs; while there is often a distance implied between the actor and the patient arguments of the *mi-* verbs, the patient argument is either close to or right in front of the actor when *-en* verbs are used. This difference of implied distance is illustrated in their corresponding imperative sentences in (4.24):

- (4.24)a. Pi-patay t-u-ra 'oner!
 PI-dead DAT-CN-that snake
 ‘(Go to) kill that snake!’ (The snake is far away from the speaker and the addressee.) (Imperative, AV)
- b. Patay-en k-u-ra 'oner!
 dead-UV NOM-CN-that snake
 ‘Kill that snake (for sure)!’ (The snake is near the speaker and the addressee.)

Second, *-en* only occurs with a human actor (Tsukida 1993), but such a restriction is not found with *mi-* verbs. Compare:

- (4.25)a. Mi-tunig k-u kuwaq t-u ti'ti'.
 AV-soft NOM-CN papaya DAT-CN meat
 ‘The papaya will tenderize the meat.’
- b. Tunig-en aku/*n-u kuwaq k-u ti'ti' aca.
 soft-UV 1S.GEN/GEN-CN papaya NOM-CN meat a.little
 ‘I/*The papaya will tenderize the meat a little.’

³² This is the analysis proposed by Tsukida (2005b) as she treats *-en* as an inflectional GV (goal voice) morpheme for *mi-* and other actor voice verbs. A similar analysis is also found in Chen (1987), where *-en* is regarded as a passive marker.

As shown in (4.25), while *mi-* verbs are allowed to appear with an inanimate, non-human causer, *-en* verbs have to appear with a human causer. Third, while *mi-* is accompanied with a motional/purposive reading, *-en* emphasizes more on the intention of the actor.

This feature of *-en* has been pointed out in Tsukida (1993):

In conclusion, when an *-en* form expresses an event, it gives an impression that the probability for the event to occur had risen or is rising higher during the situation, and that it occurred or will occur at a particular point in time, at that very time at last...If that point in time comes after the time of utterance, the probability is already rising at the time of the utterance, and gives an impression that the event will positively occur in the immediate future...When the probability rises, a rise of the motivation on the side of the agent must accompany it. The agent does the action intentionally. (Tsukida 1993: 137-38)

In fact, while *mi-* verbs are allowed to co-occur with the expression ‘unintentionally; not the intention’, *-en* verbs are banned in such contexts. Examine:

- (4.26)a.

<u>Ca'ay</u>	k-u	<u>pataduan</u>	n-i	aki	mi-curah
NEG	NOM-CN	intention	GEN-PPN	Aki	AV-burn

t-u lumaq.
DAT-CN house
‘It is not Aki’s intention to burn the house.’
- b. *

<u>Ca'ay</u>	k-u	<u>pataduan</u>	n-i	aki	curah-en
NEG	NOM-CN	intention	GEN-PPN	Aki	burn-UV

k-u lumaq.³³
NOM-CN house

Also, when attached with {*paka-*}, *-en* verbs never get the abilitative reading. Compare the following examples with (4.20).³⁴

³³ Another possible explanation for this construction may be due to the voice restriction following the “unintentionally” expression. However, as discussed in Wu (1995), in a purposive construction with two predicates, the second predicate is allowed to appear in the UV *-en* form, which indicates a less tight linkage between the two predicates compared with the one with the second predicate as an AV form.

³⁴ The analysis of {*paka*} in (4.27) is not very clear to me at this moment. The reading of this form indicates that it seems to be a combination of the causative prefix *pa-* and the prefix *ka-*. However, the forms in (4.27) are frequently used in the imperative sentences in which there is no clear involvement of any causer. Although I tentatively gloss *pa-* as the causative prefix, this construction requires further research.

- (4.27)a. {paka-}palu-en
 pa-ka-palu-en
 CAU-KA-beat-UV
 ‘let someone be beaten severely’
 *‘able to beat somebody or happen to beat somebody’
- b. {paka-}nengneng-en
 pa-ka-nengneng-en
 CAU-KA-watch-UV
 ‘let someone be see watched carefully’
 *‘able to watch or happen to see’

Finally, when appearing with the incomplete aspectual marker *ho*, *-en* verbs often refer to the state that has not yet resulted (i.e. the anticipatory telic point) or obtain an iterative reading. *Mi-* verbs can either get the progressive reading or the anticipatory telic reading but not the iterative one. Consider:

- (4.28)a. Pa-ka-pi-nanum-**en** ho kaku, ta l-um-uwad.
 CAU-KA-PI-water-UV ASP 1S.NOM then set.off-UM
 ‘Let me yet drink some water, and then (we) will set off.’
- b. Ranam-**en** ho!
 breakfast-UV ASP
 ‘Eat the same thing for the breakfast again!’
- c. **Mi**-nanum ho Ø-ci panay t-u sayta.
 AV-water ASP NOM-PPN Panay DAT-CN soda
 ‘Panay is still drinking soda.’
 ‘Panay went to drink some soda first.’

I will have more discussion concerning the co-occurrence of different verb types with the aspectual marker *ho* later in this chapter.

Based on the above-discussed features, the logical structure is postulated for *-en* in

(4.29) and an example is given in (4.30) to illustrate the LS:

- (4.29) The Logical Structure of the UV Marker *-en*:
-en: DO (x, [**do**’ (x, [**pred**’ (x, y))])INGR/BECOME (**pred**’ (y))

- (4.30)a. Palu-en n-i aki Ø-ci panay
 beat-UV GEN-PPN Aki NOM-PPN Panay
 ‘Aki will beat Panay (for sure).’

b. DO (aki, [**do**’ (aki, [**beat**’ (aki, panay))]) ... BECOME (**beaten**’ (panay))

The logical structure stated in (4.29) captures the two essential features of *-en*: [+agentive] and [+telic]. When suffixed to an activity verb, it derives an agentive active accomplishment. The agentive component DO explains why this suffix can only appear with [+human] effector, and why it cannot appear with expressions such as “unintentionally” and the agency canceling prefix *paka-*. The accomplishment component is there because *-en* verbs always have a strong implicature of the completion of the action, and it accounts for why when the *-en* verbs appear with the aspectual marker *ho*, they never refer to the progressive aspect of an activity. The properties of accomplishment verbs will be further discussed later.

Recall that in reference to (4.23), I mentioned that *-en* can derive an agentive causative accomplishment from a state verb, just like the prefix *mi-*. The only difference is that while the causer added by *mi-* can be an inanimate one, the causer added by *-en* has to be human. This contrast was shown in (4.25). As a matter of fact, compared with the causative prefix *pa-*, *-en* is a more frequently attested causative morpheme for state predicates; some state predicates can only be causativized by *-en*, but not *pa-*. This property of triggering causation must be related to the agentivity carried by *-en*.

In addition to serving as UV marker with lexicalized agency, the form *-en* also performs a rather different function in the following examples:

- (4.31)a. Fa'det-**en** kaku t-u-ya nanum.
hot-EN2 1S.NOM DAT-CN-that water
'I feel that that water is very hot.'³⁵ (Neutral Voice)
- b. Karteng-**en** cingra (mi-tatuy) t-u flac.
heavy-EN2 3S.NOM NEUT-carry DAT-CN rice
'He feels that (the rice is) very heavy when (carrying) the rice.' (Neutral Voice)
- c. Ma-ulah-**en** cingra_i t-u nguhah nira,
AV-like-EN2 3S.NOM DAT-CN lover 3S.GEN
sa-pi-kadafu-an tu cingra_i.
InA-PI-marry-MOOD.AV ASP 3S.NOM
'She likes her lover very much, so (she) wants to marry (him).'
- d. Ma-kaker-**en** cingra_i t-u wawa nira,
AV-angry-EN2 3S.NOM DAT-CN child 3S.GEN
sa-pi-palu-an tu cingra_i.
InA-PI-beat-MOOD.AV ASP 3S.NOM
'He feels very angry with his child, (so) (he) wants to beat (him).'

Unlike the UV *-en* examples discussed earlier, the examples in (4.31) show that the verbs suffixed with *-en2* (glossed as *-EN2*) do not follow the UV case marking pattern (i.e. Genitive-Nominative). On the contrary, it seems that *-en2* does not have any voice marking function, as the verb affixed by *-en2* still retains its voice marker (e.g. *ma-* for *ma-ulah-en* in (4.31c)), and the case marking pattern is controlled by this voice marker (e.g. actor voice in (4.31c)). Notice that the verbs suffixed with *-en2* all receive a 'feel...' or 'judge...' interpretation, and the state or proposition that is felt or judged seems to be intensified or exceed a certain standard/limit that is assumed by the speaker. The over-the-limit reading is most likely to be found with one-place state verbs in (4.31a-b). For two-place psych-predicates exemplified in (4.31c-d), this suffix intensifies the emotions

³⁵ The speaker is not sure whether the water is hot or not; the statement is made when the speaker is looking at the water. Notice that, although this sentence and the one in (4.31a) seems to have two arguments, these two arguments do not belong to the same predicate, as we will see later in the decomposition. Therefore, it is analyzed as an intransitive sentence, and thus the voice pattern is labeled as neutral.

denoted by the verbs, and often such verbs are followed by an action triggered by that strong emotion. Such intensified reading is also implied in (4.31a-b).

The *-en2* construction displays the following three features. First, it is the argument bearing the feeling/judgment that is marked by the nominative case, not the one serving as the stimulus that triggers the feeling/judgement. As I have pointed out, this case marking pattern is different from the UV case marking pattern found with *-en1*. Compare an *-en1* verb in (4.32a) with an *-en2* verb of the same root in (4.32b), repeated from (4.31c):

- (4.32)a. Fa'det-**en** aku k-u-ya dateng
hot-UV 1S.GEN NOM-CN-that vegetable
'I will heat up that dish (for sure).'
- b. Fa'det-**en** kaku t-u-ya nanum.
hot-EN2 1S.NOM DAT-CN-that water
'I feel that that water is very hot.'³⁶ (Neutral Voice)

Second, the AV voice prefix *ma-* does not co-occur with *-en1*, the UV marker, but it can show up with *-en2*. Compare (4.33a) with (4.33b), repeated from (4.31c). In (4.33a), the combination of *ma-* + *-en1* is not allowed:

- (4.33)a. Ulah-**en**/**ma-ulah-en* namu k-u ina namu.³⁷
like-UV/AV-like-UV 2P.GEN NOM-CN mother 2P.GEN
'You have to love your mothers.'
- b. *Ma-ulah-en* cingra_i t-u nguhah nira,
AV-like-EN2 3S.NOM DAT-CN lover 3S.GEN
- sa-pi-kadafu-an tu cingra_i.
InA-PI-marry-MOOD.AV ASP 3S.NOM
'She likes her lover very much, so (she) wants to marry (him).'

³⁶ The speaker is not sure whether the water is hot or not; the statement is made when the speaker is looking at the water. Notice that, although this sentence and the one in (4.31a) seems to have two arguments, these two arguments do not belong to the same predicate, as we will see later in the decomposition. Therefore, it is analyzed as an intransitive sentence, and thus the voice pattern is labeled as neutral.

³⁷ This example also shows that while *ma-ulah* behaves like a state verb, the unaffixed form does not.

Finally, due to the semantic incompatibility, *-en2* only attaches to roots or stems that carry a (non-result) state meaning; it is not found with roots or stems that carry an activity component, as illustrated in (4.34).

- (4.34)a. **mi-palu-en* (from *mi-palu* ‘(go to) beat’)
 b. **ma-palu-en* (from *ma-palu* ‘beat (UV)’)
 c. **ma-nanum-en* (from *ma-nanum* ‘drink (water) (UV)’)

Furthermore, as *-en2* carries a strong implicature of a state that is over a certain limit, it does not go with result state predicates very easily. When *-en2* appears with a result state predicate, specific contexts sometimes are required. This presents another piece of evidence for the distinction between result and non-result states. Examine:

- (4.35)a. ??*Ma-icang-en* *kaku* *t-u-ra* *rikor*.
 NEUT-dry-EN2 1S.NOM DAT-CN-that clothes
 ‘I feel the clothes are too dry.’
- b. *Ma-icang-en* *kaku* *t-u-ra* *kudasing*.
 NEUT-dry-EN2 1S.NOM DAT-CN-that peanut
 ‘I feel that those peanuts are over sun-dried (and become not tasty.)’

The comparison illustrated in (4.35) shows that *-en2* seems to be preferred to go with result states in a context where it is easier to construe a certain limit or a desired stage that is imposed on the result state, and this limit or stage does not coincide with the natural telic point of the result state. For example, in (4.35b), it is natural to imagine there is a desired degree of dryness when people sundry the peanuts, but it is not quite natural to impose such a desired stage for sundrying clothes.

As exemplified in (4.34) and (4.35), the attachability of *-en2* helps distinguish three classes of *ma-* verbs: non-result state, result state verbs and the UV *ma-* forms (the active/causative accomplishment). The classes differentiated by *-en1* (or UV *-en*) and *-en2* are summarized in Table 4.5:

Table 4.5 Verb Types Differentiated by *-en1* and *-en2*

Default Marking	Verb Types	<i>-en1</i> Reading	<i>-en2</i> Reading	Examples
<i>ma-</i>	(intransitive) activity	agentive active accomplishment	DNA	<i>ma-tayal</i> ‘work’ → <i>tayal-en</i> ‘do something (for sure)’
<i>mi-</i>	(motional/purposive) activity	agentive active accomplishment	DNA	<i>mi-palu</i> ‘beat’ → <i>palu-en</i> ‘beat someone (for sure)’
<i>ma-</i>	active or causative accomplishment	agentive causative accomplishment	DNA	<i>ma-patay</i> ‘become dead’ → <i>patay-en</i> ‘kill’
<i>ma-</i>	accomplishment or result state	agentive causative accomplishment	DNA* ³⁸	<i>ma-ruhem</i> ‘ripe’ → <i>ruhem-en</i> ‘ripen sth for sure’
<i>ma-</i> or unaffixed	state	agentive causative accomplishment	feel...	<i>ma-tunig</i> ‘soft’ → <i>tunig-en</i> ‘soften; tenderize’ <i>fa’det</i> ‘hot’ → <i>fa’det-en</i> ‘heat sth. up’ or ‘feel hot’

As we can see from the table, *-en1* (i.e. the UV agentive marker) helps distinguish two classes, activity and state, while *-en2* ‘feel; judge’ helps differentiate state verbs from non-state verbs, and it also helps sub-categorize the state verbs. As *-en1* has a higher frequency in occurrence, unless specified, the *-en* form discussed hereafter in this dissertation refers to *-en1*; that is, I will use *-en1* or *-en* interchangeably to refer to the same suffix.

4.2.3 The Meaning and Functions of the AV and UV Markers *Ma-s*

Unlike *mi-* and *-en*, it is rather difficult to pin down a unified meaning for *ma-*. For instance, in terms of voice-marking functions, we have seen in Chapter 3 that there at least two *ma-s* in the Amis voice system; one appears in the AV set and the other is a UV marker. In fact, there are more than two *ma-s* distinguished in Amis in terms of their derivational functions. For example, Yan (1992) proposes four classes of *ma-* verbs based on the argument structure and whether these *ma-* verbs can undergo possible derivation through the attachment of *mi-*.

The verbs marked by *ma-*, including the AV *ma-* and UV *ma-*, will be classified in

this section from a different perspective. To begin with, in terms of the temporal information, AV *ma-* verbs also have two readings: progressive and stative; the latter can be a result state, or an episodic/transient state. The progressive reading of *ma-* is found with roots that denote activities with low induced agency, as seen in the diagnostic test by the occurrence of {*paka-*} discussed in Section 4.2.1. These *ma-* activity verbs are exemplified below:

- (4.36)a. Ma-tayal Ø-ci sawmah.
 NEUT-work NOM-PPN Sawmah
 ‘Sawmah is at work.’ or ‘Sawmah is doing some job.’
- b. Ma-kerker Ø-ci panay.
 NEUT-shiver NOM-PPN Panay
 ‘Panay is shivering.’

As seen in (4.36), though both verbs get a progressive reading, they differ from each other in terms of volition. That is, presumably, *ma-tayal* ‘work’ is volitional, while *ma-kerker* ‘shiver’ is involuntary. However, the picture is not that clear, as the {*paka-*} test shows that {*paka-*}*tayal* does not by default get the agency-canceling reading that is found in *mi-* and some *-um-* verbs, though it is possible to get such a reading in a marked context. One reason for the preferred interpretation of {*paka-*} as *pa-ka-* for *ma-* activity verbs might be due to the fact that the *ma-* prefix of these verbs is conjugated into *ka-* in many syntactic constructions, such as the *ca’ay* negative construction (e.g. *ca’ay ka-tayal* ‘not work’....) and imperative sentences (e.g. *ka-tayal* ‘Work!’). We have seen this conjugation pattern in Chapter 3. In other words, the interpretation of {*paka-*}*tayal* as *pa-ka-tayal* is possibly due to an analogy of this conjugation pattern. However, comparably speaking, *ma-* activity verbs do contain a much lower degree of agentivity than their *mi-* or *-um-* counterparts, and *ma-* is found in many verbs denoting involuntary actions such

³⁸ “*” indicates that some complexities are involved.

as *ma-kerker* ‘shiver’ in (4.36) and *ma-tukatuk* ‘dose off’. Tentatively, the logical structure for *ma-* activity verbs (i.e. *ma-I*) is represented as (4.37):

(4.37) The Logical Structure of *ma-I* (*ma-* activity verbs)³⁹
ma-I: **do’** (x, [**pred’** (x, (y))])

In addition to activities, the AV *ma-* is also frequently found with state predicates.

Nevertheless, there are finer distinctions among these *ma-* state predicates. Consider the following two sets of examples:

- (4.38)a. Ma-adah tu kaku
 NEUT-recover ASP 1S.NOM
 ‘I have recovered (from illness).’
 ‘I have started to recover (from illness).’
- b. Ma-ruhem tu k-u pawli.
 NEUT-ripe ASP NOM-CN banana
 ‘The banana is ripe (just now).’
- c. Ma-fasaw tu k-u nanum.
 NEUT-cool.down ASP NOM-CN water
 ‘The water is cooled down (just now).’
- d. Ma-palal cingra.
 NEUT-wake.up 3S.NOM
 ‘He woke up.’
- (4.39)a. Ma-laluk Ø-ci sawmah.
 NEUT-diligent NOM-PPN Sawmah
 ‘Sawmah is diligent.’
- b. Ma-radiw k-u-ra kaying.
 NEUT-song NOM-CN-that young.lady
 ‘That young lady is good at singing.’
- c. Ma-ulah Ø-ci sawmah (i) ci panay-an.
 AV-like NOM-PPN Sawmah PREP PPN Panay-DAT
 ‘Sawmah likes Panay.’

There are some differences between the two groups of *ma-* state verbs in (4.38) and

³⁹ The determination of the voice pattern for each logical structure is crucially related to the case assignment rules in Amis, which will be discussed in Chapter 5.

(4.39), though they all follow the same voice pattern. Crucially, the verbs in (4.38) are interpreted as result states and some may imply a process before reaching the state, while those in (4.39) are rendered more like plain states. Such a semantic difference is also reflected in their syntactic structures. To begin with, the roots of the result state predicates in (4.38) are coded differently in the ideophone-forming construction *X sa* from the roots of the plain states in (4.39); the former cannot appear in the *sa-Root sa* frame, in which the latter can occur. Secondly, the predicates in (4.38) tend to appear with the perfective/inchoative aspectual marker *tu*, but such a tendency is not found with the verbs in (4.39). Furthermore, it is difficult to elicit the verbs in (4.38) with the incomplete aspectual marker *ho* in (affirmative) sentences, but there is no such difficulty for the verbs in (4.39). Compare:

- (4.40)a. ??Ma-adah ho kaku
 NEUT-recovered ASP 1S.NOM
 ‘I am still recovering.’
- b. *Ma-ruhum ho k-u-ni a pawli.
 NEUT-ripe ASP NOM-CN-this LNK banana
 ‘The banana is still ripe.’
- c. Ma-laluk ho cingra.
 NEUT-diligent ASP 3S.NOM
 ‘He is still diligent.’
- d. Ma-ulah ho Ø-ci sawmah (i) ci panay-an.
 AV-like ASP NOM-PPN Sawmah PREP PPN Panay-DAT
 ‘Sawmah still likes Panay.’

As seen in (4.40), when appearing with the incomplete aspect marker *ho*, verbs like *ma-laluk* ‘diligent’ and *ma-ulah* ‘like’ are interpreted with an on-going status, while predicates like *ma-adah* ‘recover’ and *ma-ruhem* ‘ripe’ cannot readily appear in such an

environment.⁴⁰ The verbs in (4.38) all have an inherent ending point in the events they depict. It is quite likely that their telic feature contributes to the difficulty of their co-occurrence with the incomplete aspect marker *ho*. Such a telic feature is not found in the non-result state verbs in (4.39). The following two logical structures are postulated to capture the distinction between the two classes of state predicates:

- (4.41)a. The Logical Structure of *ma-2* (*ma-* result state verbs)
ma-2: (INGR/BECOME) (**pred'** (x,(y)))
- b. The Logical Structure *ma-3* (*ma-* transient or plain state verbs)
ma-3: **pred'** (x, (y))

The LS in (4.41a) indicates the telic property of the verb, while the LS in (4.41b) is used to represent state predicates that do not have a telic feature, or where the feature is irrelevant to the discussion of its semantics. Notice that the INGR and BECOME part are placed in parentheses in the LS of the result state verbs in (4.41a) as the process part in these verbs is not usually referred to in the sentences, unless it is highlighted by the aspectual markers *tu* or *ho* in specific contexts. That is, the above-mentioned features of the result state verbs seem to be more relevant to the telic point inherent in these predicates but not their punctual/non-punctual features. Even though a process before reaching an ending point is entailed in the semantics of verbs like *ma-adah* 'recoverd', it is difficult to refer to that process; the unmarked reading of the *ma-* telic verbs is always the result state, and the aspectual marker *tu* is preferred if one wants to refer to the inception of the result state (i.e. change of state). One of the possible ways to test whether or not there is a process is using the co-occurrence of pace predicates such as

⁴⁰ This sentence sounds more natural if it is an interrogative sentence:
(4.40) a' Ma-adah ho cingra?
NEUT-recovered ASP 3S.NOM
'Is he still recovering?'

ma-usuy ‘slow’ and *harakat* ‘fast’. This test is illustrated in the following sentences:

- (4.42)a. Harakat/Ma-usuy ma-adah k-u adada.
fast/NEUT-slow NEUT-recovered NOM-CN ailment
‘The ailment recovered fast/slowly.’
- b. Harakat/Ma-usuy ma-likat k-u-ra tingki.
fast/NEUT-slow NEUT-light NOM-CN-that lamp
‘The lamp became lit up fast/slowly.’

The pace predicates in (4.42) show that there is a process before reaching the result states denoted by the two *ma-* verbs. More discussion of using pace words as a diagnostic test is provided in Section 4.3. The distinctions between *ma-* result state verbs and *ma-* non-result state verbs can also be observed in the sentences containing *-en2*, which was discussed in the previous section. Usually, *ma-* result state verbs are not allowed to appear with *-en2* unless a specific context is provided. The examples are given below:

- (4.43)a. ??Ma-ruhem-en cingra t-u-ya pawli.⁴¹
NEUT-ripe-EN2 1S.NOM DAT-CN-that banana
‘He feels that the banana is too ripe.’
- b. ??Ma-icang-en kaku t-u-ra rikor.
NEUT-dry-EN2 1S.NOM DAT-CN-that clothes
‘I feel that the clothes are too dry.’
- b’. Ma-icang-en kaku t-u-ra kudasing.
NEUT-dry-EN2 1S.NOM DAT-CN-that peanut
‘I feel that those peanuts are over dried.’
- c. Ma-’efcang-en kaku t-u-ra a’ol.
NEUT-stiff-EN2 1S.NOM DAT-CN-that bamboo
‘I feel that the bamboo is too stiff.’ (The bamboo is not grated thin enough.)

As seen in (4.43), the result state verbs do not readily take *-en2* due to the semantic nature of this suffix. A possible reason for the different compatibility with *-en2* between result states and non-result states might be because the desired state or limit imposed by *-en2* is less compatible with predicates that have an inherent telic point. Therefore, it is

more difficult to construe the combination of *-en2* with a result state, unless, first, there is a special context like those exemplified in (4.43), or, second, the derived predicate is rendered as the duration of the result state, as illustrated in (4.44):

- (4.44)a. Ma-palal-en ho kaku t-u-ya wawa.
 NEUT-wake.up-EN2 ASP 1S.NOM DAT-CN-that child.
 ‘I feel that the child is still awake.’
- b. Ma-adah-en tu kaku.
 NEUT-recoverd-EN2 ASP 1S.NOM
 ‘I feel that I am recovered now.’

Notice that although the combination of telic verbs and *-en2* is possible in (4.44), the over-the-limit reading of the result state is no longer obtained.⁴²

The structure of *-en2* also leads us to the distinction between the *ma-* verbs discussed so far and the *ma-* verbs in (4.45):

- (4.45)a. Ma-palu n-i sawmah Ø-ci mayaw.
 UV-beat GEN-PPN Sawmah NOM-PPN Mayaw
 ‘Mayaw was beaten by Sawmah.’
- b. Ma-ka'en n-u wawa t-u-ra futing.
 UV-eat GEN-CN child DAT-CN-that fish
 ‘That fish was eaten by the kid.’

The predicates in (4.45) are not allowed to appear with *-en2*, as already shown in (4.34). The *ma-* here often prefixes to a verb with potential agency (i.e. verbs appearing with *mi-* or *-um-* by default) and generates an unmarked interpretation of the completion of an action. Notice that this *ma-* also serves as a UV marker, and the whole sentence is often rendered like a passive sentence in English. The *ma-* verbs in (4.45) seem to also possess a kind of telic point, as they indicate now the action is completed. However, unlike the

⁴¹ The acceptability of (4.43a-b) varies among speakers.

⁴² As remarked by the informant, these two sentences are used to argue against someone’s otherwise assumption.

result state verbs in (4.43), the verbs in (4.45) receive an iterative reading when appearing with *ho*. The relevant examples are provided in (4.46):

- (4.46)a. Ma-palu **heca/ho** n-u-ya mama k-u wawa.
 UV-beat again/ASP GEN-CN-that father NOM-CN child
 ‘The child was beaten again by that father.’
- b. Ma-nanum **heca/??ho** n-i kacaw k-u sayta
 UV-water again/again GEN-PPN Kacaw NOM-CN soda
 aku.
 1S.GEN
 ‘My soda was drunk by Kacaw again.’
- c. Ma-nengneng **ho** aku.
 UV-watch ASP 1S.GEN
 ‘I have just watched (it), and now you want me to watch (it) again.’

As seen in (4.46), the *ma-* verbs are interpreted with an iterative sense when followed by *ho*. Notice that such a co-occurrence, similar to the combination of *ma-* result state verbs and *ho*, is not very common; the preferable choice is the adverb *heca* ‘again’ instead of *ho*.

The LS of this set of *ma-* verbs is given in (4.47), which indicates that *ma-* adds a telic point to an activity verb or verbs containing a **do’** operator:

- (4.47) The Logical Structure of *ma-4* (*ma-* active/causative accomplishment)
ma-4:**do’**(x, [**pred’**(x, y)]) ... INGR/BECOME (**pred’**(y))

There are two parts in this logical structure, an activity and an accomplishment. However, unlike the active accomplishment predicates discussed in RRG (e.g. the consumption verbs and the creation verbs discussed in VVLP (1997:111)), there is no “&” between the two parts in the logical structure. The representation here leaves the possibility that the activity can be a causing event that brings about the accomplishment part. An example like this is *ma-patay* ‘kill’, illustrated in (4.48d). If there is no causing event, then the LS

of this type of *ma-* verb is just like that of an active accomplishment. Hence, the *ma-* verb here can either be an active accomplishment or a causative accomplishment. The activity part also explains why this type of *ma-* verb is (sometimes marginally) allowed to appear with *ho*, which goes well with an activity verb but not a result state predicate. Notice that this logical structure is similar to that of *-en* in (4.30); the only difference lies in the agentivity part carried by *-en*. Such agentivity is not found with *ma-* verbs. It is this agentivity that possibly contributes to the default future reading *-en* verbs usually get, and also the anticipatory telic point (similar to English ‘yet’) reading when *-en* verbs are followed by *ho*, in addition to the iterative reading. See the examples in (4.29).

So far the following four distinctions among *ma-* verbs have been made: activity, result state, non-result state, and active/causative accomplishment. Except for the *ma-* activity verbs, it is sometimes difficult to tell which LS a particular *ma-* verb has, as the same root may appear with more than one *ma-*. Hence, there might be categorical ambiguity for a *ma-* verb if no contextual information is provided. For example:

(4.48)a. Ma-radiw k-u-ra kaying.
 Ma-song NOM-CN-that young.lady
 ‘That young lady is good at singing.’

a.’ **good.at.singing**’ (kaying)

b. Ma-radiw n-i aki k-u radiw aku
 UV-song GEN-PPN Aki NOM-CN song 1S.GEN
 ‘My song was sung by Aki.’

b.’ **do**’ (aki, [**sing**’ (aki, radiw aku)]) & BECOME (**sung**’ (radiw aku))

c. Ma-patay k-u-ra fafuy.⁴³
 NEUT-dead NOM-CN-that pig
 ‘That pig is dead.’
 ‘That pig is killed.’

⁴³ A more natural interpretation of (4.49c) is the first translation as the verb for “killing pigs” is *mi-pacuk* ‘slaughter (pigs)’; *mi-patay* is not usually used in such a context.

c'. BECOME **dead'** (fafuy)

d. Ma-patay n-i aki k-u-ra fafuy.
 UV-dead GEN-PPN Aki NOM-CN-that pig
 'That pig was killed by Aki.'

d.' **do'** (aki, [**kill'** (aki, fafuy)]) CAUSE BECOME (**dead'** (fafuy))

As demonstrated in (4.48), to disambiguate the verb types of *ma-radiw* and *ma-patay*, proper contextual information has to be provided, or one can perform the tests such *-en2* and *ho* to distinguish the verb types. Table 4.6 summarizes the properties of the four classes of *ma-* verbs examined above:

Table 4.6 Verb Types Differentiated by AV or Neutral and UV *ma-*s

Default marking	<i>ma-</i> form types	<i>ma-</i> form TAM reading	Induce agency (the <i>paka-</i> test)	Co-occurrence with <i>ho</i>	Affixation with <i>-en2</i>	Examples
<i>ma-</i>	(intransitive) activity	progressive	no*	on-going or anticipatory telic point	not allowed	<i>ma-tayal</i> 'work'
<i>ma-</i>	result state	change of state or result state	DNA	no	specific context required	<i>ma-ruhem</i> 'ripe'
<i>ma-</i>	plain state	state	DNA	on-going	yes	<i>ma-laluk</i> 'diligent'
<i>mi-</i>	active/causative accomplishment (UV)	completion of an activity	yes	iterative	not allowed	<i>ma-palu</i> 'get beaten'

As implied in the verbs in Table 4.6, *ma-* verbs, regardless of their voice marking, are relatively more stative, compared with *mi-*, *-um-*, and *-en* verb. However, as mentioned in the very beginning, a large proportion of the state predicates can occur by themselves without any affixation (i.e. the unaffixed predicates). The *ma-* counterparts of these verbs may have different readings. Consider the examples in (4.49):

(4.49)a. Lipahak Ø-ci sawmah.
 happy NOM-PPN Sawmah
 'Sawmah is happy.'

a.' **be'** (sawmah [**happy'**])

b. Ma-lipahak Ø-ci sawmah.
 NEUT-happy NOM-PPN Sawmah
 ‘Sawmah is very happy (because of remembering a certain event).’

b.’ **happy**’ (sawmah)

c. Kuhting k-u-ni qayam.
 black NOM-CN-this chicken
 ‘This chicken is black.’

c’. **be**’ (qayam [**black**’])

d. Ma-kuhting k-u pising nira.
 NEUT-black NOM-CN face 3S.GEN
 ‘His face became black.’

d’. BECOME **black**’ (pising nira)

e. Fa’edet k-u-ni a dateng.
 hot NOM-CN-this LNK vegetable
 ‘The dish is hot.’

e’. **be**’ (dateng [**hot**’])

f. Ma-fa’edet k-u-ni a dateng.
 UV-hot NOM-CN-this LNK vegetable
 ‘This dish was heated.’

f’. [**do**’ (Ø, [**heat**’ (Ø, dateng)))] CAUSE [BECOME **hot**’ (dateng)]

The examples in (4.49) display some possible *ma*- counterparts of unaffixed state predicates. We can see that the derived *ma*- predicates can be a transient state (e.g. (4.49b)), a result state (e.g. (4.49d)), or a causative accomplishment (e.g. (4.49f)). Notice that the distinction between the result states and the causative accomplishments is not very clear as the result state might be brought into existence by a causing event, which maybe implicit (e.g. (4.49d)) or explicit (e.g. (4.49f)).

The contrast between unaffixed states and their *ma*- versions in (4.9) is similar to the following Tagalog examples mentioned in VV (2005:48, original gloss):

(4.50)a. Puti ang damit niya.
 white NOM clothes her
 ‘Her clothes are white.’

a’. **be’** (damit niya, [**white’**])

b. Ma-puti ang damit niya.
 white NOM clothes her
 ‘Her clothes are clean.’

b’. **white’** (damit niya)

The *ma-* form in (4.50b) indicates that the whiteness of the clothes is not an inherent property as compared with the unaffixed form in (4.50a). The difference is captured by their respective logical structures in (4.50b’) and (4.50a’).

Based on the discussion so far, we can see that *ma-* has multiple functions in the verbal derivations of Amis, in addition to its multiple functions in the voice system. In fact, the semantic chaos of this prefix is not something unusual. As reviewed in Chapter 1, Yan (1992) identifies four *ma-* classes in his work. Tsukida (2005b) also proposes four *ma-* classes that are differentiated by the features [\pm state], [+affected], and [\pm control]. As mentioned in a study by Evans and Ross (2001) about the history of Proto-Oceanic **ma-*, the prefix *ma-* might have two distinct functions in Proto-Malayo-Polynesian (PMP) languages based on their investigation of some Malayo-Polynesian languages such as Tagalog, Cebuano, *Tukang Besi*, etc. The first function is roughly rendered as “become + Root”, meaning “get into the state denoted by, or associated with the root”, while the second one means “have + root”, meaning “be characterized by what the root denoted”. A similar proposal for *ma-* in Tagalog has also been made and extensively discussed in Himmelmann (in press), in which many pieces of morphosyntactic evidence are provided to show the distinctions between the two types of *ma-* in Tagalog. In the Amis data

examined above, similar correspondents of the two PMP forms can be found. The “become + root” is similar to the result state *ma-* verbs, while the “have + root” is similar to the plain transient state *ma-* verbs, which can be conceived as derivations from *ma-* plus a root denoting an entity or quality (e.g. *ma-kapah* ‘young’ > *ma-* + *kapah* ‘youth’ and *ma-radiw* ‘good at singing’ > *ma-* + *radiw* ‘song’). The “have” meaning is also found in the derivation of *ma-* activity verbs, as we will see later in the discussion.

4.2.4 Interim Summary

In this section, I have tried to classify Amis verbs based on their co-occurrence with three voice markers: *mi-*, *ma-*, and *-en* and propose a decompositional analysis for the voice markers. The analysis is summarized in Table 4.7:

Table 4.7 The Logical Structures of The Voice Affixes

Affix	Voice ⁴⁴	Logical Structures
<i>mi-</i>	AV	(do' (x, [go' (x)]) & INGR be-at' (z, x)) PURP) do' (x, [pred' (x, y)]) (<i>motional/purposive</i>) <i>activity</i>)
<i>-en</i> (<i>-en1</i>)	UV	DO (x, [do' (x, [pred' (x, y)])]) ...BECOME (pred' (y)) (<i>agentive active/causative accomplishment</i>)
<i>ma-1</i>	AV or NEUT	do' (x, [pred' (x, (y))]) (<i>activity</i>)
<i>ma-2</i>	AV or NEUT	INGR/BECOME (pred' (x, (y))) (<i>result state</i>)
<i>ma-3</i>	UV	do' (x, [pred' (x, y)]) ...BECOME (pred' (y)) (<i>active/causative accomplishment</i>)
<i>ma-4</i>	AV or NEUT	pred' (x, (y)) (<i>transient/plain state</i>)

The decompositional analysis proposed here can help us better understand the behavioral properties of these markers in the Amis grammar. For example, the specification of the agency component in *-en* explains the reason why it only goes with human (or personified) actor, while the lack of such specified agency in *mi-* accounts for why the actor is not necessarily human or even animate. In addition, such an analysis also better describes the derivations among these verb classes regarding why and how the derived

⁴⁴ As the main concern of this chapter is the derivational functions of the voice affixes, unless necessary, the voice functions of these markers will not be specified in the discussion, except for *ma-*. The voice marking functions of *ma-* requires specification as this affix appears in both the AV set and the UV set.

meaning is obtained. For instance, the logical structure of *mi-* tells us why it can derive a motional/purposive activity as well as a causative predicate from different types of roots.

Such a decompositional analysis also has an important consequence. That is, with the features specified in the logical structures, they can affect the original classes of the roots. Such influence raises some complexity regarding diagnosing the Aktionsart classes of the derived predicates as these predicates are composed of more than one logical structure, and each of the composed logical structures may influence the Aktionsart type of the derived verbs. More exploration of this point is given in Section 4.3.

A preliminary verb classification based on the interaction of the roots and the voice affixes is summarized in Table 4.8:

Table 4.8 Summary of Verb Classes Differentiated by *mi-*, *ma-s*, and *-enI*

Default Marking	Verb Types	Unmarked TAM Reading	<i>mi-</i> form Reading	<i>ma-</i> Form Reading	<i>-enI</i> Form Reading	Induced Agency
<i>mi-</i>	potentially agentive activity	progressive motional/purposive	progressive motional/purposive	completion of an action	agentive active accomplishment	yes
<i>-um-</i>	potentially agentive activity	progressive	motional/purposive	completion of an action	agentive active accomplishment	yes*
<i>ma-1</i>	non-agentive intransitive activity	progressive	motional/purposive	progressive	agentive active accomplishment	no
<i>ma-2</i>	result state	result state	causative accomplishment or achievement	result state	agentive causative accomplishment	DNA
<i>ma-3</i>	plain state	stative	causative accomplishment	transient or plain state	agentive causative accomplishment	DNA
<i>ma-4</i>	active/causative accomplishment	perfective	activity or causative accomplishment	completion of an action	agentive active accomplishment	yes*

4.3 The Aktionsart Tests and Verb Classes

Based on the structures of the ideophone-forming construction *Xsa* and the interaction with the voice affixes, at least four verb classes have been identified in Amis, namely activity, achievement, accomplishment, and state. In this section, these classes will be examined with the RRG-based Aktionsart tests and two language-specific tests

via the co-occurrence of aspectual markers *tu* and *ho*. These tests are summarized in Table 4.9 and a detailed discussion is provided following the table.

Table 4.9 Tests for Amis Aktionsart Classes⁴⁵

Criterion	States	Activities	Accomp	Achieve	Seml	Active Accomp
1. Occurs with <i>X ccay tu tatukain</i> “for an hour”	Yes*	Yes	irrelevant*	No	Yes*	irrelevant*
2. Occurs with <i>X i ccay tatukian</i> “in an hour”	No	No	Yes	No*	No	Yes
3. Occurs with adverbs like <i>harakat</i> “quickly”, <i>rara saan</i> “slowly”, etc.	No	Yes	Yes	No*	No*	Yes
4. Occurs with <i>tu</i>	change of state	perfective-ness or inception of activity	inception of activity or result state	result state	inception of activity	completion of the activity
5. Occurs with <i>ho</i>	continuing state	anticipatory telic point or progressive	anticipatory telic point or DNA (ma-)	iterative	anticipatory telic point or iterative*	iterative
6. The Reading of <i>X sa</i>	on-going state	on-going activity	result state	iterative	iterative	irrelevant

Tests 1 to 3 in the table are based on the RRG framework, which were originally proposed in Dowty (1979). Tests 4 to 6 are language specific tests in Amis, including the interaction between verb classes and two aspectual markers, and the reading of *X sa* construction discussed in the beginning of this chapter. Before the discussion of the

⁴⁵ Some of the tests originally proposed in RRG have been neglected here for language-specific reasons. For example, as there is no marker for progressive in Amis, strictly speaking, there is no way to perform the test of the occurrence of progressive aspect for this language. Nevertheless, as seen later, the test of using the “incomplete” aspect marker *ho* can partially serve as the progressive test. By the same token, I am not sure if there is a corresponding construction for the stative modifier in Amis, and therefore, I leave out the test of whether a derived predicate can serve as a stative modifier in Amis. Finally, as expressions such “vigorously” and “actively” are difficult to elicit in this language, the test of using such expressions is also excluded in the table.

Aktionsart tests, there are a few comments I would like to make. First, it is not easy to run some of the tests in Amis, and hence, speakers might have different judgments regarding the same sentences. The tests with the “*for + time*” and “*in + time*” are two such examples. As it is difficult to find the corresponding expressions of the two time phrases in Amis, speakers sometimes encounter difficulties in providing the data when the tests were performed. Second, as the predicate in Amis is almost always composed of a voice affix and a root form, the Aktionsart type may be a combination of both, and thus the test result might also be affected. In spite of these two difficulties, in general, the lexical aspect features can still be diagnosed by the application of the tests.

Let us first discuss the *for*-test. As predicted, it works well with activity verbs:

- (4.51)a. Ccay tu⁴⁶ (a) tatukian kaku mi-futing.
 one ASP LNK hour 1S.NOM AV-fish
 ‘I have been fishing for an hour.’
- b. Ccay tu (a) tatukian kaku c-um-ikay.⁴⁷
 one ASP LNK hour 1S.NOM run<NEUT>
 ‘I have been running for an hour.’

State verbs can also show up with this time expression:

- (4.52)a. Ccay tu (a) mihcaan ma-su’su’ cingra.
 one ASP LNK year NEUT-fat 3S.NOM
 ‘He has been fat for a year.’

⁴⁶ The aspectual marker *tu* has nothing to do the verbs that undergo the test; it is part of the expression of *for + time*, meaning “it has been + time”.

⁴⁷ Note that this construction does not work for every activity verb. For example, *mi-’epah* ‘drink alcohol; go to drink alcohol’, an apparent activity verb, cannot appear in such a context. However, a more commonly used paraphrase of this verb is allowed. Consider:

- (4.51)b. *Ccay tu a tatukian kaku *mi-’epah
 one ASP LNK hour 1S.NOM AV-wine
 ‘I have been fishing/dig a hole/drinking wine for an hour.’
- c. ccay tu a tatukian kaku k-um-a’en t-u ’epah
 one ASP LNK hour 1S.NOM eat<AV> DAT-CN wine
 ‘I have been drinking wine for an hour.’

I suspect that the inappropriateness of (4.51b) might be due to the rare occurrence of the verb *mi-’epah* rather than the semantics of the verb.

incompatibility between the motional/purposive reading and an inanimate effector (i.e. *tingki* ‘lamp’):

(4.54)a. Ccay tu tatukian mi-tepoc cingra
 one ASP hour AV-chop.down.at.once 3S.NOM

t-u-ra ’aol.
 DAT-CN-that bamboo.
 ‘He has been chopping down those bamboos/*that bamboo for an hour.’
 ‘He has gone to chop down those bamboos for an hour.’

b. Ccay tu a tuki mi-sa-piya-piyat/*ma-piyat
 one ASP LNK hour AV-SA-RED-flash/NEUT-flash

k-u-ra tingki.
 NOM-CN-that light
 ‘The lamp has been flashing for an hour.’

Contrary to the result of the *for*-test, activities cannot appear with *in+time*. Observe:

(4.55)a. *Ccay a tatukian ma-ranam kaku.
 one LNK hour NEUT-breakfast 1S.NOM
 ‘I have breakfast in an hour.’

b. *Pangkyu tatukian mi-nengneng kaku t-u-ni
 half hour AV-see 1S.NOM NOM-CN-this

cudad.
 book
 ‘I read this book in half an hour.’

c. Pangkyu tatukian repun-en aku mi-nengneng
 half hour finish-UV 1S.GEN AV-watch

k-u-ni cudad.
 NOM-CN-this book
 ‘I will finish reading this book in half an hour.’

d. Pangkyu tatukian ma-repun tu aku mi-nengneng
 half hour UV-finish ASP 1S.GEN AV-watch

k-u-ni cudad.
 NOM-CN-this book
 ‘I finished reading this book in half an hour.’

e. Pangkyu tatukian ma-nengneng tu n-i sawmah
 half hour UV-watch ASP GEN-PPN Sawmah

k-u-ni cudad.
 NOM-CN-this book
 ‘Sawmah read this book in half an hour.’
 ??‘Sawmah read through this book in half an hour.’

f. ??Pangkyu tatukian nengneng-en tu n-i sawmah
 half hour watch-UV ASP GEN-PPN Sawmah

k-u-ni cudad.
 NOM-CN-this book
 ‘Sawmah will read this book in half an hour.’
 *‘Sawmah will read through that book in half an hour.’

As shown in (4.55a) and (4.55b), a plain activity verb cannot co-occur with the phrase *in + time*; it has to appear with another verb that signals the termination of the activity such as *repun-en* ‘finish (for sure)’ in (4.55c) or *ma-repun* ‘finish (UV)’ in (4.55d). Notice that the active accomplishment version of the same verb (i.e. *ma-nengneng* and *nengneng-en* in (4.55e-f)) can appear with the *in + time* phrase. However, these two sentences only express that the activity of reading happened or will happen in that period of time; the completion of the reading is not indicated.⁴⁸

State verbs may appear with *in + time*, but the interpretation is not about the termination of the state but rather a comparison or a contrast with another time span:

(4.56) Ccay mihcaan ma-ulah Ø-ci dongi ci aki-an.
 one year AV-like NOM-PPN Dongi NOM Aki-DAT
 *‘Dongi finished loving Aki in one year.’
 ‘In one year, Dongi loved Aki. (In another year, she loved others).’

(Causative) accomplishment verbs can appear with *in + time*. However, the voice form of the verb seems to affect the acceptability of such examples. Consider:

⁴⁸ Notice that speakers seem to prefer *ma-nengneng* to *nengneng-en* in this context. I have no good explanation here.

- (4.57)a. Ccay a tatukian mi-pitek Ø-ci aki
 one LNK hour AV-break NOM-PPN Aki
- t-u-ra a'ol.
 DAT-CN-that bamboo.
 'Aki is going to break that bamboo and the bamboo will become broken in an hour.'
- b. Ccay a tatukian pitek-en n-i aki
 one LNK hour break-UV GEN-PPN Aki
- k-u-ra a'ol.
 NOM-CN-that bamboo
 'Aki will break that bamboo and the bamboo will become broken in an hour.'
- c. Ccay a tatukian ma-pitek n-i aki
 one LNK hour UV-break GEN-PPN Aki
- t-u-ra a'ol.
 NOM-CN-that bamboo
 'Aki broke that bamboo in an hour.'
- d. Ccay a tatukian ma-palal/palal-en n-i
 one LNK hour UV-wake.up/wake.up-UV GEN-PPN
- aki Ø-ci panay.
 Aki NOM-PPN Panay
 'Aki woke Panay up in an hour.' (the reading for *ma-palal*)
 'Aki will wake up Panay and she will be woken up in an hour.' (the reading for *palal-en*)
- e. *Ccay a takukian mi-palal Ø-ci aki ci
 one LNK hour AV-wake.up NOM-PPN Aki PPN
- panay-an.
 Panay-DAT
 'Aki is going to wake Panay up and finish waking her up in a hour.'
- f. Ccay a tatukian ma-fafaw k-u nanum.
 one LNK hour NEUT-cool.down NOM-CN water
- 'The water will cool down in an hour.'

As exemplified in (4.57), while the *mi-* form of the causative accomplishment verb *mi-pitek* ‘(go to) break something’ (derived from *ma-pitek* ‘become broken’)⁴⁹ can appear with *in + time*, *mi-palal* ‘(go to) wake up somebody’ (from *ma-palal* ‘wake up (naturally) or wake up someone (UV)’)⁵⁰ is not allowed; rather, it has to appear in its UV forms *ma-* or *-en*. It seems that the voice constructions also play a role regarding the telicity and punctuality of the verbs, as the UV versions of the (causative) achievement verbs (e.g. *ma-palal* ‘wake up someone (UV)’ or *palal-en* ‘wake up someone’) behave more like accomplishment verbs, which are then compatible with the *in+time* expression.⁵⁰

Punctual verbs such as achievement verbs (e.g. *ma-tepoc* ‘chop down at once’) and semelfactive verbs (e.g. *ma-piyat* ‘flash’) cannot co-occur with the *in + time* phrase.

Examples follow:

(4.58)a. *Ccay a tatukian ma-tepoc k-u-ra
 one LNK hour UV-chop.down.at.once NOM-CN-that
 kilang.
 tree
 ‘The tree was chopped down at once in an hour.’

b. *La-lumaq n-u ccay a tuki ma-piyat
 RED-house GEN-CN one LNK hour NEUT-flash
 k-u-ra tingki.
 NOM-CN-that lamp
 ‘The lamp flashed in an hour.’

As for the co-occurrence with adverbs test, the pace predicates such as *harakat* ‘fast’ and *ma-usuy* ‘slowly’ (or *rara saan* ‘slowly’) help distinguish the four major classes of

⁴⁹ The verb *mi-pitek* behaves like an accomplishment. However, I suspect that not every “breaking” verb behaves like this. For example, *ma-peleng* ‘broken (for vase or glass)’ behaves more like an achievement verb, as exemplified in (4.59e).

⁵⁰ There may be finer distinctions between these accomplishment verbs. While the verb *ma-pitek* ‘break’ may involve a series of stages of the breaking, a verb like *ma-palal* ‘wake up’ does not seem to have such stages. Rather, it only has a process and a punctual point. Such subtle semantic difference may contribute to the different behaviors discussed in (4.58).

verbs. To begin with, punctual verbs such as achievement verbs (e.g. *mi-tepoc* ‘chop down at once’, *ma-tekek* ‘peck once’, *ma-paleng* ‘break (intransitive)’) and semelfactive verbs (e.g. *ma-piyat* ‘flash’) are banned in the contexts with pace adverbials. However, the activity counterparts of some achievement verbs (e.g. *mi-tetek* ‘peck continuously’) can appear in such contexts. This is exemplified in (4.59):⁵¹

- (4.59)a. *Harakat mi-tipoc...
fast AV-chop.down.at.once
- b. *Ma-usuy mi-tipoc....
NEUT-slow AV-chop.down.at.once
- c. *Harakat mi-tekek
fast AV-peck.once
- d. Harakat/Ma-usuy mi-tetek k-u qayam
fast/NEUT-slow AV-peck.continuously NOM-CN chicken
t-u kaka’enen.
DAT-CN food
‘The chicken is quickly/slowly pecking up the food (continuously.)’
- e. *Rara saan ma-peleng k-u takid.
slow say.so NEUT-break NOM-CN bottle
‘The bottle broke slowly.’
- f. *Harakat ma-piyat k-u-ra tingki.
fast NEUT-flash NOM-CN-that lamp
‘The light flashes fast.’

Accomplishment verbs in (4.60) work well with these pace predicates. Consider:

- (4.60)a. Harakat/Ma-usuy ma-adah k-u adada.
fast/NEUT-slow NEUT-recoverd NOM-CN ailment
‘The ailment recovered fast/slowly.’

⁵¹ Notice that in (4.60), the pace adverbial cannot modify the motional/purposive component in the *mi*-verbs. A possible reason for this might be that the pace adverbial modifies the Core, but the motional/purposive component is inside the Nucleus. More investigation is needed.

- b. Harakat/Ma-usuy ma-likat k-u-ra tingki.
 fast/NEUT-slow NEUT-light NOM-CN-that lamp
 ‘The lamp became lit up fast/slowly.’

Note that some apparent state predicates can also appear with pace predicates.

Nevertheless, the interpretation seems to refer to the process before the result state and

thus makes the state verb look like an accomplishment. Consider:

- (4.61) Harakat ma-futiq k-u-ra wawa.
 fast NEUT-sleep NOM-CN-that child
 ‘That child fell asleep quickly.’

In addition to the Aktionsart tests adopted from VVLP (1997) and VV (2005), two more tests are employed to diagnose the lexical aspects of Amis verbs. The first one is the temporal interpretation of the verb when it co-occurs with the aspectual marker *tu*. This marker either depicts an inception of an activity or a state, or the completion of an activity (Liu 2003); that is, the verbs followed by *tu* either receive an inchoative reading or a perfective reading, depending on the classes of the verbs. For activity verbs, the default reading of “verb + *tu*” is the completion of an action but the inchoative reading is sometimes allowed, especially when the actor is first person plural and the whole sentence is interpreted as an inclusive imperative, rendered as “let’s...”. Consider:

- (4.62)a. Mi-nanum tu Ø-ci sawmah.
 AV-water ASP NOM-PPN Sawmah
 ‘Sawmah has already drunk water.’
 ‘Sawmah has gone to drink water.’
- b. Ma-kro’ tu kita
 NEUT-dance ASP 1P.INCL.NOM
 ‘We have danced.’
 ‘Let’s dance!’
- c. Ma-tayal tu kaku (t-u-na demak).
 NEUT-work ASP 1S.NOM DAT-CN-this matter
 ‘I have done it.’
 ‘I have started to do it.’

When occurring with *tu*, achievement verbs marked by *mi-* receive an inchoative reading for the “motional/purposive” part contained in the logical structure of *mi-*, but the perfective reading of the event is not accepted⁵² unless the achievement verb is marked by *ma-* (e.g. (4.63a’)). The *ma-* form for a semelfactive verb also receives the perfective reading, as illustrated by *ma-piyat* ‘flash’ in (4.63c):

- (4.63)a. Mi-tepoc tu cingra t-u-ra kilang.
 AV-chop.down.at.once ASP 1S.NOM DAT-CN-that tree
 ‘He has gone to chop and cut down the tree.’
 *‘He has already chopped and cut down the tree.’
- a’. Ma-tepoc tu nira k-u-ra kilang.
 UV-chop.down.at.once ASP 3S.GEN NOM-CN-that tree
 ‘He has already chopped down that tree.’
- b. Mi-tetek tu k-u qayam.
 AV-peck.once ASP NOM-CN bird
 ‘The bird has started to peck the food (and is still pecking).’
 *‘The bird has pecked the food.’
- c. Ma-piyat tu k-u totay.
 NEUT-flash ASP NOM-CN light.house
 ‘The light house has flashed.’

Result state verbs get the perfective reading when followed by *tu*, as shown in (4.64a-b). As for the active accomplishment or causative accomplishment verbs (e.g. (4.64c)), two readings may be obtained when they are followed by *tu*, either the inception of the motion part in *mi-* or the completion of the event. This is rather different from the *mi-* achievement verbs in (4.63).

- (4.64)a. Ma-icang tu k-u-ra rikor.
 NEUT-dry ASP NOM-CN-that clothes
 ‘That dress is dry (just now).’

⁵² A possible reason for such a phenomenon might be due to the inherent telicity of the verb, which makes it unnecessary to talk about the perfective aspect of the event by adding one more marker.

- b. Mala-su'ur tu k-u kitec-ay.
 become-dew ASP NOM-CN icy-FAC
 'The ice has melted.'
- c. Mi-patay tu k-u matu'asay t-u 'oner.
 AV-dead ASP NOM-CN old.man DAT-CN snake
 'The old man has killed the snake.'
 'The old man has gone to kill the snake.'

When showing up with *tu*, the *ma-* UV counterparts of the activity verbs (i.e. the active accomplishment or causative accomplishment) always get the perfective reading. In fact, the perfective reading is also the default temporal reading of this set of *ma-* verbs even without the co-occurrence of *tu*. This property is similar to the result state verbs shown in (4.64a-b).

- (4.65)a. Ma-nanum tu aku k-u sayta.
 UV-water ASP 1S.GEN NOM-CN soda
 'I have already drunk the soda.'
- b. Ma-ka'en tu n-i kacaw k-u-ra futing.
 UV-eat ASP GEN-PPN Kacaw NOM-CN fish
 'Kacaw has already eaten that fish.'

The state predicates obtain an accomplishment reading (i.e. "Become...") that refers to the onset of a state of affairs when followed by *tu*. Consider:

- (4.66)a. Ma-su'su' tu cingra.
 NEUT-fat ASP 3S.NOM
 'He has become fat.'
- b. Tata'ang tu k-u-ra qayam.
 big ASP NOM-CN-that chicken
 'That chicken has become big.'

The co-occurrence of *-en* verbs with *tu* is interpreted as an inception of an activity, and sometimes it may accompany an iterative sense (e.g. (4.67d)).⁵³

⁵³ The tendency to get a reading of an inception of the activity might be due to the strong agentivity carried by *-en*.

- (4.67)a. Sadek-en tu k-u-ra dateng.
 go/come.out-UV ASP NOM-CN vegetable
 ‘Start to serve that dish!’
- b. Nanum-en tu aku k-u-ra sayta.
 water-UV ASP 1S.GEN NOM-CN-that soda.
 ‘I will drink the soda in a short moment.’
- c. Nanum-en tu k-u-ra sayta!
 water-UV ASP NOM-CN-that soda
 ‘Drink the soda (now)!’
- d. Palu-en tu n-i mama k-u wawa.
 beat-UV ASP GEN-PPN father NOM-PPN child
 ‘Father beat the child again.’

The marker *tu* does not seem to make clear distinctions with *-en* verbs. As the agentive causative accomplishment (e.g. *sadak-en* in (4.67a)) and the agentive active accomplishment (*nanum-en* in (4.67b-c)) all receive the inchoative reading when followed by *tu*. The perfective reading of *tu* is rarely found with *-en* verbs. This might be due to the default future reading associated with *-en*.

The following table summarizes the interaction of different verb classes and *tu*:

Table 4.10 Verb Types and Their Co-occurrence with *tu*

Verb Types	V + <i>tu</i> interpretation
<i>mi-</i> + activity	perfective (default) or inchoative
<i>ma-</i> (AV or neutral) + activity	perfective (default) or inchoative
<i>mi-</i> + achievement	perfective of the motion part
<i>ma-</i> (AV or neutral) + semelfactive	perfective
<i>ma-</i> (AV or neutral) + result state	perfective
<i>ma-</i> (UV) + activity or causative activity (i.e. <i>ma-</i> active/causative accomplishment)	perfective
non-result state	accomplishment (Become...)
Verb + <i>-en</i>	inchoative or iterative

The other aspectual marker *ho* in general signals an “incomplete” aspect for the verbs that it attaches to. The verbs followed by *ho* usually get two readings, depending on where the stress falls. If the stress falls on the verb, then the verb is interpreted as

“on-going” (roughly rendered as ‘still’ in English). If the stress falls on *ho*, then the sentence is interpreted as ‘do something first (before doing others)’, which in general corresponds to ‘yet’ in English. The latter case seems to indicate that there is an anticipatory telic point for the activity denoted by the verb. The verb classes and their interaction with *ho* are discussed as follows.

When followed by *ho*, *mi-* activity verbs receive either the on-going reading or the anticipatory telic point reading described above. Nevertheless, the anticipatory telic point seems more likely to be construed for activities that usually do not involve a long time span (e.g. drinking and eating). For activities that can go on for a long time, this reading is less likely to get. Consider the following examples:

- (4.68)a. Mi-nanum ho kaku.
 AV-water ASP 1S.NOM
 ‘I am still drinking water.’ (stress on “*mi-nanum*”)
 ‘I will go drink water first.’ (stress on “*ho*”)
- b. Mi-futing ho kaku t-u sakalafi.
 AV-fish ASP 1S.NOM DAT-CN food.for.dinner
 ‘I am still fishing for the fish for the food for dinner.’
 ‘I will go catch the fish for the food for dinner.’
- c. Mi-pacuk ho kaku t-u fafuy, ta
 AV slaughter ASP 1S.NOM DAT-CN pig then
 pa-tireng t-u ngayangay.
 CAU-body DAT-CN canopy
 ‘I will go slauter the pig first, and then build up the canopy (for the ceremony).’

The same readings of *V + ho* are also found in *-um-* and *ma-* activity verbs. Consider:

- (4.69)a. K-um-a’en ho kaku.
 eat<AV> ASP 1S.NOM
 ‘I am still eating.’
 ‘I will go eat first.’

- b. Ma-tayal ho kaku.
 NEUT-work ASP 1S.NOM
 ‘I am still at work (or busy with doing something).’
 ‘I will go work first.’

When *mi-* attaches an achievement verb and the derived predicate is followed by *ho*, it may receive the anticipatory telic point reading or an iterative reading. Although an on-going reading is also possible, the informants do not agree among themselves concerning the acceptability of this interpretation.

- (4.70)a. Mi-tepoc ho cingra t-u-ra kilang.
 AV-chop.down.at.once ASP 3S.NOM DAT-CN-that tree
 ‘He went to chop that tree first (and then do something else).’
 ‘He went to chop those trees/*that tree again.’
 ?‘He is chopping those trees/*that tree.’

- b. Mi-toktok ho kaku t-u sapad, ta
 AV-hammer.once ASP 1S.NOM DAT-CN board then

 ma-tayal.
 NEUT-work
 ‘I will go to nail that board first, and then (go to) work.’

As seen in (4.70a), a punctual verb like *mi-tepoc* ‘chop and cut down at once’ is less likely to get the on-going reading of the action when preceding *ho* unless the patient argument is interpreted as a plural form. The plurality requirement of the patient argument is also found with the iterative reading of the same verb. This is reminiscent of the cases of the English achievement verbs such as *pop* and *explode*, as discussed in VVLP (1997:94). When occurring in a progressive context, these verbs will generate an iterative reading, and that is why they can only show up with a plural argument:

- (4.71)a. The balloons/*balloon are/*is popping
 b. The bombs/*bomb are/*is exploding.

Verbs marked by *-en* are interpreted as verbs with an anticipatory telic point when

followed by *ho* (i.e. the ‘yet’ reading), and sometimes they are accompanied with an encouraging tone, especially in imperative sentences. Examples follow:

- (4.72)a. Nanum-en ho aku.
 water-UV ASP 1S.GEN
 ‘I will drink it first.’
- b. Tayal-en ho isu!
 work-UV ASP 2S.GEN
 ‘Do it for me!’
 ‘Keep on doing it (until you finish it)!’
- c. Ulah-en ho Ø-ci panay!
 like-UV ASP NOM-PPN Panay
 ‘Try to love Panay (and see what will happen)!’

When *ho* comes after a verb marked by *ma-*, some complexities may arise. First, some *ma-* state verbs are interpreted as having an on-going sense or an anticipatory telic point. Notice that in this context, the otherwise state predicate is interpreted as a dynamic verb. It seems that this type of state predicate has an ambiguous status between a state and an activity. For example:

- (4.73) Ma-futiq ho cingra.
 NEUT-sleep ASP 3S.NOM
 ‘He is still sleeping.’
 ‘He will go sleep first.’

Ma- verbs denoting involuntary activities can only have the on-going reading when they show up with *ho*, as the anticipatory telicity reading is not likely to be construable.

Consider:

- (4.74)a. Ma-turu’uk ho cingra.
 NEUT-belch ASP 3S.NOM
 ‘He is still belching.’
- b. Ma-suwaf ho cingra.
 NEUT-yawn ASP 3S.NOM
 ‘He is still yawning.’

Similar to *ma-* involuntary activities, the *ma-* verbs with a more stative meaning

only get the on-going reading when followed by *ho* but not the anticipatory telic reading.

For example:

- (4.75)a. Ma-ulah ho Ø-ci panay ci kacaw-an
AV-like ASP NOM-PPN Panay PPN Kacaw-DAT
'Panay still likes Kacaw.'
- b. Ma-su'su' ho cingra.
NEUT-fat ASP 3S.NOM
'He is still fat.'

The data in (4.74) and (4.75) seem to suggest that involuntary activity verbs should be treated as states, not activities, as they behave more like states when appearing with *ho*.

However, there is a crucial property indicating that the verbs in (4.74) are activities.

That is, the *-en* counterparts of the verbs in (4.74) (e.g. *туру'uk-en* 'belch something out (intentionally)') are more likely to be rendered as agentive active accomplishment, while the *-en* forms of state predicates in (4.75) (e.g. *su'su'-en* 'fatten') tend to be agentive causative accomplishment.⁵⁴ Although there are some exceptions, this non-causative/causative contrast in the reading of the UV *-en* form can in general demonstrate the difference between involuntary activities and states.

Ma- result state verbs normally are not allowed to appear with *ho* unless they occur in a negative context (e.g. (4.76c)). This point has been discussed in an earlier section.

The examples are given again in (4.76):

- (4.76)a. *Ma-patay ho cingra.
NEUT-dead ASP 3S.NOM
'He is still dead.'
- b. *Ma-icang ho k-u-ra rikor.
NEUT-dry ASP NOM-CN-that clothes
'Those clothes are still dry.'

⁵⁴ However, the *-en* form of some psych-predicates (e.g. *ma-ulah* 'like') may be agentive accomplishment. Such predicates will be discussed later in this chapter.

- c. Ca' ho ka-icang k-u-ra rikor.
 NEG ASP KA-dry NOM-CN-that clothes
 'That dress is not dry yet.' (Negative, Neutral)

More such verbs include *ma-cepet* '(become) dehydrated', *mala-su'ur* 'melt (i.e. become dew)', *ma-ruhem* 'ripe'. It seems that *ho* cannot refer to the process before obtaining the result states, nor is it possible to refer to the stage after the result state has been accomplished. Interestingly enough, *ho* can co-occur with the *mi-* causative accomplishment version of result state verbs such as *mi-ruhem* '(go to) ripen' (related to *ma-ruhum* 'ripe') and also motional accomplishment verbs such as *tahini/tahira* 'arrive (here)/arrive (there)'. The reading of their co-occurrence with *ho* can refer to the process of arriving,⁵⁵ as illustrated in (4.76d), though not every informant accepts examples like (4.76e):

- (4.76)d. Mi-ruhum ho kaku t-u pawli.
 AV-ripe ASP 1S.NOM DAT-CN banana
 'I am still ripening the banana.'
 'I will go to ripen the banana first.'
- e. Tahini/tahira ho Ø-ci aki.
 arrive.here/arrive.there ASP NOM-PPN Aki
 'Aki is arriving here/there.'

When co-occurring with *ho*, *ma-* active/causative accomplishment verbs (i.e. the UV *ma-* verbs) are usually interpreted with an iterative sense (i.e. 'again'), but most of the time, this aspectual marker will be replaced by *heca* 'again'. This observation has been pointed out earlier in the discussion in (4.46).

The semelfactive verbs present an interesting case when they show up with *ho*.

Consider:

- (4.77)a. *Ma-piyat ho k-u tingki.
 NEUT-flash ASP NOM-CN lamp

⁵⁵ It is likely that the motion part of such verbs makes this reference possible.

- b. Ma-faha ho kaku.
 NEUT-cough ASP 1S.NOM
 ‘I am still coughing.’
 ‘I will go (somewhere) to cough first.’

The two verbs behave rather differently when appearing with *ho*. Notice that the meaning of the predicate *ma-faha* has been changed in this context; it behaves somewhat like an activity verb. A possible reason for why *ma-piyat* does not co-occur with *ho* may be due to the inanimacy of its effector, which makes the readings (i.e. the on-going and the anticipatory telic reading) inconstruable. The contrast in (4.77) also shows that contextual features such as the agency of the co-occurring NPs can affect the classes of the verbs. More examples illustrating such contextual influence will be offered later.

The table below summarizes the interaction of verb classes and the aspectual marker *ho*:

Table 4.11 Verb Types and Their Co-occurrence with *ho*

Verb Types	V + <i>ho</i> interpretation
<i>mi-</i> + activity	on-going or anticipatory telic point
<i>ma-</i> (AV or neutral) + (voluntary) activity	on-going or anticipatory telic point
<i>-um-</i> + activities	on-going or anticipatory telic point
<i>ma-</i> (AV or neutral) + (involuntary) activity	on-going
<i>mi-</i> (AV or neutral) + achievement	iterative or anticipatory telic point
<i>ma-</i> (AV or neutral) + semelfactives	iterative, anticipatory telic point, or DNA
<i>ma-</i> (AV or neutral) + result state	DNA
<i>ma-</i> (UV) + activity or causative activity (i.e. <i>ma-</i> active/causative accomplishment)	iterative
motional accomplishment	on-going (the process before reaching the telic point)
non-result state	on-going
Verb + <i>-en</i>	anticipatory telic point

The following generalizations can be made from Table 4.11. First, activity predicates tend to get either an on-going or anticipatory telicity reading when they are followed by *ho*, but the latter reading is affected by the agency of the co-occurring effector. The less

agentive the effector is, the less likely the anticipatory telicity reading will be obtained. This influence is also found with semelfactive predicates. Second, whether or not the telic roots can co-occur with *ho* depends on the voice affixes that attach to them. If they are affixed with *mi-*, which contributes a motional/purposive component to the logical structure of the derived predicates, then the co-occurrence with *ho* is acceptable. If they are affixed with UV *ma-*, which signals the perfectiveness of the event, then the co-occurrence with *ho* is less likely to be acceptable. Third, punctual verbs such as *ma-piyat* ‘flash’ and *ma-faha* ‘cough’ tend to get an iterative reading, as seen in (4.77b), if their co-occurrence with *ho* is allowed. Moreover, as shown in the table, the *ma-* UV verbs seem to behave more like punctual verb as they also get an iterative reading when they co-occur with *ho*.

I have shown in this section how to differentiate the verb classes by applying the Aktionsart tests. Although the tests are not perfect, in general, they can still help us detect the lexical aspectual features that pertain to each class. The table below summarizes the classes that have been identified so far in Amis and the voice marker they may appear with. Notice that these markers may change the categories of the root form:

Table 4.12 Verb Classes and Possible Markers⁵⁶

Verb Types	Markers
activity	<i>mi-</i> : motional/purposive activity or plain activity
	<i>-um-</i> : activity
	<i>ma-</i> (AV or neutral): voluntary or involuntary
	unaffixed: motional activity
state	unaffixed: attributive (mostly)
	<i>ma-</i> (AV or neutral): transient or result
accomplishment	<i>ma-</i> (AV or neutral): (result state)
	<i>ma-</i> (UV): active or causative accomplishment
	<i>-en</i> : agentive active/causative accomplishment
achievement	<i>mi-</i> : motional/purposive achievement
semelfactive	<i>ma-</i> (AV or neutral)

⁵⁶ The causative class is not included here; it will be discussed later in this chapter.

4.4 Further Discussion of Two Verb Sub-classes

Two sub-classes of verbs will be further discussed in this section: involuntary activities and psych-predicates. These two sub-types of predicates are both marked by *ma-* in Amis, and they exhibit some interesting derivational properties that are different from typical activities and states, the major verb types they belong to. Activities in Amis typically receive a motional/purposive reading when prefixed with *mi-*, but the *mi-* forms for involuntary activities usually get a causative reading. In contrast, the combination of *mi-* + state predicates typically yields a causative reading, but this is not necessarily the case with psych-predicates; some of them can get a motional/purposive reading. These peculiar derivational properties of the two types of verb will be explored in this section.

4.4.1 Involuntary Activities

Typical examples of involuntary activities include: *ma-suwaf* ‘yawn’, *ma-’etut* ‘fart’, *ma-turu’uk* ‘belch; burp’, and *ma-uta* ‘vomit’. While the core argument of such verbs is almost always animate (even human) and sentient, it cannot control such activities volitionally. This semantic feature of such activities contributes to their potential incompatibility with the prefix *mi-*, which has motional/purposive element, as the derived interpretation (i.e. ‘purposively go to do the activity to somebody’) may not be construable. An interesting result for such an incompatible combination is a causative verb in which an inanimate entity causes the involuntary activities for the effector.⁵⁷

Examples are given below:

- (4.78)a. Ma-turu’uk kaku.
 NEUT-belch 1S.NOM
 ‘I am belching.’

⁵⁷ I actually suspect that involuntary verbs can still get the motional/purposive reading for their *mi-* forms, though such sentences might be semantically marginal.

- a'. Mi-turu'uk k-u sayta t-u tamdaw.
 AV-belch NOM-CN soda DAT-CN people
 'The soda drink will make people belch.'
- a''. Ma-turu'uk n-u sayta kaku.
 UV-belch GEN-CN soda 1S.NOM
 'I was made to belch by the soda.'
- b. Ma-'etut ho kaku (t-u kunga).
 NEUT-fart ASP 1S.NOM DAT-CN sweet.potato
 'I am still farting (because of eating sweet potatoes).'
- b'. Mi-'etut k-u kunga takuwanan.
 AV-fart NOM-CN sweet.potato 1S.DAT
 'The sweet potato will make me fart.'
- c. Ma-uta kaku (t-u sanek n-u
 NEUT-vomit 1S.NOM DAT-CN smell GEN-CN
 tusiya).
 car
 'I vomit (because of the smell of the car.)
- c'. Mi-uta k-u simal (t-u tamdaw).
 AV-vomit NOM-CN oil DAT-CN person
 'Oil will make people vomit.'
- c''. Ma-uta n-u sanek n-u tusiya kaku.
 UV-vomit GEN-CN smell GEN-CN car 1S.NOM
 'I was made to vomit by the smell of the car.'

As illustrated in the data, the *mi-* version of the involuntary verbs is causative, and this causative verb can have a UV *ma-* counterpart, a causative accomplishment verb (e.g. *ma-turu'uk* in (4.78a'')). Some of the verbs also have a causative verb marked by *pa-* (or *pa-pi*). Contrary to the *mi-* causative predicates, *pa-* causatives have a human causer. Notice that in the *pa-pi-* causative form, the caused activity is no longer involuntary.⁵⁸

Consider:

⁵⁸ As I will argue later in the discussion of *pa-* causatives, the logical structure of *pa-pi* is [**do'** (x, Ø)] CAUSE DO (y, [**do'** (y, [**pred'** (y, (z))])]). In this LS, the effector of the caused event (i.e. y) has to be agentive.

- (4.79)a. Pa-turu'uk kaku t-u wawa.
 CAU-belch 1S.NOM DAT-CN child
 'I help the baby belch (e.g. after feeding him milk).'
- b. Pa-pi-turu'uk kaku cingraan.
 CAU-PI-belch 1S.NOM 3S.DAT
 'I ask him to belch.'

Unlike the *mi-* form, the *-en* form of an involuntary activity is not causative; it becomes an agentive accomplishment with a specific undergoer. Consider:

- (4.80)a. Turu'uk-en aku k-u-ni.
 belch-UV 1S.GEN NOM-CN-this
 'I am going to belch this out.'
- b. Uta-en!
 vomit-UV
 'Vomit it out!'

This non-causative interpretation of *-en* verbs marks the distinction between involuntary activities and states; for the latter, both the *mi-* and *-en* forms tend to be causative. In (4.80), we can see that *-en* supplies the agency to the semantics of the involuntary verb and makes it a volitional active accomplishment now. Notice that the forms in (4.80) are all transitive activities with specific undergoers. For involuntary activities that are unlikely to have undergoers, their *mi-* and *-en* forms will be causative. This is exemplified by *ma-puleneng* 'sink' in (4.81):

- (4.81)a. Ma-puleneng kaku.
 NEUT-sink 1S.NOM
 'I sank.'
- b. Mi-puleneng kaku t-u talid.
 AV-sink 1S.NOM DAT-CN bottle
 'I am going to sink the bottle.'
- c. Ma-puleneng aku k-u talid.
 UV-sink 1S.GEN NOM-CN bottle
 'I sank the bottle.'

d.	Puleneng-en	aku	k-u	talid.
	sink-UV	1S.GEN	NOM-CN	bottle
	'I will sink the bottle.'			

As illustrated in (4.81), when a second argument is added to the logical structure of the predicate *puleneng* 'sink' by *mi-* or *-en*, it always involves a causative reading.⁵⁹

4.4.2 Psych-predicates

Another set of verbs that also behave quite interestingly roughly corresponds to the psych-predicates, though there are a few exceptions. Although these verbs are all marked by *ma-* and can be represented by the same logical structure [**pred'** (x, (y))], they can be divided into two sub-classes. One group, exemplified by *ma-ulah* 'like', *ma-fanaq* 'know', *ma-tawa* 'smile; laugh (at)', *ma-ngudu* 'be polite to; respect; embarrassed; humbled', and *ma-inal* 'envious', can take two arguments or possibly be a two-place predicate, in which the x argument serves as the actor and y argument functions as the undergoer or non-macrorole direct core argument. The other group, which usually takes only one argument, includes *ma-'esam* 'annoyed' and *ma-lanang* 'irritated' and *ma-cangal* 'discontented'; the only argument of these verbs is an undergoer. There are some major distinctions between the two sub-classes of psych-predicates, namely the actor-experiencer psych-predicates and the undergoer-experiencer psych-predicates. First, when being affixed with *mi-*, the actor-experiencer set gets the motional/purposive reading (i.e. 'go to do something to show the mental state'), but the undergoer-experiencer set gets the causative reading. The contrast is illustrated in (4.82) and (4.83) below:

⁵⁹ This example indicates that the involuntary activities can be further subcategorized. I will leave this issue for future study.

- (4.82)a. Mi-ulah Ø-ci aki ci dongi-an.
 AV-like NOM-PPN Aki PPN Dongi-DAT
 ‘Aki is going to express his love to Dongi.’
- b. Mi-ngudu cingra t-u lafang.
 AV-humbled 3S.NOM DAT-CN guests
 ‘He will behave himself in front of the guests (to show the respect to them).’
- c. Mi-inal kaku mi-sanga t-u tafolud.⁶⁰
 AV-envious 1S.NOM NEUT-make DAT-CN bag
 ‘I feel envious (to someone’s bag) so I (also) make the same bag.’
 (I made the bag out of the envious feeling.)
- (4.83)a. Mi-’esam k-u-ni a lalangaw (t-u
 AV-irritated NOM-CN-this LNK fly DAT-CN
 tamdaw).
 people
 ‘This fly is irritating (people).’
- b. Mi-lanang k-u suni takuwanan.
 AV-annoyed.by.noise NOM-CN sound 1S.DAT
 ‘The sound is annoying me.’

Second, while the actor-experiencer group can take the *-en* form to generate an agentive active accomplishment reading, the undergoer-experiencer group cannot. The *-en* form for the actor-experiencer group is illustrated in (4.84):

- (4.84)a. Ulah-en cingra!
 like-UV 3S.NOM
 ‘(You must) love him!’
- b. Ngudu-en k-u singsi!
 humbled-UV NOM-CN teacher
 ‘Respect the teacher!’

⁶⁰ Notice that the verb *mi-inal* ‘go to do something out of the jealous feeling’ displays some differences from *mi-ulah* ‘(go to express) love’ and *mi-ngudu* ‘(go to show) respect’. First, unlike *mi-ulah* and *mi-ngudu*, the motional/purposive reading is not very obvious in the verb *mi-inal*. Furthermore, an additional predicate (i.e. *mi-sanga*) has to be added following *mi-inal*, but such a structure is not found with *mi-ulah* and *mi-ngudu*. However, the verb *mi-inal* is placed under the same category with *mi-ulah* and *mi-ngudu* because these psych-predicates seem to all share one feature; that is, some subsequent action is triggered because of the mental state. This feature is not found in the *mi-* verbs of the undergoer-experiencer psych-predicates, as discussed later. With *mi-ulah* and *mi-ngudu*, the action does not have to be specified, but with *mi-inal*, the action has to be specified in the sentence. This suggests that finer distinctions can be made among the three verbs in (4.82). More investigation is needed.

- c. Inal-en aku cingra.
 envious-UV 1S.GEN 3S.NOM
 ‘I will follow him (because of my envious feeling to him.)’

Third, while the actor-experiencer group can be causativized by *pa-* (or more precisely, *pa-ka-*), the undergoer-experiencer group does not have a *pa-ka-* causative form.

Examples follow:

- (4.85)a. Pa-ka-inal k-u tafulod aku t-u
 CAU-KA-envious NOM-CN bag 1S.GEN DAT-CN
 tao.
 others
 ‘My bag made other people feel envious.’
- b. Pa-ka-ngudu kaku t-u singsi.
 CAU-KA-humbled 1S.NOM DAT-CN teacher
 ‘I made the teacher feel ashamed.’ (i.e. I disgrace the teacher.)

The distinctions of the two types of psych-predicate are summarized in Table 4.13.⁶¹

Table 4.13 The Sub-classes of Psych-predicates

Experiencer	Examples	reading of <i>mi</i> - ⁶²	-en	<i>pa-ka-</i>	<i>ma-ka-ka-...-en</i>
Actor	<i>ma-ulah</i> ‘like’	motional/purposive	Yes	Yes ‘reward’	Yes
	<i>ma-fanaq</i> ‘know’	motional/purposive	Yes	Yes ‘inform’	Yes
	<i>ma-tawa</i> ‘smile; laugh’	motional/purposive	Yes	Yes ‘make laugh’	Yes
	<i>ma-ngudu</i> ‘respect; be polite to; embarrassed’	motional/purposive	Yes	Yes ‘disgrace’	Yes
	<i>ma-inal</i> ‘envious’	motional/purposive	Yes	Yes ‘make envious’	Yes
Undergoer	<i>ma-lanang</i> ‘annoyed by noise’	causative	No	No	Yes
	<i>ma-’esam</i> ‘annoyed’	causative	No	No	Yes

There is a crucial semantic difference between the two groups of psych-predicates.

While the psych-states with an actor-experiencer can be motivated internally, those with an undergoer-experiencer tend to be caused by an external stimulus. This semantic

⁶¹ The predicate *ma-ngudu* is semantically complicated. Some of the interpretations seem to suggest that it has an experiencer undergoer. However, as it behaves more like the one with an actor-experiencer, I tentatively place it with those actor-experiencer psych-predicates.

⁶² Most, if not all, of these verbs do not have a *ma-* UV form. An exception is found with *mi-lanang*, which has *ma-* counterpart (i.e. *ma-nanang* ‘be made annoyed’)

distinction accounts for the fact that the internally motivated psych-predicates can only have the *pa-* causative form, which involves the addition of an external causer, while the externally caused psych-predicates do not take a *pa-* causative form, as their external cause is implied in their semantics, and their *mi-* form can indicate such an external cause if one wants to refer to it.

In spite of the distinctions displayed in Table 4.13, these psych-predicates do share a common feature; they all have *ma-ka-* and *ka-...-en* UV forms.⁶³ However, the interpretation of these forms is somewhat heterogeneous. Consider the following examples:

- (4.86)a. Ma-ulah kaku ci panay-an
 AV-like 1S.NOM PPN Panay-DAT
 ‘I like Panay.’
- a’. Ma-ka-ulah aku Ø-ci panay.
 UV-KA-like 1S.GEN NOM-PPN Panay
 ‘Panay is liked by me.’
 ‘I like Panay.’
- b. Ma-fanaq kaku t-u-ra tamdaw.
 AV-know 1S.NOM DAT-CN-that person
 ‘I know that person.’
- b’. Ma-ka-fanaq n-u tao k-u-ra demak.
 UV-KA-know GEN-CN other NOM-CN-that thing
 ‘That matter was discovered by others.’
- (4.87)a. Ma-ngudu kaku t-u singsi.
 NEUT-humbled 1S.NOM DAT-CN teacher
 ‘I feel humbled with respect to the teacher.’
- a’. Ma-ka-ngudu n-u singsi kaku.
 UV-KA-humbled GEN-CN teacher 1S.NOM
 ‘I made the teacher feel humbled/embarrassed (because I am superior to the teacher in certain respects.)’
 ‘The teacher respects me.’

⁶³ These two forms seem to be in free variation as remarked by the informants.

- a". Ma-ka-ngudu n-u aluman-ay kaku.
 UV-KA-humbled GEN-CN many-FAC 1S.NOM
 'I am respected by many people.'
- b. Ma-inal kaku t-u tafulud nira.
 NEUT-envious 1S.NON DAT-CN bag 3S.GEN
 'I feel envious with reference to his bag.'
 'I envy him his bag.'
- b'. Ma-ka-inal n-u tao k-u tafulod
 UV-KA-envious GEN-CN others NOM-CN bag

 aku.
 1S.GEN
 'My bag made other people envious (because I showed it to them intentionally.)'
- c. Ma-tawa kaku t-u wawa.
 AV-laugh.at 1S.NOM DAT-CN child
 'I am laughing at the kid.'
- c'. Ma-ka-tawa n-u tao kaku.
 UV-KA-laugh.at GEN-CN others 1S.NOM
 'I let people laugh at me (because I have done something stupid.)'

Compare the *ma-ka-* forms in (4.86) and (4.87). Those in (4.87) sometimes have a causative sense, with the stimuli serving as a kind of causer. In fact, Starosta (1974) treats *ma-ka-* as one of the causative morphemes in Amis,⁶⁴ though he does not further discuss the form. However, treating *ma-ka-* as a causative construction will present a mismatch to the case-marking patterns in Amis, as now the genitive case marks the undergoer-experiencer (e.g. *singsi* in (4.87a')) while the nominative case marks the actor-stimulus (e.g. *kaku* in (4.87a')). It is extremely rare or even impossible that a genitive case would mark an undergoer in Amis, as it only marks the actor of non-AV verbs and the possessor in a possessive construction. If the causative analysis is adopted, we will

⁶⁴ This form (*maka-* in his paper) is analyzed as a process of causation by Starosta (1974), in which he called this as a resultative derivation.

have to make this case marking pattern an exceptional one here. An alternative way is to treat *ma-ka-* as a non-causative form. The reason why there is a causative reading in this form is because now the stimulus is a macrorole (i.e. undergoer) and is marked by the nominative case. That is, the *ma-ka-* form of the verbs is similar to two-place psych-predicates in English such as *envy* and *fear* (e.g. in *I envy you.* and *I fear dogs.*).

However, unlike English which has the actor-experiencer (i.e. *I*) as the grammatical subject, in Amis it is the undergoer-stimulus that is marked as the subject, not the actor-experiencer. This non-causative analysis of *ma-ka-* is primarily based on the fact that *ma-ka-* is not consistently rendered as causative in all of the attested examples. As one can see in (4.86) and (4.87), not every *ma-ka-* example receives a causative interpretation. In fact, informants have different judgments/readings about the *ma-ka-* sentences exemplified above,⁶⁵ even regarding the same predicate, as seen in (4.87a') and (4.87a'').

In contrast with the interpretation of *ma-ka-*, the *pa-* causative forms of the psych-predicates have a consistent causative meaning, as exemplified in (4.85). Notice that the *pa-* causative forms do follow the regular case marking patterns in Amis; the actor-stimulus is marked by the nominative case, and the experiencer is marked by the dative case. Therefore, it seems that the causation in *ma-ka-* is inferred rather than lexically coded. A possible reason to account for this causative inference or implication, as mentioned, is the highlighted status of the stimuli. As shown in Table 4.13, the meaning of *ma-ka-* is not exactly the same as the corresponding *ma-* form, especially for those one-place *ma-* psych-predicates.

⁶⁵ One informant mentioned that *ma-ka-* actually has a reciprocal meaning in the form *ma-ka-ngudu* (i.e. mutually respect).

Table 4.14 The Meaning of *ma-* and *ma-ka-* Psych-predicates

<i>ma-</i> (AV or neutral)	<i>ma-ka-</i> (UV)
<i>ma-ulah</i> ‘like’	<i>ma-ka-ulah</i> ‘like’
<i>ma-fanaq</i> ‘know’	<i>ma-ka-fanaq</i> ‘know; discover’
<i>ma-tawa</i> ‘smile; laugh’	<i>ma-ka-tawa</i> ‘laugh at’
<i>ma-ngudu</i> ‘humbled; embarrassed; respect’	<i>ma-ka-ngudu</i> ‘embarrass; respect’
<i>ma-inal</i> ‘envious’	<i>ma-ka-inal</i> ‘envy’
<i>ma-hemek</i> ‘happy’	<i>ma-ka-hemek</i> ‘praise’

The table shows that the psych-predicates, when appearing with *ma-ka-*, all have a two-place reading, no matter how many core arguments their *ma-* counterpart take. It is possible that some psych-predicates may have two or more lexical entries, and these entries may vary in the number of the core arguments. While *ma-* picks up the lexical entry with only one core argument (i.e. experiencer), *ma-ka-* picks up the one with two (i.e. experiencer and stimulus). When the stimulus is chosen to be the PSA (i.e. marked by the nominative case) in the *ma-ka-* construction, it triggers a causative implication.⁶⁶ More investigation is required.

Moreover, all of these psych-predicates have a *ka-...-en* form, which is rendered almost the same as *ma-ka-* based on the remarks from the informants. Examples are given below:

- (4.88)a. Ka-ngudu-en n-u singsi kaku.
 KA-humbled-UV GEN-CN teacher 1S.NOM
 ‘I am respected by the teacher.’
- a’. Ka-ngudu-en k-u singsi namu.
 KA-humbled-UV NOM-CN teacher 2P.GEN
 ‘(You) should respect your teacher.’
- b. Ngudu-en aku k-u matu’asay.
 humbled-UV 1S.GEN NOM-CN old.man
 ‘I will show respect to the old people.’

⁶⁶ This implicature seems especially strong when the experiencer is not specific (e.g. *tao* ‘others’)

- c. Ka-inal-en n-u tao k-u tafulod
 KA-envious-UV GEN-CN others NOM-CN bag

aku.

1S.GEN

‘My bag made other people envious (because I showed it to them intentionally.)’

- d. Ka-cangal-en n-u tao kaku.
 KA-discontented-UV GEN-CN people 1S.NOM
 ‘Others feel discontented about me (because I didn’t do a good job.)’

- e. Ka-tawa-en n-u tao kaku.
 KA-laugh.at-UV GEN-CN others 1S.NOM
 ‘I let people laugh at me.’

- e’. Tawa-en aku kisu.
 laugh.at-UV 1S.GEN 2S.NOM
 ‘I will laugh at you.’

As illustrated in (4.88), the form *ka-...-en* differs from the bare *-en* form (i.e. the UV agentive marker), if attested, of the same root in that the actor of *ka-...-en* (i.e. the argument marked by the genitive case, e.g. *singsi* ‘teacher’ in (4.88a)) is not agentive, as the carried out activity is not necessarily volitional. This difference indicates that the presence of *ka-* seems to cancel the inherent agency of *-en*. This may also explain why *ka-...-en* can go with every psych-predicate, even with psych-predicates (e.g. *ma-cangal* ‘discontented’) that do not easily appear in an agentive context.

The two special sub-classes of verbs discussed above are all marked by *ma-* (AV or neutral) by default, which again exemplifies the heterogeneity of *ma-* verbs. Even though four classes of *ma-* verbs have been identified and represented with the logical structures, finer distinctions can still be made through further specification or further decomposition.

This is also one of the recent developments pursued in RRG.⁶⁷

⁶⁷ For further development of the decompositional model in RRG, please refer to Mairal and Faber (2002, 2005).

4.5 Verbal Derivations

As argued in the beginning of this chapter, the root forms in Amis can be categorized into objects/entities, activities, attribute (non-episodic) states, result states, and achievements. Although some root forms are ontologically verbal (e.g. activity roots) and seem predicative inherently, a predicate in Amis has to be derived by either affixation or zero derivation. In this section, some commonly found derivational processes will be examined. I will begin with the discussion of how to derive a predicate by adding different voice affixes to various types of roots. Then, I will look into the causativization in Amis, in particular, the *pa-* causativization. The discussion on these derivational processes will lead us to explore two important prefixes in Amis: *pi-* and *ka-*, which appear very frequently in the verbal conjugation patterns that were shown in Tables 3.11 and 3.12.

A few comments need to be made before the exploration of the derivational processes. To begin with, the discussion of involuntary activity verbs and psych-predicates in the previous sections strongly suggests the necessity of further breaking down the basic *aktionsart* classes proposed in VVLP (1997) and VV (2005). For example, it is obvious that there are finer distinctions among the activity verbs in terms of their potential agency, though they are all marked by **do'**. By the same token, states should be further differentiated not only based on the presence/absence of the attribute feature, but also based on whether or not there is a process before obtaining a transient state. However, in RRG, no distinctions have been made in the logical structures between result transient state and non-result transient states; both are presented by [**pred'** (x, (y))]. In the following discussion, to better describe and formulate the derivational

rules, I will tentatively propose further decompositions for the subcategories in the root classes to compensate for the insufficient representations in the framework.

The second comment is about the derivational functions of the voice affixes. Syntactically, these affixes share the same function of deriving a predicate from the roots. However, semantically speaking, there are two different functions performed by these affixes, depending on the semantic structure of the roots they attach to. These two functions are termed “classifying” and “changing” in the following discussion. As different categories of the roots have their own semantic structures, it is possible that the semantic structure of a root is identical or very similar to that of the voice affix attaching to the root in the derivation. Under such circumstances, the major function of the voice marker is to classify or label the type of derived predicate; it does not add more semantic content to the root during the derivation. For example, this classifying function is frequently found when the *-um-* and one of the *ma-*s (i.e. the activity *ma-*) attaches to an activity root. As we will see later in the lexical rules, the logical structure of the derived predicate is almost the same as that of the root. The “changing” function takes place when the voice affixes attach to roots that have rather different semantic structures. In such a derivation, the voice affixes, besides classifying the predicate-type, change the logical structure of the root by either adding more semantic content to the root, for the majority of the examples, or remove some semantic features from the root. The semantic change is represented in the LS of the derived predicate. This is very common when a voice affix attaches to a root without a verbal meaning (e.g. an object root). These two functions will be specified in the lexical rules.

The lexical rules formulated below include at the least the following three parts.

The first part is the logical structure of the (voice) affix. The second part, the input, specifies the semantics of the root. The third part is the output that displays the logical structure of the derived predicate and the function(s) of the voice affixes in the derivation. The part that is supplied by the root during the derivation will be italicized in the LS of the output. If there is more than one possible output, each output will be given individually. For each rule, there will be at least one example provided to illustrate the application of the rule and further explanation will be provided when necessary.

4.5.1 Deriving a Predicate from a Nominal Root

It is a very common process to derive a predicate (causative or non-causative) from a root that denotes an object or an entity, termed “nominal root” in the following discussion. However, different affixes may interact with different semantic properties inherent in a nominal root. Regarding the semantic representation of nouns, RRG adopts the qualia theory proposed by Pustejovsky (1991, 1995), where nominals are represented by four qualia roles as listed in (4.89):

(4.89) Qualia Theory (Pustejovsky 1991:426-7)

- a. Constitutive Role: the relation between an object and its constituents, or proper parts
 1. Material
 2. Weight
 3. Parts and component elements

- b. Formal Role: that which distinguishes the object within a larger domain
 1. Orientation
 2. Magnitude
 3. Shape
 4. Dimensionality
 5. Color
 6. Position

- c. Telic Role: purpose and function of the object
 1. Purpose that an agent has in performing an act
 2. Built-in function or aim that specifies certain activities

- d. Agentive Role: factors involved in the origin or “bringing about” of an object
 1. Creator
 2. Artifact
 3. Natural kind
 4. Causal chain

The following representation is the qualia structure of *novel* given by Pustejovsky:

(4.90) **novel** (x)

- a. Const: **narrative**' (x)
- b. Form: **book**' (x), **disk**' (x)
- c. Telic: **do**' (y, [**read**' (y, x)])
- d. Agentive: **artifact**' (x), **do**' (y, [**write**' (y, x)]) & INGR **exist**' (x)

The interaction between the qualia roles and the voice affixes during the derivation will be discussed in the following.⁶⁸

Observe the examples in (4.91):

(4.91) *mi-* + nominal root → activity

Root	<i>mi-</i> form
<i>nanum</i> ‘water’	<i>mi-nanum</i> ‘(go to) drink (water)’
<i>futing</i> ‘fish’	<i>mi-futing</i> ‘(go to) fish’
<i>icep</i> ‘betlenut’	<i>mi-icep</i> ‘(go to) chew betlenut’
<i>dateng</i> ‘vegetable’	<i>mi-dateng</i> ‘(go to) pick vegetable’
<i>kilang</i> ‘tree’	<i>mi-kilang</i> ‘(go to) chop down a tree’
<i>cudad</i> ‘book’	<i>mi-cudad</i> ‘(go to) study (i.e. read books)’

As we can see in the above examples, when *mi-* attaches to a nominal root, the whole derived form is an activity with the root form serving as the object. Judging from the examples in (4.91), we can see that when a nominal root is affixed with *mi-*, it is either the telic role (e.g. *mi-nanum* ‘(go to) drink (water)’) or the agentive role (e.g. *mi-dateng* ‘(go to) pick vegetable’) that is selected and reserved in the derived form. Hence, the lexical rule in (4.92) is postulated to account for such a derivation. In the rule, the part

⁶⁸ Nevertheless, I have to admit that there are some derivations that cannot be explained by the qualia theory. Such derivations may involve metaphorical extension or cultural specific factors and thus the semantic content of the derived predicates cannot be simply explained by the four qualia roles. As the investigation of such derivations is beyond the scope of this research, I will exclude such examples in the discussion.

supplied by the root in the logical structure of the derived predicate is italicized.

(4.92) Lexical rule of *mi-* + nominal root α

a. Rule

LS of <i>mi-</i>	[[do' (x, [go' (x)]) & INGR be-at' (z, x)] PURP] [do' (x, [pred' (x, y)])]
Input	Nominal (α), selected qualia role: telic role or agentive role
Output 1	[[do' (x, [go' (x)]) & INGR be-at' (z, x)] PURP] [do' (x, [<i>pred'</i> _{Qt} (x, α)])] Functions of <i>mi-</i> : classifying and changing
Output 2	[[do' (x, [go' (x)]) & INGR be-at' (z, x)] PURP] [do' (x, [<i>pred'</i> _{Qa} (x, α)])] Function(s) of <i>mi-</i> : classifying and changing
Notes	The derived predicate selects either the telic role of the root, specified as pred' _{Qt} in Output 1, or the agentive role of the root, specified as pred' _{Qa} in Output 2.

b. Example for output 1

LS of <i>mi-</i>	[[do' (x, [go' (x)]) & INGR be-at' (z, x)] PURP] [do' (x, [pred' (x, y)])]
Input	<i>nanum</i> 'water', selected qualia role: telic role
Output	<i>mi-nanum</i> '(go to) drink (water)' [[do' (x, [go' (x)]) & INGR be-at' (z, x)] PURP] [do' (x, [<i>drink'</i> (x, <i>nanum</i>)])]

c. Example for output 2

LS of <i>mi-</i>	[[do' (x, [go' (x)]) & INGR be-at' (z, x)] PURP] [do' (x, [pred' (x, y)])]
Input	<i>dateng</i> 'vegetable', selected qualia role: agentive role
Output	<i>mi-dateng</i> '(go to) pick vegetable' [[do' (x, [go' (x)]) & INGR be-at' (z, x)] PURP] [do' (x, [<i>pick'</i> (x, <i>dateng</i>)])]

The rule in (4.92a) states the derivational process of *mi-* plus a nominal root, where *mi-* picks up either the telic role (i.e. the purpose and the function) or the agentive role (i.e. 'bringing about the existence; cause to become have') of the object root and derives related predicates. Two examples are provided in (4.92b) and (4.92c) to illustrate the two possible outputs. Notice that this rule is exactly an example in which the voice affix adds a part of its semantic content to the root and then derives a predicate.

As for *-um-*, the predicates with this infix are relatively few in number, and it is no longer productive, as loan words never undergo further derivation with *-um-*. Furthermore, this infix seldom attaches to nominal roots. The following are a few examples that I have collected:

(4.93) *-um-* + nominal root → activity

Root	<i>-um-</i> form
<i>tireng</i> ‘body’	<i>t-um-ireng</i> ‘stand’
<i>radiw</i> ‘song’	<i>r-um-adiw</i> ‘sing’
<i>suwal</i> ‘(spoken) words’	<i>s-um-uwal</i> ‘say’
<i>ta’iq</i> ‘stool’	<i>t-um-a’iq</i> ‘defecate’
<i>sela</i> ‘air’	<i>s-um-ela</i> ‘breath’
<i>teraq</i> ‘a drop of liquid’	<i>t-um-eraq</i> ‘drip; leak’

Unlike *mi-*, *-um-* does not select the telic role of the nominal root; rather, it only selects the agentive role during the derivation, and the new form is interpreted as ‘bring about the existence of something’.⁶⁹ The lexical rule for *-um-* derivation is postulated as (4.94):

(4.94) Lexical rule of *-um-* + nominal root α (preliminary)

LS of <i>-um-</i>	do’ (x, [pred’ (x, y)])
Input	Nominal (α), selected qualia role: agentive role
Output	do’ (x, [pred’ _{Qa} (x, (α))]) Function(s) of <i>-um-</i> : classifying and changing

Notice that the derivational rule in (4.94) suggests that the derived verb would be a two-place predicate. However, this is not always true, as I do find one-place *-um-*predicates such as *t-um-eraq* ‘drip’ in my data. The two-place version of this predicate will be *mi-teraq* ‘drip (transitive)’. In such examples, the nominal (α) is in the position of *x* but not *y* in the logical structure. So, (4.94) is revised as (4.95) to incorporate this derivational possibility:

(4.95) Lexical rule of *-um-* + nominal root α (revised)

a. Rule

LS of <i>-um-</i>	do’ (x, [pred’ (x, (y))])
Input	Nominal (α), selected qualia role: agentive role
Output 1	do’ (x, [pred’ _{Qa} (x, (α))]) Function(s) of <i>-um-</i> : classifying and changing
Output 2	do’ (x, [pred’ _{Qa} (α)] (α =inanimate) Function(s) of <i>-um-</i> : classifying and changing

⁶⁹ This interpretation might sound unnatural for some examples such as *t-um-ireng* ‘stand’. However, if we conceive this new interpretation as ‘bringing about a support’, it will not sound like an exception to the lexical rule. The evidence of such a conception is from the *pa-* form of *tireng*, which means ‘to stand something up by giving a support’.

b. Example for output 1

LS of <i>-um-</i>	do' (x, [pred' (x, (y))])
Input	<i>suwal</i> '(spoken) words', selected qualia role: agentive role
Output	<i>s-um-uwal</i> 'say': do' (x, [say' (x, (<i>suwal</i>))])

a. Example for output 2

LS of <i>-um-</i>	do' (x, [pred' (x, (y))])
Input	<i>teraq</i> 'a drop of liquid', selected qualia role: agentive role
Output	<i>t-um-eraq</i> 'drip': do' (x, [drip' (<i>teraq</i>)])

The rule in (4.95a) states that when *-um-* attaches to a nominal root, it will derive an activity predicate that selects the agentive role of the root, with the root serving either as the patient-argument (y), if the derived predicate has two arguments, or the effector (x), if the derived predicate has only one argument. Notice that, based on the examples collected, the second output is only possible when the derived predicate does not need an animate effector. Such a kind of *-um-* predicate is rather sporadic, though.

Finally, let us examine activity verbs prefixed by the *ma-* (AV or neutral), exemplified in (4.96):

(4.96) *ma-* + nominal root → activity

Root	<i>ma-</i> Form (AV or neutral)
<i>kro</i> 'dance'	<i>ma-kro</i> (or <i>ma-sa-kro</i>) 'dance'
<i>tayal</i> 'work'	<i>ma-tayal</i> 'work'
<i>'etut</i> 'gas'	<i>ma-'etu</i> 'bloat'
<i>kimad</i> 'story'	<i>ma-kimad</i> 'tell story'
<i>kerker</i> 'shiver'	<i>ma-kerker</i> 'shiver'
<i>faha</i> 'cough'	<i>ma-faha</i> 'cough'

The examples in (4.96) show that the combination of *ma-* and a nominal root also chooses the agentive qualia role of the nominal, as the derived forms all involve in the process of "bringing about" the object/entity. However, unlike *-um-* verbs, the root never appears in the x slot in the logical structures of *ma-* verbs; it only shows up as the y argument of the derived *pred'*. Another possible outcome for such a derivation is that the

pred' is the same as the root; that is, the derived activities contain the same semantic content of the roots (e.g. *cough* (n.) and *cough* (v)), though the root can also be conceived as the generic product produced by the activity. The two possible derivations are represented by the lexical rule in (4.97):

(4.97) Lexical rule of *ma-* (activity, AV or neutral) + nominal (α) \rightarrow activity

a. Rule

LS of <i>ma-</i>	do' (x, [pred' (x, (y))])
Input	Nominal (α), selected qualia role: agentive role
Output 1	do' (x, [pred' _{Qa} (x, (α))]) Functions of <i>ma-</i> : classifying and changing
Output 2	do' (x, [pred' _{Qa} (x)]), pred' = α Function(s) of <i>ma-</i> : classifying and changing

b. Example for output 1

LS of <i>ma-</i>	do' (x, [pred' (x, (y))])
Input	<i>kimas</i> 'story', selected qualia role: agentive role
Output 1	<i>ma-kimad</i> 'tell a story': do' (x, [tell.a.story' (x, (<i>kimas</i>))])

c. Example for output 2

LS of <i>ma-</i>	do' (x, [pred' (x, (y))])
Input	<i>faha</i> 'cough', selected qualia role: agentive role
Output	<i>ma-faha</i> 'cough': do' (x, [cough' (x)])

In addition to deriving an activity predicate, *ma-* can also derive a state predicate from a nominal root. Some examples are given below:

(4.98) *ma-* + nominal root \rightarrow state

Root	<i>ma-</i> Form (AV or neutral)
<i>kapah</i> 'youth'	<i>ma-kapah</i> 'beautiful; good'
<i>duka</i> 'wound'	<i>ma-duka</i> 'wounded'
<i>kuli</i> 'bone'	<i>ma-kuli</i> 'thin; bony'
<i>ludis</i> 'wave'	<i>ma-ludis</i> 'wavy'
<i>fali</i> 'wind'	<i>ma-fali</i> 'windy'

As illustrated in (4.98), the prefix *ma-* tends to select the formal qualia role of a nominal

to form a state predicate;⁷⁰ and the derived states can be roughly rendered as ‘have the quality denoted by the root’. Most of the derived predicates seem to be transient or result states. Such a derivation can be represented in (4.99):

(4.99) Lexical rule of *ma-* (plain state, AV or neutral) + nominal (α) → state

a. Rule

LS of <i>ma-</i>	pred' (x, (y))
Input	Nominal (α), selected qualia role: formal role
Output	have.α_{Qf}' (x, (y)) Function(s) of <i>ma-</i> : classifying and changing

b. Example

LS of <i>ma-</i>	pred' (x, (y))
Input	<i>duka</i> ‘wound’, selected qualia role: formal role
Output	<i>ma-duka</i> ‘wounded’: wounded' (x)

The following table summarizes the voice affixes, the qualia roles they tend to select from a nominal root in the derivation, and the types of predicates they derive from a nominal root.

Table 4.15 Voice Affixes and the Selection of Qualia Roles from Nominal Roots in the Derivation⁷¹

Voice Affix	Qualia Role Selected	Type of Derived Predicate
<i>mi-</i>	telic or agentive	(motional/purposive) activity
<i>-um-</i>	agentive	activity
<i>ma-</i> (AV or neutral)	agentive	activity
<i>ma-</i> (AV or neutral)	formal	state

4.5.2 Deriving a Predicate from a State Root

There are at least four types of state roots: attribute/non-episodic, episodic/transient, result, and psych-state. The most common derivational process from these state roots is via the affixation of *ma-*. However, as discussed earlier, there are at least four logical

⁷⁰ As mentioned in Footnote 67 of this chapter, there are some exceptions in the derivation that cannot be explained by the qualia theory. For example, it is difficult to conceive the relation between *ma-kapah* ‘beautiful’ from the root *kapah* ‘youth’ as a relation specified by the formal qualia of *kapah*. Some cultural or metaphorical factors might have been involved in such exceptions.

⁷¹ The lexical rule of the UV marker *-en* + a nominal root is similar to that of *mi-*; the only difference is that *-en* has a DO component and a telic in its LS

structures of *ma-*, repeated in (4.100):

(4.100) The Logical Structures of *ma-*

<i>ma-1</i> activity (AV or neutral)	do' (x, [pred' (x, (y))])
<i>ma-2</i> result state (AV or neutral)	(INGR/BECOME) (pred' (x, (y)))
<i>ma-3</i> active/causative accomplishment (UV)	do' (x, [pred' (x, (y))]) ...BECOME (pred' (y))
<i>ma-4</i> transient or plain state (AV or neutral)	pred' (x, (y))

Not every *ma-* is compatible with a state root. The activity *ma-1* never co-occurs with a state root; it either attaches to a nominal root or an activity root. Result state *ma-2* and transient or plain state *ma-4* are the *ma-* forms most frequently found with state roots.

When *ma-2* attaches to a non-result state root (e.g. an attribute or a transient state), it adds the (INGR/BECOME) part to the LS of the roots; when this prefix attaches to a result state root, it simply derives a predicate without any addition of any component to the LS of the root. The lexical rule of *ma-2* + a state root can be formulated as follows:

(4.101) Lexical rule of *ma-2* (result state, AV or neutral) + state root $\alpha \rightarrow$ result state

a. Rule 1

LS of <i>ma-2</i>	(INGR/BECOME) (pred' (x, (y)))
Input	Result State Root (α): (INGR/BECOME) (pred'$_{\alpha}$' (x, (y)))
Output	(INGR/BECOME) (pred'$_{\alpha}$' (x, (y))) Function(s) of <i>ma-2</i> : classifying

a'. Example for Rule 1

LS of <i>ma-2</i>	(INGR/BECOME) (pred' (x, (y)))
Input	<i>ruhem</i> 'ripe': (INGR/BECOME) (ripe' (x))
Output	<i>ma-ruhem</i> 'ripe': (INGR/BECOME) (ripe' (x))

b. Rule 2

LS of <i>ma-2</i>	(INGR/BECOME) (pred' (x, (y)))
Input	Attribute State Root (α): be' (x, [pred'$_{\alpha}$'])
Output	(INGR/BECOME) (pred'$_{\alpha}$' (x, (y))) Function(s) of <i>ma-2</i> : classifying and changing

b'. Example for Rule 2

LS of <i>ma-2</i>	(INGR/BECOME) (pred' (x, (y)))
Input	<i>kuhting</i> 'black': be' (x, [black'])
Output	<i>ma-kuhting</i> 'become black' (INGR/BECOME) (black' (x))

c. Rule 3

LS of <i>ma-2</i>	(INGR/BECOME) (pred' (x, (y)))
Input	Transient or Plain State (α): pred'α' (x, (y))
Output	(INGR/BECOME) (pred'α' (x, (y))) Function(s) of <i>ma-</i> : classifying and changing

c'. Example for Rule3

LS of <i>ma-2</i>	(INGR/BECOME) (pred' (x, (y)))
Input	<i>lasang</i> 'drunk': drunk' (x)
Output	<i>ma-lasang</i> '(become) drunk': (INGR/BECOME) (drunk' (x))

The three rules in (4.101) state the derivational possibilities when *ma-2* attaches to a result state, an attribute state, or a transient/plain state. However, as the INGR/BECOME part in *ma-2* cannot be easily referred to, it is sometimes difficult to tell whether a given *ma-* + state root has a *ma-2* or a *ma-4* in the logical structure. Nevertheless, it seems that the result state *ma-2* does not commonly show up with an attribute state root; when an attribute state appears with *ma-*, the derived predicate is more likely to be a *ma-3* predicate, the causative accomplishment (UV). For example:

- (4.102)a. *fa'edet* 'hot'
 b. *ma-fa'edet* 'heat up (UV)'

The root form in (4.102a) is an attribute state root, and its *ma-* form in (4.102b) is rendered as a causative accomplishment (i.e. a *ma-3* predicate (UV)). As this derivation is similar to that of *mi-* + an attribute root, I will discuss these two together later in this section.

The prefix *ma-4* (the transient or plain state) will derive a transient or a plain state from an attribute or non-episodic state. An example is given in (4.103):

- (4.103)a. *lipahak* 'happy'
 b. *ma-lipahak* 'very happy (e.g. for remembering something happy)'

The root *lipahak* ‘happy’ can be used as a predicate through zero derivation (i.e. an unaffixed predicate) as seen in (4.103a), but it also has a *ma-* form. The *ma-* version of this predicate indicates a stronger, yet episodic state of happiness, compared with the unaffixed form in (4.103a). Notice that, however, the *ma-* form in (4.103b) can also be conceived as a result state. As I have pointed out, the distinction between a result state and a transient state is not very obvious, since it is difficult to refer to the process part entailed in a result state unless certain contexts are provided (e.g. the co-occurrence with a pace adverb). This *ma-* prefix can derive a state predicate that is irrelevant to a permanent/episodic feature (e.g. a psych-predicate) from a state or a nominal root. The lexical rule is stated below:

(4.104) Lexical rule of *ma-4* (transient/plain state, AV or neutral) + state root α → transient/plain state

a. Rule 1

LS of <i>ma-4</i>	pred' (x, (y))
Input	Attribute State Root (α): be' (x, [pred'α'])
Output	pred'α' (x, (y)) Function(s) of <i>ma-4</i> : classifying and changing

a'. Example for Rule 1

LS of <i>ma-4</i>	pred' (x, (y))
Input	<i>lipahak</i> : be' (x, [happy'])
Output	<i>ma-lipahak</i> ‘very happy (because of something)’: happy' (x)

b. Rule 2

LS of <i>ma-4</i>	pred' (x, (y))
Input	Transient/Plain State Root (α): pred'α' (x, (y))
Output	pred'α' (x, (y)) Function(s) of <i>ma-4</i> : classifying

b'. Example for Rule 2

LS of <i>ma-4</i>	pred' (x, (y))
Input	<i>inal</i> : envious' (x, (y))
Output	<i>ma-inal</i> ‘envious’: envious' (x, (y))

The derivational rule for *ma-3* (active/causative accomplishment, UV) is closely related to that of *mi-*. Both of them commonly derive a causative accomplishment predicate when attaching to a state root (e.g. *fa'edet* 'hot' → *mi-fa'edet* '(go to) heat up' and *ma-fa'edet* 'heat up (UV)'). However, it is also possible for *mi-* to derive an activity from a state root, especially a root denoting a psych-state, which I have already discussed in Section 4.4.2. The lexical rule of *mi-* plus a (non-psych) state root is stated in (4.105):

(4.105) Lexical rule of *mi-* + (non-psych) state root α → (motional) causative accomplishment

a. Rule 1

LS of <i>mi-</i>	[[do' (x, [go' (x)]) & INGR be-at' (z, x)] PURP) [do' (x, [pred' (x, y))]]
Input	Result State Root α : (INGR/BECOME) (pred'α' (x, (y)))
Output 1	[[do' (x [go' (x)]) & INGR be-at' (z, x)] PURP) [do' (x, [pred' (x, (y))])] CAUSE BECOME [pred'α' (y)], x=animate Function(s) of <i>mi-</i> : classifying and changing
Output 2	[do' (x, [pred' (x, (y))])] CAUSE [BECOME [pred'α' (y)]] Function(s) of <i>mi-</i> : classifying and changing

a'. Example for Rule 1

LS of <i>mi-</i>	[[do' (x, [go' (x)]) & INGR be-at' (z, x)] PURP) [do' (x, [pred' (x, y))]]
Input	<i>ma-ruhem</i> 'ripe': (BECOME) ripe' (x)
Output 1	<i>mi-ruhem</i> '(go to) ripen': [[do' (x [go' (x)]) & INGR be-at' (z, x)] PURP) [do' (x, [pred' (x, (y))])] CAUSE BECOME [ripe' (y)], x=animate
Output 2	<i>mi-ruhem</i> 'ripen': [do' (x, [pred' (x, (y))])] CAUSE [BECOME [ripe' (y)]]

b. Rule 2

LS of <i>mi-</i>	[[do' (x, [go' (x)]) & INGR be-at' (z, x)] PURP) [do' (x, [pred' (x, y))]]
Input	Attribute State Root α : [be' (x, [pred'α'])]
Output 1	[[do' (x [go' (x)]) & INGR be-at' (z, x)] PURP) [do' (x, [pred' (x, (y))])] CAUSE BECOME [pred'α' (y)], x=animate Function(s) of <i>mi-</i> : classifying and changing
Output 2	[do' (x, [pred' (x, (y))])] CAUSE [BECOME [pred'α' (y)]] Function(s) of <i>mi-</i> : classifying and changing

b'. Example for Rule 2

LS of <i>mi-</i>	[[do' (x, [go' (x)]) & INGR be-at' (z, x)] PURP) [do' (x, [pred' (x, y))]]
Input	<i>kuhting</i> 'black': be' (x, [black'])
Output 1	<i>mi-kuhting</i> '(go to) blacken': [[do' (x [go' (x)]) & INGR be-at' (z, x)] PURP) [do' (x, [pred' (x, (y))]]] CAUSE BECOME [black' (y)], x=animate
Output 2	<i>mi-kuhting</i> 'blacken': [do' (x, [pred' (x, (y))])] CAUSE [BECOME [black' (y)]]

c. Rule 3

LS of <i>mi-</i>	[[do' (x, [go' (x)]) & INGR be-at' (z, x)] PURP) [do' (x, [pred' (x, y))]]
Input	Transient State Root α : predα' (x, (y))
Output 1	[[do' (x [go' (x)]) & INGR be-at' (z, x)] PURP) [do' (x, [pred' (x, (y))]]] CAUSE BECOME [(predα' (y))], x=animate Function(s) of <i>mi-</i> : classifying and changing
Output 2	[do' (x, [pred' (x, (y))])] CAUSE [BECOME [predα' (y)]] Function(s) of <i>mi-</i> : classifying and changing

c'. Example of Rule 3

LS of <i>mi-</i>	[[do' (x, [go' (x)]) & INGR be-at' (z, x)] PURP) [do' (x, [pred' (x, y))]]
Input	<i>tuniq</i> 'soft': soft' (x)
Output 1	<i>mi-tuniq</i> '(go to) soften; (go to) tenderize': [[do' (x [go' (x)]) & INGR be-at' (z, x)] PURP) [do' (x, [pred' (x, (y))]]] CAUSE BECOME [(soft' (y))], x=animate
Output 2	<i>mi-tuniq</i> 'soften; tenderize': [do' (x, [pred' (x, (y))])] CAUSE [BECOME [soft' (y)]]

As shown in the rules above, whether or not the motional/purposive part can be retained in the derived predicates depends on the nature of the *x* argument; the *x* argument has to be animate so that he/she can carry out the motional/purposive component in the LS. If it is inanimate, then there will not be any motional/purposive reading in the derived causative predicates. This is illustrated in the following contrast between an inanimate effector (i.e. *kuwaq* 'papaya') and an animate/human one (i.e. *Mayaw*):

- (4.106)a. Mi-tuniq k-u kuwaq t-u titi
 AV-soft NOM-CN papaya DAT-CN meat
 'The papaya will tenderize the meat.'

a'. [**do'** (kuwaq, [**soften'** (kuwaq, titi))]] CAUSE [BECOME (**soft'** (titi))]

- b. Mi-fa'edet Ø-ci mayaw t-u dateng.
 AV-hot NOM-CN Mayaw DAT-CN vegetable
 'Mayaw is going to heat up the dish.'
 'Mayaw is heating up the dish.'

- b.' ([do' (Mayaw, [go' (Mayaw)]) & INGR be-at' (z, Mayaw)] PURP) [do' (Mayaw, [heat.up' (Mayaw, dateng)])] CAUSE [BECOME (hot' (dateng))]

The rule for *ma-3* (active/causative accomplishment, UV) is similar to that of *mi-*.

However, there is no motional purposive part in the LS of *ma-3*, as stated in (4.107):

(4.107) Lexical rule of *ma-3* ((active/causative) accomplishment, UV)+ state root α → causative accomplishment

a. Rule 1

LS of <i>ma-3</i>	do' (x, [pred' (x, (y))]) ...BECOME (pred' (x, y))
Input	Result State Root α : (INGR/BECOME) (pred'α' (x, (y)))
Output	do' (x, [pred' (x, (y))]) CAUSE BECOME (pred'α' (y)) Function(s) of <i>ma-3</i> : classifying and changing

a'. Example for Rule 1

LS of <i>ma-3</i>	do' (x, [pred' (x, (y))]) ...BECOME (pred' (x, y))
Input	<i>ma-ruhem</i> 'ripe': (BECOME) ripe' (x)
Output	<i>ma-ruhem</i> 'ripen' (UV): [do' (x, [pred' (x, (y))])] CAUSE [BECOME [ripe' (y)]]

b. Rule 2

LS of <i>ma-3</i>	do' (x, [pred' (x, (y))]) ...BECOME (pred' (x, y))
Input	Attribute State Root α : [be' (x, [pred'α'])]
Output	[do' (x, [pred' (x, (y))])] CAUSE [BECOME [pred'α' (y)]] Function(s) of <i>ma-3</i> : classifying and changing

b'. Example for Rule 2

LS of <i>ma-3</i>	do' (x, [pred' (x, (y))]) ...BECOME (pred' (x, y))
Input	<i>kuhting</i> 'black': be' (x, [black'])
Output	<i>ma-kuhting</i> 'blacken' (UV): [do' (x, [pred' (x, (y))])] CAUSE [BECOME [black' (y)]]

c. Rule 3

LS of <i>ma-3</i>	do' (x, [pred' (x, (y))]) ...BECOME (pred' (x, y))
Input	Transient State Root α : pred'α' (x, (y))
Output	[do' (x, [pred' (x, (y))])] CAUSE [BECOME [pred'α' (y)]] Function(s) of <i>ma-3</i> : classifying and changing

c'. Example of Rule 3

LS of <i>ma-3</i>	do' (x, [pred' (x, (y))]) ...BECOME (pred' (x, y))
Input	<i>tuniq</i> 'soft': soft' (x)
Output	<i>ma-tuniq</i> 'soften; tenderize' (UV): [do' (x, [pred' (x, (y))])] CAUSE [BECOME [<i>soft'</i> (y)]]

As mentioned, the *mi-* derivational rule for a psych-predicate is different from other state predicates. Both the motional/purposive activity and the causative predicates can be possible outputs when *mi-* attaches to a psych-state root, depending on whether the state is internally motivated or externally triggered. The motional/purposive interpretation only goes with the internally motivated mental states; that is, *mi-* will derive an activity that expresses or is triggered by the psychological state denoted by the root. Notice that the motional/purposive reading of *mi-* for psych-predicates is semantically more complicated than other similar derivations that have been discussed. The purpose is triggered by a specified mental state, and the result of such a purpose is to make the state known to someone. For a more precise description of this derivation, I would like to employ the following logical structure that is used for describing the “purposive” function of English *for* in RRG (VVLP 1997: 383):

$$(4.108) \text{ want}' (x, LS_2) \wedge DO (x, [LS_1 \dots CAUSE \dots LS_2])$$

The LS in (4.108) depicts the situation where “the participant denoted by *x* wants some state of affairs to obtain (*LS₂*) and intentionally does *LS₁* in order to bring *LS₂* about” (VVLP 1997:383). In the Amis case, *LS₂* is specified in the psych-state, and *LS₁* is the motional part contributed by *mi-* (i.e. go to do something). The rule is formulated as (4.109):

(4.109) Lexical rule of *mi-* + psych-state root $\alpha \rightarrow$ motional/purposive activity

a. Rule

LS of <i>mi-</i>	([(do' (x, [go' (x)]) & INGR be-at' (z, x)] PURP) [do' (x, [pred' (x, y)])])
Input	Psych-State Root α : pred$_{\alpha}$' (x, (y)), pred$_{\alpha}$' = internally-generated psych-state
Output	[want' (x, [BECOME known' (w, [<i>pred$_{\alpha}$'</i> (x, (w))])]) ^ DO (x, [do' (x, [go' (x)])]) & INGR be-at' (z, x) & do' (x, [pred' (x, (y))]) CAUSE BECOME known' (w, [<i>pred$_{\alpha}$'</i> (x)])] Function(s) of <i>mi-</i> : classifying and changing

b. Example

LS of <i>mi-</i>	([(do' (x, [go' (x)]) & INGR be-at' (z, x)] PURP) [do' (x, [pred' (x, y)])])
Input	ulah 'like': like' (x, y), pred$_{\alpha}$' = internally-generated psych-state
Output	[want' (x, [BECOME known' (w, [<i>like'</i> (x, w)])]) ^ DO (x, [do' (x, [go' (x)])]) & INGR be-at' (z, x) & do' (x, [pred' (x, (y))]) CAUSE BECOME known' (w, [<i>like'</i> (x, w)])]

The derivational rule in (4.109) says that the *x* argument goes to do something (LS₁) to make his/her psych-state (LS₂, e.g. **like'** (x, w) in the example) become known to someone (i.e. *w*). Take *mi-ulah* 'go to express love to someone' as an example. Its logical structure shows that the *x* argument goes to do something to make his/her love known to someone. Notice that in this derivation, the *x* argument has to be agentive, which explains why the externally triggered psych-states do not easily appear with this derivation; the experiencer for such a psych-predicate tends to show little volition. Moreover, as these psych-states are stimulated externally, it is possible to make the stimulus an inanimate causer that brings about the psych-predicate by prefixing *mi-*, which is the derivation stated in the rule in (4.105) for non-psych states; the derived predicate is a causative accomplishment.

Finally, let us discuss the derivational rule for the combination of *the* UV suffix *-en* and a state root. This suffix will generate a causative accomplishment verb from a state root. Moreover, due to the agentive nature of *-en*, the derived verb is also agentive. The rule is given in (4.110):

(4.110) Lexical rule of state root α + *-en* → agentive causative accomplishment⁷²

a. Rule 1

LS of <i>-en</i>	DO (x, [do' (x, [pred' (x, y))]) ... INGR/BECOME (pred' (y))
Input	Result State Root α : (INGR/BECOME) (pred'α' (x, (y)))
Output	DO (x, [do' (x, [pred' (x, y))]) CAUSE <i>BECOME</i> (pred'α' (y)) Function(s) of <i>-en</i> : classifying and changing

a'. Example for Rule 1

LS of <i>-en</i>	DO (x, [do' (x, [pred' (x, y))]) ... INGR/BECOME (pred' (y))
Input	<i>ma-ruhem</i> 'ripe': (BECOME) ripe' (x)
Output	<i>ruhem-en</i> 'ripen' (UV): DO (x, [do' (x, [pred' (x, y))]) CAUSE [<i>BECOME</i> [ripe' (y)]]

b. Rule 2

LS of <i>-en</i>	DO (x, [do' (x, [pred' (x, y))]) ... INGR/BECOME (pred' (y))
Input	Attribute State Root α : [be' (x, [pred'α'])]
Output	DO (x, [do' (x, [pred' (x, y))]) CAUSE [<i>BECOME</i> [pred'α' (y)]] Function(s) of <i>-en</i> : classifying and changing

b'. Example for Rule 2

LS of <i>-en</i>	DO (x, [do' (x, [pred' (x, y))]) ... INGR/BECOME (pred' (y))
Input	<i>kuhting</i> 'black': be' (x, [black'])
Output	<i>kuhting-en</i> 'blacken' (UV): DO (x, [do' (x, [pred' (x, y))]) CAUSE [<i>BECOME</i> [black' (y)]]

c. Rule 3

LS of <i>-en</i>	DO (x, [do' (x, [pred' (x, y))]) ... INGR/BECOME (pred' (y))
Input	Transient State Root α : pred'α' (x, (y))
Output	DO (x, [do' (x, [pred' (x, y))]) CAUSE [<i>BECOME</i> [pred'α' (y)]] Function(s) of <i>-en</i> : classifying and changing

c'. Example of Rule 3

LS of <i>-en</i>	DO (x, [do' (x, [pred' (x, y))]) ... INGR/BECOME (pred' (y))
Input	<i>tuniq</i> 'soft': soft' (x)
Output	<i>tuniq-en</i> 'soften; tenderize' (UV): DO (x, [do' (x, [pred' (x, y))]) CAUSE [<i>BECOME</i> [soft' (y)]]

4.5.3 Deriving a Predicate from an Activity Root

Recall that in the discussion of the *mi-* verbs, the {*paka-*} attachment test was applied to detect the inherent agency of the root forms. The discussion is summarized in

⁷² This derivation often co-occurs with the intensifier prefix *sa-* (e.g. *sa-tuniq-en* 'make tender').

Table 4.16:

Table 4.16 Degree of Agentivity Displayed in the Activity Roots

Reading of { <i>paka</i> -} Types of Roots	<i>paka</i> - (abilitative)	<i>pa-ka</i> - (causative)	examples
1. with strong agentive implicature (<i>mi</i> -, <i>-um</i> -)	yes	no	<i>paka-palu</i> ‘able to beat’ <i>paka-nengneng</i> ‘able to see’ <i>paka-ka’en</i> ‘able to eat’
2. agency-neutral, but non-agentive is the norm (<i>-um</i> -, <i>ma</i> - (AV or neutral))	yes	yes (default)	<i>pa-ka-lingad</i> ‘ask sb. to plow’ <i>paka-lingad</i> ‘able to plow’ <i>pa-ka-tangic</i> ‘beseech’ <i>paka-tangic</i> ‘able to cry’ <i>pa-ka-futiq</i> ‘make sleep’ <i>paka-futiq</i> ‘dare to sleep’
3. involuntary activities (<i>ma</i> - (AV or neutral))	no	no	*{ <i>paka</i> -} <i>suwaf</i> > <i>suwaf</i> ‘yawn’ *{ <i>paka</i> -}’ <i>etut</i> > ’ <i>etut</i> ‘fart’

As shown in the table, some roots only get the agency canceling reading when they are affixed with {*paka*-}, and thus these roots carry strong agentive implicature. The second group gets the causative reading of {*paka*-} by default. However, if a proper context is provided, the agency canceling, abilitative reading is also possible. For example:

(4.111)a. {*paka*-}*lingad* ‘ask sb. to plow on the farm’ (default reading)

b. {*Paka*-}*lingad* *isu* *t-u* *lingad*?
 ABLT-plow 2S.GEN DAT-CN plow
 ‘Are you able to do the plowing job?’

c. {*paka*-}*tangic* ‘beseech’ (i.e. cause to show sympathy) (default reading)

d. {*Paka*-}*tangic* *kisu* *cingraan*?
 ABLT-cry 2S.NOM 3S.DAT
 ‘Are you able to mourn for him (in the funeral)?’

The unmarked reading of the form {*paka*-}*lingad* is *pa-ka-lingad* ‘cause to plow’.

However, if a specific undergoer is provided, and/or it occurs in an interrogative sentence with a second person effector, it is possible to construe the derived form as *paka-lingad* ‘able to plow’, as illustrated in (4.111b). A similar case is found with the root *tangic* ‘cry’. The default reading of {*paka*-}*tangic* is *pa-ka-tangic* ‘beseech; cause to cry’, but in

a context where the listener is questioned about the possibility of mourning in the funeral for someone that he/she does not have any affection of, the form *{paka-}tangic* can get the abilitative reading (i.e. ‘able to cry’). For this group of roots, the non-agentive reading is the norm, though the agentive interpretation is possible occasionally. Hence, they are neutral regarding agentive implicature, but the absence of such implicature is the normal. Notice that when *{paka-}* is interpreted as ‘be able to’ for the agency-neutral group, the meaning of the roots seems to be changed as well (i.e. *cry* → *mourn*). The acceptability for the agency-canceling reading for the second group may vary among speakers. In addition to the two groups that can appear with *{paka-}*, there is one more set of roots of which the *{paka-}* form is not accepted. This set is composed of the involuntary activities discussed earlier. If an involuntary activity is allowed to have a *pa-* causative form, it is either *pa-* or *pa-pi-*; the form *pa-ka-* has not been found with this group of roots so far.

The *{paka-}* test shows that activity verbs in Amis are unmarked for agency, though some of them may carry strong agentive implicature. Nevertheless, such implicature can be canceled in proper contexts (e.g. the co-occurrence with “unintentionally”); hence, it should not be treated as a lexicalized property. The situation of Amis follows the claim in RRG (based on Holisky (1987) and Van Valin and Wilkins (1996)) that most of the time, this so-called agent, as named in almost all of the previous studies in Amis, is actually just an “effector”, which is “a dynamic participant doing something in an event” (Van Valin and Wilkins 1996:288). As discussed in Van Valin and Wilkins (1996), there are three factors that may affect the determination of a given argument as an agent or not: “the lexical semantic properties of the verb, the inherent lexical content of the NP

argument, and the grammatical construction in which the verbs and the NP co-occur.”
(Van Valin and Wilkins 1996:313)

The first factor can be illustrated by the observation summarized in Table 4.16; that is, the lexical content of the root forms (e.g. *palu* ‘beat’ vs. *futiq* ‘sleep’) helps foster the agentive reading of the actor argument. Second, the inherent lexical property of the NP may trigger the agentive implicature of a certain argument this NP denotes. The second factor subsumes a number of parameters,⁷³ which are allocated in two competing and interlinked hierarchies: animacy and empathy (or experiential salience) (Van Valin and Wilkins 1996:316). The first hierarchy is self-explanatory from its title, and the second one refers to the ability of a given argument to trigger agency attributions when occurring in an actional context. Some of the parameters (e.g. volitional, self-energetic, etc.) from the two hierarchies have been incorporated in the discussion of involuntary activities and the psych-predicates. Compared with the first two factors, the third factor has not been explored in the same depth, as commented in Van Valin and Wilkins (1996), and thus needs further investigation. .

Except for some motional activities (e.g. *tayni* (*ta-i-ni*) ‘come (here)’ and *tayra* (*ta-i-ra*) ‘go (there)’),⁷⁴ non-causative predicates deriving from an activity root are usually affixed by the AV markers *mi-*, *-um-*, or *ma-*. As seen in Table 4.16, activity roots usually appear with one of these affixes by default, and these roots vary among themselves in terms of the degrees of agentive implicature. Therefore, before the postulation of the derivational rules, it will be helpful to specify the various degrees of

⁷³ Please refer to the figure in Van Valin and Wilkins (1996: 314-315) for the list of the parameters and how the two hierarchies are interlinked.

⁷⁴ These two predicates are pronounced as *tayni* and *tayra* respectively in normal speech.

agency implied in the activity roots. Generally speaking, there are three types of activity roots in terms of the strength of agentive implicature: those with strong agentive implicature, those with weak agentive implicature, and those with no agentive implicature. Tentatively, these three types are represented in the following manner:

- (4.112)a. activity roots with **strong** agentive implicature: (DO) **do'** (x, [**pred'** (x, (y))])
- b. activity roots with **weak** agentive implicature: <DO> **do'** (x, [**pred'** (x, (y))])
- c. activity roots with **no** agentive implicature: **do'** (x, [**pred'** (x, (y))])

As illustrated in (4.112), I use (DO) and <DO> to indicate the strong and weak agentive implicature carried by the activity roots. For those without such implicature, I will keep the original semantic representation for activity verbs. Morphologically speaking, the first group usually occurs with *mi-*, the second group is usually affixed by *-um-* or *ma-* (AV or neutral), and third group is marked by *ma-* (AV or neutral). The specification stipulated in (4.112) will be utilized in the derivational rules for activity verbs.

The prefix *mi-* can derive two types of predicates from activity roots, depending on whether the root is implied with agency or not. For those with an agentive implicature, the derived form either gets a plain activity reading or a motional/purposive activity reading. Notice that the plain activity reading is only possible if the root also appears with *mi-* by default (e.g. *mi-palu* '(go to) beat'). For such roots, the motional/purposive component in the LS is optional. However, for activity roots that appears with either *-um-* or *ma-* by default in the AV construction, their *mi-* form always gets the motional/purposive reading. This difference has been discussed in an earlier section of this chapter. The lexical rule of *mi-* + an activity root is given as (4.113):

(4.113) Lexical rule of *mi-* + activity root $\alpha \rightarrow$ activity

a. Rule 1

LS of <i>mi-</i>	([[do' (x, [go' (x)]) & INGR be-at' (z, x)] PURP) [do' (x, [pred' (x, y)])]
Input	Activity Root α , with Strong Agentive Implicature: (DO) do' (x, [pred $_{\alpha}$ ' (x, (y))])
Output 1	([[do' (x, [go' (x)]) & INGR be-at' (z, x)] PURP) [do' (x, [pred $_{\alpha}$ ' (x, y)])], pred $_{\alpha}$ ' appears with <i>mi-</i> by default. Function(s) of <i>mi-</i> : classifying and changing
Output 2	[do' (x, [go' (x)]) & INGR be-at' (z, x)] PURP [do' (x, [pred $_{\alpha}$ ' (x, y)])], pred $_{\alpha}$ ' appears with <i>-um-</i> or <i>ma-</i> by default. Function(s) of <i>mi-</i> : classifying and changing

a'. Example of Rule 1 Output 1

LS of <i>mi-</i>	([[do' (x, [go' (x)]) & INGR be-at' (z, x)] PURP) [do' (x, [pred' (x, y)])]
Input	<i>palu</i> 'beat': (DO) do' (x, [beat' (x, y)])
Output	<i>mi-palu</i> 'go to beat' ([[do' (x, [go' (x)]) & INGR be-at' (z, x)] PURP) [do' (x, [beat' (x, y)])]

a''. Example of Rule 1 Output 2

LS of <i>mi-</i>	([[do' (x, [go' (x)]) & INGR be-at' (z, x)] PURP) [do' (x, [pred' (x, y)])]
Input	<i>ka'en</i> 'eat': (DO) do' (x, [eat' (x, y)])
Output	<i>mi-ka'en</i> 'go to have a banquet' [do' (x, [go' (x)]) & INGR be-at' (z, x)] PURP [do' (x, [eat' (x, y)])],

b. Rule 2

LS of <i>mi-</i>	([[do' (x, [go' (x)]) & INGR be-at' (z, x)] PURP) [do' (x, [pred' (x, y)])]
Input	Activity Root α , with Weak Agentive Implicature: <DO> do' (x, [pred $_{\alpha}$ ' (x, (y))])
Output	[do' (x, [go' (x)]) & INGR be-at' (z, x)] PURP [do' (x, [pred $_{\alpha}$ ' (x, y)])], pred $_{\alpha}$ ' appears with <i>-um-</i> or <i>ma-</i> by default. Function(s) of <i>mi-</i> : classifying and changing

b'. Example of Rule 2

LS of <i>mi-</i>	([[do' (x, [go' (x)]) & INGR be-at' (z, x)] PURP) [do' (x, [pred' (x, y)])]
Input	<i>lingad</i> 'plow': <DO> do' (x, [plow' (x, y)])
Output	<i>mi-lingad</i> 'go to plow (for someone)' [do' (x, [go' (x)]) & INGR be-at' (z, x)] PURP [do' (x, [plow' (x, y)])]

For the roots that have no agentive implicature (i.e. involuntary activities), *mi-* generates a causative activity. This is represented in (4.114):

(4.114) Lexical rule of *mi-* + activity root $\alpha \rightarrow$ causative activity

a. Rule

LS of <i>mi-</i>	$([\mathbf{do}'(x, [\mathbf{go}'(x)]) \& \text{INGR be-at}'(z, x)] \text{PURP}) [\mathbf{do}'(x, [\mathbf{pred}'(x, y)])]$
Input	Activity Root α , with No Agentive Implicature: $\mathbf{do}'(x, [\mathbf{pred}'_{\alpha}(x, (y))])$
Output	$\mathbf{do}'(x, [\mathbf{pred}'(x, \emptyset)]) \text{CAUSE } \mathbf{do}'(y, [\mathbf{pred}'_{\alpha}(y, (z))])$, x= inanimate or non-volitional Function(s) of <i>mi-</i> : classifying and changing

b. Example

LS of <i>mi-</i>	$([\mathbf{do}'(x, [\mathbf{go}'(x)]) \& \text{INGR be-at}'(z, x)] \text{PURP}) [\mathbf{do}'(x, [\mathbf{pred}'(x, y)])]$
Input	<i>turu'uk</i> 'belch': $\mathbf{do}'(x, [\mathbf{belch}'(x, y)])$
Output	<i>mi-turu'uk</i> 'cause to belch' $\mathbf{do}'(x, [\mathbf{pred}'(x, \emptyset)]) \text{CAUSE } \mathbf{do}'(y, [\mathbf{belch}'(y, (z))])$, x= inanimate or non-volitional

This lexical rule states the possibility for *mi-* to co-occur with an involuntary activity; the outcome is a causative activity initiated by a non-agentive causer.

Roots that appear with the infix *-um-* are limited in number. Some of them may exhibit a strong agentive implicature (e.g. *ka'en* 'eat'), while others may have a weak agentive implicature (e.g. *tangic* 'cry'). The lexical rule for *-um-* is stated in (4.115):

(4.115) Lexical rule of *-um-* + activity root $\alpha \rightarrow$ activity

a. Rule 1

LS of <i>-um-</i>	$\mathbf{do}'(x, [\mathbf{pred}'(x, y)])$
Input	Activity Root α , with Strong Agentive Implicature: $(\text{DO}) \mathbf{do}'(x, [\mathbf{pred}'_{\alpha}(x, (y))])$
Output	$(\text{DO}) \mathbf{do}'(x, [\mathbf{pred}'_{\alpha}(x, (y))])$ Function(s) of <i>-um-</i> : classifying

a'. Example for Rule 1

LS of <i>-um-</i>	$\mathbf{do}'(x, [\mathbf{pred}'(x, y)])$
Input	<i>ka'en</i> 'eat': $(\text{DO}) \mathbf{do}'(x, [\mathbf{eat}'(x, (y))])$
Output	<i>k-um-a'en</i> 'eat': $(\text{DO}) \mathbf{do}'(x, [\mathbf{eat}'(x, (y))])$

b. Rule 2

LS of <i>-um-</i>	do' (x, [pred' (x, y)])
Input	Activity Root α , with Weak Agentive Implicature: <DO> do' (x, [pred'_{α}' (x, (y))])
Output	<DO> do' (x, [pred'_{α}' (x, (y))]) Function(s) of <i>-um-</i> : classifying and changing

b'. Example for Rule 1

LS of <i>-um-</i>	do' (x, [pred' (x, y)])
Input	<i>tangic</i> 'cry': <DO> do' (x, [cry' (x, (y))])
Output	<i>t-um-angic</i> 'cry': <DO> do' (x, [cry' (x, (y))])

We can see that *-um-* does not change the semantic structure of the activity root; it just makes the root function as a predicate.

As for *ma-*, there are three possible derivations from the affixation of this form: activity, active accomplishment, and causative accomplishment; they are derived from different *ma-*s attaching to activity roots with various degrees of agentivity. The first one is found with *ma-1* (activity, AV or neutral) + roots with weak or no agentive implicature, the second one, the non-causative active accomplishment, is found with *ma-3* (causative/active accomplishment, UV) plus roots with agentive implicature, and the third one, the causative accomplishment, is found with *ma-3* (causative/active accomplishment, UV) plus roots with no agentive implicature. The last two derivations are the UV versions of the corresponding *mi-* verbs stated in (4.113) and (4.114). These three derivations are stated in (4.116), (4.117), and (4.118) respectively:

(4.116) Lexical rule of *ma-1* (activity, AV or neutral) + activity root $\alpha \rightarrow$ activity

a. Rule 1

LS of <i>ma-1</i>	do' (x, [pred' (x, y)])
Input	Activity Root α , with Weak Agentive Implicature: <DO> do' (x, [pred'_{α}' (x, (y))])
Output	<DO> do' (x, [pred'_{α}' (x, (y))]) Function(s) of <i>ma-1</i> : classifying

a'. Example for Rule 1

LS of <i>ma-1</i>	do' (x, [pred' (x, y)])
Input	<i>tayal</i> 'work': <DO> do' (x, [work' (x, (y))])
Output	<i>ma-tayal</i> 'work': <DO> do' (x, [work' (x, (y))])

b. Rule 2

LS of <i>ma-1</i>	do' (x, [pred' (x, y)])
Input	Activity Root α , with No Agentive Implicature: do' (x, [pred'α' (x, (y))])
Output	do' (x, [pred'α' (x, (y))]) Function(s) of <i>ma-1</i> : classifying

b'. Example for Rule 2

LS of <i>ma-1</i>	do' (x, [pred' (x, y)])
Input	<i>туру'uk</i> 'belch': do' (x, [belch' (x)])
Output	<i>ma-туру'uk</i> 'belch': do' (x, [belch' (x)])

As shown in the rule, like *-um-*, the affixation of *ma-1* does not affect the semantics of an activity root; it simply derives a predicate from the root.

The rules in (4.117) state the derivation through the affixation of *ma-3* (causative/active accomplishment, UV). There are two possible inputs for this derivation from activity roots with strong and weak agentive implicature respectively. Notice that, however, the derivation from the second input is not very common, as the majority of activity roots with weak agentive implicature only have one core argument.

**(4.117) Lexical rule of *ma-3* (causative/active accomplishment, UV) + activity root α
→ active accomplishment**

a. Rule 1

LS of <i>ma-3</i>	do' (x, [pred' (x, (y))]) ...BECOME (pred' (x, y))
Input 1	Activity Root α , with Strong Agentive Implicature: (DO) do' (x, [pred'α' (x, (y))])
Input 2	Activity Root α , with Weak Agentive Implicature: <DO> do' (x, [pred'α' (x, (y))])
Output	do' (x, [pred'α' (x, (y))]) & BECOME (pred'α' (y)) Function(s) of <i>ma-3</i> : classifying and changing

b. Example for Input 1

LS of <i>ma-3</i>	do' (x, [pred' (x, (y))]) ...BECOME (pred' (x, y))
Input	<i>palu</i> 'beat': (DO) do' (x, [beat' (x, y)])
Output	<i>ma-palu</i> 'beat (UV)' do' (x, [beat' (x, y)]) & BECOME (<i>beaten'</i> (y))

c. Example for Input 2

LS of <i>ma-3</i>	do' (x, [pred' (x, (y))]) ...BECOME (pred' (x, y))
Input	<i>tayal</i> 'work': <DO> do' (x, [work' (x, y)])
Output	<i>ma-tayal</i> 'work; do (UV)' do' (x, [work' (x, y)]) & BECOME (<i>work.on'</i> (y))

The rule in (4.118) states the derivation in which *ma-3* attaches to an activity root with no agentive implicature (i.e. involuntary activity), and the derived predicate is a causative accomplishment (UV) with an inanimate causer that triggers the involuntary activity.

(4.118) Lexical rule of *ma-3* (active/causative accomplishment, UV) + activity root α → causative accomplishment

a. Rule

LS of <i>ma-3</i>	do' (x, [pred' (x, (y))]) ...BECOME (pred' (x, y))
Input	Activity Root α , with No Agentive Implicature: do' (x, [pred'α' (x, (y))])
Output	do' (x, [pred' (x, (y))]) CAUSE BECOME do' (y, [pred'α' (y)]) x= inanimate or non-volitional Function(s) of <i>ma-3</i> : classifying and changing

b. Example

LS of <i>ma-3</i>	do' (x, [pred' (x, (y))]) ...BECOME (pred' (x, y))
Input	<i>uta</i> 'vomit': do' (x, [vomit' (x, y)])
Output	<i>ma-uta</i> 'cause to vomit (UV)' do' (x, [pred' (x, y)]) CAUSE BECOME do' (y, [vomit' (y)]), x= inanimate or non-volitional

Based on the derivational processes discussed above, needless to say, the prefix *mi-* shows the most derivational possibilities when attaching to an activity root. This derivational power can be attributed to its complicated semantics. The first part of *mi-*

(i.e. the motion/purposive part) carries a strong agentive implicature and contains a goal in it, and only when the attached root also possesses an agentive implicature and a potential to take a specific goal, can the motional/purposive part be retained in the derived form. In other words, the activity roots must inherently contain animate, at least self-energetic and volitional, effectors in their logical structures. When the roots do not have a volitional effector, the motional/purposive part cannot be preserved in the derivation; only the activity part of *mi-* is left in the output. This activity component of *mi-* then is conceived as a causing event that brings about the activity denoted by the root (hence, causative activity), and for the state roots, this activity component of *mi-* brings about the state (hence, causative accomplishment).

In addition to the affixes (*mi-*, *-um-*, *ma-* (AV or neutral), and UV *ma-*) discussed above, the suffix *-en* is also commonly found with activity roots. There is only one derivational possibility: the agentive active accomplishment. The rule is stated below:

(4.119) Lexical rule of *-en* (UV) + activity root $\alpha \rightarrow$ agentive active accomplishment

a. Rule

LS of <i>-en</i>	DO (x, [do' (x, [pred' (x, y))]) ... INGR/BECOME pred' (y)
Input 1	Activity Root α , with Strong Agentive Implicature: (DO) do' (x, [pred'_{α}' (x, (y))])
Input 2	Activity Root α , with Weak Agentive Implicature: <DO> do' (x, [pred'_{α}' (x, (y))])
Input 3	Activity Root α , with No Agentive Implicature: do' (x, [pred'_{α}' (x, (y))])
Output	DO (x, [do' (x, [pred'_{α}' (x, y))]) ... INGR/BECOME (pred'_{α}' (y)) Functions of <i>-en</i> : classifying and changing

b. Example for Input 1

LS of <i>-en</i>	DO (x, [do' (x, [pred' (x, y))]) ... INGR/BECOME pred' (y)
Input	<i>palu</i> 'beat': (DO) do' (x, [beat' (x, y)])
Output	<i>palu-en</i> 'beat for sure (UV)' DO (x, [do' (x, [beat' (x, y))]) ... INGR/BECOME beaten' (y)

c. Example for Input 2

LS of <i>ma-3</i>	do' (x, [pred' (x, (y))])BECOME (pred' (x, y))
Input	<i>tayal</i> 'work': <DO> do' (x, [work' (x, y)])
Output	<i>tayal-en</i> 'do a certain work (for sure) (UV)' DO (x, [do' (x, [work' (x, y)])]) INGR/BECOME work.on' (y)

d. Example for Input 3

LS of <i>ma-3</i>	do' (x, [pred' (x, (y))])BECOME (pred' (x, y))
Input	<i>uta</i> 'vomit': do' (x, [vomit' (x, y)])
Output	<i>uta-en</i> 'vomit something out (UV)' DO (x, [do' (x, [vomit' (x, y)])]) INGR/BECOME vomited' (y)

As shown in (4.119), the suffix *-en* supplies an agent to the activity roots regardless of their degrees of implied agency.

4.5.4 *Pa-* Causativization

In addition to the voice affixes examined so far, the causative prefix *pa-* is also commonly found in verbal derivation. There are at least three types of causative verbs that are derived from the affixation of *pa-*, including plain *pa-* verbs (i.e. *pa-* + root), *pa-pi-* verbs, and *pa-ka-* verbs. These three types of *pa-* verbs will be discussed in this section. The discussion of plain *pa-* verbs will focus on the interaction of *pa-* and the categories of the root. This interaction is manifested through the readings of the derived *pa-* predicates. As for the *pa-pi-* causative verbs, I will argue that they involve weaker causation (i.e. a jussive reading), compared with the plain *pa-* counterparts. This weaker causation of *pa-pi-* verbs is related to the semantics of *pi-*, the morphological variant of *mi-*, as mentioned in Chapter 3. As I will show later, the semantics of *pi-* intensifies the volition of the causee in the derived causative verb and thus weakens the causing power from the causer. Regarding the *pa-ka-* verbs, a greater variety of their interpretations have been found in the data, and I suspect that this is due to heterogeneous semantics of

ma-, to which *ka-* is morphologically related. The agentive UV suffix *-en* also plays an important role in *pa-* causativization. In fact, the *pa-* forms suffixed with *-en* show up more frequently than the plain *pa-* forms based on my investigation, and this is also reported in Starosta (1974). For some predicates, in particular the state predicates, informants prefer the presence of *-en* with *pa-*.

4.5.4.1 *Pa-* and the Categories of the Roots

The conjugation patterns of the plain *pa-* verbs are displayed in Table 4.17.

Table 4.17 The Conjugation Patterns of Plain *Pa-* Verbs

		<i>Verbal Affix</i>			<i>pa-</i>	
		Semantic Valence			2 or 3	
Affirmative	Declarative	Voice	Neutral		<i>pa-</i> or <i>mi-pa-</i>	
			AV		<i>pa-</i> or <i>mi-pa-</i>	
		UV	Plain	Past; ±Agentive		<i>ma-pa-</i>
				Future; +Agentive		<i>pa-...-en</i>
			Applicative	Instrument	Atemporal	<i>sa-pa-...-</i>
					Past	<i>ma-sa-pa-</i>
				Future and +agentive		<i>sa-pa-...-en</i>
			Locative	Goal	-----	
		Patient		<i>pa-...-an</i>		
		Location		<i>pa--...-an</i>		
	Mood	Factual	AV or neutral		<i>pa--...-ay</i>	
			UV		<i>ma-pa-...-ay</i>	
		Irrealis	AV or neutral		<i>CaRED-pa-</i> (= <i>pa-pa-</i>)	
			UV		<i>CaRED-...-en</i>	
		Volitive	Optative ₁ or timerative	AV or neutral	<i>mi-pa-...-aw</i>	
				UV	<i>pa-...-aw</i>	
	Optative ₂	AV	<i>sa-pa-...-an</i>			
		UV	<i>sa-pa-...-aw</i>			
	<i>pa-</i> Causative	AV		----(cf. <i>pa-pi-pa-</i>)		
		UV	Past	---(cf. <i>ma-pa-pi-pa-</i>)		
Future; +Agentive			---(cf. <i>pa-pi-pa-...-en</i>)			
Imperative	Voice	Neutral		---		
		AV		<i>pi-pa</i> ⁷⁵		
		UV	Plain	<i>pa-...-en</i>		
			Applicative (only instrument)	<i>sa-(pi-)pa-...-en</i>		

⁷⁵ I am not sure if a plain *pa-* verb can be used in the AV imperative sentence without the prefix *pi-*. More investigation is required.

The following features of plain *pa-* verbs are shown in the table. First, unlike *mi-* or *ma-* verbs that will change their forms into *pi-* or *ka-* in some of their conjugation patterns, the prefix *pa-* is retained in every construction. Notice that it is also possible to attach *mi-* to a *pa-* verb (i.e. *mi-pa-...*), and such verbs will follow the paradigm of the *mi-* verbs. The affixation of *mi-* will add the motional/purposive reading to a plain *pa-* verb. Second, it is quite unlikely to causativize a plain *pa-* verb by attaching the causative prefix *pa-* again (i.e. **pa-pa-* for double causative).⁷⁶ However, it is possible to prefix *pa-* to a *mi-pa-* verb, and *mi-* will become *pi-* in the derivation (i.e. *pa-pi-pa-*). Finally, although a plain *pa-* verb follows the AV case marking pattern, its volitative-optative/timerative form (i.e. *pa-...-aw*) follows the UV case marking pattern. This feature is very different from the AV verbs marked by *mi-*, *-um-*, and *ma-*, as their corresponding volitative-optative/timerative forms (e.g. *mi-...-aw*) still follow the AV case marking pattern. More discussion about this feature is offered in Chapter 6.

In RRG, the LS for a causative construction is given as “ α CAUSE β , where α , β are logical structures of any type”. In such a representation, the prefix *pa-* can be conceived as the α CAUSE part, and the attached root or stem supplies the β part. Nevertheless, the interpretations of the derived *pa-* predicates show an intriguing interaction with the categories of the root, as shown in Table 4.18 below:

⁷⁶ Notice that the form *pa-pa-* is attested for the irrealis expression (i.e. Ca reduplication).

Table 4.18 Types of Interpretations of *Pa-* + Root

Root Category	Root	<i>pa-</i> Root interpretation	Examples
Object/Entity	<i>nanum</i> ‘water’ <i>fali</i> ‘wind’ <i>kilang</i> ‘tree’	cause to have	<i>pa-nanum</i> ‘give/add water’ <i>pa-fali</i> ‘inflate’ (cause to have air) <i>pa-kilang</i> ‘chop the wood and give the wood to sb.’
Attribute	<i>miming</i> ‘small’ <i>kuhting</i> ‘black’ <i>takaraw</i> ‘tall’	cause to have (in order to become)	<i>pa-mingming-en</i> (* <i>pa-mingming</i>) ‘give sb. a small portion’ <i>pa-kuhting</i> ‘add black color’ <i>pa-takaraw-en</i> ‘stuff something under to make taller’
Transient or Result State	<i>su’su</i> ‘fat’ <i>lasang</i> ‘drunk’ <i>keced</i> ‘shrunk’ <i>cinas</i> ‘torn’	cause to become (in order for sb. to have)	<i>pa-su’su</i> ‘fatten’ <i>pa-lasang</i> ‘cause to become drunk by offering more wine’ <i>pa-keced</i> ‘alternate the size to become smaller’ <i>pa-cinas</i> ‘tear something and give the torn portion to someone’
Activity	<i>rakat</i> ‘walk’ <i>nginguy</i> ‘bath’	cause to do	<i>pa-rakat</i> ‘drive; walk with’ <i>pa-nginguy</i> ‘help (the baby) bath’

We can see that when *pa-* attaches to a root denoting an object or an entity, the interpretation of the derived form tends to be “cause to have something denoted by the root”. Here, *pa-* picks up the formal qualia role of the root in the derivation. The derivational rule for *pa-* + a nominal root is formulated as:

(4.120) **Lexical rule of *pa-* + nominal (γ) \rightarrow cause to have**

a. Rule

LS of <i>pa-</i>	do' (x, \emptyset) CAUSE β
Input	Nominal (γ), selected qualia role: formal role
Output	do' (x, \emptyset) CAUSE BECOME have. γ_{of} ' (y, z), $z=\gamma$

b. Example

LS of <i>pa-</i>	do' (x, \emptyset) CAUSE β
Input	<i>fali</i> ‘wind’ selected qualia role: formal role
Output	<i>pa-fali</i> ‘inflat; cause to have air’: do' (x, \emptyset) CAUSE BECOME have.air_i' (y, z _i)

As shown in the example, I use co-index to show that the *z* argument in the derived predicate is the same as the object/entity denoted by the root. Most of the time, this argument does not show up in the sentence, especially when it is generic. This is

illustrated by *pa-nanum* in (4.121). The LS of *pa-nanum* is given in (4.121a') and (4.121b'). However, this argument will show up if it a specified example of the root (e.g. *sayta* 'soda' for *nanum* 'water' in (4.121c)); that is, this argument is not exactly the same as the root, but it preserves the formal qualia role of the root.

(4.121)a. Ma-na'ay kaku **pa-nanum** t-u sayta.
 AV-not.want 1S.NOM CAU-water DAT-CN soda
 'I don't want to add water to the soda.'

a'. **do'** (kaku, ∅) CAUSE BECOME **have.water_i'** (sayta, z_i)

b. **Pa-nanum** kaku t-u matu'asay.
 CAU-water 1S.NOM DAT-CN old.man
 'I gave the senior water to drink.' (AV)

b'. **do'** (kaku, ∅) CAUSE BECOME **have.water_i'** (matu'asay, z_i)

c. **Pa-nanum** kaku t-u wawa t-u sayta.
 CAU-water 1S.NOM DAT-CN child DAT-CN soda
 'I gave the child soda to drink.' (AV)

c'. **do'** (kaku, ∅) CAUSE BECOME **have.water'** (wawa, sayta)

When *pa-* attaches to a state root, the situation is much more complicated than the *pa-* derivations found with other root types. Generally speaking, there are four possible interpretations: (a) cause to have, (b) cause to have in order to become, (c) cause to become for someone, and (d) cause to become. To facilitate the discussion, I will label these four interpretation as (a) cause to have (b) cause to have + result state (c) cause to become + benefactive, and (d) cause to become. Each of them is illustrated with an example in (4.122):

(4.122)a. *pa-mingming-en* 'give someone a small portion' (*mingming*: small)

b. *pa-takaraw-en* 'stuff something under to make it taller' (*takaraw*: tall)

c. *pa-cinas-en* 'tear something (and give the portion to someone)' (*cinas*: torn)

d. *pa-su'su'-en* 'put on weight' (*su'su'*: fat)

As one may notice, these *pa-* forms tend to appear with *-en*. As a matter of fact, plain *pa-* causative forms for states, especially attribute states, are rarely found. The more commonly attested causative forms for such state roots are either *mi-* or *-en*, especially *-en*. Even when there is a *pa-* causative form found with the (attribute) state roots, *-en* is preferred to co-occur with the *pa-* form, and the causative predicate tends to show up in the imperative mood.⁷⁷ The semantic complexity exemplified in (4.122) could be a possible influence from the attachment of *-en*, for which I do not have a good answer for the time being. Although it is difficult to generalize the causative interpretations based on the root types of the state, there are still traces of tendencies. To begin with, the *pa-* forms of the attribute state tend to get a reading of (a) or (b), both of which share the “cause to have” component. In terms of this observation, attribute states behave more like the nominal roots.⁷⁸ The derivational rule is constructed in (4.123):

(4.123) Lexical rule of *pa-* + attribute state (γ) \rightarrow cause to become

a. Rule

LS of <i>pa-</i>	do' (x, \emptyset) CAUSE β
Input	Attribute State Root (γ): be' (y, [pred' _{γ} ' (y, (z))])
Output	do' (x, \emptyset) CAUSE BECOME <i>have.y'</i> (z), y=something γ
Output 2	[do' (x, \emptyset) CAUSE BECOME have' (y, z)] PURP [BECOME <i>pred'</i> (y)] pred' = γ

b. Example 1 for Output 1

LS of <i>pa-</i>	do' (x, \emptyset) CAUSE β
Input	<i>kuhting</i> 'black': be' (y, [black' (y)])
Output	<i>pa-kuhting</i> 'add a little black color' do' (x, \emptyset) CAUSE BECOME <i>have.black.color'</i> (z)

⁷⁷ The suffix *-en* is also used in a UV imperative sentence, as mentioned in Chapter 3.

⁷⁸ The similarity is not surprising. As mentioned earlier in Section 4.1.2.2, these two types of roots do share some similarities.

c. Example 2 for Output 2

LS of <i>pa-</i>	do' (x, ∅) CAUSE β
Input	<i>takaraw</i> : be' (y, [tall' (y)])
Output	<i>pa-takaraw</i> 'stuff sth. under to make taller' [do' (x, ∅) CAUSE BECOME have' (y, z)] PURP [BECOME tall' (y)]

The *pa-* forms of transient/plain states and result states tend to get readings (c) or (d).

The similarity of the two readings is the part “cause to become”. The lexical rules are postulated in (4.124) for transient/plain state and (4.125) for result state:

(4.124) Lexical rule of *pa-* + transient/plain state (γ) → cause to become

a. Rule

LS of <i>pa-</i>	do' (x, ∅) CAUSE β
Input	Transient/plain State Root (γ): pred' _γ (y, (z))
Output	do' (x, ∅) CAUSE BECOME pred' (y, (z)), pred' =γ

b. Example

LS of <i>pa-</i>	do' (x, ∅) CAUSE β
Input	<i>su'su</i> 'fat': fat' (y)
Output	<i>pa-su'su</i> 'fatten up' do' (x, ∅) CAUSE BECOME fat' (y)

(4.125) Lexical rule of *pa-* + result state (γ) → cause to become + (benefactive)

a. Rule

LS of <i>pa-</i>	do' (x, ∅) CAUSE β
Input	Result State Root (γ): (INGR/BECOME) pred' _γ (y, (z))
Output 1	do' (x, ∅) CAUSE BECOME pred' (y, (z)), pred' =γ
Output 2	[do' (x, ∅) CAUSE BECOME pred' (y, (z))] PRUP [BECOME have' (w, y)], pred' =γ

b. Example 1 for Output 1

LS of <i>pa-</i>	do' (x, ∅) CAUSE β
Input	<i>cinas</i> '(become) torn': (INGR/BECOME) torn' (y)
Output	<i>pa-cinas</i> 'tear': do' (x, ∅) CAUSE BECOME torn' (y)

c. Example 2 for Output 2

LS of <i>pa-</i>	do' (x, ∅) CAUSE β
Input	<i>cinas</i> '(become) torn': (INGR/BECOME) torn' (y)
Output	<i>pa-cinas</i> 'tear something and give the torn portion to someone': [do' (x, ∅) CAUSE BECOME torn' (y)] PRUP [BECOME have' (w, y)],

The sentence examples for the rules in (4.124) and (4.126) are provided in (4.126):

- (4.126)a. Pa-su'su'-en k-u fafuy!
 CAU-fat-UV NOM-CN pig
 'Fatten up the pigs!'
- b. Pa-cinas-en k-u wawa t-u kami!
 CAU-torn-UV NOM-CN child DAT-CN paper
 'Tear the paper and give a part for the child.'
- c. Pa-cinas kaku t-u kami i wawa.
 CAU-torn 1S.NOM DAT-CN paper PREP child
 'I took the paper to the child for tearing it.' (AV)

Notice that a goal or a recipient NP (e.g. *wawa* in (4.126c)) can be added to examples like *pa-cinas* 'cause to become torn', and thus more rules than the two postulated than (4.124) and (4.125) may be needed to account for an example like (4.126c). However, the "CAUSE BECOME" part is a component that is shared in the outputs of *pa-* + a result state, and it is also found in (4.126c).

Unlike the complicated situation found with the state roots, when *pa-* attaches to an activity root, the derived interpretation is simply "cause to do".⁷⁹ The rule is represented below in (4.127), with sentence examples given in (4.128):

(4.127) Lexical rule of *pa-* + activity root (γ) \rightarrow cause to do

LS of <i>pa-</i>	do' (x, \emptyset) CAUSE β
Input	Activity Root (γ): do' (y, [pred' (y, (z))])
Output	[do' (x, \emptyset)] CAUSE [BECOME do' (y, [pred' (y, (z))])], pred' = γ

b. Example

LS of <i>pa-</i>	do' (x, \emptyset) CAUSE β
Input	<i>rakat</i> 'walk': do' (y, [walk' (y)])
Output	<i>pa-rakat</i> 'drive (i.e. cause to walk)': [do' (x, \emptyset)] CAUSE [BECOME do' (y, [walk' (y)])]

- (4.128)a. Pa-rakat kaku t-u paliding.
 CAU-walk 1S.NOM DAT-CN car
 'I drive the car.' (AV)

⁷⁹ However, occasionally, there may be readings other than "cause to do" obtained in this derivation. I will discuss these readings in Chapter 5 when I discuss the undergoer selection for three-place predicates.

- b. Pa-ka'en kaku ci panay-an t-u pawli.
 CAU-eat 1S.NOM PPN Panay-DAT DAT-CN banana
 'I feed Panay banana.' (AV)

b'. [**do'** (kaku, Ø)] CAUSE BECOME [**do'** (Panay, [**eat'** (Panay, pawli)])]

In addition to attaching to different types of root discussed above to derive a causative verb, *pa-* is also frequently found in three-place transfer predicates such as *pa-fli* 'give', *pa-qaca* (or *pa-cakay*) 'sell', and *pa-caliw* 'lend'. The word *pa-fli* is derived from attaching *pa-* to a root also meaning 'give'. Consider:

- (4.129)a. Mi-fli kaku t-u paysu.
 AV-give 1S.NOM DAT-CN money
 'I am going to give money.'
 'I am giving money.'
- b. Mi-fli kaku ci dongi-an.
 AV-give 1S.NOM PPN Dongi-DAT
 'I am going to give Dongi (something).'
 'I am giving Dongi (something).'
- c. Pa-fli Ø-ci mayaw ci aki-an
 CAU-give NOM-PPN Mayaw PPN Aki-DAT
 t-u paysu
 DAT-CN money
 'Mayaw is going to give money to Aki.'

Although the root form *fli* can be used alone with *mi-* and *-en*, these forms do not occur as frequently as *pa-fli*. Furthermore, *mi-fli* is used as a two-place predicate; either the theme argument or the recipient argument can show up in a sentence, but rarely both of them, as shown in (4.129a-b). Furthermore, unlike other *mi-* verbs, which have a *pi-* counterpart, the form **pi-fli* is not found; the corresponding form is *pi-pa-fli*. These observations suggest that *pa-fli* might have become lexicalized.

The other two three-place predicates are formed from affixing *pa-* to a transfer root and deriving another transfer predicate that changes the perspective on the event to

source as the initiator. This is exemplified in (4.130):

(4.130)a. *pa-caliw* ‘lend’ > (*mi-*)*caliw* ‘borrow’

b. *pa-cakay/pa-qaca* ‘sell’ > (*mi-*)*cakay/qaca* ‘buy’

Notice that like the observation of *mi-fli* ‘give’, the two predicates *mi-caliw* ‘borrow’ and *mi-cakay* ‘buy’ also show up with two arguments, as illustrated in (4.131):

(4.131)a. *Mi-qaca kaku t-u cudad t-u wawa.
 AV-buy 1S.NOM DAT-CN book DAT-CN child
 ‘I am going to buy the book for the child.’

a’. Mi-qaca kaku t-u cudad sa-pa-fli
 AV-buy 1S.NOM DAT-CN book InA-CAU-give
 t-u wawa.
 DAT-CN child
 ‘I am going to buy the book and give to the child.’
 ‘I am buying the book to give it to the child.’

b. Pa-qaca kaku t-u cudad i/*t-u
 CAU-buy 1S.NOM DAT-CN book PREP/DAT-CN
 wawa.
 child
 ‘I am going to the child’s place to sell the book.’
 ‘I sell the book to the child.’

c. Pa-qaca kaku t-u cudad i ci aki-an
 CAU-buy 1S.NOM DAT-CN book PREP PPN Aki-DAT
 ‘I sold the book to Aki.’

Examples in (4.131a-a’) show that to mention the beneficiary participant, another predicate (i.e. *sa-pa-fli*) has to show up in the sentence.

These three-place predicates are all transfer verbs, and they are in general represented by the logical structure: “[**do**’ (x, ∅)] CAUSE [BECOME NOT **have**’ (x, z) & BECOME **have**’ (y, z)]” in RRG. Nevertheless, some three-place predicates such as *pa-aca/pacaky* ‘sell’ and *pa-caliw* ‘lend’ are formed by adding a causative morpheme to

a transfer root, which also involves causation. Hence, the derived predicate will have a causal chain in the logical structures. This is illustrated in (4.132):

- (4.132)a. *pa-fli* ‘give’:
 [do’ (x, ∅)] CAUSE [BECOME NOT **have**’ (x, z) & BECOME **have**’ (y, z)]
- b. *mi-qaca* ‘buy’
 [do’ (x, ∅)] CAUSE [BECOME NOT **have**’ (y, z) & BECOME **have**’ (x, z)]
- c. *pa-qaca* ‘sell’ (i.e. ‘cause to buy’)
 [do’ (w, ∅)] CAUSE [[do’ (x, ∅)] CAUSE [BECOME NOT **have**’ (y, z) & BECOME **have**’ (x, z)]], y=w
- d. *mi-caliw* ‘borrow’
 [do’ (x, ∅)] CAUSE [BECOME NOT **have**’ (y, z) & BECOME **have**’ (x, z)]
- e. *pa-caliw* ‘lend’ (i.e. cause to borrow)
 [do’ (w, ∅)] CAUSE [[do’ (x, ∅)] CAUSE [BECOME NOT **have**’ (y, z) & BECOME **have**’ (x, z)]], y=w

Both *pa-qaca* (or *pa-cakay*) ‘sell’ and *pa-caliw* ‘lend’ are represented as causal chains in their logical structures in (4.132).⁸⁰ As one can see from the illustration, these three-place transfer predicates all have very similar logical structures. However, as I will show in Chapter 5, the undergoer selection patterns of these three-place predicates show some variation. There might be some subtle semantic difference among these predicates. However, such difference is beyond the explanation of the present decomposition model adopted here. More research is needed.

4.5.4.2 The Analysis of *Pa-pi-...(-en)* and *Pa-ka-...(-en)* Verbs

Two more *pa-* causative constructions, *pa-pi-...(-en)* and *pa-ka-...(-en)*, will be discussed in this section. As mentioned in Chapter 3, the two affixes *pi-* and *ka-* appear

⁸⁰ The predicate *pa-fli* ‘give’ is not represented with a causal chain for the following reasons. First, the addition of the prefix *pa-* does not change the meaning of the root; it only licenses the presence of a third argument. Second, the derived *pa-* verb seems to become lexicalized or be becoming lexicalized. Hence, it does not seem necessary to stipulate a causal chain for *pa-fli*.

very frequently in the verbal constructions, such as negative and imperative constructions, and causativization. These two affixes are morphologically related to *mi-* and non-*mi-* verbs. That is, *mi-* verbs conjugate into *pi-* forms in the relevant inflections and derivations, while verbs taking affixes other than *mi-* (e.g. *ma-*, *-um-*, and unaffixed) conjugate into *ka-* forms. This analogy indicates that *pi-* and *ka-* may preserve the semantics of their corresponding affixes. That is exactly what we are going to see for the causative verbs *pa-pi-* and *pa-ka-*, as discussed below.

A semantic feature of *pa-pi-* causatives is that they all have a jussive reading that involves indirect causation. For instance:

- (4.133)a. Pa-pi-nanum Ø-ci ina ci mama-an.
 CAU-PI-water NOM-PPN mother PPN father-DAT
 ‘Mother asked Father to drink water.’
- b. Pa-pi-ka’en-en aku Ø-ci panay t-u pawli.
 CAU-PI-eat-UV 1S.GEN NOM-PPN Panay DAT-CN banana
 ‘I asked Panay to eat banana.’
- c. Pa-pi-cikay kaku ci panay-an
 CAU-PI-run 1S.NOM PPN Panay-DAT
 ‘I ask Panay to run/join the race.’
- d. Pa-pi-cikay-en aku Ø-ci panay-an
 CAU-PI-run-UV 1S.GEN NOM-PPN Panay-DAT
 ‘I will definitely ask Panay to run/join the race.’

The *pa-pi-* causative predicates are all interpreted with a jussive tone, rendered as ‘ask someone to (go to) do something’. Apparently the “go to do” part in the derived meaning is contributed by *pi-* (i.e. *mi-*). But, where does the jussive sense or indirect causative sense come from? Consider the following comparison of *pa-* and *pa-pi-*:

- (4.134)a. Pa-cumud-en k-u haku/*wawa!
 CAU-enter-UV NOM-CN box child
 ‘Bring the box/*child in!’

- a'. Pa-pi-cumud-en k-u wawa/*haku!
 CAU-PI-enter-UV NOM-CN child box
 'Bring the child/*box in!'
- b. Pa-rakat-en cingra/k-u-ni a paliding!
 CAU-walk-UV 3S.NOM/NOM-CN-this LNK car
 'Walk with him!' (The causee is a child.)
 'Drive this car!' (i.e. 'Make this car run!')
- b'. Pa-pi-rakat-en cingra/*k-u-ni a paliding!
 CAU-PI-walk-UV 3S.NOM/NOM-CN-this LNK car
 'Ask him to go to walk!'
 *'Ask this car to go to walk!'
- c. Pa-radiw Ø-ci ina t-u wawa.
 CAU-song NOM-PPN mother DAT-CN child
 'Mother taught the child to sing (by singing along with the child).'
- c'. Pa-pi-radiw Ø-ci ina t-u wawa.
 CAU-PI-song NOM-PPN mother DAT-CN child
 'Mother asked the child to sing.'

As demonstrated in the examples, the causee in *pa-* verbs is not as “agentive” as the one in *pa-pi-* verbs. The causee in *pa-pi-* has to have the ability and volition to perform the caused action independently; this self-independent property is not found in the causee of *pa-* causatives. If we incorporate the LS of *mi-* into the LS of *pa-pi-*, then we can have a natural account for the difference illustrated in (4.134); the motional/purposive component in *mi-* gives the *pa-pi-* predicate a “CAUSE DO” instead of a “CAUSE **do**” in the derivation illustrated in (4.135):

(4.135) The logical structure of *pa-pi-*:

[**do**' (x, Ø)] CAUSE [DO (y, [**do**' (y, ...

Following CAUSE DO, the participant *y* has to be a true agent. The strong agentivity of *y* weakens the causation denoted by *pa-* and thus fosters the jussive reading. Nonetheless, with the presence of *-en* ‘the agentive UV marker’, the causation may become stronger, as we can see in the comparison between (4.133c) and (4.133d).

As for *pa-ka-*, the situation is not as straightforward as *pa-pi-*, as the derived form can have more than one interpretation, depending on the categories of the roots. The first derived interpretation is ‘cause to become’, which is further divided into two sub-types. The first sub-type carries a reading of “completeness” or “thoroughness” for the causative state, which can be roughly rendered as ‘cause to become thoroughly’. It is often associated with the combination of *pa-ka-* and the attribute/non-episodic state root. Some Examples are given in (4.136):

(4.136)a. *pa-tati’ih-en* ‘destroy’ (> *tati’ih* ‘bad’)

a’. *pa-ka-tati’ih-en* ‘destroy (to a greater degree)’

b. *pa-kuhting-en* ‘add a little black color’ > *kuhting* ‘black’

b’. *pa-ka-kuhting-en* ‘make it all black’

As one can compare the plain *pa-* forms and the *pa-ka-* forms in (4.136), the *pa-ka-* form carries a reading of “completeness” and “thoroughness” of a causative state. Moreover, recall that in the discussion of *pa-* plus different categories of the roots, I have mentioned that when *pa-* attaches to an attribute state root, the derived interpretation could be ‘cause to have’ (e.g. (4.136b)). However, when the affix *ka-* is added in the causative form, it is no longer ‘cause to have’; instead, the reading obtained is ‘cause to become’. The *ka-* here seems to correspond to the episodic state *ma-* or the result state *ma-*. This *pa-ka-* form often co-occurs with *-en*.⁸¹ Its logical structure can be represented as (4.137):

(4.137) The logical structure of *pa-ka-...(-en)*

[do’ (x, ∅)] CAUSE [BECOME pred’ (y)]

This “thoroughness” reading is also found with *pa-ka-* + an object root or an activity root

⁸¹ The *-en* is preferred there. Some informants do not accept the bare *pa-ka-* form (or even the *pa-* form), while others remark that the bare *pa-ka-* form is rarely used. Notice that the meaning of *-en* is not specified in the LS of (4.137).

with agentive implicature. The relevant examples are given in (4.138)

- (4.138)a. Pa-dateng-en k-u-ni!
 CAU-vegetable-UV NOM-CN-this
 ‘Add vegetable to this (to cook)!’
- a’. Pa-ka-dateng-en k-u-ni
 CAU-KA-vegetable-UV NOM-CN-this
 ‘Pick all of these vegetables!’
- b. Pa-ka-palu-en k-u-ni a wawa.
 CAU-KA-beat-UV NOM-CN-this LNK child
 ‘Beat the child more thoroughly.’
- c. Pa-ka-nengneng-en k-u-ra tamdaw.
 CAU-KA-see-UV NOM-CN-this person
 ‘Watch that person carefully.’
 ‘Pay special attention to that man.’
- d. Ma-pa-ka-cefus aku k-u-ra hana.
 UV-CAU-spray.water 1S.GEN NOM-CN-that flower
 ‘I water that flower thoroughly.’

As shown in the examples, the *pa-ka-* forms also involve a sense of “thoroughness” or “completeness” in the interpretation. Moreover, unlike the derivation of *pa-* + an object root, in which the derived meaning is ‘cause to have’ (e.g. *pa-dateng* ‘serve the vegetable’), the derivation of *pa-ka-* + an object root is ‘cause to do’ (e.g. *pa-ka-dateng* ‘pick all the vegetables’); in other words, the addition of *ka-* seems to derive an activity from the object root, and the activity becomes the causative activity in the derived *pa-ka-* predicate. This function of *ka-* is similar to the UV *ma-* (i.e. the active/causative accomplishment *ma-*), as *ma-* can derive an activity from object root (e.g. *dateng* ‘vegetable’ → *ma-dateng* ‘pick vegetable (UV)’). In other words, the structure of *pa-ka-* + an object root or an activity root with agentive implicature can be interpreted as “cause something to be done thoroughly”. The only problem is that the causative reading does not seem to show up in such derivations based on the examples I have collected so far;

these forms are often used in the imperative context, as illustrated in (4.138a'), in which there is no clear involvement of a causer. Tentatively, I still treat such examples as causative predicates, based on the “thoroughness” reading that is shared between such predicates and the causative verbs in (4.136). However, future investigation is required regarding this analysis.

The other sub-type of the ‘cause to become’ derivation is illustrated by the examples in (4.139). In this sub-type, the “completeness” or “thoroughness” reading is not found:

(4.139)a. Pa-ka-roray Ø-ci aki kitanan
 CAU-KA-tried NOM-PPN Aki 1P.Incl.DAT
 ‘Aki made us tried.’ (AV)

a'. [**do'** (aki, Ø)] CAUSE [BECOME **tired'** (kitanan)]]

b. Pa-ka-ngudu kaku t-u singsi.
 CAU-KA-embarrassed 1S.NOM DAT-CN teacher
 ‘I made the teacher feel ashamed.’ (AV)

b'. [**do'** (kaku, Ø)] CAUSE [BECOME **embarrassed'** (singsi)]]

The *ka-* in the two *pa-ka-* verbs in (4.139) can be regarded a morphological variant of *ma-*, which the roots following *pa-ka-* appear with by default (e.g. *ma-roray* ‘tried’ and *ma-ngudu* ‘embarrassed; humbled; respect’). These *ma-* verbs are all state predicates.

The second type of derived interpretation of *pa-ka-* is ‘cause to do’. The examples are given in (4.140):

(4.140)a. Pa-ka-tawa Ø-ci mayaw t-u wawa.
 CAU-KA-laugh NOM-PPN Mayaw DAT-CN child
 ‘Mayaw made the children laugh.’ (AV)
 ‘Mayaw told jokes to the children.’

a'. [**do'** (Mayaw, Ø)] CAUSE [**do'** (wawa, [**laugh'** (wawa)]]]

b. *pa-ka-tayal* ‘cause to do something’ (AV) > *tayal* ‘work’

This is found when *pa-ka-* attaches to an activity root with low agentive implicature. The

ka- in these *pa-ka-* verbs can also be regarded as a morphological variant of *ma-*, as these activity roots also appear with *ma-* by default (e.g. *ma-tawa* ‘smile; laugh (at)’ and *ma-tayal* ‘work’).⁸²

The above-discussed semantic complexity of *pa-ka-* is just a reflection of complicated semantics of *ma-*, from which the meanings of *ka-* derive. Notice that, the affix *ka-* in Amis seems to behave quite differently from the *ka-* form found in some other Formosan languages. According to Zeitoun and Huang’s (2000) survey of four Formosan languages (not including Amis), *ka-* functions as a stativity marker. However, the function of *ka-* in Amis does not seem as straightforward. In some cases, *ka-* does make the verb more stative. For instance, the *ka-* in the *ka-...-en* form found with many psych-predicates seems to cancel the agency that *-en* carries, as now the

- (4.141)a. Ngudu-en aku k-u matu’asay.
 humbled-UV 1S.GEN NOM-CN old.man
 ‘I will show respect to the old people.’
- a’. Ka-ngudu-en n-u singsi kaku.
 Ka-humbled-UV GEN-CN teacher 1S.NOM
 ‘I am respected by the teacher.’
- b. Tawa-en aku kisu.
 laugh.at-UV 1S.GEN 2S.NOM
 ‘I will laugh at you.’
- b’. Ka-tawa-en n-u tao kaku.
 KA-laugh.at-UV GEN-CN others 1S.NOM
 ‘I let people laugh at me.’

As illustrated in (4.141), while the bare *-en* form emphasizes the volition of the actor, the form *ka-...-en* highlights the saliency of the stimulus that triggers the psych-state or

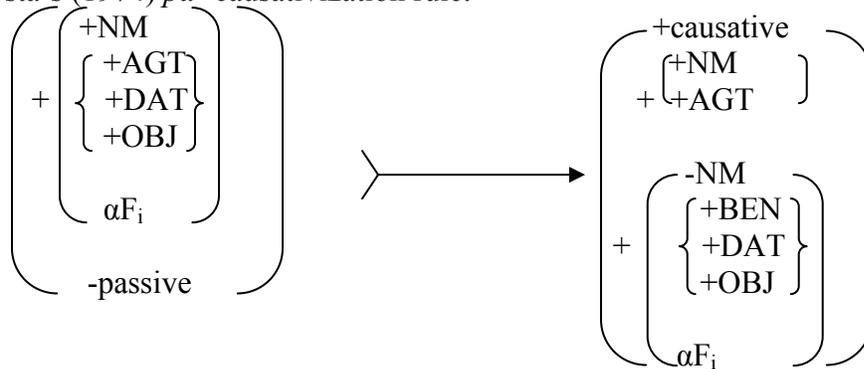
⁸² Some of the *ma-* verbs in (4.139) and (4.140) can only take *pa-ka-* (e.g. **pa-tawa*), while others can have both *pa-* and *pa-ka-* causatives (e.g. *pa-talaw* ‘frighten (by performing some action)’ and *pa-ka-talaw* ‘cause to become afraid’), of which the informants cannot tell the differences very clearly, though some of them remarked that *pa-ka-* is more emphatic but less dynamic than *pa-*. More investigation is needed.

action. In other words, the presence of *ka-* seems to cancel or at least weaken the agency inherent in *-en*. This might be conceived as a function of a “stativity marker”. However, there are also examples such as *pa-ka-tayal* ‘cause to do’ and *pa-ka-tawa* ‘cause to laugh’, in which there is no clear evidence indicating that *ka-* is a stativity marker.⁸³

4.5.4.3 Comparison with Starosta’s (1974) Analysis

Starosta (1974) makes a survey of the causative verbs in Formosan languages, including Amis.⁸⁴ He mentions that there are several causative-related processes in Amis, such as *maka-* (termed resultative), *paka-* (termed abilitative), and *mi-/pi-* (termed transitive derivation), but he only discusses *pa-* causative verbs in his paper. He formulates the *pa-* causative derivation in the following within the lexibase model:⁸⁵

(4.142) Starosta’s (1974) *pa-* causativization rule:



Starosta states that the rule in (4.142) derives active causative verbs from accusative active verbs with agent, dative, or object subjects (i.e. marked by nominative case). The causative version adds a new agent to the case frame. If the source verb already has an agent subject, the derived causative verb will be added with a corresponding benefactive

⁸³ Tsukida (2005b) also mentions that *ka-* is not a state marker in her investigation of Fata’an Amis.

⁸⁴ Starosta collected his data from Nataoran Amis, a northern dialect of this language.

⁸⁵ Please refer to Chapter 1 for a brief introduction to this framework in the review of Chen (1988).

constituent in the case frame. Consequently, this added benefactive is marked by the nominative case.

Starosta’s discussion of the rule is summarized as follows, provided with the comparison with my findings. First, the rule stated in (4.142) only applies to active transitive verbs (verbs with an agent subject, e.g. *mi-* verbs). It is not directly applicable to verbs with an object or dative subjects. Most of such verbs are *ma-* verbs, and they in general correspond to *ma-* UV verbs (e.g. *ma-mǐlaw* ‘see’), *ma-* activity verbs (e.g. *ma-rǐbaahoy* ‘fly’), and *ma-* two-place state predicates (e.g. *ma-vaanañ* ‘know’) in my discussion. The *pa-* causative form for these verbs is *pa-* + stem. However, as remarked by Starosta, simple *pa-* causatives are rather infrequent. Another possible and more common causative form for these verbs is *pa-pi-*, which is the causative verb derived from an active transitive verb. Hence, to derive a *pa-pi-* causative verb, ergative verbs (i.e. transitive verbs with an object subject, e.g. *ma-mǐlaw* ‘see’ (UV)) have to undergo a rule termed “transitivization” before being causativized. During transitivization, the prefix *mi-* (hence the *pi-* in the causative form) attaches to the ergative verb and derives an active transitive verb (e.g. *mi-mǐlaw* ‘see’), which in turn serves as an input for the causativization. This derivation is illustrated in (4.143) with the example of *ma-mǐlaw* ‘see’ (Starosta 1974:309, emphasis mine):⁸⁶

(4.143) *ma-mǐlaw* ‘see’ → *mi-mǐlaw* ‘watch’ → *pa-pi-mǐlaw* ‘ask to look at’
 ergative → active transitive → causative

Regarding the point mentioned above, my investigation shows that the simple *pa-*

⁸⁶ This is a simplified version of the derivation.

causative verbs are not as infrequent as reported in Startosta's study, though the possibility to find *pa-pi-* forms is higher than simple *pa-* causative forms. Furthermore, *pa-* and *pa-pi-* do not function in the same way in causativization, and their different functions offer important information concerning the classification of root forms in Amis. However, such difference and significance seem to be overlooked in Starosta (1974).

Second, he observes the fact that the simple *pa-* and *pa-pi-* verbs rarely occur, though they are grammatically possible forms. The more frequently obtained forms are *pa-...-en* and *pa-pi-...-en*. His finding is supported in my investigation. However, he treats *-en* as a passive derivation in Amis, which is also the analysis adopted by Chen (1987). In other words, *pa-...-en* and *pa-pi-...-en* are passivized causative verbs in his analysis. He notices that passive verbs may semantically differ from their active counterparts. For example, the verb *mɛlaw* means 'look after' in two passive forms *mɛlaw-en* and *pa-pi-mɛlaw-en*, but it can mean either 'look after' or 'see' in the active form *mi-mɛlaw*. He explains the difference by stating the assumption that *mɛlaw* has undergone a semantic shift and derives an agentive verb meaning 'look after', which makes it possible to consequently undergo the passivization. Obviously, this assumption is very different from the analysis; *-en* is treated as an agentive marker in this dissertation in addition to its voice-marking function. It will affect the agency of the root during the derivation, and this is why *-en* forms are always agentive. The prefix *mi-* has the possibility to appear with an effector and an agent, provided the fact that the motional/purposive part is optional. That is why *mi-* forms might get more readings. I will come back for more discussion on Starosta's rule when it comes to issue of case marking patterns of three-place predicates in Chapter 5.

4.6 Summary

The major analyses and claims made in this chapter are summarized as follows. First, I have demonstrated that the root forms in Amis can be at least categorized into object, activity, attribute state, transient, and result state in terms of their coding and interpretation in the ideophone-forming construction *X sa*. The analysis is represented in Table 4.2.

Second, by adopting the Aktionsart-based decompositional model of RRG, the lexical roots, the derived verbs, and the voice markers in Amis are decomposed and represented in the logical structures. The semantic features residing in the logical structures of the voice markers help us better understand the relevant verbal derivations and voice-related phenomena in Amis. The LS of each voice marker is summarized in Table 4.7. The Aktionsart tests for Amis verbs are given in Table 4.9.

Third, based on the logical structures proposed for root categories and voice markers, a set of lexical rules have been postulated to account for the derivation of a predicate from an object, an activity, and a state.

Finally, the *pa-* causativization and its related phenomena have been explored in this chapter. In particular, I have shown that the interpretation of *pa-* + root is related to the distinctions of root categories. The relation is displayed on Table 4.18. I have also argued that the form *pa-pi-* has a logical structure “CAUSE DO...”, which requires an agentive causee, instead of “CAUSE **do**’...” that is found in simple *pa-* verbs. The agentive causee requirement explains why *pa-pi-* verbs almost always get a jussive reading, as now the causer has less degree of control over the causee. As for another causative form *pa-ka-*, the affix *ka-* seems to be the morphological variant of the *ma-*

verbs that serve as the source verbs for causativization. It simply retains the semantics of source *ma-* during the causativization. Therefore, the derived *pa-ka-* verb can be “cause to do” or “cause to become”, depending on the types of *ma-* verbs that *pa-ka-* attaches to. The logical structures and lexical rules are very important for the discussion in the following two chapters, as frequent references to these structures and rules will be made upon the discussion of the case marking patterns and grammatical relations in Amis.

Chapter 5

Semantic Roles and Case Marking

In Chapter 4, the major classes of Amis verbs have been worked and represented in the logical structures. In this chapter, the semantic roles of the arguments in those logical structures will be examined, and I will also discuss how cases are assigned for each argument in a sentence in Amis.

As mentioned in Chapter 2, the issue of semantic roles has been discussed under three different levels of generality (VV 2005): verb-specific semantic roles (e.g. killer), thematic relations generalized across the verb-specific roles (e.g. agent), and generalized semantic roles that are generalizations across thematic roles (e.g. macroroles in RRG). On the issue of semantic roles, previous studies of Amis seem to focus on the distinctions of the second level. In particular, these thematic relations are often discussed together with the “focus” (i.e. voice in the present discussion) phenomenon. Amis has been characterized in a number of previous studies to have a four-focus or four-voice system, which includes agent (“actor” in this dissertation), patient (our “undergoer” in this dissertation), instrument, and location. However, there are at least two problems in such an analysis. To begin with, it is inappropriate to place the single argument of all of the intransitive verbs in a one category, namely, agent. For example, some intransitive state predicates such as *ma-su'su* ‘fat’ and *ma-patay* ‘(become) dead’ are often glossed as AF verbs in the previous analyses, similar to the intransitive activity verbs (e.g. *ma-lingad* ‘plow’ and *r-um-akat* ‘walk’). In other words, these studies seem to place the single argument of these intransitive verbs under one semantic role, as long as this argument is

marked by the nominative case.¹ However, apparently, there is no effector, let alone a true “agent” involved in the states of affairs depicted by predicates like *ma-su’su* ‘fat’ and *ma-patay* ‘(become) dead’. Furthermore, semantically speaking, the role the single argument of verbs like *ma-lingad* ‘plow’ and *r-um-kat* is different from that of the single argument of *ma-su’su* ‘fat’ and *ma-patay* ‘(become) dead’; the former is more actor-like, while the latter is more undergoer-like. Placing them under a single category does not seem very appropriate. The RRG analysis of these one-place predicates is quite different, as the single argument for an intransitive verb can still be assigned different macroroles, depending on the logical structure of the predicate, even though their single argument is marked by the same case.²

The second problem in such a four-voice system lies in the rather peculiar co-occurrence of two voice markers, in particular the “undergoer voice” and the “instrument voice” markers, on the same predicates but with one possibility of assigning the nominative case to the NP. For example, in the verb *ma-sa-pi-sanga* ‘use something as an instrument to make something’, it is always the instrument that can be marked by the nominative case, not the undergoer NP. Such examples suggest that one of the two “voice” markers should perform a different function. This is why I argued in Chapter 3 that there are actually only two voice distinctions: actor and undergoer; the latter allows multiple selections from roles like patient, instrument, and location. The other two voices mentioned in the earlier analysis, instrument and location, are treated as applicative constructions that indicate the variable undergoer choices in Amis. In other words,

¹ Chen (1987) presents an opposite proposal in which the only case relation in intransitive verbs is [+Patient].

² Furthermore, as mentioned in Chapter 2, “agent” is not treated as a basic thematic relation in the RRG framework, and thus this term is not used in the analysis in the voice system.

examples like *ma-sa-pi-sanga* are applicative UV constructions in which there is a non-canonical choice of the undergoer. Both of the two new analyses for the semantic roles and the voice system in Amis make crucial reference to the macrorolehood of an argument, which is the first issue that will be explored in this chapter.

Another major topic to be investigated in this chapter concerns the case marking patterns in Amis, with a specific focus on the following issues. First, the discussion of the forms and functions of the case markers will be elaborated. Second, case assignment rules for different types of verbs will be postulated. These rules will be closely related to the exploration of grammatical relations in Chapter 6.

This chapter is organized as follows. Section 5.1 is dedicated to the issues related to macroroles such as the number of macrorole that each verb might take and the distinction between actor and undergoer. Section 5.2 re-examines the forms and functions of the case marking system in Amis. A comparison between the proposal made in this dissertation and analyses proposed in other works such Huang (1995), Liu (1999), and Liao (2002) will be provided. Section 5.3 investigates the case assignment for one-place and two-place predicates, while Section 5.4 discusses the case marking patterns for three-place predicates, where variable undergoer selection for some verbs in Amis have been found.

5.1 Macroroles

As demonstrated in Chapter 2, the assignment of macroroles is based on the AUH presented in Figure 5.1 (repeated from Figure 2.7, VV (2005:126)) that makes reference to the argument positions in the logical structure of the predicate, and the set of default principles stated in (5.1) (repeated from (2.5)).

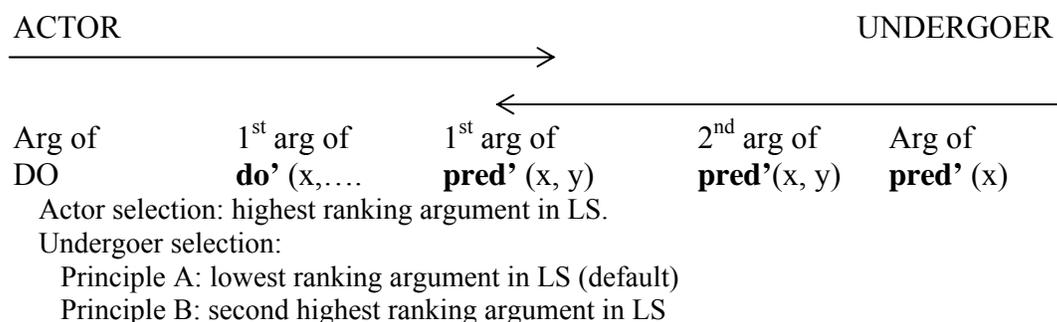


Figure 5.1 Actor-Undergoer Hierarchy (AUH)

(5.1) Default Macrorole Assignment Principles

- a. Number: the number of macroroles a verb takes is less than or equal to the number of arguments in its logical structure
 1. If a verb has two or more arguments in its LS, it will take two macroroles.
 2. If a verb has one argument in its LS, it will take one macrorole.

- b. Nature: for verbs which take one macrorole,
 1. If the verb has an activity predicate in its LS, the macrorole is actor.
 2. If the verb has no activity predicate in its LS, the macrorole is undergoer.

The AUH states the default selection of macroroles; that is, given a transitive predicate, the leftmost argument will be chosen to be the actor, and the rightmost one will be the undergoer. However, there is also marked assignment for undergoer, as found in many languages. Hence, there are two possible principles regulating the undergoer selections cross-linguistically. As shown later in the discussion, both principles are needed to account for the data in Amis.

We mentioned in Chapter 2 that RRG distinguishes two types of transitivity: M-transitivity (i.e. macrorole transitivity) and S-transitivity (i.e. syntactic transitivity or semantic valence). The former is determined by the number of the macrorole, while the latter is indicated by the number of the core argument that a verb takes. It is also pointed out that M-transitivity and S-transitivity do not necessarily have the same value, as illustrated in Table 5.1 (repeated from Table 2.5, VV (2005:64)):

Table 5.1 Macrorole Number and Transitivity

	Semantic Valence	Macrorole Number	M-transitivity
<i>snow</i>	0	0	Atransitive
<i>die</i>	1	1	Intransitive
<i>drink</i> [ACTIVITY]	1 or 2	1	Intransitive
<i>drink</i> [ACT ACCOMPL]	2	2	Transitive
<i>kill</i>	2	2	Transitive
<i>set</i>	3	2	Transitive
<i>send</i>	3	2	Transitive

The distinction between S-transitivity and M-transitivity is very important, as it may bring out different analyses for the transitivity type (e.g. accusative, ergative, or both) of a language. In the following, I will discuss the assignment of macrorole for verbs that semantically take different numbers of core arguments.

5.1.1 Macrorole Assignment and Predicates with Zero Core Arguments

Typical examples of predicates with zero core arguments are meteorological or phenomenal verbs such as *ma-orad* ‘rain’, *ma-faliyos* ‘have typhoon’, *si’enaw* ‘cold (in terms of weather)’, and *tu’eman* ‘dark’. In Amis, these verbs can appear by themselves without any co-occurring argument, as illustrated in (5.2):

- (5.2) a. *Ma-orad anini.*
 NEUT-rain now
 ‘It is raining today.’
- b. *Si’enaw anini.*
 cold now
 ‘It is cold today.’

The zero semantic valence of such predicates is also indicated in their behavior in the *-en2* ‘feel...’ construction, which has been discussed in Chapter 4. Examples follow:

- (5.3) a. *Fa’edet-en kaku t-u-ya nanum.*
 hot-EN2 1S.NOM DAT-CN-that water
 ‘I feel that that water is very hot.’ (NEUT)

- b. Karteng-en cingra (mi-tatuy) t-u felac.
 heavy-EN2 3S.NOM NEUT-carry DAT-CN rice
 ‘He feels very heavy when carrying the rice.’ (NEUT)
- c. Ma-ulah-en cingra_i t-u nguhah nira,
 AV-like-EN2 3S.NOM DAT-CN lover 3S.GEN
 sa-pi-kadafu-an tu cingra_i.
 InA-PI-marry-MOOD.AV ASP 3S.NOM
 ‘She likes her lover very much, so she wants to get married.’
- d. Ma-kaker-en cingra_i t-u wawa nira,
 AV-angry-EN2 3S.NOM DAT-CN child 3S.GEN
 sa-pi-palu-an tu cingra_i.
 InA-PI-beat-MOOD.AV ASP 3S.NOM
 ‘He feels very angry at his child, (so) he wants to beat him.’
- e. Ma-orad-en kaku, sa ca ka-tayra kaku.
 NEUT-rain-EN2 1S.NOM so NEG KA-go 1S.NOM
 ‘It seemed like rain to me, so I didn’t go.’
- f. Ma-fali-en kaku, sa ca ka-tayra kaku.
 NEUT-wind-EN2 1S.NOM so NEG KA-go 1S.NOM
 ‘It seemed windy to me, so I didn’t go.’

The sentences in (5.3) are all interpreted as “feel...” or “judge...”. These sentences can be divided into three types based on the argument structure of the state predicate preceding *-en2*. In (5.3a-b), the arguments of the state verbs preceding *-en2* (e.g. *nanum* ‘water’ and *felac* ‘rice’) are different from the one who bears the feeling (e.g. *kaku* ‘I’ in (5.3a) and *cingra* ‘he’ in (5.3b)), while in (5.3c-d), these two arguments are the same (e.g. *cingra* in both examples). In (5.3e-f), only the arguments bearing the feeling or judgment (e.g. *kaku* ‘I’ in both sentences) appear in the sentences; that is, there is no argument for the state verbs (e.g. *ma-orad* ‘rain’) affixed by *-en2* in the two sentences. This difference can be seen from the logical structures of the three types of *-en2* sentences in Table 5.2:

Table 5.2 Three Types of Structures of V-en2

LS of V-en2	Example of V (i.e. the pred' part in the LS)
a. feel' (x, [pred' (y)])	<i>harateng</i> 'heavy'; <i>fa'edet</i> 'hot'
b. feel' (x, [pred' (x, (y))])	<i>ma-ulah</i> 'like'; <i>ma-keter</i> 'angry at'
c. feel' (x, [pred' (∅)])	<i>ma-orad</i> 'rainy'; <i>ma-fali</i> 'windy'

As shown in Table 5.2, the structures of *-en2* reflect the sub-types of predicates it attaches and the number of core arguments these predicates have. They are: Type (a), which is for sentences (5.3a-b), is composed of one-place state predicates; Type (b), for (5.3c-d), contains mostly psych-predicates that can have either one or two core arguments; Type (c), for (5.3e-f), are mostly meteorological or phenomenal verbs that have no core arguments.

However, it is also possible for these meteorological or phenomenal verbs to appear with an argument that usually denotes the time or the location for this meteorological state or phenomenon:

- (5.4) a. Ma-orad k-u kakarayan.
 NEUT-rain NOM-CN sky
 'The sky is raining.'
- b. Si'enaw k-u romi'ad.
 cold NOM-CN day
 'It is cold in the daytime.'

The verbs in (5.4) must be given different logical structures from those in (5.2), as their case marking pattern is different. Compare the two logical structures in (5.5):

- (5.5) a. Ma-orad anini.
 NEUT-rain now
 'It is raining today.'
- a'. **rain'** (∅)
- b. Ma-orad k-u kakarayan.
 NEUT-rain NOM-CN sky
 'The sky is raining.'

b'. **rain'** (kakarayan)

The above examples show that the verb *ma-orad* 'rain' can have two lexical entries that vary in the number of core arguments, as seen in (5.5). Based on the macrorole assignment principles stated in (5.1), *ma-orad* in (5.5a) is analyzed as M-atransitive, while the same predicate in (5.5b) is M-intransitive.

The M-atransitive verbs discussed above seem reminiscent of a subset of impersonal verbs (i.e. impersonal intransitive) discussed in Chen (1987).³ Impersonal verbs are characterized as appearing without any argument marked by the nominative case, and that is why Chen (1987) also labels them as "subjectless" verbs. There are two subsets of this verb type: intransitive and transitive, depending whether there is an agent role, marked by the genitive case, showing up in the sentence or not. According to Chen (1987:205), impersonal intransitive verbs are phenomenal verbs denoting meteorological phenomena. Some of the verbs that she mentions are the same as what I have illustrated in (5.2) and (5.4). However, there are some verbs in her categorization that can actually be analyzed in a different way. Consider the following examples:

- (5.6) a. Ci-kawas i lumaq.
have-ghost PREP house
'There are ghosts at home.'
- b. Ci-kawas k-u lumaq.
have-ghost NOM-CN house
'There are ghosts at home.'
'The house is haunted.'
- c. Ci-kawas k-u/*i lumaq n-i sawmah.
have-ghost NOM-CN/PREP house GEN-PPN Sawmah
'There are ghosts at Sawmah's place.'

³ Chen (1987) identifies two sets of impersonal verbs, intransitive and transitive. Examples were given in Chapter 1.

The verb *ci-kawas* ‘have ghost’ in (5.6a) is also treated as an example of impersonal verbs in Chen (1987), as it can appear without a (nominative) case-bearing argument, and similar to *ma-orad* ‘rain’, it can also show up with an argument marked by the nominative case (e.g. (5.6b)). However, this verb differs from the meteorological verbs in terms of the following features. First, unlike meteorological verbs that are either unaffixed or marked by *ma-*, this verb is marked by *ci-*, which attaches to an object root and derives a predicate roughly rendered as ‘possess something; there is/are something; grow something’, with the “something” part denoted by the root. Some examples are given below.

(5.7)

<i>ci-tangal</i> ‘smart (i.e. have brain)’	<i>ci-futing</i> ‘there is/are fish’
<i>ci-paysu</i> ‘rich (i.e. have money)’	<i>ci-rikior</i> ‘put on clothes’
<i>ci-tiyad</i> ‘pregnant (i.e. have belly)’	<i>ci-ukak</i> ‘have bone’

The following lexical rule for the derivation of the examples in (5.7) can be postulated by utilizing the qualia role of an object root:

(5.8) **Lexical Rule of *ci-* + nominal root α**

a. Rule

LS of <i>ci-</i>	have.y’ (x, (y))
Input	Nominal (α), selected qualia role: formal role
Output	have.yα’ (x, (y)), y= α

b. Example

LS of <i>ci-</i>	have.y’ (x, (y))
Input	<i>paysu</i> ‘money’, selected qualia role: formal role
Output	<i>ci-paysu</i> ‘have money; rich’ have.money’ (x)

The rule states that when *ci-* attaches to a noun root, it is the formal qualia role that is selected in the derivation. As seen in (5.6) and (5.7), most of the derived *ci-* predicates can take one macrorole (i.e. being M-intransitive). Unlike the meteorological/phenomenal predicates such as *ma-orad* ‘rain’ and *ma-fali* ‘windy’, which seem to be M-

atransitive by default, examples such as (5.6a) are not the default pattern for *ci-* predicates, and their occurrence can be explained. The oblique argument in (5.6a) is the *x* argument in the logical structure **have.y'** (*x*, (*y*)). When it is inanimate and is not specified with any information, it can be realized as an oblique core argument. However, if the *x* argument is animate (e.g. denoting a possessor), and/or is followed by some specific information, it has to be coded as a direct core argument, and it will also be a macrorole. We can see this contrast in (5.6b-c). Based on the discussion mentioned above, verbs like *ci-kawas* should be analyzed as M-intransitive verbs by default, but it allows variable patterns that link the core argument either to the core or the periphery; the latter pattern is the marked one. The above discussion shows that the impersonal verbs identified by Chen (1987) should be further differentiated based on whether their default M-transitivity value.

5.1.2 Macrorole Assignment and Predicates with One Core Argument

As mentioned in the beginning, RRG makes the actor-undergoer distinction even among the verbs that take a single core argument.⁴ This approach is quite different from the analysis made in the previous studies. The assignment of macrorole for S-intransitive verbs makes crucial reference to whether or not these verbs have a **do'** in the logical structures. Thus, the single argument for intransitive activity verbs such as *r-um-akat* 'walk' and intransitive state verbs such as *ma-laluk* 'diligent' will not be assigned with the same macrorole; the former has an actor while the latter an undergoer. This distinction has very important implications for the derivational morphology and the case marking patterns in Amis. Consider the following sentences:

⁴ Tsukida (2005b) claims the existence of the phenomenon of "split-intransitivity" in Amis, which is similar to the RRG analysis that I am going to propose here.

- (5.9) a. **T-um-ireng** cingra.
stand<NEUT> 3S.NOM
‘He is standing.’
- a’. **Tireng-en** aku pa-kimad, ta paka-nengneng
stand-UV 1S.GEN CAU-speech so.that ABLT-watch
- kamu.
2S.NOM
‘I will stand up when making a speech so that you can see me clearly.’
- b. **Ma-tunig** k-u-ni a titi
NEUT-soft NOM-CN-that LNK meat
‘The meat is soft.’
- b’. **Tunig-en** aku k-u-ni a titi.
soft-UV 1S.GEN NOM-CN-this LNK meat
‘I will tenderize the meat.’

Both *t-um-ireng* ‘stand’ and *ma-tunig* ‘soft’ are one-place predicates, and their only argument is marked by the nominative case (e.g. *cingra* in (5.9a)). When they are suffixed with *-en*, the only argument in *t-um-ireng* (now *tireng-en*) is marked by the genitive case and the plain activity verb becomes an agentive active accomplishment. The case of *ma-tunig* ‘soft’ is rather different. The single argument in *ma-tunig* (e.g. *kuni a titi*) is still marked by the nominative case in *tunig-en*, and the derived verb is an agentive causative accomplishment. There are two reasons for their different behaviors in the *-en* form. In addition to the difference in the verb types, which has been discussed in Chapter 4, the other factor affecting the case marking pattern is the different macroroles assigned to the only arguments of *t-um-ireng* ‘stand’ and *ma-tunig* ‘soft’. As the LS of *t-um-rieng* is **do’** (x, [**stand’** (x)]), the *x* argument will be an actor, according to the macrorole assignment principle stated in (5.1). However, as there is no **do’** in the LS of *ma-tunig* (i.e. (BECOME/INGR) **soft’** (x)), the *x* argument is an undergoer. When the verb is affixed by *-en*, the agentive UV marker, the actor in *tireng-en* is marked by the

genitive case by default, while the undergoer in *tunig-en* receives the nominative case in this UV *-en* construction. It is noteworthy that even though the verb type of *ma-tunig* has been changed in the *-en* affixation, the undergoer status of *titi* ‘meat’ remains unchanged during the derivation.⁵ If one assumes that the single arguments in *t-um-ireng* ‘stand’ and *ma-tunig* ‘soft’ bear the same kind of semantic role, there is no explanation as to why the two arguments behave differently in their *-en* forms. Therefore, the macrorole distinction should be made for the single arguments of one-place predicates.

5.1.3 Macrorole Assignment and Predicates with Two Core Arguments

When there are two core arguments in the LS of a predicate, the situation becomes complex. As shown in Table 5.1, it is possible that verbs with two core arguments end up having only one macrorole. Typical examples illustrating this mismatch between syntactic transitivity and macrorole transitivity include multiple-argument activities with a non-referential second argument, two-place locative predicates, and three-place predicates. The first two will be discussed in this section; the macrorole assignment for three-place predicates will be examined in next section.

Two-place verbs can appear with two case-marking patterns in Amis, as illustrated in (5.10):

- (5.10)a. Mi-nanum cingra (t-u nanum).
 AV-water 3S.NOM DAT-CN water
 ‘He is drinking water.’
 ‘He is going to drink water.’
- b. Mi-nanum cingra t-u-ra sayta.
 AV-water 3S.NOM DAT-NCM-CN soda
 ‘He is drinking that soda.’
 ‘He is going to drink that soda.’

⁵ This echoes to the conclusion made by Chen (1987:273) that “in general, the language does not favour processes that involve CR-reinterpretation (i.e. case relation interpretation, JW).”

- c. Ma-nanum nira k-u nanum.
 UV-water 3S.GEN NOM-CN water
 ‘He drank the water.’
 ‘The water was drunk by him.’

The pattern in (5.10a-b) is termed as AV pattern, which has the nominative-dative case frame, while the one in (5.10c) is the UV pattern, which has the genitive-nominative case frame. Presumably, based on the macrorole assignment principles stated in (5.1), verbs with two core arguments can have two macroroles. However, as I am going to argue in the following paragraphs, the second argument of a two-place AV verb is actually realized as a non-macrorole. Based on the two phases of linking from semantics to syntax introduced in Chapter 2, there are two possible reasons for such realization. First, the second argument is not assigned with a macrorole at the phase of linking from the argument position in the LS to macrorole, and hence, it is realized as a non-macrorole core argument. Second, the second argument is assigned with a macrorole but its macrorolehood is deprived due to the voice operation. Therefore, it is also realized as non-macrorole core argument. This happens during the phase of linking from macrorole to syntactic functions. The example in (5.10a) is possibly a result of the former, while (5.10b) is probably a result of the latter. The second reason, which is related to the functions of voice operation, will be explored in greater detail in Chapter 6. The following discussion will focus on the first reason, which is related to macrorole assignment.

As indicated in the English translation of (5.10a) and (5.10c), there is a crucial difference regarding the interpretations of the second argument in the two sentences; the one in (5.10a) is non-referential, while the one in (5.10c) is specific. One may suspect

that the referentiality of the second argument is contributed by the different voices of the two verbs. However, consider the following pair of sentences:

- (5.11)a *Kalamkam-en* *aku* *k-um-a'en* **k-u** **hemay.**
 fast-UV 1S.GEN eat<NEUT> NOM-CN rice
 ‘I will eat the rice fast.’
- b. *Kalamkam-en* *aku* *k-um-a'en* **t-u** **hemay.**
 fast-UV 1S.GEN eat<NEUT> DAT-CN rice
 ‘I will eat the meal fast.’

Sentences in (5.11) exemplify a type of serial verb construction in Amis. As discussed in Wu (1995, 2000), in the serial verb constructions, the form of the non-initial predicate is constrained by its semantic relation with the first predicate. The tighter the relation is, the more constrained the form will be. For example, according to Wu (1995), the type of serial verb construction that begins with a pace predicate like *kalamkam* ‘fast’ in (5.11) exhibits a rather tight semantic relation with its following predicate(s), and in such a construction, the non-initial predicate(s) can only appear in its “AV” form (e.g. *mi-*, *ma-*, or *-um-*) in the affirmative declarative. However, the AV marking of the non-initial predicate has no voice function at all; it is the initial predicate that controls the voice choice of the sentence. As shown in (5.11a), in spite of the AV marking of the verb *k-um-a'en* ‘eat’, the noun *hemay* ‘rice’ is preceded by nominative case, following the UV pattern signaled by *-en* on the initial predicate *kalamkam* ‘fast’.

As the infix *-um-* has no voice function in this sentence, it is glossed as ‘neutral’ (i.e. NEUT)’ in such examples. This neutral function of the voice markers has been briefly mentioned in Chapter 3. However, compare (5.11a) with (5.11b). When the argument *hemay* ‘rice’ is marked by *tu* in (5.11b), it does not refer to a particular bowl of rice;

instead, it receives a generic reading as ‘meal’.⁶ With reference to the analysis of the second argument of a two-place verb, the contrast demonstrated in (5.11) is very important. To begin with, this contrast shows that the non-referential noun *hemay* in (5.11b) is not a macrorole. If it were a macrorole, it would have to be an undergoer, based on the default assignment principles in (5.1), and consequently, it would be marked by the nominative case, like the noun *hemay* ‘rice’ in (5.11a), as this is a UV sentence.⁷ However, it is marked by the dative case. Second, it shows the possibility that the second argument of two-place activity verbs such *k-um-a’en* ‘eat’ is not necessarily a macrorole. This observation follows the RRG’s treatment for activity verbs with a non-referential second argument as M-intransitive, as seen in the example *drink* in Table 5.1.

The *tu*⁸ NP of a two-place AV verb such as *mi-nanum* ‘(go to) drink water’ in (5.10) is analyzed as a non-macrorole (NMR) core argument in this dissertation. This analysis is proposed based on the following observations: the omissible status of this *tu* NP, the multiple marking function of the case marker *tu* for core and oblique NPs, and the fact that the status of the *tu* NP can be promoted by the locative applicative construction. I have shown the first observation in (5.10a). In fact, two-place activity verbs that are derived from *mi-* + an object root (e.g. *mi-dateng* ‘(go to) pick vegetables’ > *dateng* ‘vegetable’ and *mi-futing* ‘(go to) fish’ > *futing* ‘fish’) often appear without the presence of the second argument, especially when this argument is non-referential.

⁶ This is similar to expression in Mandarin Chinese, in which the expression *chi1 fan4* ‘eat rice’ actually means “to have a meal”. The word *fan4* ‘rice’ does not necessarily refer to the actual rice.

⁷ Only macroroles can be marked by the nominative case in Amis. I will discuss the case assignment later in this chapter.

⁸ Unless necessary, the morphemic break of *tu* is omitted in the discussion; that is, I will discuss it as a single marker, referring it as *tu* instead of *t-u*.

Regarding the second reason, as mentioned in Chapter 3, the dative case marker *tu* can appear with NPs that cover a wide range of variety. It can show up with a core argument, as exemplified in (5.10) and (5.11b). It can also mark apparent adjuncts such as time and reason in a sentence. More examples are given below:

- (5.12)a. Ma-nanam kaku mi-ninguy **t-u** **dafak.**
 NEUT-get.used.to 1S.NOM NEUT-bathe DAT-CN morning
 ‘I am used to taking a bath in the morning.’
- b. Lipahak Ø-ci aki **t-u** **romia-mia-d**
 happy NOM-PPN Aki DAT-CN day<RED>
 ‘Aki is happy every day.’
- c. Ma-stul kaku **t-u** **fekeroh.**
 NEUT-stumble.over 1S.NOM DAT-CN rock
 ‘I stumbled over the/a rock.’
- c’. Ma-stul **n-u** **fekeroh** kaku
 UV-stumble.over GEN-CN rock 1S.NOM
 ‘The rock made me stumble.’ (The rock rolled to me and made me stumble.)

As illustrated in (5.12), the NP marked by *tu* can be an adjunct, manifesting time (e.g. (5.12a-b) or indirect cause (e.g. (5.12c). Compare (5.12c) and (5.12c’), when the NP denotes a direct cause, it is marked as an actor in the UV sentence by the genitive case. The marking functions displayed above of the case mark *tu* show that it is likely this case marker is used for NPs that have a less important semantic status; such NPs include a non-macrorole core argument or an adjunct, depending on the logical structures of the verb. A similar argument has been proposed by Liao (2002) for Kavalan, another Formosan language, in which there is also a case marker *tu* that shares similar functions with the Amis *tu*. Unlike the dative case analysis proposed in this dissertation for *tu* in Amis, Liao (2002) argues that the *tu* in Kavalan is better analyzed as an oblique case

marker instead of an accusative case marker that is proposed by other studies of Kavalan. I will further discuss Liao's analysis in a later section of this chapter.

The third reason underlying a non-macrorole analysis for the *tu* NP in (5.10a) is that the semantic status of this NP can be promoted by the locative applicative constructions. Recall that in Chapter 3, I have shown that there are three sub-types of the *-an* applicative constructions, namely, patient, goal, and locative, as exemplified in (3.43). Both the patient and the goal NPs are marked by the dative case in the AV constructions. The qualification of being the target of the applicative construction indicates the less important status of these NPs in the AV sentences.

Notice that the applicative construction is applicable for both the *tu* NP in (5.10a) and the *tura* NP in (5.10b), though the *tura* NP is referential and cannot be omitted in a sentence. In other words, the *tura* NP should have been assigned undergoer based on the macrorole assignment principles. However, its possibility to be promoted via the applicative construction shows that this NP is also a non-macrorole. I thus argue that the patient NP in a two-place AV sentence is syntactically realized as a non-macrorole core argument, regardless of its status in the lexical phrase of linking (i.e. from the argument position in LS to macrorole assignment).

Table 5.3 displays the comparison between the second NP of a two-place predicate in AV and UV construction.

Table 5.3 The Comparison of the Second Argument of a Two-place Predicate

Voice		AV	(Plain) UV
Features			
1. Case Marking		Dative	Nominative
2. Semantic Status after Voice Operation		NMR core argument	Macrorole (undergoer)
3. Referentiality		±Referential	Referential
4. Omissible		Yes (especially the non-referential ones)	No
5. Promotion via Applicative Construction		Applicable	Not Applicable
6. Privileged Syntagmatic Functions	Semantic	Yes	Yes
	Syntactic	No	Yes
7. Displacement Structure		Nominal Type	Nominal Type
8. Wh-Question		Nominal Type	Nominal Type

The first four features displayed in Table 5.3 have been examined in the above discussion. The other features will be explicated in Chapter 6. But, as one can see from the table, the major criterion to tell a macrorole argument from a non-macrorole argument is the possibility for to be promoted by the applicative construction; only a non-macrorole argument (or an adjunct) is eligible to appear in such constructions.

Now it follows from the previous discussion that the sentences in (5.10) exhibit different M-transitivity. For instance, while *mi-nanum* (AV) is M-intransitive, *ma-nanum* (UV) is M-transitive, though both are S-transitive, as they have two core arguments in the LS. In fact, even if the second argument is made referential, such as the one in (5.10b), it is still a non-macrorole. As mentioned, the major clue lies in the possibility to apply the applicative constructions in such examples. By the same logic, the two sentences in (5.13) are also deemed as M-intransitive though the second arguments in the two sentences are denoted by personal proper nouns.

(5.13)a. Mi-palu Ø-ci sawmah ci mayaw-an.
 AV-beat NOM-PPN Sawmah PPN Mayaw-DAT
 ‘Sawmah is beating Mayaw.’
 ‘Sawmah is going to beat Mayaw.’

b. Ma-ulah kaku ci panay-an
 AV-like 1S.NOM PPN Panay-DAT
 ‘I like Panay.’

There are two important consequences following the analysis of treating two-place AV predicates as M-intransitive. The first one is related to the macrorole assignment rules postulated in RRG. Following the default assignment rules in (5.1), the predicate *ma-ulah* in (5.13b) should have an undergoer, as it is M-intransitive and it has no **do'** in its LS. However, the only macrorole in *ma-ulah* should be an actor rather than an undergoer. These reasons have been mentioned in the discussion of psych-predicates in Chapter 4, in which I have shown that there are two types of psych-predicates: internally-motivated and externally-triggered. The former includes examples such as *ma-ulah* 'like' and *ma-ngudu* 'embarrassed; humbled; respect', while the latter includes verbs like *ma-'esam* 'irritated' and *ma-lanang* 'annoyed by noise'. The two groups of psych-predicates behave differently regarding the meaning of their *mi-* and *-en* counterparts, as shown in the examples (5.14), repeated from Chapter 4:

- (5.14)a. Mi-ulah Ø-ci aki ci dongi-an.
 AV-like NOM-PPN Aki PPN Dongi-DAT
 'Aki is going to express his love to Dongi.'
- a'. Ulah-en cingra!
 like-UV 3S.NOM
 '(You must) love him!'
- b. Mi-ngudu cingra t-u lafang.
 AV-humbled 3S.NOM DAT-CN guests
 'He will behave himself in front of the guests (to show the respect to them).'
- b'. Ngudu-en k-u singsi!
 humbled-UV NOM-CN teacher
 'Respect the teacher!'
- c. Mi-'esam k-u-ni a lalangaw (t-u
 AV-irritated NOM-CN-this LNK fly DAT-CN
 tamdaw).
 people
 'This fly is irritating (people).'

is not uncommon cross-linguistically for the first argument of a two-place psych-predicate to be assigned an actor macrorole.

The second consequence following the M-intransitive analysis for two-place AV predicates is that, similar to the proposal made in Liao (2002; 2004) for Kavalan, the case marking patterns in Amis also exhibit an ergative pattern.⁹ Following the methodology adopted in Liao (2004), the case marking patterns of one and two-place predicates in Amis can be summarized as in the following table:

Table 5.4 Case Marking Patterns For One-place and Two-place Predicates in Amis

Pattern	Voice	Affixes ¹⁰	Case Pattern	Macrorole Transitivity	Example
Pattern 1	Neutral	-um- ma-	Nominative (S _A /S _U)	intransitive	<i>t-um-ireng</i> ‘stand’ <i>ma-su’su</i> ‘fat’
Pattern 2	AV	<i>mi-</i> , <i>-um-</i> , <i>ma-</i>	Nominative Dative (S _A) (NMR Core Argument)	intransitive	<i>mi-palu</i> ‘(go to) beat’ <i>k-um-a’en</i> ‘eat’ <i>ma-tayal</i> ‘work’ ¹¹
Pattern 3	UV ¹²	<i>ma-</i> , <i>ma-ka-</i> <i>-en</i>	Genitive Nominative (A) (U)	transitive	<i>ma-palu</i> ‘beat’ <i>ma-ka-ulah</i> ‘like’ <i>palu-en</i> ‘beat (for sure)’

Pattern 1 is found with one-place predicates, while Pattern 2 is found in two-place AV predicates. Both Patterns 1 and 2 are M-intransitive; the nominative case marks the only macrorole (i.e. the S argument). For one-place predicates, the S argument can be actor (abbreviated as S_A) or undergoer (abbreviated as S_U); for two-place AV predicates, the S argument is actor (abbreviated as S_A) and the other argument (i.e. the P argument, or the

⁹ However, Amis displays a split-system between the accusative pattern and the ergative pattern in terms of the voice-marking morphology. This phenomenon will be discussed in Chapter 6.

¹⁰ This list is not exhaustive. Only some commonly found affixes are listed in the table.

¹¹ Two-place AV *ma-* verbs are few in number. The verb *ma-tayal* is used as a one-place predicate most of time, though it is also possible to add a second argument.

¹² This table only discusses the plain UV pattern. For applicative UV sentences, their case pattern will be Genitive (A) + Nominative (U) + Dative (NMR core argument), which is also M-transitive.

patient role) is realized as a NMR core argument.¹³ Pattern 3 is M-transitive; the genitive case marks the actor, while the nominative case marks the undergoer. In other words, the marking of S argument is the same as the undergoer argument, which displays the ergative pattern.

This analysis of the two case marking patterns (i.e. AV and UV) in Amis is different from the previous works. Basically, there are two types of analysis that have been proposed in these earlier studies: the split-ergative system and the accusative system.¹⁴ The former is proposed by Chen (1987), while the latter is implicitly mentioned in Yan (1992).¹⁵ Other scholars do not comment on this issue in their studies, but nevertheless include an accusative case in their case system, which suggests either a split system or an accusative system.

With this new analysis of the case marking patterns proposed in this dissertation, Amis should follow by default the principle for case assignment in ergative languages proposed in RRG:

(5.15) Case assignment rules for ergative languages

- a. Assign absolutive case (i.e. nominative case) to the lowest ranking macrorole argument on the PSA selection hierarchy.
- b. Assign ergative case (i.e. genitive case) to the other macrorole argument.
- c. Assign dative case to non-macrorole arguments (default).

¹³As mentioned earlier, there are two phases of linking involved in the two-place AV construction. It is possible that the second argument of **pred'** is linked to the undergoer, according to the macrorole assignment principles, and then the AV operation deprives this macrorole argument of its macrorolehood. In other words, the AV construction performs the function of argument modulation. This point will be further discussed in Chapter 6.

¹⁴ Liu (1999) seems to adopt an ergative analysis for Amis, as she mentions that intransitive verbs are only found in agent voice (i.e. my actor voice). However, it is not clear whether her intransitive verbs cover both one-place and two-place predicates or just one-place predicates. Furthermore, she still retains the accusative case in her case system, which seems to imply a split-ergative pattern like the one proposed in Chen (1987) for the case marking system, but not a pure ergative pattern.

¹⁵ Yan (1992) places the actor in the UV sentence at a position out of the core, a position analogous to the oblique core argument in RRG. This treatment seems to imply a valence-decreasing function of the UV pattern. His analysis suggests an accusative system for Amis, though he does not explicitly mention it.

The rules in (5.15) account for the case assignment found in Patterns 1 to 3. This set of rules will be further discussed later in this chapter.

Before the discussion of the macrorole assignment for three-place predicates in next section, let us examine two additional types of two-place predicates. This first type is the locative predicates that contain a location and a theme in the core but only have the theme serve as the undergoer. The relevant examples are given in (5.16):

(5.16)a. Maroq kaku i taypak.
 live 1S.NOM PREP Taipei
 ‘I live in Taipei.’

a'. **live'** (taypak, kaku)

b. Ira k-u ta-tulu a wawa i la-lumaq.
 exist NOM-CN PL-three LNK child PREP RED-house.
 ‘There are three children inside the house.’

b'. **exist'** ([**be-in'** (la-lumaq, ta-tulu a wawa)])

c. Ira k-u paysu aku.
 exist NOM-CN money 1S.GEN
 ‘I have money.’ (i.e. My money exists.)

c'. **exist'** ([**have'** (aku, money)])

As illustrated in (5.16), two-place locative predicates show up with a consistent case marking pattern; the theme argument is marked by the nominative case, while the locative argument is marked by the preposition. It is necessary to note that in Amis, the existential, possessive, and locative constructions are all signaled by the predicates *ira* ‘there is/are; exist; be at’ and *awa*, the negative counterpart of *ira*. In the possessive construction, the locative argument is denoted by a genitive pronoun. Further, unlike the predicates discussed in (5.14), there is no corresponding UV pattern for this set of

verbs.¹⁶ This is because one of the core arguments is realized as an oblique argument (i.e. marked by the preposition).

Another type of two-place predicate is the causative state or accomplishment verbs that are derived from adding *pa-* to one-place state predicates. Some examples are given in (5.17):

(5.17)a. Pa-ka-lipahak Ø-ci aki kitanan
 CAU-KA-happy NOM-PPN Aki 1P.INCL.DAT
 ‘Aki made us happy.’ (Causative, AV)

a’. [**do**’ (aki, Ø)] CAUSE [BECOME **happy**’ (kitanan)]

b. Ma-pa-lipahak n-i aki Ø-ci panay
 UV-CAU-happy GEN-PPN Aki NOM-PPN Panay
 ‘Aki made Panay very happy.’

b’. [**do**’ (aki, Ø)] CAUSE [BECOME **happy**’ (panay)]

c. Pa-ka-nga’ay k-u-ra ising t-u adada
 CAU-KA-good NOM-CN-that doctor DAT-CN ailment
 isu.
 2S.GEN
 ‘That doctor cured your ailment.’ (Causative, AV)

c’. [**do**’ (ising, Ø)] CAUSE [BECOME **good**’ (adada)]

d. Pa-ka-nga’ay-en k-u-ra adada!
 CAU-KA-good-UV NOM-CN-that ailment
 ‘Cure that ailment!’

d’. [**DO** (2S.GEN, [**do**’ (2S.GEN, Ø)))] CAUSE [BECOME **good**’ (adada)]

As illustrated in (5.17), the *pa-* version of one-place state predicates also shows up with the AV case frame (i.e. Nominative-Dative), while its UV counterpart has the Genitive-

¹⁶ There are two exceptions to this claim. First, the predicate is causativized by the UV marker *-en*, which will add a causer and the theme argument is the undergoer. Second, verbs such as *maroq* that have more than one meaning might be an exception. *Maroq* can mean ‘live’ and ‘sit’. When appearing in the UV form, it can only mean ‘sit’ but not ‘live’. In other words, this verb should have two lexical entries that can better account for its derivational behavior.

Nominative frame. In other words, the *pa-* predicates in (5.17a) and (5.17c) are also M-intransitive while those in (5.17b) and (5.17d) are M-transitive, with the causer serving as the actor and the causee as the undergoer. As one can see, while the *pa-* construction adds an actor for the otherwise M-intransitive state predicates, the derived verb is still M-intransitive, and it follows the AV pattern by default. However, as I will show in the discussion in Chapter 6, when *pa-* co-occurs with the volitative mood suffix *-aw*, it will follow the UV case pattern. This feature is different from verbs affixed with the AV markers *mi-*, *-um-*, and *ma-*, as these verbs still follow the AV pattern when suffixed with *-aw*.

5.1.4 Macrorole Assignment and Predicates with Three Core Arguments

As mentioned in Chapter 4, three-place predicates in Amis usually appear with *pa-*, and three groups of *pa-* verbs were discussed in that chapter: *pa-*, *pa-pi-*, and *pa-ka-*. For the first group, I have gone through the derivational possibilities of *pa-* + different types of roots and worked out the logical structures for each possibility. The macrorole assignment for each type of three-place predicate will be examined in this section.

The intriguing complexity about macrorole assignment for three-place predicates lies in the fact that their S-transitivity never equals to their M-transitivity, as there are three arguments in the logical structure but only at most two of them can be chosen to be macroroles. The competition of macrorole-hood exists in the two groups of potential undergoer participants, theme/patient and recipient/beneficiary/source/goal. According to the AUH in Figure 5.1, the default choice would be the theme/patient argument, since it is at the rightmost position of the hierarchy, and this is true in many languages, including English. Such languages follow the direct-object pattern and hence are referred

to as direct object languages. However, there are also languages that have the recipient/beneficiary argument as the default or only choice of the undergoer; these languages are primary object languages, as proposed by Dryer (1986). Still, there are languages that can allow both to be undergoers; that is, these languages allow variable linking to the undergoer from the argument position in the logical structure. Such languages may have an unmarked choice between them, and only choose the marked one under certain contexts or for certain verb types. The phenomena of dative shift or locative alternation in English can be viewed as examples for this type. Apparently, primary object languages present a marked pattern based on the AUH and need to be accounted for by a different undergoer selection principle. Hence, in Figure 5.1, we have seen two principles of undergoer selection (i.e. choosing the lowest ranking macrorole in LS and choosing the second highest ranking macrorole in LS). As reported in Guerrero Valenzuela and Van Valin (2004), languages tend to exhibit a mixed type, and the two principles of undergoer selection are both needed to account for such a mixed system.

There are two case frames that are found in the AV constructions of the three-place predicates. The nominative case always shows up with the actor. As for the other two arguments, there are two possibilities. First, they can both be marked by the dative case and thus form a “Nominative-Dative-Dative” case frame for three-place AV predicates. Second, it is also possible that the recipient/goal/beneficiary participant is marked by the preposition, while the theme/patient participant is marked by the dative case, and this will result in a “Nominative-Dative-Preposition” case frame. We will see examples of both case frames in the later discussion. Although there are three arguments in such predicates, there is only one macrorole (i.e. actor) in the AV construction; the two non-actor

arguments that are marked by the dative case or the preposition are non-macrorole arguments. Their non-macrorole status is proven by fact both the two arguments can be promoted to be an undergoer by means of the applicative construction, as illustrated in (5.18):

- (5.18)a. **Pa-nanum** cingra ci aki-an t-u-ra sayta.
 CAU-water 3S.NOM PPN Aki-DAT DAT-CN-that soda
 ‘He gave Aki that soda (to drink).’
- b. Cima k-u **pa-nanum-an** nira t-u-ra
 who.NOM NOM-CN CAU-water-LA 3S.GEN DAT-CN-that
 sayta?
 soda
 ‘Who did he ask to drink that soda?’
- c. U maan k-u **pa-nanum-an** nira ci
 NCM what NOM-CN CAU-water-LA 3S.GEN PPN
 aki-an?
 Aki-DAT
 ‘What did he ask Aki to drink?’

The sentences in (5.18b-c) exemplify a type of WH-Question, which is termed the nominal type, as the clause following the WH-word is preceded by the nominative case marker *ku*. There is a missing argument (i.e. a pivot) in this nominal clause, and this missing argument is co-referential with the WH-word. As I will show in Chapter 6, this missing argument has to be either an actor of an AV verb or an undergoer of a UV verb in that clause. As shown in the data, the missing argument of the applicative UV verb *pa-...-an* can be either the theme argument, as in (5.18b), or the recipient/beneficiary argument, as in (5.18c). The eligibility of being the target of an applicative construction shows that neither one of the dative NPs in (5.18a) is an undergoer.

Nevertheless, during the lexical phrase of linking, one of the two non-actor arguments can be linked to undergoer, of which the macrorolehood is removed by the argument modulation function of the actor voice construction.¹⁷ As both non-actor arguments are marked in the same way (i.e. by the dative case) in the AV construction of a three-place predicate, it is difficult to tell which argument is the default choice of the undergoer in Amis during the lexical linking phrase of these three-place predicate. The only clue lies in the in the plain UV constructions of the three-place predicates, as only one of two non-actor NPs can be selected as the undergoer in the UV constructions, and this undergoer NP will be marked by the nominative case. In the following discussion, I will show that Amis also displays a mixed system regarding the selection of the undergoer, as different three-place predicates may have different default choices of undergoer in the UV constructions. However, Amis seems to behave more like a primary object language. In fact, the primary object pattern is the only pattern that is found with the *pa-pi-* verbs.

5.1.4.1 *Pa-* + Transfer Roots

We will first look into the Amis counterparts for English *give*, *borrow/lend*, *buy/sell*. These three-place predicates are all derived from a root that is inherently ditransitive (i.e. having three core arguments), though not all of them can be realized as direct core argument. Except for *pa-fli* ‘give’, the rest of these verbs are all derived by affixing *pa-* to a transfer root, and the derived predicate depicts the transfer event with a different perspective regarding the source as the initiator of the causing event. As three-place predicates have a causative operator (i.e. CAUSE) in the LS by default, attaching *pa-* to a

¹⁷ Although the possibility to mark the recipient/goal/beneficiary argument with the preposition seems to imply a less important status of this argument, it is not necessarily this case for every three-place predicate, as we will see later in the discussion.

transfer root makes a causal chain in the LS, one is contributed by the its own CAUSE operator and the other one from *pa-*. This has been mentioned this in Chapter 4. Their logical structures are given again in (5.19):

(5.19)a. Pa-fli Ø-ci mayaw ci aki-an t-u
 CAU-give NOM-PPN Mayaw PPN Aki-DAT DAT-CN

paysu
 money
 ‘Mayaw is going to give money to Aki.’ (AV)

a’. [**do’** (mayaw, Ø)] CAUSE [BECOME **not.have’** (mayaw, paysu) & BECOME **have’** (aki, paysu)]

b. Mi-qaca kaku t-u cudad sa-pa-fli
 AV-buy 1S.NOM DAT-CN book InA-CAU-give

t-u wawa
 DAT-CN child
 ‘I am buying the book to give it to the child.’
 ‘I am going to buy this book and give it to the child.’

b’. ...[**do’** (kaku, Ø)] CAUSE [BECOME NOT **have’** (y, cudad) & BECOME **have’** (wawa, cudad)]¹⁸

c. Pa-qaca k-u-ra wawa t-u hana
 CAU-buy NOM-CN-that child DAT-CN flower

t-u-ra kaying.
 DAT-CN-that young.lady
 ‘That child sold flowers to that lady.’ (AV)

c’. [**do’** (wawa, Ø)] CAUSE [[**do’** (kaying, Ø)] CAUSE [BECOME NOT **have’** (wawa, hana) & BECOME **have’** (kaying, hana)]]

d. Mi-caliw kaku i widang t-u paysu
 AV-borrow 1S.NOM PREP friend DAT-CN money

‘I am going to borrow money from (the) friends.’

d’. ...[**do’** (kaku, Ø)] CAUSE [BECOME NOT **have’** (widang, paysu) & BECOME **have’** (kaku, paysu)]

¹⁸ This is a simplified version of the LS of this sentence. It only shows the LS of *qaca* ‘buy’; the semantic representations of *mi-* and *sa-pa-fli* ‘use (something) to give to someone’ are not provided in the LS. Such simplified style of representation will be adopted throughout this section.

e. Pa-caliw Ø-ci panay ci aki-an t-u
 CAU-borrow NOM-PPN Panay PPN Aki-DAT DAT-CN

paliding.
 car
 ‘Panay lent the car to Aki.’ (AV)

e’. [**do**’ (panay, Ø)] CAUSE [[**do**’ (aki, Ø)] CAUSE [BECOME NOT **have**’ (panay, paliding) & BECOME **have**’ (aki, paliding)]]

Two observations can be generalized from (5.19). First, for the *mi*- version of the three-place predicate, while the theme participant is marked by the dative case, the recipient/source participant is either left out or marked by the preposition. This indicates that the theme participant is coded as a direct core argument, while the recipient/source argument is treated more like an oblique core argument. This marking thus implies a more important semantic status of the theme participant, and thus it should be chosen as the undergoer in the UV construction. This is exactly what one can find in the data, as shown in (5.20):

(5.20)a. Ma-qaca n-u-ra kaying **k-u** **hana**
 UV-buy GEN-CN-that young.lady NOM-CN flower

n-i panay
 GEN-PPN Panay
 ‘That lady bought Panay’s flower.’

a’. [**do**’ (kaying, Ø)] CAUSE [BECOME NOT **have**’ (panay, hana) & BECOME **have**’ (kaying, hana)]

b. *Ma-qaca n-u-ra kaying k-u hana
 UV-buy GEN-CN-that young.lady NOM-CN flower

i ci panay-an/t-u-ra wawa
 PREP PPN Panay-DAT/DAT-CN-that child
 ‘That lady bought flower from Panay/that child’

- c. *Ma-qaca n-u-ra kaying t-u hana
 UV-buy GEN-CN-that young.lady NOM-CN flower
 Ø-ci panay/k-u-ra wawa
 NOM-PPN Panay/NOM-CN-that child
 ‘That lady bought flower from Panay/that child’
- d. Aka qaca-en k-u hana n-u-ra wawa/
 NEG.IMP buy-UV NOM-CN flower GEN-CN-that child
 *t-u-ra wawa
 DAT-CN-that child
 ‘Don’t buy that kid’s flower!’
- d’.DO (x, [**do**’ (x, Ø)] CAUSE [BECOME NOT **have**’ (wawa, hana) & BECOME **have**’ (x, hana)]¹⁹

As seen in the UV form of *qaca* ‘buy’, only the theme argument can serve as the undergoer, and hence the PSA in the UV sentence; the source participant can only appear as the possessor of the theme in the genitive case (e.g. (5.20d)). This is exactly what the AUH in Figure 5.1 predicts. One more example from *caliw* ‘borrow’ is provided below:

- (5.21)a. Ma-caliw n-i aki **k-u** **paliding** n-i
 UV-borrow GEN-PPN Aki NOM-CN car GEN-PPN
 panay
 Panay
 ‘Aki borrowed Panay’s car.’

a’. [**do**’ (aki, Ø)] CAUSE [BECOME NOT **have**’ (panay, paliding) & BECOME **have**’ (aki, paliding)]

- b. *Ma-caliw n-i aki k-u paliding
 UV-borrow GEN-PPN Aki NOM-CN car
 i ci panay-an/t-u-ra singsi
 PREP PPN Panay-DAT/DAT-CN-that teacher
 ‘Aki borrowed the car from Panay/that teacher’

¹⁹ This is a simplified version of the LS for (5.20d); it only shows the agentive feature of *-en*; the other details of *-en* and the LS of the imperative negative word *aka* are omitted in the LS.

c. Aka caliw-en **k-u** **paysu** n-u wawa!
 NEG.IMP borrow-UV NOM-CN money GEN-CN child
 ‘Don’t borrow the child’s money!’

c’. DO (x, [**do**’ (x, ∅)]) CAUSE [BECOME NOT **have**’ (wawa, paysu) &
 BECOME **have**’ (x, paysu)]

However, the situation with the *pa-* verbs is complex. As indicated in (5.19a), (5.19b), and (5.19c), both the theme participant such as *hana* ‘flower’ in (5.19c) and the beneficiary/goal participant such as *kaying* ‘young lady’ in (5.19c) are marked by the dative case, which does not reveal much information about the relative importance of the two arguments. Notice that the beneficiary/goal participant can also be marked by a preposition in addition to the dative case, as illustrated in (5.22).

(5.22)a. Pa-qaca kaku t-u cudad **i** **wawa.**
 CAU-buy 1S.NOM DAT-CN book PREP child
 ‘I sold the book to the child.’ (AV)
 ‘I went the child’s place to sell the book’ (AV)

a’. [**do**’ (kaku, ∅)] CAUSE [[**do**’ (wawa, ∅)] CAUSE [BECOME NOT **have**’ (kaku, cudad) & BECOME **have**’ (wawa, cudad)]] (for the first reading)

b. Pa-caliw ∅-ci kacaw t-u paysu
 CAU-borrow NOM-PPN Kacaw DAT-CN money

i **singsi.**
 PREP teacher

‘Kacaw is going to lend the money to the teacher.’

b’. [**do**’ (kacaw, ∅)] CAUSE [[**do**’ (singsi, ∅)] CAUSE [BECOME NOT **have**’ (kacaw, paysu) & BECOME **have**’ (singsi, paysu)]]

Examples in (5.22) seem to suggest that the theme participant is more important than the recipient/goal participant as it is never marked by the preposition, and thus the theme NP is more likely to be chosen as the undergoer in the UV construction. However, this assumption does not hold for every *pa-* verb. For instance, for the verb *pa-fli* ‘give’, both

the recipient and the theme can be possible undergoers though the recipient seems to be a preferred choice, as shown in the following examples:

(5.23)a. Ma-pa-fli aku t-u paysu Ø-ci
 UV-CAU-give 1S.GEN DAT-CN money NOM-PPN

mayaw.

Mayaw

‘I gave the money to Mayaw already.’

a’. [do’ (aku, Ø)] CAUSE [BECOME **not.have**’ (aku, paysu) & BECOME **have**’ (mayaw, paysu)]

b. Ma-pa-fli aku **k-u** **payau** *(i) ci
 UV-CAU-give 1S.GEN NOM-CN money PREP PPN

mayaw-an.

Mayaw-DAT

‘I gave the money to Mayaw.’

c. Ma-pa-fli n-u singsi **k-u-ra** **wawa/**
 UV-CAU-give GEN-CN teacher NOM-CN-that child/

Ø-ci **dongi** t-u paysu.
 NOM-PPN Dongi DAT-CN money

‘The teacher gave that child/Dongi money.’

d. ??Ma-pa-fli n-u singsi t-u-ra wawa/ci
 UV-CAU-give GEN-CN teacher DAT-CN-that child /PPN

dongi-an **k-u** **paysu.** (inconsistent)
 Dongi-DAT NOM-CN money

‘The teacher gave that child/Dongi money.’

e. Aka pa-fli-en **k-u** **wawa!**
 NEG.IMP CAU-give-UV NOM-CN child
 ‘Don’t give to the child!’

f. *Aka pa-fli-en **k-u** **waneng!**
 NEG.IMP CAU-give-UV NOM-CN sugar
 ‘Don’t give the candy!’

Examples in (5.23) indicate the possibilities for both the theme participant and the recipient participant to be marked by the nominative case in the UV construction.

However, the recipient seems to be a favored choice for this predicate based on the following observations. First, there seem to be more restrictions for the theme to serve as the undergoer. For example, the theme argument seems to prefer to appear after the verb if it is the undergoer, as seen in the comparison of (5.23b) and (5.23d); in (5.23d), the theme undergoer is placed as the end of the sentence, and the acceptability of this example is not as good as (5.23b), in which the theme undergoer appears after the verb. Second, it is the theme argument that is allowed to be left out in the sentence, not the recipient. This is exemplified in (5.23e-f).

However, unlike *pa-fli* ‘give’, *pa-qaca/pa-cakay* ‘sell’ can only select the theme argument as the undergoer, as illustrated in (5.24):

- (5.24)a. Ma-pa-cakay n-i aki **k-u** **futing** ci
 UV-CAU-buy GEN-PPN Aki NOM-CN fish PPN

ofad-an.
 Ofad-DAT
 ‘Aki sold (other people’s) fish to Ofad.’

- a’. [**do**’ (aki, ∅)] CAUSE [[**do**’ (ofad, ∅)] CAUSE [BECOME NOT **have**’ (aki, futing) & BECOME **have**’ (ofad, futing)]]

- b. *Ma-pa-cakay n-i aki t-u futing ∅-ci
 UV-CAU-buy GEN-PPN Aki DAT-CN fish NOM-PPN

ofad.
 Ofad
 ‘Aki sold (other people’s) fish to Ofad.’

- c. Ma-pa-qaca n-u-ra wawa **k-u** **hana**
 UV-CAU-buy GEN-CN-that child NOM-CN flower

t-u-ra kaying.
 DAT-CN-that young.lady
 ‘That child sold flowers to that lady.’

- c’. [**do**’ (wawa, ∅)] CAUSE [[**do**’ (kaying, ∅)] CAUSE [BECOME NOT **have**’ (wawa, hana) & BECOME **have**’ (kaying, hana)]]

- d. *Ma-pa-qaca n-u-ra wawa t-u hana
 UV-CAU-buy GEN-CN-that child DAT-CN flower
- k-u-ra** **kaying.**
 NOM-CN-that young.lady
 ‘That child sold flowers to that lady.’
- e. *Ma-pa-qaca n-u-ra wawa **k-u-ra** **kaying**
 UV-CAU-buy GEN-CN-that child NOM-CN-that young.lady
- t-u hana.
 DAT-CN flower
 ‘That child sold flowers to that lady.’
- f. Ma-pa-qaca n-u-ra wawa **k-u** **hana i**
 UV-CAU-buy GEN-CN-that child NOM-CN flower PREP
- kaying.**
 young.lady
 ‘That child sold flowers to that lady.’
- g. Pa-qaca-en n-u-ra wawa **k-u** **hana t-u-ra**
 CAU-buy-UV GEN-CN-that child NOM-CN flower DAT-CN-that
- kaying.**
 young.lady
 ‘That child will sell the flowers to that young lady.’
- g’. DO (wawa, [**do**’ (wawa, ∅)] CAUSE [[**do**’ (kaying, ∅)] CAUSE [BECOME NOT **have**’ (wawa, hana) & BECOME **have**’ (kaying, hana)]]
- h. *Pa-qaca-en n-u-ra wawa t-u hana **k-u-ra.**
 CAU-buy-UV GEN-CN-that child DAT-CN flower NOM-CN-that
- kaying**
 young.lady
 ‘That child will sell the flowers to that young lady.’
- i. *Pa-qaca-en aku ∅-ci **aki/k-u** **wawa**
 PA-buy-UV 1S.GEN NOM-PPN Aki/NOM-CN child
- t-u cudad
 DAT-CN book
 ‘I will sell Aki/the child the book.’

As shown in (5.24), only the theme participant, such as *futing* ‘fish’ in (5.24a) and *hana* ‘flower’ in (5.24c), of *pa-qaca/pa-cakay* ‘buy’ can be marked by the nominative case in the UV constructions. That is, the UV sentences that have a nominative recipient/goal are not acceptable.

As for *pa-caliw* ‘lend’, similar to *pa-fli* ‘give’, it allows both possibilities regarding undergoer selection, but the theme seems to be the preferred choice. Examples follow:

- (5.25)a. Ma-pa-caliw n-i kacaw **k-u** **singsi**
 UV-CAU-borrow GEN-PPN Kacaw NOM-CN teacher

 t-u paysu.
 DAT-CN money
 ‘Kacaw lent the teacher money.’
- a’. [**do**’ (kacaw, ∅)] CAUSE [[**do**’ (singsi, ∅)] CAUSE [BECOME NOT **have**’ (kacaw, paysu) & BECOME **have**’ (singsi, paysu)]]
- b. Ma-pa-caliw ni kacaw **ku** **paysu**
 UV-CAU-borrow GEN-PPN Kacaw NOM-CN money

 i singsi.
 PREP teacher
 ‘Kacaw lent the money to the teacher.’
- c. *Ma-pa-caliw n-i kacaw t-u singsi
 UV-CAU-borrow GEN-PPN Kacaw DAT-CN teacher

k-u paysu.
 NOM-CN money
 ‘Kacaw lent the money to the teacher.’
- d. Aka pa-caliw-en **k-u** **singsi** t-u
 NEG.IMP CAU-borrow-UV NOM-CN teacher DAT-CN

 paysu.
 money
 ‘Don’t lend the teacher money.’
- d’. [DO (x, [**do**’ (x, ∅)] CAUSE [[**do**’ (singsi, ∅)] CAUSE [BECOME NOT **have**’ (x, paysu) & BECOME **have**’ (singsi, paysu)]]

- e. Aka pa-caliw-en k-u paysu t-u/i
 NEG.IMP CAU-borrow-UV NOM-CN money DAT-CN/PREP

singsi.
 teacher
 ‘Don’t lend the money to the teacher.’

- f. Ma-pa-caliw n-i panay Ø-ci aki t-u
 UV-CAU-borrow GEN-PPN Panay NOM-PPN Aki DAT-CN

paliding.
 car
 ‘Every time Panay lent the car to Aki....’ (some follow-up comment about Aki.)

- g. Pa-caliw-en n-i panay t-u paliding
 CAU-borrow-UV GEN-PPN Panay DAT-CN car

Ø-ci aki.
 NOM-PPN Aki
 ‘Panay lent the car to Aki....’ (some follow-up comment about Aki.)

As shown in (5.25), although both recipient and theme arguments can be the undergoer in the UV construction, a special context is required for the recipient argument to serve as the undergoer (e.g. (5.25f-g)). This contextual requirement for the presence of an undergoer recipient suggests that theme participant is the preferred undergoer choice for this *pa-caliw* ‘lend’.

A similar observation is also found with *pa-luwad* ‘send’, which is derived from *pa-luwad* ‘get up; rise; set off’. Relevant examples are given in (5.26):

- (5.26)a. Pa-luwad Ø-ci aki t-u tilid ci
 CAU-set.off NOM-PPN Aki DAT-CN letter PPN

panay-an.
 Panay-DAT
 ‘Aki is going to send a letter to Panay.’

- a’. [**do**’ (aki, Ø)] CAUSE [**do**’ (tilid, [**set.off**’ (tilid))] & BECOME **be-at**’ (panay, tilid)]

- b. Ma-pa-luwad tu n-i aki **k-u** **tilid** ci
 UV-CAU-set.off Asp GEN-PPN Aki NOM-CN letter PPN
- panay-an.
 Panay-DAT
 ‘Aki sent a letter to Panay.’
- c. Pa-luwad-en n-i aki **k-u-ni** **tilid** ci
 CAU-set.off-UV GEN-PPN Aki NOM-CN-this letter PPN
- panay-an.
 Panay-DAT
 ‘Aki will send this letter to Panay.’
- d. *Pa-luwad-en n-i aki t-u-ni **tilid**
 CAU-set.off-UV GEN-PPN Aki DAT-CN-this letter
- ∅-ci **panay.**
 NOM-PPN Panay
 ‘Aki will send this letter to Panay.’
- e. Ma-pa-luwad tu n-i aki t-u **tilid**
 UV-CAU-set.off Asp GEN-PPN Aki DAT-CN letter
- ∅-ci **panay_i** awa ho k-u **pacawi**
 NOM-PPN Panay NEG.exist ASP NOM-CN answer
- nira_i
 3S.GEN
 ‘Aki sent a letter to Panay, but has no her reply yet.’
 (The first clause is unacceptable if there is no follow-up comment.)

The sentences in (5.26) show that, in spite of allowing two possible undergoer choices, the theme argument seems to be the default choice. The recipient argument only serves as the undergoer in specific contexts such as the one provided in (5.26e), but this contextual requirement is not necessary for the theme argument to be chosen as the undergoer. Moreover, the UV form *pa-luwad-en* only selects the theme to be the undergoer, but not the recipient.

So far, two patterns of undergoer selection in the (plain) UV constructions of the three-place predicates have been found in the above discussion. One follows the default choice (Principle A) based on the AUH, while the other has both the default and the marked choices (Principles A and B) for the undergoer. The first pattern is exemplified by the UV forms of *pa-qaca/pa-cakay* ‘sell’, which prefers to have a theme-undergoer, while the second one is illustrated in the UV constructions of *pa-fli* ‘give’, *pa-caliw* ‘lend’, *pa-luwad* ‘send’, which can have either theme or recipient as the undergoer. The above discussion indicates that Amis, similar to the languages discussed in Guererro Valenzuela and Van Valin (2004), exhibits a mixed type regarding the undergoer selection and will need more than one principle to account for the undergoer selection patterns. More three-place predicates will be examined in the following sections.

5.1.4.2 *Pa-* + Roots of Different Categories

Recall that in the earlier discussion, I have mentioned that when *pa-* attaches to a root that designates an object or an entity, it generates a reading of “cause to have”.

Consider the following:

- (5.27)a. Ma-na’ay kaku pa-nanum t-u/i sayta.
 NEUT-reluctant 1S.NOM CAU-water DAT-CN/PREP soda
 ‘I don’t want to add water into the soda.’
 * ‘I don’t want to add soda (to something).’
- b. Pa-dateng kaku t-u lafang.
 CAU-vegetable 1S.NOM DAT-CN guest
 ‘I serve the guests dishes.’

As shown in (5.27), usually, the theme participant can be omitted in the sentence, especially when it is non-referential and shares the same meaning with the root form (e.g. *nanum* in (5.27a) and *dateng* in (5.27b)). The logical structure of this set of predicates

can be represented as [**do'** (x, ∅) CAUSE BECOME **have.** i' (y, z_i)]; in this logical structure, the y argument is usually denoted by the noun same as the root.

In the UV construction, it is usually the recipient (i.e. the y argument) that is chosen to be the undergoer, though the theme may be a possible choice with some restrictions:

(5.28)a. Ma-pa-nanum tu n-i ina t-u sayta
 UV-CAU-water ASP GEN-PPN mother DAT-CN soda

∅-ci **mama.**
 NOM-PPN father
 'Mother gave soda for Father to drink.'

a'. [**do'** (ina, ∅)] CAUSE BECOME **have.water'** (mama, sayta)]²⁰

b. *Ma-pa-nanum tu n-i ina ci mama-an
 UV-CAU-water ASP GEN-PPN mother PPN father-DAT

k-u **sayta.**
 NOM-CN soda
 'Mother gave soda for Father to drink.'

c. Pa-nanum-en n-i ina t-u sayta
 CAU-water-UV GEN-PPN mother DAT-CN soda

∅-ci **mama.**
 NOM-PPN father
 'Mother gave soda for Father to drink.'

c'. [DO (ina, [**do'** (ina, ∅)])] CAUSE BECOME **have.water'** (mama, sayta)]

d. *Pa-nanum-en n-i ina **k-u** **sayta** ci
 CAU-water-UV GEN-NCN mother NOM-CN soda PPN

mama-an.
 father-DAT
 'Mother will give Father the soda to drink.'

²⁰ To simplify the discussion, the LS of *ma-* (active accomplishment, UV) is not represented in the LS of the *ma-* UV construction of the three-place predicates. As for the *-en* UV constructions of these predicates, only the agentive feature of *-en* will be specified. The addition or omission of the logical structures of *ma-* and *-en* will not affect the ranking of the arguments in the LS.

e. Ma-pa-nanum tu n-i ina **k-u** **sayta**
 UV-CAU-water ASP GEN-PPN mother NOM-CN soda

i wawa.
 PREP child

‘Mother gave soda for the child to drink.’

e’. [**do**’ (ina, ∅)] CAUSE BECOME **have.water**’ (wawa, sayta)]

f. Pa-nanum-en n-i ina **k-u** **sayta**
 CAU-water-UV GEN-PPN mother NOM-CN soda

i wawa.
 PREP child.

‘Mother gave soda for the child to drink.’

f’. [DO (ina, [**do**’ (ina, ∅)]) CAUSE BECOME **have.water**’ (wawa, sayta)]

g. *Pa-nanum-en n-i ina **k-u** **sayta**
 CAU-water-UV GEN-PPN mother NOM-CN soda

t-u wawa.
 DAT-CN child.

‘Mother gave soda for the child to drink.’

h. Pa-nanum-en **k-u** **sayta** t-u nanum!
 CAU-water-UV NOM-CN soda DAT-CN water

‘Add water to the soda!’

h’. [DO (x, [**do**’ (x, ∅)])] CAUSE [BECOME **have.water**’ (sayta, water)]

i. *Pa-nanum-en **k-u** **nanum** i sayta!
 CAU-water-UV NOM-CN water PREP soda

‘Add the water to the soda!’

The examples in (5.28) indicate that there is no problem when the recipient participant (i.e. the second highest ranking argument in the LS, such as *mama* ‘father’ in (5.28a) and *sayta* ‘soda’ in (5.28h)) serves as the undergoer in the UV form. However, there seems to be some restriction for the theme argument (i.e. the lowest ranking argument in the LS, such as *sayta* ‘soda’ in (5.28a) and *nanum* ‘water’ in (5.28h)) to be an undergoer. As we can see in (5.28f), the recipient has to be marked by the preposition instead of the dative case when the theme is chosen to be the undergoer. In other words, the recipient

argument has to be treated as an oblique or adjunct-like when the theme serves as the undergoer. However, informants do not agree amongst themselves regarding this structure, as the sentence with an identical structure in (5.28i) is not acceptable. It looks like when *pa-* attaches to a root denoting an object or an entity, the recipient argument is a preferred choice of the undergoer, which follows Principle B in the AUH.

Now, let us consider the situation when *pa-* attaches to a root that denotes an activity. As mentioned in Chapter 4, the derived meaning is ‘cause to do the activity’ (i.e. [**do**’ (x, ∅)] CAUSE [**do**’ (y, [**pred**’ (y, (z))])]). However, there involve some complexities regarding the derived interpretations and the undergoer choice of such three-place predicates.

To begin with, the causee argument (i.e. the argument of **do**’ after CAUSE) is the preferred undergoer if the derived verb has the plain “cause to do” reading. Similar to the situation found in *pa-* + object root illustrated in (5.28f), the patient argument (i.e. the second argument of **pred**’ after CAUSE) can only be undergoer when the causee is marked by the preposition. This is exemplified by *pa-nengneng* ‘show; let see’ (i.e. CAUSE BECOME **do**’ (x, [**see**’ (x, y))])²¹ in (5.29).

(5.29)a. Pa-neneneng kaku t-u-ni-ni a tilid ci
 CAU-see 1S.NOM DAT-CN-this-RED LNK letter PPN

sawmah-an.
 Sawmah-DAT
 ‘I am going to show the letter to Sawmah.’

a’. [**do**’ (kaku, ∅)] CAUSE [BECOME **do**’ (aki, [**see**’ (aki, tilid)))]

²¹ There is no clear lexical distinction between ‘watch’ and ‘see’ in Amis; both meanings are denoted by the root form *nengneng*. However, it seems the meaning of *nengneng* is closer to ‘watch’ (i.e. **do**’ (x, [**see**’ (x, y))]), as *nengneng* is analyzed an activity root with strong agentive implicature based on its performance in the {paka-} test mentioned in Chapter 4. Hence, the **do**’ is retained in the LS of *pa-nengneng*.

- b. Pa-neneneng kaku t-u ising.
CAU-see 1S.NOM DAT-CN doctor
'I am going to let the doctor see (me).'
- b'. [**do'** (kaku, ∅)] CAUSE [BECOME **do'** (ising, [**see'** (ising, z)))]
- c. Pa-nengneng-en **kaku** t-u-ni impic!
CAU-see-UV 1S.NOM DAT-CN-this pencil
'Let me see the pencil!'
- c'. DO (x, [**do'** (x, ∅)]) CAUSE BECOME [**do'** (kaku, [**see'** (kaku, impic)])]
- d. *Pa-nengneng-en **k-u-ni** impic!
CAU-see-UV NOM-CN-this pencil
'Let (someone) see the pencil!'
- e. Ma-pa-nengneng aku **k-u-ni-ni**²² i wawa.
UV-CAU-see 1S.GEN NOM-CN-this-RED PREP child
'I showed this to the child.'
- e'. [**do'** (kaku, ∅)] CAUSE BECOME [**do'** (wawa, [**see'** (wawa, kuni)])]
- f. *Ma-pa-nengneng aku t-u wawa
UV-CAU-see 1S.GEN DAT-CN child
- k-u-ni-ni.**
NOM-CN-this- RED
'I showed this to the child.'
- g. Pa-nengneng-en aku **k-u-ni-ni** i wawa.
CAU-see-UV 1S.GEN NOM-CN-this-RED PREP child
'I will show this to the child.'
- g'. DO (aku, [**do'** (kaku, ∅)]) CAUSE BECOME [**do'** (wawa, [**see'** (wawa, kuni)])]

The examples in (5.29) indicate that the verb *pa-nengneng* 'show' seems to prefer to have the causee (i.e. the second highest ranking argument in the LS, such as *kaku* in (5.29c)) as the undergoer though the patient argument (i.e. the lowest highest ranking argument in the LS, such as *kunini* in (5.29e)) is also possible undergoer choice, especially when the causee is marked by the preposition.

²² The reduplication indicates emphasis.

The preference to have the second highest ranking argument as the undergoer can also be observed in the UV forms of *pa-ka'en* ‘feed’ in (5.30) and *pa-radiw* ‘teach to sing’²³ in (5.31):

(5.30)a. Aka pa-ka'en-en t-u futing **cingra!**
 NEG.IMP CAU-eat-UV DAT-CN fish 3S.NOM
 ‘Don’t feed him fish.’ or ‘Don’t give him fish to eat!’

a'. [DO (x, [**do'** (x, Ø)])] CAUSE BECOME [**do'** (cingra, [**eat'** (cingra, futing)])]

b. Ma-pa-ka'en aku Ø-ci **panay.**
 UV-CAU-eat 1S.GEN NOM-CN Panay
 ‘I (already) let Panay eat.’

b'. [**do'** (x, Ø)] CAUSE BECOME [**do'** (panay, [**eat'** (panay, z)])]

c. Pa-ka'en-en aku **k-u kulong t-u**
 CAU-eat-UV 1S.GEM NOM-CN water.buffalo DAT-CN

rengos.
 grass
 ‘I will feed the water buffalos grass.’

c'. DO (aku, [**do'** (aku, Ø)]) CAUSE BECOME [**do'** (kulong, [**eat'** (kulong, rengos)])]

d. *Pa-ka'en-en aku t-u kulong **k-u**
 CAU-eat-UV 1S.GEM DAT-CN water.buffalo NOM-CN

rengos.
 grass
 ‘I will feed the water buffalos grass.’

As shown in the UV forms of *pa-ka'en* ‘feed’, the undergoer is always the causee (i.e. the second highest argument in the LS). The verb *pa-radiw* ‘teach to sing; cause to sing’ exemplified in (5.31) exhibits the same phenomenon:

²³ The predicate *pa-radiw* has two interpretations: “sing a song for someone” and “teach to sing”. The first reading is related to the fact that the root form *radiw* denotes an object “song”, and hence its *pa-* form also has the reading of “cause to have a song”.

- (5.31)a. Pa-radiw-en n-i ina **k-u** **wawa**
 CAU-song-UV GEN-PPN mother NOM-CN child
- t-u sa-ka-lingad a radiw.
 DAT-CN InA-KA-plow LNK song
 ‘Mother will teach the child to sing the plowing song.’
- a’. [DO (ina, [**do**’ (ina, ∅)])] CAUSE BECOME [**do**’ (wawa, [**sing**’ (wawa, sakalingad a radiw))]
- b. *Pa-radiw-en n-i ina t-u wawa
 CAU-song-UV GEN-PPN mother DAT-CN child
- k-u** **sa-ka-lingad** **a** **radiw.**
 NOM-CN InA-KA-plow LNK song
 ‘Mother will teach the child to sing the plowing song.’
- c. Ma-pa-radiw n-i ina **k-u** **wawa**
 UV-CAU-song GEN-PPN mother NOM-CN child
- t-u sa-ka-lingad a radiw
 DAT-CN InA-KA-plow LNK song
 ‘Mother taught the child to sing the plowing song.’
- c’. [**do**’ (ina, ∅)] CAUSE BECOME [**do**’ (wawa, [**sing**’ (wawa, sakalingad a radiw))]
- d. *Ma-pa-radiw n-i ina t-u wawa
 UV-CAU-song GEN-PPN mother DAT-CN child
- k-u** **sa-ka-lingad** **a** **radiw.**
 NOM-CN InA-KA-plow LNK song
 ‘Mother taught the child to sing the plowing song.’
- e. Ma-pa-radiw n-i ofad inacila i tamianan
 UV-CAU-song GEN-PPN Ofad yesterday PREP 1P.Excl.DAT
- k-u-ni** **a** **radiw.**
 NOM-CN-this LNK song
 ‘Ofad asked us to sing this song yesterday.’
- e’. [**do**’ (ofad, ∅)] CAUSE BECOME [**do**’ (tamianan, [**sing**’ (tamiana, kuni a radiw))]

f. ??Pa-radiw-en n-i ofad i tamianan
 CAU-song-UV GEN-PPN Ofad PREP 1P.Excl.DAT

k-u-ni **a** **radiw.**
 NOM-CN-this LNK song
 ‘Ofad asked us to sing this song.’

f'. [DO (ofad, [**do'** (ofad, ∅)])] CAUSE BECOME [**do'** (tamianan, [**sing'** (tamiana, kuni a radiw))]

We can also find the preference of the second highest ranking argument to be the undergoer in the UV forms of *pa-radiw*. Although the lowest ranking argument is also a possible choice, it is less preferred, as indicated in (5.31f). The above examples illustrate the situation that when the derived *pa-* verbs have the logical structure [**do'** (x, ∅)] CAUSE [**do'** (y, [**pred'** (y, z)])], the second highest ranking argument (y) in the LS is the unmarked undergoer choice in the UV constructions.

Nevertheless, some of the derived *pa-* verbs may involve more than just a causative activity; it may add a location in which the caused event happens, or it may add a beneficiary who is offered something to perform this caused activity. The first possibility is exemplified by the predicate *pa-tangtang* ‘cause something to be cooked at a certain place’, which is derived from the root *tangtang* ‘cook; steam’ and *pa-camul* ‘cause to add into or join’, derived from *camul* ‘add; join’. For such examples, the patient/theme argument (i.e. the lowest ranking argument in the LS) such as *hemay* ‘rice’ in (5.32) and *tefoq* ‘bamboo shoot’ in (5.33b) will be the undergoer in the UV construction, not the location. Examples follow:

(5.32)a. Mi-tangtang kaku t-u hemay
 AV-cook 1S.NOM DAT-CN rice
 ‘I am cooking the meal.’
 ‘I am going to cook the meal.’

- b. Ma-tangtang k-u hemay.
 NEUT-cook NOM-CN rice
 ‘The rice is cooking.’
- c. Pa-tangtang Ø-ci panay ci aki-an t-u hemay.
 CAU-cook NOM-PPN Panay PPN Aki-DAT DAT-CN rice
 ‘Panay went to Aki’s place to cook the rice.’ (AV)
 *‘Panay made Aki cook rice.’
- c.’ [**do**’ (panay, Ø)] CAUSE [BECOME **be-at**’ (aki, hemay) PURP **do**’ (x, [**cook**’ (panay, hemay)))]
- d. Ma-pa-tangtang n-i panay ci aki-an **k-u**
 UV-CAU-cook GEN-PPN Panay PPN Aki-DAT NOM-CN

hemay
 rice
 ‘Panay brought the rice to Aki’s place to cook.’
- e. Pa-tangtang-en n-i panay ci aki-an **k-u**
 CAU-cook-UV GEN-PPN Panay CN Aki-DAT NOM-CN

hemay.
 rice
 ‘Panay brought the rice to Aki’s place to cook (as planned).’
- (5.33)a. Mi-pa-camul kaku t-u tefoq i
 AV-CAU-add 1S.NOM DAT-CN bamboo.shoot PREP

 dateng
 vegetable
 ‘I am going to add bamboo shoot into the dish.’
- a’. [**do**’ (kaku, Ø)] CAUSE [BECOME **be-in**’ (dateng, tefoq)]²⁴
- b. Ma-pa-camul aku **k-u** **tefoq** i/
 UV-CAU-add 1S.GEN NOM-CN bamboo.shoot PREP/

 ??t-u dateng.
 DAT-CN dish
 ‘I added the bamboo shoot to the dish.’

²⁴ The semantic representation of *mi-* is omitted in this LS.

b'. ??Ma-pa-camul aku **k-u** **dateng** t-u
 UV-CAU-add 1S.GEN NOM-CN vegetable DAT-CN

tefoq
 bamboo.shoot
 'I added bamboo shoot into the dish.'

c. Aka pa-camul-en **k-u** **nanum** i/
 NEG.IMP CAU-add-UV NOM-CN water PREP/

??t-u sayta.²⁵
 DAT-CN soda
 'Don't add the water into the soda.'

c'. [**do'** (x, ∅)] CAUSE [BECOME **add-in'** (sayta, nanum)]

d. *Aka pa-camul-en t-u nanum **k-u** **sayta!**
 NEG.IMP CAU-add-UV DAT-CN water NOM-CN soda.
 'Don't add the water into the soda.'

e. Ma-pa-camul n-i mayaw **k-u-ra**
 UV-CAU-add GEN-PPN Mayaw NOM-CN-that

pyuma i/t-u amis.
 Puyuma.man PREP/DAT-CN Amis.man
 'Mayaw had that Puyuma man join the Amis people.'

e'. [**do'** (mayaw, ∅)] CAUSE [BECOME **add-in'** (amis, pyuma)]

f. ??Ma-pa-camul n-i mayaw t-u-ra
 UV-CAU-add GEN-PPN Mayaw DAT-CN-that

pyuma **k-u** **amis.**
 Puyuma.man NOM-CN Amis.man
 'Mayaw had that Puyuma man join the Amis people.'

As shown above, the second highest ranking arguments in the logical structures of *pa-tangtang* and *pa-camul* are the first argument of **be-loc'**, and this argument is never chosen to be the undergoer in the UV constructions. The only undergoer choice is the lowest ranking argument in the LS.

²⁵ Although this sentence seems very similar to *pa-nanum*, there is a subtle difference between the two. For *pa-nanum*, the interpretation is more like 'cause to have (water) (i.e. 'give' water)', but for *pa-camul*, the interpretation is more like 'cause to join/mix with (i.e. add into (something))'.

Another possible interpretation of *pa-* + an activity root is ‘cause to have something in order to perform the activity’. The example is given in (5.34):

- (5.34)a. Pa-kalat-en **k-u-ni!**
 CAU-bite-UV NOM-CN-this
 ‘Give (him/her) this to bite!’
- a’. [DO (x, [**do**’ (x, ∅)])] CAUSE [BECOME **have**’ (y, kuni) PURP [**do**’ (y, [**bite**’ (y, kuni))]]
- b. Pa-kalat-en **∅-ci panay!**
 CAU-bite-UV NOM-PPN Panay
 ‘Give Panay something to bite!’
- b’. [DO (x, [**do**’ (x, ∅)])] CAUSE [BECOME **have**’ (panay, z) PURP [**do**’ (panay, [**bite**’ (panay, kuni))]]

For this type of causative activity, both the lowest ranking argument and the second highest ranking argument can be possible undergoers. The three possible derivations of *pa-* + an activity root are summarized in Table 5.5:

Table 5.5 The Possible Undergoer Selection Patterns of *pa-* + Activity Root

Role of Causee	Examples	Actor	Undergoer
effector	<i>pa-adup</i> ‘bring to hunt’ <i>pa-radiw</i> ‘ask to sing’ <i>pa-nengneng</i> ‘let see’	causer	both, but the second highest ranking argument (i.e. Principle B) is default
theme (followed by a location)	<i>pa-tangtang</i> ‘bring sth to cook at a certain place’	causer	the lowest ranking argument (i.e. Principle A)
beneficiary/effector	<i>pa-kalat</i> ‘offer sth to bite’	causer	both

There are four possible interpretations when *pa-* attaches to a state root.²⁶ These interpretations and their undergoer selection patterns are given in Table 5.6:

²⁶ Some of the states roots, especially the result states may seem like accomplishment.

Table 5.6 The Possible Undergoer Selection Patterns of *pa-* + State Root

Interpretation	Role of Causee	Examples	Actor	Undergoer
Type (a) cause to have	beneficiary (or possessor)	<i>pa-kuhting-en</i> ‘cause to add a little black color’	causer	the second highest ranking argument in LS (i.e. Principle B)
Type (b) cause to have in order to become	beneficiary (or possessor)/theme	<i>pa-takaraw-en</i> ‘cause to stuff something to make it taller’	causer	the second highest ranking argument in LS (i.e. Principle B)
Type (c) cause to become for someone	theme (followed by a beneficiary or possessor)	<i>pa-cinas-en</i> ‘cause to tear something and give a portion to someone’	causer	the second highest ranking argument in LS (i.e. Principle B)
Type (d) cause to become	theme	<i>pa-cinas-en</i> ‘cause to tear something’	causer	the lowest ranking argument in LS (i.e. Principle A)

Types (a) and (b) are more frequently found with the attribute/non-episodic state, while Types (c) and (d) appear more often with the result state (or accomplishment) roots. As summarized in Table 5.6, it is noticed that when there is a beneficiary argument present in the derived *pa-* verb, the beneficiary will be chosen to be the undergoer; otherwise, it is the theme that will be selected as the undergoer. Examples are given below:²⁷

(5.35)a. Pa-cinas-en Ø-ci aki t-u kami!
 CAU-tear-UV NOM-PPN Aki DAT-CN paper
 ‘Tear the paper apart and give Aki a portion!’ (= type (c))

a’. [DO (x, [do’ (x, Ø)])] CAUSE [BECOME **torn’** (kami) PURP [BECOME **have’** (aki, kami)]]

b. ??Pa-cinas-en k-u kami ci aki-an!
 CAU-tear-UV NOM-CN paper PPN Aki-DAT
 ‘Tear the paper apart and give a portion to Sawmah.’ (= type (c))

c. Pa-cinas-en k-u kami!
 CAU-tear-UV NOM-CN paper
 ‘Tear the paper!’ (= type (d))

c’. [DO (x, [do’ (x, Ø)])] CAUSE [BECOME **torn’** (kami)]

²⁷ As seen in Table 5.6 and in the following examples, these *pa-* forms often appear in the imperative mood. Strictly speaking, these imperative *pa-* forms involve a causal chain, in which the speaker is the ultimate causer of the first causing event, and then the listener is the causee of the first causing event as well as the causer of the second causative event. To simplify the discussion, I only discuss the second causing event in the imperative sentences.

- d. Pa-pecih-en **k-u** **wawa** t-u mantu!
 CAU-break.into.half-UV NOM-CN child DAT-CN steamed.bun
 ‘Break the steam bun into half and give one half to the child.’ (= type (c))
- d’. [DO (x, [**do**’ (x, ∅)])] CAUSE [BECOME **broken.into.half**’ (mantu)] PURP
 [BECOME **have**’ (wawa, mantu)]]
- e. ?Pa-pecih-en t-u wawa **k-u** **mantu**.
 CAU-break.into.half-UV DAT-CN child NOM-CN steamed.bun
 ‘Break the steam bun into half and give one half to the child.’ (= type (c))

As demonstrated in (5.35), when there is beneficiary (i.e. the first argument of BECOME **have**’, such as *aki* in (5.35a)) in the sentence, the beneficiary argument will be the preferred undergoer choice. The theme is the undergoer only when there is no beneficiary participant (e.g. (5.35c)) showing up in the sentence. Based on the logical structures of the examples in (5.35), we can see that both principles of undergoer selection are applicable. For sentences that have the beneficiary as the undergoer, they follow Principle B (i.e. the second highest ranking argument in LS), while for sentences with a theme undergoer, they abide by Principle A (i.e. the lowest ranking argument in LS).

The examples in (5.36) show another type of *pa-* + state root. In these examples, the theme and the beneficiary are denoted by the same participant, which is also the only choice of the undergoer in the UV construction:

- (5.36)a. Pa-takaraw-en k-u-ni!
 CAU-tall-UV NOM-CN-this
 ‘Stuff something under this and make it taller!’ (= type (b))

- a’. [**do**’ (x, ∅) CAUSE BECOME [**be-under**’ (kuni, y)] PURP [BECOME **tall**’ (kuni)]

To sum up the above discussion, it seems that the undergoer selection of simple *pa-* verbs is subject to the thematic role of the causee and other arguments in the sentence. If

there is an effector or a beneficiary following CAUSE in the LS, they will be the default choice of the undergoer. This can be accounted for by the application of Principle B. If there is no such argument, the theme or patient argument following CAUSE will be the undergoer, which follows Principle A.

5.1.4.3 Undergoer Selection of *Pa-pi-* Predicates

The undergoer selection of *pa-pi-* is very regular. I have mentioned that *pa-pi-* is a combination of *pa-* + *mi-*; this analysis was also proposed in Starosta (1974). The meaning of *mi-* requires an agentive causee in the derived *pa-pi-* predicate. In other words, the logical structure of *pa-pi-* is “[**do**’ (x, ∅)] CAUSE [DO (y, ...)]”. It is always the argument of CAUSE DO (i.e. the y argument) that is chosen to be the undergoer in *ma-pa-pi-* and *pa-pi-...-en* sentences, but never others. This regularity has been reported in Starosta (1974) and Chen (1987). The following examples illustrate this pattern of *pa-pi-* with various types of root.

- (5.37)a. Pa-pi-nengneng-en n-i ina **k-u** **wawa**
 CAU-PI-see-UV GEN-PPN mother NOM-CN child
- t-u wacu.
 DAT-CN dog
 ‘Mother will ask the child to watch the dog.’
- a’. [DO (ina, [**do**’ (ina, ∅)])] CAUSE [DO wawa, [**do**’ wawa, [**see**’ (wawa, wacu)]]
- b. *Pa-pi-nengneng-en n-i ina t-u wawa
 CAU-PI-see-UV GEN-PPN mother DAT-CN child
- k-u** **wacu.**
 NOM-CN dog
 ‘Mother will ask the child to watch the dog.’

c. Ma-pa-pi-nengneng n-i ina **k-u** **wawa**
 UV-CAU-PI-see-UV GEN-PPN mother NOM-CN child

t-u wacu.
 DAT-CN dog
 ‘Mother asked the child to watch the dog.’

c’. *Ma-pa-pi-nengneng n-i ina t-u wawa
 UV-CAU-PI-see GEN-PPN mother DAT-CN child

k-u **wacu.**
 NOM-CN dog
 ‘Mother asked the child to watch the dog.’

The examples in (5.37) illustrate the UV constructions of *pa-pi-* + an activity root *nengneng* ‘see; watch’. As shown in the data, it is the second highest ranking argument in the LS that is chosen to be the undergoer. The same principle is also adopted for *pa-pi-* + an object root, as exemplified in (5.38):

(5.38)a. Ma-pa-pi-nanum n-i ina t-u sayta **k-u**
 UV-CAU-PI-water GEN-NCN mother DAT-CN soda NOM-CN

wawa.
 child
 ‘Mother asked someone to ask the child to drink soda.’

a’. [**do**’ (ina, ∅)] CAUSE DO (wawa, [**do**’ (wawa, [**drink**’ (wawa, sayta))])

b. *Ma-pa-pi-nanum n-i ina **k-u** **sayta**
 UV-CAU-PI-water GEN-NCN mother NOM-CN soda

t-u wawa.
 DAT-CN child
 ‘Mother asked someone to ask the child to drink soda.’

b’. *Ma-pa-pi-nanum n-i ina t-u wawa
 UV-CAU-PI-water GEN-NCN mother DAT-CN child

k-u **sayta.**
 NOM-CN soda.
 ‘Mother asked someone to ask the child to drink soda.’

The sentences in (5.39) illustrate the undergoer selection of *pa-pi-* + a *pa-* predicate.

It is also the second highest ranking argument in the LS that is the undergoer in the corresponding UV sentences.

(5.39)a. Pa-pi-pa-fli-en n-i sawmah **k-u-ra**
 CAU-PI-CAU-give-UV GEN-PPN Sawmah NOM-CN-that

wawa t-u flac t-u-ra singsi.
 child DAT-CN rice DAT-CN-that teacher
 ‘Sawmah asked that child to give rice to that teacher.

a’. [DO (Sawmah, [**do**’ (Sawmah, ∅)])] CAUSE DO (wawa, [**do**’ (wawa, ∅)])
 CAUSE [BECOME **not.have**’ (wawa, flac) & BECOME **have**’ (singsi, flac)]

b. *Pa-pi-pa-fli-en n-i sawmah t-u-ra
 CAU-PI-CAU-give-UV GEN-PPN Sawmah DAT-CN-that

wawa **k-u** **flac** t-u-ra singsi.
 child NON-CN rice DAT-CN-that teacher
 ‘Sawmah asked that child to give rice to that teacher.

c. *Pa-pi-pa-fli-en n-i sawmah t-u-ra
 CAU-PI-CAU-give-UV GEN-PPN Sawmah DAT-CN-that

wawa t-u flac **k-u-ra** **singsi**.
 child DAT-CN rice NOM-CN-that teacher
 ‘Sawmah asked that child to give rice to that teacher.

The examples demonstrated above all show that only the argument of CAUSE DO can serve as the undergoer of *pa-pi-* predicates; this undergoer selection follows from Principle B.

The above-mentioned features (i.e. regular undergoer choice pattern and the jussive reading) of *pa-pi-* causatives are also found with *pa-ka-..-um-* verbs, which apparently are influenced by the meaning of *-um-*, which is represented as “**do**’ (x, **pred**’ (x, (y)))”. The examples are given below:

(5.40)a. Pa-ka-c-um-ikay-en Ø-ci aki!
 CAU-KA-run-UM-UV NOM-PPN Aki
 ‘Ask Aki to run!’

a'. DO (x, [**do'** (x, Ø)]) CAUSE DO (aki, [**do'** (aki, [**run'** (aki)])])

b. Pa-ka-r-um-diw-en cingra!
 CAU-KA-song-UM-UV 3S.NOM
 ‘Recommend him to join the singing contest!’

b'. DO (x, [**do'** (x, Ø)]) CAUSE DO (cingra, [**do'** (cingra, [**sing'** (cingra, z)])])

c. Ma-pa-ka-r-um-adiw ita cingra
 UV-CAU-KA-song-UM 1P.INCL.GEN 3S.NOM

t-u-ra radiw.
 DAT-CN-that song
 ‘We asked him to sing that song.’

c'. **do'** (ita, Ø)]) CAUSE DO (cingra, [**do'** (cingra, [**sing'** (cingra, radiw)])])

In spite of the rather regular pattern of undergoer choice, these verbs do display some peculiarities, for which I do not yet have a clear explanation. These special properties all seem to be related to the agentive requirement of the causee. To begin with, the informants do not accept *pa-pi-* sentences with a less agentive causee such as *wawa* ‘child’. For such a noun, it sometimes will be rendered as a patient (5.41a) instead of a causee/effector, and it may even be left out in the sentence (e.g. (5.41b-c)):

(5.41)a. Pa-pi-nengneng Ø-ci ina t-u wawa.
 CAU-PI-see NOM-PPN mother DAT-CN child
 ‘Mother made (somebody) look at the child.’
 *‘Mother made the child look at something.’

b. Pa-pi-ka'en Ø-ci ina t-u kunga.
 CAU-PI-eat NOM-PPN mother DAT-CN sweet.patato
 ‘Mother asked (people) to eat sweet potatoes.’

b'. *Pa-pi-ka'en Ø-ci ina t-u wawa.
 CAU-PI-eat NOM-PPN mother DAT-CN child
 ‘Mother asked the child to eat (something).’

- c. *Pa-pi-ka'en Ø-ci ina t-u wawa
 CAU-PI-eat NOM-PPN mother DAT-CN sweet.patato
- t-u kunga.
 DAT-CN sweet.patato
 'Mother asked the child to eat sweet potatoes.'
- d. Pa-pi-ka'en Ø-ci ina t-u kunga
 CAU-PI-eat NOM-PPN mother DAT-CN sweet.patato
- ci aki-an.
 NOM Aki-DAT
 'Mother asked Aki to eat sweet potatoes.'
- e. Pa-pi-ka'en Ø-ci ina t-u kunga
 CAU-PI-eat NOM-PPN mother DAT-CN sweet.patato
- (i) takuwanan
 PREP 1S.DAT
 'Mother asked me to eat sweet potatoes.'

The examples in (5.41b) seem to imply that the causee argument is not as important as the patient argument, as it can be left out. However, this implication contradicts with the undergoer selection pattern we have found so far with *pa-pi-* verbs. It is not clear whether the idiosyncratic preference is due to the lack or a weaker degree of agentivity in a noun like *wawa* 'child', or this is due to some kind of voice operation in *pa-pi-* that makes the causee now an oblique argument or an adjunct. More investigation into this is therefore needed.

5.1.4.4 Undergoer Selection of *Pa-ka-* Predicates

Unlike the regularity that has been found in *pa-pi-* verbs, the undergoer selection with *pa-ka-* is more complicated, and it depends on the predicate types that *pa-ka-* attaches to. We have seen an example with *pa-ka-um-*, which behaves like *pa-pi-*. I will discuss more types in this section.

There are at least two types of reading that can be obtained from the *pa-ka-* construction, as discussed in Chapter 4. These interpretations are summarized in Table 5.7:

Table 5.7 The Interpretations of *pa-ka-* Root and Undergoer Selection Patterns

Interpretation	Sub-types	Source of <i>ka-</i>	Root Type	Role of Causee	Example
Type (a) cause to become	with a sense of “thoroughness”	<i>ma-</i> episodic or plain state	attribute state	theme	<i>pa-ka-kuhting-en</i> ‘make it all black’ (<i>kuhting</i> ‘black’)
	without a sense of “thoroughness”	<i>ma-</i> episodic or plain state	episodic or plain state	patient	<i>pa-ka-roray</i> ‘cause to become tired’ (<i>ma-roray</i> ‘tired’)
Type (b) cause to do		<i>ma-</i> activity	activity	effector	<i>pa-ka-tayal-en</i> ‘cause to do’ (<i>ma-tayal</i> ‘work’)

Most of the *pa-ka-...(-en)* predicates are two-place predicates, which have no undergoer selection problem. A few three-place predicates of these categories are discussed below.

The first one is *pa-ka-fanaq* ‘introduce; inform; teach’ in (5.42):

(5.42)a. Pa-ka-fanaq kaku ci aki-an i
CAU-KA- knowledge 1S.NOM PPN aki-DAT PREP

ci panay-an/widang
PPN Panay-DAT/friend
‘I introduced Aki to Panay/a friend.’ (AV)

a’. [**do**’ (kaku, Ø)] CAUSE [BECOME **know**’ (panay, aki)]

b. Pa-ka-fanaq-en aku Ø-ci aki *(i)
PA-KA-knowledge-UV 1S.GEN NOM-PPN Aki PREP

ci panay-an
PPN Panay-DAT
‘I will introduce Aki to Panay.’

c. Pa-ka-fanaq-en aku ci aki-an Ø-ci
PA-KA- knowledge-UV 1S.GEN PPN Aki-DAT NOM-PPN

panay.
Panay
‘I will introduce Aki to Panay.’

The data shows that both the second highest ranking (i.e. *Panay*) and the lowest ranking (i.e. *Aki*) arguments in the LS can be undergoer, though the AV form in (5.43a) seems to imply that lowest ranking argument is the default choice as the nouns *Panay* and *widang* ‘friend’ can be marked by the preposition *i*.

Finally, let us consider another example *pa-si-fanaq* ‘teach (i.e. cause to have knowledge)’, in which the prefix *si-* is a phonetic variant of *ci-*, meaning ‘have; grow’ (e.g. *ci-paysu* ‘have money’). The AV examples of *pa-si-fanaq* are given in (5.43):

- (5.43)a. Pa-si-fanaq k-u singsi t-u wawa
 CAU-have-knowledge NOM-CN teacher DAT-CN child
- t-u n-u amis.²⁸
 DAT-CN GEN-CN Amis
 ‘The teacher is going to teach the children Amis.’ (AV)

a’. [do’ (singsi, Ø)] CAUSE [BECOME **have.knowledge**] (wawa, nu amis)]

- b. Pa-si-fanaq k-u singsi t-u
 CAU-have-knowledge NOM-CN teacher DAT-CN
- n-u amis i wawa.
 NOM-CN Amis PREP child
 ‘The teacher is going to teach Amis to the children.’ (AV)

As shown in (5.43), the second highest ranking argument (i.e. *wawa* ‘child’) can be marked by the dative case or by the preposition, which implies that this NP can be treated as an oblique argument. However, as indicated in the UV constructions in (5.44), the second highest ranking argument in the LS is the only choice of undergoer:

- (5.44)a. Ma-pa-si-fanaq n-u singsi k-u
 UV-CAU-have-knowledge GEN-CN teacher NOM-CN
- wawa t-u n-u amis.
 child DAT-CN GEN-CN Amis
 ‘The teacher taught the children Amis.’

²⁸ The genitive phrase *nu amis* means something of Amis. Usually it refers to the language or the culture.

- a'. [**do'** (singsi, ∅)] CAUSE [BECOME **have.knowledge'** (wawa, nu amis)]
- b. *Ma-pa-si-fanaq n-u singsi t-u
 UV-CAU-have-knowledge GEN-CN teacher DAT-CN
- wawa **k-u** **n-u** **amis.**
 child NOM-CN GEN-CN Amis
 'The teacher taught the children Amis.'
- c. *Ma-pa-si-fanaq n-u singsi k-u
 UV-CAU-have-knowledge GEN-CN teacher NOM-CN
- n-u amis i wawa.
 GEN-CN Amis PREP child
 'The teacher taught Amis to the children.'
- d. Pa-si-fanaq-en n-u singsi **k-u** **wawa**
 CAU-have-knowledge-UV GEN-CN teacher NOM-CN child
- t-u n-u amis.
 DAT-CN GEN-CN Amis
 'The teacher will teach the children Amis.'
- d'. [DO (singsi, [**do'** (singsi, ∅)])] CAUSE [BECOME **have.knowledge'** (wawa, nu amis)]
- e. *Pa-si-fanaq-en n-u singsi t-u
 CAU-have-knowledge-UV GEN-CN teacher DAT-CN
- wawa **k-u** **n-u** **amis.**
 child NOM-CN GEN-CN Amis
 'The teacher will teach the children Amis.'
- f. *Pa-si-fanaq-en n-u singsi i wawa
 CAU-have-knowledge-UV GEN-CN teacher PREP child
- k-u** **n-u** **amis.**
 NOM-CN GEN-CN Amis
 'The teacher will teach the children Amis.'

As seen in (5.44), it is impossible for the lowest ranking argument in LS, *nu amis* '(language) of Amis' in the example, to be the undergoer in the UV constructions, and it does not matter whether the second highest ranking argument *wawa* 'child' is marked by

the dative case or by the preposition. In other words, this predicate follows Principle B in terms of undergoer selection.

The above discussion of undergoer selection patterns of *pa-* and related verbs shows that both Principles A and B on the AUH are required in Amis. It is difficult to generalize a pattern in which one single principle can cover all the situations for different types of verbs. The only regular pattern is found with *pa-pi-* verbs (and *pa-ka-um-* verbs), which always follow Principle B (i.e. the second highest ranking argument in LS) in undergoer selection. For other types of verbs, it may exhibit more flexibility. Interestingly, there seems to be a role hierarchy regarding such flexibility. That is, beneficiary (the first argument of **have'** after CAUSE) and effector (the first argument of **do'** after CAUSE) seem to enjoy more privilege over theme/patient participants when it comes to undergoer selection. Judging from this phenomenon, Amis seems to exhibit the features of a primary object language (Dryer 1986).

5.2 Case System and Case Assignment Rules

The case system of Amis has been briefly introduced in Chapter 3. In this section, more details concerning the forms and function of the case markers will be presented. In addition, the case assignment rules in Amis based on the RRG framework will also be postulated.

5.2.1 The Forms and Functions of the Case Markers

The case markers and noun classifiers are given again in Tables 5.8 and 5.9:

Table 5.8 Amis Case Markers

Nouns	Case Markers		
	Nominative	Genitive	Dative
Common Nouns	<i>k-</i>	<i>n-</i>	<i>t-</i>
Personal Proper Nouns	∅		<i>-an</i>

Table 5.9 Amis Noun Classifiers

Nouns	Number	
	Singular	Plural
Common Nouns	<i>u</i>	
Personal Proper Nouns	<i>ci</i>	<i>ca</i>

There are two major analyses proposed in the previous studies concerning the case system in Amis. These two analyses can be exemplified respectively by the studies in Huang (1995) and Liu (1999).²⁹

Huang proposes a four-case system for Amis as shown in Table 5.10 (Huang 1995:226):

Table 5.10 Amis Case Markers (Huang 1995)

		cases			
		Case Markers			
nouns		Neutral	Nominative	Locative/Accusative	Genitive
Common		<i>u</i>	<i>ku</i>	<i>tu</i>	<i>nu</i>
Proper	Singular	<i>ci</i>	<i>ci</i>	<i>ci ...-an</i>	<i>ni</i>
	Plural	<i>ca</i>	<i>ca</i>	<i>ca ...-an</i>	<i>na</i>

As seen in Table 5.10, in Huang’s (1995) analysis, there is a set of neutral case marker, which is also found in Chen’s (1987) case system. This set of case markers refers to the case markers that usually appear clause-initially to mark a nominal predicate,³⁰ such as *u* in (5.45a) and *ci* in (5.45b), or a displaced common noun, as seen in (5.45c):

- (5.45) a. **U** singsi cingra.
 NCM teacher 3S.NOM
 ‘He is a teacher.’
- b. **Ci** sawmah kaku.
 NCM Sawmah 1S.NOM
 ‘I am Sawmah.’

²⁹ These studies are selected for a comparison because their analyses are based on the same Amis dialect investigated in this dissertation.

³⁰ This set is also referred to as predicate case in some studies.

- c. U fafahian a kaka ma-laluk, u
 NCM woman LNK older.sibling NEUT-diligent NCM
- fa'inayan a kaka ma-tuka.
 man LNK older.sibling NEUT-lazy
 'The older sister is diligent; the older brother is lazy.

Observing the morphological similarities shared among some of the case markers in Huang's system, such as *ku*, *tu*, *nu*, and *nu*, *ni*, *na*,³¹ Liu (1999) comes up with a rather different proposal. Her analysis is presented in Tables 5.11 and 5.12 (Liu 1999:35):³²

Table 5.11 Amis Case Markers (Liu 1999)

Case	Nominative	Locative/Accusative	Genitive
Marker	<i>k-</i>	<i>t-</i>	<i>n-</i>

Table 5.12 Amis Noun Classifier System (Liu 1999)

Noun		
Common	Non-common	
<i>u</i>	Singular	Plural
	<i>i</i>	<i>a</i>

Here we can see that Liu (1999) treats the "neutral case marker" set in Huang's analysis as a set of noun classifiers. That is, each case marker in Huang's analysis is treated as a complex morpheme composed of a case marker (e.g. *k-*) and a noun class marker (e.g. *u*) in Liu's proposal.

Although Liu's analysis better generalizes the morphological resemblances shared in some of the case markers in Amis, she also admits that her proposal suffers from the following problems (Liu 1999:35). First, she cannot explain why while the classifier for common nouns (i.e. *u*) can be used alone, the classifiers for non-common nouns have to appear with the consonant *c-*. Second, she cannot account for why the complexes for non-common nouns are *ci/ca*, *ni/na*, and *ci/ca ...-an* but not **ki/*ka*, *ni/na*, and **ti/*ta*.

³¹ In fact, Huang (1995) also notices the resemblances shared among the forms of the case markers.

³² Liu's analysis follows Chang et al.'s (1998) treatment for the case markers in Kavalan, another Formosan language.

That is, following her analysis, a desired system of the morphological complexes of case markers and noun classifiers would be similar to the one in Table 5.13:

Table 5.13 An “Ideal” System of Amis Case Markers Following Liu’s (1999) Analysis³³

number nouns		cases		
		Nominative	Locative/Accusative	Genitive
Common		<i>k-u</i>	<i>t-u</i>	<i>n-u</i>
Proper	Singular	* <i>k-i</i> (<i>c-i</i>)	* <i>t-i</i> (<i>c-i...an</i>)	<i>n-i</i>
	Plural	* <i>k-a</i> (<i>c-a</i>)	* <i>t-a</i> (<i>c-a...an</i>)	<i>n-a</i>

Although Liu (1999: 34) tries to account for the formation of *ci/ca* from **ki/*ka* through a phonological process of palatalization that turns /k/ into /c/ when it appears before a high front vowel (i.e. /k/ + /i/ → /ci/), she still cannot offer a satisfactory account for the bound status of the noun classifiers *i* and *a*, and the non-existence of **ti/*ta*. Moreover, Liu’s explanation by means of palatalization is dubious, as the sound sequences /k/ + /i/ and /k/ + /a/ are both found in Amis (e.g. *kisu* ‘you (singular, nominative)’ and *kaku* ‘I’).

Liu’s basic idea is adopted in the analysis proposed in this dissertation with the following revisions. First, her “non-common noun” set of noun class markers is renamed as “personal proper noun” markers, as this set of markers is only used to mark personal names and kinship terms. They never appear before a non-human proper noun such as a place name (e.g. (5.46a)). They do however, appear before a name of an animal (e.g. (5.46b)), which might be due to the personification of the noun:

- (5.46)a. Ma-ulah kaku **t-u** **pusong.**
 AV-like 1S.NOM DAT-NCM Taitung
 ‘I like Taitung.’

³³ The asterisk “*” indicates the non-existing forms and the one in the parenthesis is the attested form.

b.	Ma-palu	n-i	mama	∅-ci	aki	atu	∅-ci
	UV-beat	GEN-NCM	father	NOM-NCM	Aki	and	NOM-NCM

kolo.

Kolo

‘Father beat Aki and Kolo (a dog’s name)’

Hence, the distinctions between the two sets of nouns should be common nouns and personal proper nouns. The second revision is concerned with the personal proper noun markers. As mentioned, Liu’s proposal only works well with the common noun sets but not the non-common nouns. Though she attempts to solve the problems from phonological grounds, her solution is still unsatisfactory. As an alternative, I propose to treat the consonant *c-* in *ci* and *ca* as a part of the noun class marker but not a phonetic variant of the case marker *k-* after palatalization, and instead a null form is posited for the nominative case marker of personal proper nouns. This has been shown in the Tables 5.11 and 5.12.

This revised proposal has two advantages. First, it can explain why the vowels *-i* and *-a* cannot occur by themselves.³⁴ Second, it eliminates the oddity found with the co-occurrences of two “case markers” in *ci ... -an* and *ca ... -an*. If *c-* is conceived as a case marker, the combinations will be very unnatural, as now we have two case forms (i.e. *c-* and *-an*) that serve to signal just one case relation (accusative in Huang (1995) and Liu (1999) or dative in my analysis).

Another significant difference between my analysis and that of the previous studies (including both Huang 1995 and Liu 1999) is the replacement of the accusative (or

³⁴ However, we have to explain why the genitive case markers for the personal proper nouns are *ni-/na-* but not **nci-* and **nca-*. This seems to be accountable based on the phonological ground. Since **nc-* is not an attested cluster in Amis, the consonant *c* may just get conflated with the case marker. As for the reason why the dative (or accusative/locative in Huang (1995) and Liu (1999)) case marker *t-* is not used for the personal proper nouns, I have no good explanation at this moment.

accusative/locative) case with the dative case in the case paradigm of Amis. There are two reasons for proposing such a treatment, in terms of theory-external and theory-internal considerations respectively. The theory-external consideration is based on observation that this set of case markers signals a rather wide variety of semantic roles, as shown in Chapter 3. Some examples are provided again in (5.47). As one can see, these markers not only signal the argument manifesting a patient role, as the accusative case canonically does, but also arguments or even adjuncts that serve a variety of roles.

- (5.47)a. Mi-nanum kaku **t-u** **sayta.**
 AV-water 1S.NOM DAT-NCM soda
 ‘I am going to drink soda.’ (patient)
 ‘I am drinking soda.’
- b. Pa-fli k-u singsi **t-u-ra** **wawa**
 CAU-give NOM-NCM teacher DAT-NCM-that child
- t-u** **waneng.** (recipient and theme)
 DAT-NCM candy
 ‘The teacher gave that child candy.’ (AV)
- c. Ma-ulah kaku **t-u** **pusong.**
 AV-like 1S.NOM DAT-NCM Taitung
 ‘I like Taitung.’ (target of emotion)
- d. Ma-utak kaku **t-u** **sanek n-u** **tusiya.**
 NEUT-vomit 1S.NOM DAT-NCM smell GEN-NCM car.
 ‘I feel sick for the smell of cars.’ (reason)
- e. Ma-tayal kaku **t-u** **romi’ad/ro-mi’a-mi’ad.**
 NEUT-work 1S.NOM DAT-NCM day/day<RED>
 ‘I work during the daytime.’ (time)
 ‘I work every day.’
- f. Cenger-en aku k-u kiladum **t-u** **kuhting-ay.**
 color-UV 1S.GEN NOM-NCM cloth DAT-NCM black-FAC
 ‘I am going to color the cloth with the black color.’ (instrument)

As shown in (5.47), the various roles indicated by the case marker *tu* make us hesitate to name it as an accusative case marker, especially those from (5.47d) to (5.47f). The great

diversity of the role types marked by *tu* shows that “dative” may be a more appropriate term for this case, as most of these marking functions in (5.47) coincide with the functions, listed in (5.48), typically or frequently served by a dative case cross-linguistically according to the discussion in Blake (1994):

(5.48) The range of functions performed by dative case (Blake 1994:145):³⁵

- a. indirect object of some two-place verbs low on the transitivity scale (e.g. verbs such as HELP, SEEK, or LIKE).
- b. indirect object of a few three-place verbs such as GIVE and SHOW.
- c. the roles of the purposes (*She went for fish.*) and beneficiary (*She went for (on behalf of) of her mother*). These may be expressed by a purposive case or a benefactive case in some languages.
- d. possessor (frequently expressed by the genitive).
- e. destination (sometimes expressed by a allative case in some languages).
- f. the indirect object of a detransitivized construction as the antipassive of various languages.
- g. the direct object of certain verbs or of all verbs in certain aspects.
- h. the indirect subject of certain verbs or of all verbs in certain aspects.

When comparing the functions of an accusative case and those of a dative case, Blake also makes the following observations:

The accusative case is a syntactic case which can encode a variety of semantic role, but one could take the central and defining function to be that of encoding the affected patient of activity verbs. The dative is likewise a syntactic case that can encode a variety of roles, but I would suggest that its central function is to encode entities that are the target of an activity or emotion. (Blake 1994:145)

If we treat the case markers *t-* and *-an* as markers for dative case, we have to explain why this set of markers also marks an apparent “affected patient” in (5.47a). Nevertheless, as

³⁵ As commented by Blake (1994:145), items (a) to (c) are the typical functions of the dative case while items (d) to (h) are also quite frequent.

discussed in Chapter 4, verbs affixed with *mi-* usually carry an unmarked reading of on-going or motional purposive activities (e.g. *mi-nanum* ‘(go to) drink water’). That is, these verbs are usually rendered as incomplete actions (or atelic), and the patient is not really affected. Moreover, under the reading of a motional/purposive activity, the second argument of *mi-* verbs seems more like a goal or a target, and I have also mentioned that these AV verbs are M-intransitive. Thus, calling the markers *t-* and *-an* as dative case markers that manifest the patient-like arguments for these low-transitivity verbs is well-justified, as the function stated in (5.48f).

Nevertheless, there are also quite a few languages such as Korean (Lee (1999)) and Polish (Przepiórkowski (1999)) that have been reported to mark the temporal adverbials with the accusative case. These languages seem to challenge the above-mentioned rationale of replacing the accusative/locative case. However, there is also theory-internal consideration for proposing such a replacement. As I have mentioned in the case assignment rules of RRG in Chapter 2, the dative case is the default case assigned to the non-macrorole core argument, and this is the status that I have argued for the lowest ranking argument of a two-place AV predicate and the non-actor NPs in a three-place AV predicate in Amis. I have also argued that Amis displays an ergative pattern in the case marking system. However, in RRG, the accusative case is the case assigned to the lowest ranking macrorole on the PSA Selection Hierarchy for accusative languages. Based on these case assignment rules, dative case is a more appropriate choice in my analysis for theory-internal consideration, as the employment of the accusative case indicates the macrorole status of a core argument, and it also implies the transitivity type of a language within the RRG framework.

Other than dative and accusative, there is another possible choice for this set of marker, namely, the oblique case marker, as proposed in Liao (2002) for the case marker *tu* in Kavalan.³⁶ Similar to the *tu* marker in Amis, *tu* in Kavalan has been analyzed in some studies as an accusative case marker, which leads to the claim that Kavalan is an accusative language or a split ergative language. However, Liao (2002) argues that *tu* should be treated as an oblique case marker, and the Kavalan dyadic clause exemplified in (5.49) that contains the nominative case marker *a/ya/wa* for the agent participant and *tu* for the patient participant should be analyzed a syntactically intransitive clause. Liao later concludes that Kavalan is an ergative language.

(5.49) Liao (2002:145, original transcription and gloss)

Riŋu	smaŋi	tu	namat	a	kubaran.
unknown/unable	make	tu	weapon	nom	Kavalan

‘The Kavalan were not able to/did not know how to make weapons.’

Liao’s analysis is based on her observation of the following functions served by *tu* (Liao 2002: 150-151):

- (5.50) a. It can mark an indefinite theme.
- b. It can mark a location noun (a place name or a common noun location).
- c. It can mark an inanimate actor of a dyadic *-an* clause.
- d. It can mark a temporal phrase.
- e. It can mark a (human) comitative noun.
- f. It can mark an inanimate possessor.

There seems to be some functional correspondences between the Kavalan *tu* and the Amis *tu*, which suggests the possibility that Amis *tu* is also an oblique case marker.

Nevertheless, there is a crucial difference between the Kavalan *tu* and Amis *tu*. While

³⁶ Some of the Kavalan communities are very close to the Amis villages. In fact, it is not uncommon that a Kavalan speaker can also speak Amis.

the example given in Liao’s paper shows that the argument marked by *tu* is more likely to be indefinite, in Amis, however, there is sometimes a specification requirement for the argument marked by *tu*. Consider the following examples:

- (5.51) a. R-um-akat kaku i lalan.
 walk<NEUT> 1S.NOM PREP road.
 ‘I am walking on a/the road.’
- b. R-um-akat kaku **t-u** **lalan** sa-ka-tayra i
 walk<AV> 1S.NOM DAT-NCM road InA-KA-go PREP
- wuciya.
 Wuciya
 ‘I walk on the road to Wuciya.’

The verb *r-um-akat* ‘walk’ co-occurs with a locative argument in (5.51). If the argument is marked by the preposition *i*, it does not need to be specified; however, if it is marked by *tu*, it must be specified with more information. Another comparison is found in the following pair:

- (5.52)a. Ma-tayal kaku.
 NEUT-work 1S.NOM
 ‘I am working.’
- b. Mi-tayal kaku **t-u** **tayal** **n-a** **panay.**
 AV-work 1S.NOM DAT-NCM work GEN-NCM Panay.
 ‘I am going to do the work of the Panay family.’

As seen in (5.52), the *mi-* version of the verb *tayal* ‘work’ requires the co-occurrence of a second argument manifesting a specified job, and this argument is marked by *tu*. The obligatory presence and the specification requirement of the second argument in (5.52b) indicate that this argument is more like a direct core argument instead of an oblique core argument. Moreover, as I will show later in Chapter 6, some arguments marked by *tu* can still serve as the controller in the obligatory control construction. This property is rarely found with arguments marked by an oblique case marker. It is true that some noun

phrases marked by *tu*, such as those in (5.47e-f), do appear like adjuncts, and unlike core arguments, some *tu*-marked noun phrases can be displaced to the clause-initial position without nominalizing the sentence, which I will discuss in Chapter 6. Nonetheless, this is not the feature with every NP marked by *tu*. Unlike the *tu* marker in Kavalan, Amis *tu* (and *-an*) can mark a non-macrorole direct core argument (e.g. (5.47a)) or adjunct-like NPs (e.g. (5.47e-f)), depending on the semantics of the verb or the constructions, and these marking functions are better incorporated into the functions of a dative case than an oblique case. Therefore, “dative” is a more appropriate term than oblique to describe this set of case markers in Amis.

In Chapter 3, I briefly described the functions of these case markers. Generally speaking, the nominative case marks the so-called grammatical subject in a sentence. That is the reason why in Chen (1987), verbs that do not co-occur with any argument marked by the nominative case are classified as subjectless (or impersonal) verbs. The issue about “subject” properties of an argument will be further explored in Chapter 6. The genitive case performs two functions: marking a possessor and marking an actor in a Non-AV clause; the latter function can be viewed as an equivalent to the ergative case in ergative languages. As shown later in Chapter 6, an argument marked by the genitive case also exhibits certain “subject” properties (i.e. as a controller or as a pivot), which has long been brought to attention in Tagalog by Schachter (1977). The dative case serves a wide range of functions in Amis; it can mark a non-macrorole direct core argument, an oblique argument, or an adjunct. The contrast between a core argument and an adjunct can be illustrated from the following examples. Consider the following examples:

- (5.53)a. Ma-ulah kaku **t-u** **pusong.**
 AV-like 1S.NOM DAT-CN Taitung
 ‘I like Taitung.’ (i.e. ‘I like everything about Taitung, but I don’t necessarily live there.)
- b. Ma-ulah kaku **i** **pusong.**
 AV-like 1S.NOM PREP Taitung
 ‘I like (to live in) Taitung.’

As exemplified in (5.53), when the place name *pusong* is preceded by the dative case, it is interpreted as a target of emotion, which is part of the logical structure of *ma-ulah* ‘like’ (i.e. *y* in **like**’ (*x*, *y*)). When it is marked by the preposition *i*, it is rendered as a place. A similar contrast is also found in the following sentences, some of which are repeated from (5.51):

- (5.54)a. R-um-akat kaku **i** **lalan.**
 walk<NEUT> 1S.NOM PREP road
 ‘I am walking on the road.’
- a’. ??R-um-akat kaku **t-u** **lalan.**
 walk<AV> 1S.NOM DAT-CN road
 ‘I am walking on the road.’
- b. R-um-akat kaku **t-u** **lalan n-u**
 walk<AV> 1S.NOM DAT-CN road GEN-CN
sa-ka-tayra i wuciya.
 InA-ka-go.there PREP Wuciya
 ‘I am walking on the road that is going to Wuciya.’
- c. Ma-rakat n-u kanunah k-u-ra waneng.
 UV-walk GEN-CN ant NOM-CN-that sugar
 ‘That candy was walked on by an ant.’

The verb *r-um-akat* ‘walk’ in (5.54) is presumably an intransitive verb, and it usually appears in a structure like (5.54a). I have pointed out that if the otherwise locative adjunct is marked by the dative case, it has to be made specific, as seen in the comparison in (5.51), repeated in (5.54a-b). The same specification requirement is even stricter when

this argument becomes an undergoer as shown in (5.54d); the event has to be something more specific than an ordinary walking activity. The examples in (5.53) and (5.54) indicate that the NP marked by *tu* should play a semantically more important role than the one marked by the preposition; this NP is still in the core of *r-um-akat* ‘walk’, though it is not realized as a macrorole.

A crucial difference between a NMR direct core argument and an oblique one lies in the mechanisms to promote the status of the argument to become a privileged syntactic argument (PSA) in the constructions that require a PSA.³⁷ There are two possible ways to promote an NMR core argument to become a PSA: plain undergoer voice construction and applicative constructions. Consider the following examples in which *tu* marks a NMR direct core argument:

- (5.55)a. Mi-nanum Ø-ci aki **t-u** **sayta.**
 AV-water NOM-PPN Aki DAT-CN soda
 ‘Aki is drinking soda.’
 ‘Aki is going to drink soda.’
- b. Ma-nanum n-i aki **k-u-ra** **sayta.**
 UV-water GEN-PPN Aki NOM-CN-that soda
 ‘Aki drank that soda.’
- b’. Nanum-en aku **k-u-ni** **a** **sayta.**
 water-UV 1S.GEN NOM-CN-this NK soda
 ‘I will drink this soda.’
- b”. Mi-nanum-an n-i aki **k-u** **sayta.**
 MI-water-LA GEN-PPN Aki NOM-CN soda
 ‘Aki drank the soda.’
 ‘What Aki drank is the soda.’ (Locative applicative, UV)
- c. Ma-ulah kaku ci panay-an.
 AV-like 1S.NOM PPN Panay-DAT
 ‘I like Panay.’

³⁷ Such constructions will be discussed in Chapter 6.

d. Ma-ka-ulah aku Ø-ci panay.
 UV-KA-like 1S.GEN NOM-PPN Panay
 ‘I like Panay.’
 ‘Panay is liked by me.’

d'. Ulah-en namu Ø-ci **panay.**
 like-UV 2P.GEN NOM-PPN Panay
 ‘You have to love Panay.’

d''. Ka-ulah-an aku Ø-ci panay.
 KA-like-LA 1S.GEN NOM-PPN Panay
 ‘Panay is the one I like (most).’ (Locative applicative, UV)

The data in (5.55) illustrates the possibilities to promote the status of the second argument of **pred'** (the one marked by the dative case) in *mi-nanum* and *ma-ulah* to become a PSA (i.e. undergoer of a UV). Both the plain UV constructions (e.g. (5.55b-b') and (5.55d-d')) and the applicative UV constructions (e.g. (5.55b'') and (5.55d'')) are applicable here. Notice the number of core arguments in the two predicates has remained the same in the plain UV constructions and the applicative UV constructions.

Now consider a different case exemplified in (5.56).

(5.56)a. **Ma-patay** k-u oner t-u sapaiyo
 NEUT-dead NOM-CN snake DAT-CN medicine

 n-u 'edu.
 GEN-CN mouse
 ‘Snakes may die from the poison for killing mice.’

a'. (BECOME) **dead'** (oner)

b. **Sa-pi-patay** n-u matu'asay t-u 'oner
 InA-PI-death GEN-CN old.man DAT-CN snake

k-u *sapaiyo* *n-u* 'edu.
 NOM-CN medicine GEN-CN mouse
 ‘The old man killed the snake with the poison of killing mice.’
 (Instrument applicative, UV)

b'. [**do'** (matu'asay, [**use'** (matu'asay, sapaiyo nu 'edu)))] CAUSE [[**do'** (sapaiyo nu 'edu, Ø) CAUSE BECOME **dead'** (oner)]

c. **Ma-utak** kaku *t-u* *sanek* *n-u* *tusiya.*
 NEUT-vomit 1S.NOM DAT-CN smell GEN-CN car.
 ‘I feel like vomiting from the smell of cars.’

c’. **do’** (kaku, [**vomit’** (kaku, (y))])

d. **Sa-ka-utak** aku *k-u* *sanek* *n-u* *tusiya.*
 InA-KA-vomit 1S.GEN NOM-CN smell GEN-CN car
 ‘The smell of the car is the reason why I vomit.’ (Instrument applicative, UV)

d’. **because.of’** (*sanek nu tusiya*, [**do’** (kaku, [**vomit’** (kaku, (y))])])

As shown in (5.56), for the adjunct NP marked by *tu* to become a PSA (i.e. undergoer of a UV), only the applicative construction can be used. Notice that the number of the core arguments will be changed when the applicative constructions are used, as one can compare the number of the arguments in the LS of the non-applicative verb and the applicative one.

There is another way to make the adjunct in (5.56a) and (5.56c) a PSA. However, unlike the applicative constructions that make the adjunct an undergoer of a UV construction, the adjunct now becomes an actor of an AV construction, as illustrated in (5.57):

(5.57)a. **Mi-patay** *k-u* *sapaiyo* *n-u* *’edu* *t-u*
 AV-dead NOM-CN medicine GEN-CN mouse DAT-CN

oner.
 snake

‘The poison for killing mice may kill a snake as well.’

a’. [**do’** (*sapaiyo nu ’edu*, ∅)] CAUSE [BECOME **dead’** (oner)]

b. **Mi-utak** *t-u* *tamdaw* *k-u* *sanek* *n-u*
 AV-vomit DAT-CN person NOM-CN smell GEN-CN

tusiya.
 car

‘The smell of cars makes people vomit.’

b'. [**do'** (sanek nu tusiya, Ø)] CAUSE [BECOME **vomit'** (kaku)]

c. **Ma-utak** n-u sanek n-u tusiya kaku.
UV-vomit GEN smell GEN-CN car 1S.NOM
'The smell of the car made me vomit.'

c'. [**do'** (sanek nu tusiya, Ø)] CAUSE [**do'**(kaku, [**vomit'** (kaku)])]

The reason/indirect cause adjunct NPs in (5.56a) and (5.56c) now become actor in (5.57a) and (5.57b-c) respectively. As indicated in the logical structures of the two AV predicates *mi-patay* in (5.57a) and *mi-uta* in (5.57c), the predicates have become causativized and there is an effector added to the core of the predicates.³⁸ In other words, the number of the core arguments has also been changed. The addition of the core argument is not found in the examples in (5.55); when the *tu* NPs in (5.55) become a PSA in the plain or applicative UV constructions, there is no addition of the argument involved. Hence, the *tu* NP of *ma-patay* in (5.56a) and *ma-utak* in (5.56c) should be analyzed differently from the *tu* NPs in *mi-nanum* in (5.55a) and *ma-ulah* in (5.55c); those *tu* NPs in (5.56) are adjuncts while those in (5.55) are NMR direct core arguments.

Another difference between a NMR direct core argument and an oblique core argument or adjunct is that the semantic status of the former can always be adjusted through the plain voice operation; however for the latter, it is not always possible. In other words, some *tu* NPs can only be promoted by means of the applicative construction. For example, the plain voice construction is quite unlikely to be employed to promote the adjunct manifesting temporal expression in (5.47e), although the applicative form *ka-*

³⁸ Here the *tu* NP in fact manifests an external causer for the event described by the predicate, though the predicate is non-causative. The same phenomenon is also found in the *tu* NP in (5.49d). This explains why they can serve as the argument for the *mi-* counterparts, which carry a causative reading after derivation. Functionally speaking, the *tu* marker here is similar to the English preposition *from*, which appears to be causative in its predicative roles (Jolly 1993:293) as in the sentence: *John died from Malaria*. The causative version of this English sentence will be *Malaria killed John*.

tayal-an ‘place or time for working’ can be used. For some adjuncts that are more likely to be construed as effectors (e.g. an indirect cause like *sanek nu tusiya* ‘smell of the car’ in (5.56c), they may be promoted to become an actor in AV and UV constructions, as we have seen in (5.57). The following table summarizes the different features of the types of NPs marked by *tu*:

Table 5.14 The Comparison of the NPs Marked by *tu*

	NMR direct core argument	Oblique Core Argument	Adjunct
Position in LS	part of the core, most likely 2 nd argument of pred'	part of the core	not in the core
Thematic Relations	most likely an undergoer-like relation	most likely an undergoer-like relation	can be effector-like (e.g. indirect cause, reason) or adjunct-like (e.g. time)
Plain Voice Operation	1. UV, applicative 2. no addition of core argument	1. UV, but not always applicable 2. no addition of core argument	1. AV, but not always applicable, 2. addition of core argument
Applicative Construction	1. Locative-Patient 2. no core argument added	1. <i>mi-...-an</i> or <i>ka-...-an</i> 2. no core argument added	1. <i>sa-, pi-...-an, ka-...-an</i> 2. Core argument added
Examples	<i>sayta</i> in (5.55a)	<i>nanum</i> in (6.4b)	<i>sapaiyo nu 'edu</i> in (5.57a)

Further discussion about the distinctions among the three types of NP will be offered in Chapter 6, in which, the behavioral property in the displacement and WH-question constructions of these NPs will be examined.

Finally, I would like to discuss the function of the preposition *i*. I have demonstrated the contrast between a *tu* argument and an *i* argument in (5.53) and (5.54). Due to its locative feature, this preposition only marks the argument that can, to some extent, be construed as a locative participant. Therefore, it marks oblique arguments or adjuncts such as recipient, goal, location, and direction etc., all of which have a locative feature. In fact, the combination of this preposition and deitic morphemes seems to have been lexicalized as words related to time and space (e.g. *i-ra* ‘exist’, *i-tini* ‘(at) here’, *i-tiya ho* ‘long long time ago’, *i-na-cila* ‘yesterday’). However, I have not found the examples in which the preposition *i* marks a temporal participant. According to Fey

(1986:120), *i* only marks past time, and that is exactly what is found in fixed lexical expressions (e.g. *i-nacila* ‘yesterday’). As for the temporal participants in a sentence, the dative case is employed to mark them, as seen in (5.47e). The assignment of the preposition will be proposed later in this chapter.

5.2.2 Case Assignment Rules

From this section onwards, I am going to formulate the rules for assigning cases in Amis based on the verb classification and the macrorole assignment that have been discussed so far. In RRG, the regular case marking rules for languages in the world make reference to the PSA hierarchy stated in (5.58), which we have seen in Chapter 2:

(5.58) Privileged Syntactic Argument Selection Hierarchy

Arg of DO > 1st arg of **do**' > 1st arg of **pred**' (x, y) > 2nd arg of **pred**'(x, y) > Arg of **pred**' (x)

Thus, for ergative languages or ergative constructions, they generally follow the rules in (5.59):

(5.59) Case Assignment Rules for Ergative Constructions (VV 2005:108)

- a. Assign absolutive case to the lowest ranking macrorole argument in terms of (5.58).
- b. Assign ergative case to the other macrorole argument.

Let us see how the rules in (5.59) apply to Amis. The case marking patterns for predicates with various numbers of core arguments are summarized in Table 5.15:

Table 5.15 Case Marking Patterns in Amis

S-Transitivity	M-Transitivity	Case Marking Patterns	Voice	Verb Types or Affixes
0	0	None or Prep. Phrase	NEUT	meteorological or phenomenal verbs
1	1	NOM	NEUT	unaffixed, <i>ma-</i> , <i>-um-</i>
1	1	GEN	UV	<i>-en</i>
2	1	NOM PREP	NEUT	two-place locative verbs
2	1	NOM DAT	AV	<i>mi-</i> , <i>ma-</i> , <i>-um-</i>
2	2	GEN NOM	UV	<i>ma-</i> , <i>ma-ka-</i> , <i>ma-ka-...-um-</i> , <i>-en</i>
3	1	NOM DAT PREP	AV	<i>pa-</i> or <i>mi-pa-</i>
3	1	NOM DAT DAT	AV	<i>pa-</i> or <i>mi-pa-</i>
3	2	GEN NOM DAT	UV	1. <i>ma-pa-</i> , <i>pa-...-en</i> 2. <i>sa-</i> , <i>-an</i>
3	2	GEN NOM PREP	UV	1. <i>ma-pa-</i> , <i>pa-...-en</i> 2. <i>sa-</i> or <i>-an</i>

Table 5.16 presents the case marking patterns found with different voice affixes:

Table 5.16 Voice Affixes and their Common Case Marking Patterns

Affixes	Logical Structures	Voice	Common Case Marking Pattern
<i>mi-</i>	(do' (x [go' (x)]) & INGR be-at' (z, x)) PURP) do' (x, [pred' (x, y)])	AV	NOM DAT
<i>-en</i> (<i>-en1</i>)	DO (x (do' (pred' (x, y)) ...BECOME (pred' (y)))	UV	1. GEN 2. GEN NOM 3. GEN NOM DAT 4. GEN NOM PREP
<i>ma-1</i>	do' (x, [pred' (x, (y))]) (<i>ma-</i> activity)	AV or NEUT	1. NOM 2. NOM DAT
<i>ma-2</i>	(INGR/BECOME) (pred' (x, (y))) (<i>ma-</i> result state)	AV or NEUT	NOM
<i>ma-3</i>	do' (x, [pred' (x, y)])...BECOME (pred' (y)) (<i>ma-</i> active or causative accomplishment)	UV	GEN NOM
<i>ma-4</i>	pred' (x, (y)) (<i>ma-</i> episodic or plain state)	AV or NEUT	1. NOM 2. NOM DAT

Since Amis is claimed in this dissertation to present an ergative pattern of case marking, following the case assignment rules for ergative languages stated in (5.59), the rules for Amis is formulated in (5.60):

(5.60) Case Assignment Rules in Amis

- a. Assign nominative case to the lowest macrorole argument in terms of (5.58)
- b. Assign genitive case to the other macrorole argument.
- c. Assign dative case to other direct core argument (s).

The rules stated in (5.60) not only account for the case marking pattern for the UV verbs but also for the AV verbs. For the latter, due to the voice operation, there is only one macrorole, which is always assigned the nominative case. As for other core arguments in the AV construction, they will receive the dative case, following the application of (5.60c).

However, one may run into a problem upon the application of the rules in (5.60) for intransitive verbs suffixed with the UV marker *-en*. As shown in Table 5.16, the single argument of an *-en* intransitive verb (i.e. the agent as in (5.9a')) is always marked by the genitive case. Applying the rule (5.60a) to an *-en* intransitive verb will yield the wrong case assignment. Therefore, another set of case assignment rules for verbs marked by *-en* has to be postulated. These rules are stated in (5.61):

(5.61) Case Assignment Rules for Verb Marked by *-en*

- a. Assign genitive case to the highest ranking macrorole in terms of (5.58)
- b. Assign nominative case to the other macrorole argument.
- c. Assign dative case to other direct core argument (s).

For two-place or three-place *-en* verbs, all of the three rules in (5.61) are applicable. But for the one-place *-en* verbs, only (5.61a) and (5.61c) will apply, as there is only one macrorole in such verbs. The examples in (5.62) illustrate how the rules in (5.60) and (5.61) work.

(5.62)a. Ma-ulah_ kaku ci panay-an
 AV-like 1S.NOM PPN Panay-DAT
 'I like Panay.'

a'. **like'** (kaku, panay)
 (Rule(s) applied: (5.60a) and (5.60c))

b. Ma-ka-ulah_ aku Ø-ci panay.
 UV-KA-like 1S.GEN NOM-PPN Panay
 'I love Panay secretly.'
 'Panay was loved by me.'

- b'. **like'** (aku, Panay)....BECOME **like'** (aku, Panay)
(Rule(s) applied: (5.60a) and (5.60b))
- c. Ma-stul kaku t-u fekeroh.
NEUT-stumble 1S.NOM DAT-CN rock
'I stumbled over on the rock.'
- c'. **stumble'** (kaku) → (5.52a)
(Rule(s) applied: (5.60a))
- d. Ma-stul n-u fekeroh kaku.
UV-stumble GEN-CN rock 1S.NOM
'The rock rolled to me and made me stumble.'
- d'. [**do'** (fekeroh, ∅)] CAUSE [BECOME **stumble'** (aku)]
(Rule(s) applied: (5.60a) and (5.60b))
- e. Ma-ruhem tu k-u-ra pawli.
NEUT-ripe ASP NOM-CN-that banana
'The banana has become ripe.'
- e'. (INGR/BECOME) **ripe'** (pawli)
(Rule(s) applied: (5.60a))
- f. Rakat-en aku.
walk-UV 1S.GEN
'I will walk (to do something.)'
- f'. DO (aku, [**walk'** (aku)])
(Rule(s) applied: (5.61a))
- g. Rakat-en aku k-u-ni a kayakay.
walk-UV 1S.GEN NOM-CN-this LNK bridge
'I will walk pass the bridge.'
- g'. DO (aku, [**walk'** (aku, kayakay)]) & BECOME **walked'** (kayakay)
(Rule(s) applied: (5.61a) and (5.61c))
- h. Pa-si-fanaq k-u singsi t-u wawa
CAU-have-knowledge NOM-CN teacher DAT-CN child

t-u n-u amis.
DAT-CN GEN-CN Amis
'The teacher is going to teach the children Amis.'

h'. [**do'** (singsi, ∅)] CAUSE [BECOME **have.knowledge'** (wawa, nu amis)]
 (Rule(s) applied: (5.60a) and (5.60c))

The rules discussed so far only deal with case markers. However, there is also a preposition *i* in Amis. As mentioned earlier, this preposition mainly marks arguments with a locative feature (i.e. *x* in **be-loc'** (*x*, *y*) or **pred-loc'** (*x*, *y*)), which makes its function similar to the prepositions *in* and *at* in English. In addition, it also marks the first argument of the existential verb *ira* or *awa* (i.e. **(NOT) exist'** ([**pred'** (*x*, *y*)]))³⁹ and possibly the first argument in the embedded logical structure BECOME/INGR **pred'** (*y*, *z*). The examples are given in (5.63):

(5.63)a. Maroq kaku i taypak.
 live 1S.NOM PREP Taipei
 'I live in Taipei.'

a'. **live.in'** (taypak, kaku)

b. Ira k-u kawas i lumaq nira.
 exist NOM-CN ghost PREP house 3S.GEN
 'There is ghost in his house.'

b'. **exist'** ([**be-in'** (lumaq nira, kawas)])

c. Ma-na'ay kaku pa-nanum t-u/i sayta.
 NEUT-reluctant 1S.NOM CAU-water DAT-CN/PREP soda
 'I don't want to add water into the soda.'

c'. *pa-nanum*: [**do'** (kaku, ∅)] CAUSE BECOME [**have.water_i'** (sayta, *z_i*)

d. Pa-nengneng kaku t-u-ni-ni t-u/i
 CAU-see 1S.NOM DAT-CN-this-RED DAT-CN/PREP

wawa_i
 child
 'I showed the child this.'
 'I showed this to the child.'

³⁹ As mentioned in Chapter 4, this is not surprising, as cross-linguistically, existential, locative, and possessive predicates are often coded by the same lexicon (Clark 1978). This phenomenon is also found in Formosan languages (Zeitoun et al. 1999). Hence, the first argument of the three types of predicate may also be viewed the same by speakers.

d'. [**do'** (kaku, Ø)] CAUSE BECOME [**see'** (child, tunini)]

However, as illustrated in (5.63), while the first argument of the embedded BECOME/INGR **pred'** might have more than one way of marking it (e.g. dative case or preposition), the preposition is the only choice for the first argument of **pred-loc'** (x, y). Moreover, while the first argument of the embedded BECOME/INGR **pred'** can be a possible undergoer and hence a PSA in the UV construction, it is impossible for the first argument of **pred-loc'** to be an undergoer, let alone a PSA. This is illustrated by the following contrast between *pa-nanum* 'cause to have water' and *pa-tli* 'put' in (5.64):

(5.64)a. Pa-nanum-en **k-u** **sayta** t-u nanum!
 CAU-water-UV NOM-CN soda DAT-CN water
 'Add water to the soda!'

a'. DO (x, [do' (x, Ø)] CAUSE BECOME [**have.water'** (sayta, nanum)])

b. Pa-tli_ kaku t-u kunga **i** **langa.**
 CAU-put 1S.NOM DAT-CN sweet.potato PREP basket
 'I put the sweet potatoes in the basket.'

b'. [**do'** (kaku, Ø)] CAUSE BECOME [**be-loc'** (langa, kunga)]

c. Ma-pa-tli' aku k-u kunga **i** **langa.**
 UV-CAU-put 1S.GEM NOM-CN sweet.potato PREP basket
 'I put the sweet potato in the basket.'

c'. *Ma-pa-tli' aku t-u kunga **k-u**
 UV-CAU-put 1S.GEN DAT-CN sweet.potato NOM-CN

langa.
 basket
 'I put the sweet potato in the basket.'

As indicated in (5.64), the first argument of the embedded **be-loc'** (e.g. *langa* 'basket') cannot be an undergoer in the UV construction. This follows from the claim in RRG that the first argument of **be-loc'** or **pred-loc'** cannot be a macrorole; in other words, two-

place locative predicates are always M-intransitive. The following preposition assignment rules are postulated for Amis:

(5.65) Preposition Assignment Rules for Amis

Assign the preposition *i* to the first argument of ...**pred'** (x, y)... if it is a non-macrorole argument:

- (i) obligatory if **pred'** (x, y) = **pred-loc'** (x, y), x = common noun
- (ii) optional if **pred'** (x, y) = **pred-loc'** (x, y), x = personal proper noun
- (iii) optional if **pred'** (x, y), **pred'** = cognition, possession, and perception

The three rules stated in (5.65) catch the different contexts when the preposition is assigned. For locative predicates, the preposition is obligatorily assigned to a common noun, as illustrated in (5.63a). However, if the location is expressed by a personal proper noun, the preposition can be optional, though its presence is preferred. The example is given in (5.66). The optional presence of the preposition might be due to the dative case marker *-an*, which shares the same form with the locative suffix that is found in the words denoting place names (e.g. *kila-kilang-an* 'woods' > *kilang* 'tree'); in other words, the locative feature is implied in the dative-case marked NP, and it is probable that the preposition is optional because of this.

(5.66) Maroq kaku (i) ci panay-an.
 live 1S.NOM PREP PPN Panay-DAT
 'I live at Panay's place.'

As for the rule (5.65iii), it is for the possible presence of the preposition before the first argument of CAUSE BECOME **have'**, **know'**, and **see'**. For this argument, it is also possible to assign the dative case to this NP, as we have seen in the discussion of three-place predicates such as *pa-fli* 'give', *pa-ka-fanaq* 'teach', and *pa-nengneng* 'show'.

5.3 Summary

In this chapter, I have examined the macrorole assignment for verbs with various numbers of core arguments. I have also discussed the case marking patterns and

postulated the case assignment rules for Amis. The following claims are proposed in this dissertation. First, the actor voice predicates are analyzed as M-intransitive regardless of their semantic valence or syntactic-transitivity; in other words, two-place and three-place AV predicates are deemed as M-intransitive. Although lexically these predicates can have two macroroles, the undergoer is realized as a non-macrorole syntactically due to the voice operation. The NMR status of the presumable undergoer argument is indicated by the possibility to promote its status via the application construction. This M-intransitive analysis for two-place AV predicates brings along a significant implication about the transitivity system in Amis. That is, the actor voice construction is a syntactically antipassive construction that decreases the value of the M-transitivity of the ergative counterpart. Second, I have shown that both Principle A and Principle B of undergoer selection, based on the AUH of RRG, are required in Amis in order to adequately describe the undergoer selection patterns found in the three-place predicates. This proposal completes the finding mentioned in Starosta (1974) and Chen (1987) about case reassignment in causative verbs. Their findings seem only relevant to the application of Principle B, not Principle A, as their data primarily includes *pa-pi*-causative verbs only; other *pa*- verbs have been left out in their discussion. Finally, case assignment rules for Amis have been formulated based on its ergative pattern of case marking. In addition, the preposition assignment rules for this language have also been established. All of the above claims and analyses are closely related to the discussion of the next chapter, the grammatical relations in Amis.

Chapter 6

Grammatical Relations

As discussed in Chapter 2, RRG approaches the issue of grammatical relations (or syntactic relations) rather differently from other theories. Notions such as subject, direct object, and indirect object are not considered to be basic or universal in languages, nor do they have any theoretical status in RRG. There is only one syntactic relation that is recognized in RRG, namely, the privileged syntactic argument of a grammatical construction (PSA), a term that has been introduced in Chapter 2. There are two types of privileged syntagmatic functions in a construction: controller and pivot. However, only when such privileged functions (i.e. being a controller or being a pivot) involve a restricted neutralization of semantic roles, can we claim that there exists a grammatical relation for that particular construction in the language. In other words, grammatical relations are privileged syntagmatic functions that cannot be defined by semantic or pragmatic grounds. In the following sections, some major constructions that contain a controller, a pivot, or both will be analyzed with regard to how these privileged arguments in the constructions are defined. In particular, I will examine the assumption that is made in quite a few previous studies of Amis that the NP bearing the nominative case is the subject of the sentence (e.g. Chen (1987)). As I will show later, in some constructions, the NPs bearing the genitive case or even the dative case can also have those privileged syntagmatic function(s).

Besides examining whether there are grammatical relations in Amis or not, I will also discuss two major constructions that may affect the semantic status of an NP: applicative constructions and voice operations. Applicative constructions, indicating the

phenomenon of multiple undergoer selection in Amis, play two primary functions in this language: enhancing the status of an adjunct or enhancing the status of a non-macrorole core argument. In other words, they either add an otherwise adjunct to the core, or assign the macrorolehood to a non-macrorole direct core argument. The NP promoted by the applicative constructions will become the undergoer of the sentence, and it will be marked by the nominative case. In other words, the applicative verbs follow the UV pattern by default even without the presence of the UV markers. The default voice choice of the applicative constructions indicates the ergative nature of Amis. The two primary functions performed by the applicative constructions will be further discussed in this chapter. The voice constructions in Amis will also be examined in this chapter with regard to which particular function they perform: PSA modulation or argument modulation, terms that have been introduced in Chapter 2.

This chapter is organized as follows. Section 6.1 examines the following five constructions that may tell us whether “grammatical relations” exist in Amis or not: relative clause, displacement constructions, control constructions, reflexivization, and constructions with consecutive clauses that share a purposive or a sequential relation. Section 6.2 discusses applicative constructions, focusing on their particular functions and the semantics of the applicative markers. Constructional schemas for each applicative construction will be established. Finally, in Section 6.3, I will look into the two voice constructions in Amis and discuss their respective functions. Some constructions that exhibit voice changes without the presence of the voice affixes will also be included in the discussion.

6.1 Major Constructions for the Discussion of Grammatical Relations

There are five constructions investigated in this section. These constructions either contain a controller, a pivot, or both, and for some constructions, there might involve restrictions for a given argument to serve those privileged syntagmatic functions. Nevertheless, not all of the restrictions have to be defined syntactically; some of them are related to the semantic status of an NP. I will begin with the discussion of relative clauses, or RC-like clausal modifiers (Wu 2003) in Amis.

6.1.1 Relative Clause

A relative clause (RC) in Amis is formed by gapping a NP from the modifying clause. The gapped NP is a pivot as it is omitted in the clause (indicated by “__” in the clause). This gapped NP is coreferential with the modified noun that follows the RC, and the linker *a* optionally shows up between the RC and the head noun. As mentioned in Chapter 3, the verb in the RC usually shows up in one of the following two types of structures. AV or plain UV verbs have to be affixed with the factual marker *-ay* or undergo Ca reduplication that manifests the irrealis status of the predicate; in other words, they never appear only with their plain voice forms in an RC. On the contrary, the applied UV verbs appear in the RC with the original applicative forms; they neither show up with *-ay* nor undergo Ca reduplication. The examples are given below. The RC is bold-faced, and the status of the pivot inside the RC is specified for every example.

- (6.1) a. **Mi-kalat** k-u wacu ci aki-an
AV-bite NOM-CN dog PPN Aki-DAT
'The dog is going to bite Aki.' or 'The dog is biting Aki.'

a'. Pivot: Actor of AV verb

Ma-patay tu k-u-ya **mi-kalat-ay** ___i **ci**
 NEUT-dead ASP NOM-CN-that AV-bite-FAC PPN

ak-an a wacu_i.
 Aki-DAT LNK dog
 'That dog that bit Aki is dead'

a''. Pivot: NMR direct core argument of AV verb

*Ma-patay tu k-u-ya **mi-kalat-ay** **k-u**
 NEUT-death ASP NOM-CN-that AV-bite-FAC NOM-CN

wacu ___i a tamdaw_i.
 dog LNK person
 'That person that the dog bit is dead'

b. Ma-ka'en n-i aki k-u-ya tali.
 UV-eat GEN-PPN Aki NOM-CN-that taro.
 'Aki ate that taro.'

b'. Pivot: Undergoer of UV verb

Tati'ih k-u-ya **ma-ka'en-ay** **n-i** **aki** ___i
 bad NOM-CN-that UV-eat-FAC GEN-PPN Aki

a tali_i.
 LNK taro
 'That taro that Aki ate was bad.'

b''. Pivot: (Patient) undergoer of applied UV verb

Tati'ih k-u-ya **mi-ka'en-an** **n-i** **aki** ___i
 bad NOM-CN-that MI-eat-LA GEN-PPN Aki

a tali_i.
 LNK taro.
 'That taro that Aki ate was bad.'

c. Pivot: Actor of UV verb

*Ma-su'su' k-u-ya **ma-ka'en-ay** ___i **k-u** **tali**
 NEUT-fat NOM-CN-that UV-eat-FAC NOM-CN taro

a tamdaw.
 LNK person
 'The person that ate the taro was fat.'

- d. Pivot: (Instrument) undergoer of applied UV verb
 Ma-pitek aku k-u **sa-pi-cikcik** **n-i** **aki**
 UV-break 1S.GEN NOM-CN InA-PI-cut GEN-PPN Aki

t-u **ateng** ____i a pu'ut_i.
 DAT-CN vegetable LNK knife
 'I broke the knife with which Aki cuts the vegetable'

- i. Pivot: (Locative) undergoer of applied UV verb

Tayra Ø-ci panay mi-ladum i
 go NOM-PPN Panay NEUT-fetch.water PREP

pi-ladum-an **n-i** **aki** ____i a tefun_i.
 PI-fetch.water-LA GEN-PPN Aki LNK well
 'Panay went to fetch water at the well where Aki fetched water.'

As mentioned in Wu (1995, 2000) and Liu (1999), the head of the RC has to be the grammatical subject of the RC. If their observation is correct, the pivot in the RC should involve the restricted neutralization of the semantic roles. This is exactly what one can see in (6.1). To serve as a head for an RC, its co-referential gapped NP has to be the actor of an AV verb, the undergoer of a plain UV verb, or an applied argument of an applied UV verb. If the gapped NP does not belong to any one of the types mentioned above, the sentences will be rendered ungrammatical, as exemplified in (6.1a''), where the pivot is a NMR direct core argument of an AV verb, and in (6.1c), in which the pivot is an actor of a UV verb. Hence, there is a restricted neutralization of semantic roles on the pivot of an RC in Amis.

6.1.2 Displacement Construction and WH-question Construction

Both the displacement construction and the WH-question formation involve a displaced nominal element that is placed at the clause-initial position. There are two types of structures for these constructions. The first type, termed the nominal type, is constructed as an equational sentence in which the displaced NP or the WH-word and the

remaining elements of the clause are juxtaposed together. This remaining clause is preceded by a nominative case marker, and it is structured like a headless relative clause, as the verb in the clause is coded in the same way (e.g. suffixed with *-ay*) as the verbs inside an RC. An example of this type can be found in (6.2a'). The second type, termed the verbal type, is formed simply by placing an NP or a WH-word at the beginning of the clause. The remaining clause of the verbal type stays structurally unchanged; that is, it is neither preceded by a case marker nor is required to change the verb form in it. The WH-word can even appear in-situ in the verbal type though it more often appears clause-initially. This type can be illustrated by an example like (6.4b). Choosing one type over the other crucially depends on the status of the displaced NP. Similar to the condition of forming an RC, the nominal type involves a restricted neutralization of semantic roles; that is, its pivot has to be the PSA of the clause. As for the verbal type, the pivot can be either oblique arguments or adjuncts, but this structure is less preferred or even deemed as ungrammatical if the pivot is a macrorole or a NMR core argument.

Let us first consider the nominal type in (6.2):

(6.2) a. Ma-ulah kaku t-u fafahian a singsi.
 AV-like 1S.NOM DAT-CN woman LNK teacher
 'I like female teachers.'

a'. Pivot: (Patient) undergoer of -an applied UV verb

U	fafahian	a	singsi _i	k-u	ka-ulah-an
CN	woman	LNK	teacher	NOM-CN	KA-like-LA

aku ____i.
 1S.GEN
 'It is female teachers that I like better.'

b. Pivot: Actor of AV verb

Ya wawa_i k-u mi-pa-nanum-ay ____i t-u
 that child NOM-CN AV-CAU-water-FAC DAT-CN

kulong.

water.buffalo

‘It is that child who feed water to the water buffalos.’

b’. Pivot: Actor of UV verb

*Ya wawa_i k-u ma-pa-nanum-ay ____i k-u
 that child NOM-CN UV-CAU-water-FAC NOM-CN

kulong.

water.buffalo

‘It is that child who feed water to the water buffalos.’

c. Pivot: (Patient) undergoer of -an applied UV verb

Ya nanum_i k-u mi-pa-nanum-an tu aku
 that water NOM-CN MI-CAU-water-LA ASP 1S.GEN

ci mama-an ____i.
 PPN father-DAT

‘That water is what I gave father to drink.’

The sentence in (6.2a) shows the sentence that follows the canonical word order of Amis. In (6.2a’), the undergoer NP in (6.2a) appears at the sentence initial position and there is a gap in the remaining clause that follows the displaced NP. As one can see, there is a case marker *ku* present between the displaced NP and the remaining clause; that is, the clause appears at a nominal position.¹ The same nominal structure is also found when an actor of an AV verb is displaced, as illustrated in (6.2b). But, when the displaced NP is an actor of a UV verb, the nominal structure is not accepted, as seen in (6.2b’). The example in (6.2c) indicates that the nominal type is found when the displaced NP is an undergoer of a UV verb. These examples demonstrate a restricted neutralization of semantic roles, as the pivot in the nominal clause following the displaced element has to be the actor of an AV verb or the undergoer of a UV verb; the latter can be either a plain

¹ This structure is treated as a cleft sentence in Liu (1999).

UV verb or an applied UV verb. In other words, there is a syntactic pivot in the nominal type of displacement construction.

The restricted neutralization exemplified in (6.2) is also observed in the nominal type WH-questions in (6.3):

- (6.3) a. Pivot: Actor of AV verb
 Cima_i k-u **mi-palu-ay** ____i **t-u** **wawa?**
 who.NOM NOM-CN AV-beat-FAC DAT-CN child
 ‘Who is the one that beat the child?’
- a’. Pivot: Actor of UV verb
 *Cima_i k-u **ma-palu-ay** ____i **k-u** **wawa?**
 who.NOM NOM-CN UV-like-FAC NOM-CN child
 ‘Who is the one that beat the child?’

Sentences in (6.3a-a’) exemplify the WH-questions concerning an actor of a predicate. As shown the data, the clause following the interrogative pronoun is preceded by a case marker, which gives the nominal property of the clause. Furthermore, when the interrogative pronoun is coreferential with the actor of the predicate, the verb has to be marked by the AV affix; that is, this pronoun cannot be coreferential with an actor of a UV verb. When the interrogative pronoun refers to a non-actor in the clause, the verb has to be marked by either the plain UV markers (e.g. (6.3b)) or the applicative markers (e.g. (6.3c-f)). Hence, there is a restricted neutralization of semantic roles. Examples follow:

- (6.3) b. Pivot: Undergoer of UV verb
 U maan_i k-u **ma-ka’en-ay** **n-i** **aki** ____i?
 CN what NOM-CN UV-eat-FAC GEN-PPN Aki
 ‘What is it that Aki ate?’
- b’. Pivot: NMR direct core argument of AV verb
 *U maan_i k-u **k-um-a’en-ay** **Ø-ci** **aki** ____i?
 CN what NOM-CN eat<AV>-FAC NOM-PPN Aki
 ‘What did Aki eat?’

- c. Pivot: (Patient) undergoer of applied UV verb
 Cima_i k-u **ka-ulah-an** **isu** _____i?
 who.NOM NOM-CN KA-like-LA 2S.GEN
 ‘Who is the one you like?’
- d. Pivot: (Instrument) undergoer of applied UV verb
 U maan_i k-u **sa-pi-cikcik** **isu** **t-u**
 CN what NOM-CN InA-PI-cut 2S.GEN DAT-CN

dateng _____i?
 vegetable
 ‘What did you use to cut the vegetable?’
- e. Pivot: (Locative) undergoer of applied UV verb
 Cima_i/Cimanan_i k-u **pi-caliw-an** **isu**
 who.NOM/who.DAT NOM-CN PI-borrow-LA 2S.GEN

t-u **paysu** _____i?
 DAT-CN money
 ‘Whom did you borrow the money from?’
- f. Pivot: (Goal) undergoer of applied UV verb
 Cima_i k-u **pa-aca-an** **n-u-ra**
 who.NOM NOM-CN CAU-buy-LA GEN-CN-that

wawa **t-u** **hana** _____i?
 child DAT-CN flower
 ‘Who did that child sell the flower?’

The verbal type of displacement construction is exemplified in (6.4). In this construction, an NP is displaced, but the structure of the clause is not affected; it can still retain its verbal feature as there is no case marking appearing before the clause, and the verb in the clause does not have to be one of the deverbal forms. The verbal type is well accepted for the displacement of an oblique argument or adjunct, but the acceptability decreases when a macrorole or an NMR direct core argument is displaced. For the latter group of NPs, the nominal type is preferred. Consider the following examples:

(6.4) a. Ma-pa-nanum tu n-u wawa k-u kulong
 UV-CAU-water ASP GEN-CN child NOM-CN water.buffalo

t-u-ya nanum.
 DAT-CN-that water
 ‘The child has already fed the water buffalo that water.’

b. Pivot: Oblique argument of three-place UV verb

Ya nanum_i **ma-pa-nanum** **tu** **n-u** **wawa**
 that water UV-CAU-water ASP GEN-CN child

k-u **kulong** _____i.
 NOM-CN water.buffalo
 ‘That water the child has already fed the water buffalo.’

The example (6.4a) exhibits the default word order of a three-place predicate, while in (6.4b), one of the NMR arguments (i.e. the theme participant *nanum* ‘water’) is placed at the beginning of the clause. The only difference between the two sentences is the word order; the clause following the displaced NP in (6.4b) is structurally unaffected, as the verb form remains unchanged and the clause is not preceded by a case marker.

However, the acceptability of such kind of displacement construction varies according to the semantic status of the displaced NP. In general, the more peripheral the NP is, the higher acceptability the verbal type displacement construction can get among the speakers. For example, this structure is not acceptable or less preferred if the displaced NP is the actor (i.e. a macrorole) of the predicate, as seen in (6.4c-c’), or a NMR core argument, as seen in (6.4d):

(6.4) c. Pivot: Actor of UV verb

*Ya wawa_i **ma-pa-nanum** _____i **k-u** **kulong**.
 that child UV-CAU-water NOM-CN water.buffalo
 ‘That child gave water to the water buffalo.’

c’. Pivot: Actor of AV verb

??Ya wawa_i **mi-pa-nanum** _____i **t-u** **kulong**.
 that child AV-CAU-water DAT-CN water.buffalo
 ‘That child gave water to the water buffalo.’

- d. Pivot: NMR direct core argument of AV verb
 ??U kulong_i mi-pa-nanum k-u wawa ____i.
 CN water.buffalo AV-CAU-water NOM-CN DAT-CN
 ‘That child gave water to the water buffalo.’

Although both the recipient participant *kulong* ‘water buffalo’ and the theme participant *nanum* ‘water’ are coded as NMR arguments by the dative case in (6.4d) and (6.4a) respectively, they differ from each other regarding the possibility to be selected as the undergoer in the UV construction. For a three-place predicate like *pa-nanum* ‘give water’ or *mi-pa-nanum* ‘go to give water’, only the recipient argument can be the undergoer in the UV construction, as discussed in Chapter 5. Hence, the recipient argument of this predicate enjoys a more important semantic status than the theme argument. The recipient argument *kulong* of *mi-pa-nanum* is analyzed as a NMR direct core argument, while the theme argument *nanum* ‘water’ is analyzed as an NMR oblique core argument.² The verbal type construction is more likely to go with peripheral NPs such as adjunct and oblique core argument but not a macrorole or direct core argument. More examples are given below in (6.4e-g’)

- (6.4) e. Pivot: Undergoer of UV verb
 ??U futing_i ma-ka’en n-i sawmah ____i.
 CN fish UV-eat GEN-PPN Sawmah
 ‘The fish was eaten by Sawmah.’

- f. Ma-laluk kisu mi-padang t-u fafahian a
 NEUT-diligent 2S.NOM AV-help DAT-CN woman LNK
 kaka.
 older.sibling
 ‘You are enthusiastic in helping out the elder sister.’

² Another piece of evidence that shows the direct-oblique distinction between the two core arguments is that while the theme argument *nanum* ‘water’ is omissible in the sentence, it is impossible to omit the recipient argument *kulong* ‘water buffalo’.

f'. Pivot: NMR argument of embedded AV verb

U	fafahian	a	kaka _i ,	ma-laluk	kisu
CN	woman	LNK	older.sibling	NEUT-diligent	2S.NOM

mi-padang ____i.

AV-help

‘You are enthusiastic in helping out the elder sister (in contrast with the elder brother).’

g.	Pa-si-fanaq	Ø-ci	ina	t-u	radiw
	CAU-have-knowledge	NOM-PPN	mother	DAT-CN	song

i wawa.

PREP child

‘Mother is teaching songs at the child’s place.’

g'. Pivot: Adjunct of three-place AV verb

I	wawa _i	pa-si-fanaq	Ø-ci	ina
PREP	child	CAU-have-knowledge	NOM-CN	mother

t-u **radiw** ____i.

DAT-CN song

‘Mother is teaching songs at the child’s place.’ (An answer to ‘Where is Mother?’)

As shown in the above sentences, the verbal type displacement construction is rendered as marginally acceptable by the speakers for a displaced macrorole in (6.4e).³ But, it is acceptable when the displaced NP is a NMR core argument of an embedded verb as seen in (6.4f’), and it is also grammatical when the NP is a (locative) adjunct of a (three-place) AV verb, as shown in (6.4g’).

The phenomenon discussed above in Amis is reminiscent to the hierarchy of the unmarked topic choice among various NPs discussed in Foley and Van Valin (1984). In this hierarchy, adjuncts (i.e. setting NPs in their term) enjoy the preference over other oblique NPs, which in turn are favored over core NPs to serve as a natural topic. That is to say, “the NPs most central to the clause are the most marked as topics, while the most

³ It seems that for the argument marked by the genitive case (e.g. the actor of a UV verb in (6.4c)), the structure is the least favored. More investigation is needed here.

peripheral NPs are the least marked” (Foley and Van Valin 1994:126). This hierarchy has been found in English and Tagalog. Although the displaced NP in Amis is not necessarily a topic, the various degrees of easiness to be displaced among NPs of different semantic status are also found. Meanwhile, Chang (1997) also reports similar findings regarding the different constraints in the extraction of arguments and adjuncts in two other Formosan languages: Kavalan and Seediq. It is easier to distract adjuncts than arguments.

The verbal type of structure is also found in the formation of WH-questions. In other words, the verb in the clause following the interrogative pronoun does not undergo further affixation or reduplication, and the clause is not preceded by a case marker. This structural type is only limited to the WH-questions of oblique arguments or adjuncts; the WH-questions of macroroles and NMR direct core arguments have to appear in the nominal type exemplified in (6.3). The verbal type of WH-questions is illustrated in (6.5):

(6.5) a. Pivot: NMR oblique argument of AV verb

Cimanan_i **mi-aca** **k-u-ra** **kaying** **t-u** **hana**
 who.DAT AV-buy NOM-CN-that lady DAT-CN flower

_____i?

‘Whom is the young lady going to buy flower from?’

b. Pivot: NMR oblique argument of three-place AV verb

Cimanan_i **pa-aca** **k-u-ra** **wawa** **t-u** **hana**
 who.Dat CAU-buy NOM-CN-that child DAT-CN flower

_____i?

‘Who did that child sell the flower?’

c. Pivot: adjunct of intransitive verb

I cuwa_i **kisu** **ma-futiq** _____i?
 PREP where 2S.NOM NEUT-sleep

‘Where are you going to sleep?’

evidence for grammatical relations in this type of structure. Table 6.1 below

summarizes the two types of structures for displacement and WH-question formation:

Table 6.1 Summary of the Pivot Types in Displacement and WH-Q Constructions

Structure Type	Grammatical Relations	Pivot
Nominal	Yes	actor of AV undergoer of UV
Verbal	No	oblique NP (oblique argument and adjunct) ??core NP (macrorole and NMR direct core argument)

There is another interesting piece of information revealed in this table. Recall that in Chapter 5, I have shown that in Amis, the NMR direct core argument, oblique core argument, and adjuncts can all be marked by the dative case in an AV sentence.

Although the case marker seems to neutralize their distinctions, their different semantic status is reflected in the structures of displacement and WH-question constructions.

Both macroroles and NMR direct core arguments have to be promoted to become PSAs before being displaced or being the focus of WH-questions, but such a constraint is not found with oblique arguments and adjuncts.

6.1.3 Control Constructions

This section focuses on the exploration of three structural variants of control construction. These variants can be illustrated with the English examples in (6.6):⁵

- (6.6) a. Leslie tried to open the door.
b. Kim persuaded Pat to go to the party.
c. Robin promised Sandy to clean the birdcage.

Both (6.6a) and (6.6c) are referred to as subject control, as the controller of the missing argument in the linked core is the subject of the matrix core. The sentence in (6.6b) exemplifies a case of object control, in which the controller of missing argument in the linked core is the object of the matrix core. As the terms like subject and object play no

⁵ The English examples are taken from VVLP (1997:540)

role in RRG, the types of the controllers (e.g. syntactic, semantic, or pragmatic) of the missing arguments have to be discussed in a different approach. In this section, the Amis equivalents of the control constructions illustrated in (6.6) will be examined. I will show that the controller is not necessarily a syntactic one; in other words, there can be no grammatical relations involved in these constructions. To avoid using terms related to grammatical relation, I will name the three types of control constructions: the try-type, the persuade-type, and the promise-type. Let us begin with the persuade-type:

6.1.3.1 The Persuade-type Control Construction

Consider the following Amis examples containing a jussive verb *mi-lalang* ‘dissuade’:

(6.7) a. Controller: NMR core argument of AV verb; Pivot: A of AV verb

Mi-lalang	kaku _i	ci	mama-an _j	mi-palu	___ _{j/*i}
AV-dissuade	1S.NOM	PPN	father-DAT	AV-beat	

t-u wawa.
 DAT-CN child

‘I am going to dissuade Father from beating the child.’

a’. ***Mi-lalang** kaku_i ci mama-an_j **mi-palu** cingra_{j/*i}.
 AV-dissuade 1S.NOM PPN father-DAT AV-beat 3S.NOM

t-u wawa.
 DAT-CN child

‘I am going to dissuade Father from beating the child.’

b. Controller: U of UV verb; Pivot: A of AV verb

Ma-lalang	aku _i	∅-ci	mama _j	mi-palu	___ _{j/*i}
UV-dissuade	1S.GEN	NOM-PPN	father	AV-beat	

t-u wawa
 DAT-CN child

‘I dissuaded Father from beating the child.’

- c. Controller: U of UV verb; Pivot: A of AV verb

Lalang-en aku_i Ø-ci mama_j **mi-palu** _____j/*i
dissuade-UV 1S.GEN NOM-PPN father AV-beat

t-u wawa.
DAT-CN child

‘I dissuade Father from beating the child.’

- d. Controller: NMR core argument of AV verb; Pivot: A of intransitive verb

Mi-lalang kaku_i ci mama-an_j **tayra** _____j/*i i
AV-dissuade 1S.NOM PPN father-DAT go.there PREP

taypak.
Taipei

‘I am going to dissuade Father from going to Taipei.’

- e. Controller: U of UV verb; Pivot: A of intransitive verb

Ma-lalang aku_i Ø-ci mama_j **tayra** _____j/*i i
UV-dissuade 1S.GEN NOM-PPN father go.there PREP

taypak.
Taipei

‘I dissuaded Father from going to Taipei.’

- f. Controller: U of UV verb; Pivot: A of intransitive verb

Lalang-en aku_i Ø-ci mama_j **tayra** _____j/*i i
dissuade-UV 1S.GEN NOM-PPN father go.there PREP

taypak.
Taipei

‘I dissuade Father from going to Taipei.’

Like the English example with *persuade*, the control construction headed by *mi-lalang* (*ma-lalang*, *lalang-en*) ‘dissuade’ in Amis is also obligatory as there is no way to express the shared argument in the linked core. This is shown by the ungrammaticality of (6.7a’). The data show that the second argument of the matrix core (i.e. the italicized part) is the controller of the missing argument in the linked core regardless as to whether it is realized as an NMR direct core argument in the AV construction in (6.7a) and (6.7d), or an undergoer of a UV verb in (6.7b-c) and (6.7e-f). This observation contradicts to

the previous assumption for an object control construction that the argument bearing the nominative case is the “subject”, and the “object” argument of the matrix core in (6.7a) is the controller for the missing argument. As shown in examples such as (6.7b-c) and (6.7e-f), the controller is not an “object” of the matrix core. Therefore, it is inappropriate to name this type of construction an “object control” construction. However, employing the notions of semantic macrorole and direct core argument, the phenomenon can be explained in a unified way. It is the lowest ranking argument of the matrix verb that can serve as the controller for the missing argument in the linked core (i.e. the “___” part). This argument can be a NMR direct core argument of an AV matrix core or an undergoer of a UV matrix core that controls the interpretation of the missing argument.

Besides a controller, there is a pivot (i.e. the shared argument) in the linked core of the control verb *mi-lalang* (AV) (*ma-lalang* (UV), *lalang-en* (UV)). As shown in the above examples, the pivot can only be an actor of an AV verb, as in (6.7a-c), or an actor of an intransitive verb, as in (6.7d-f). Other possibilities are not allowed. For instance:

- (6.8) a. Controller: NMR core argument of AV verb; Pivot: A of UV verb
 ***Mi-lalang** kaku_i ci mama-an_j **ma-palu/palu-en** ___j/*i.
 AV-dissuade 1S.NOM PPN father-DAT UV-beat/beat-UV
 k-u wawa.
 NOM-CN child
 ‘I am going to dissuade Father from beating the child.’
- b. Controller: NMR core argument AV verb; Pivot: NMR core argument of AV verb
 ***Mi-lalang** kaku_i ci mama-an_j **mi-palu** k-u
 AV-dissuade 1S.NOM PPN father-DAT AV-beat NOM-CN
 tao ___j/*i.
 others
 ‘I dissuaded Father from being beaten by others.’

- c. Controller: NMR core argument of AV verb; Pivot: U of UV verb
 ***Mi-lalang** kaku_i ci mama-an_j **ma-palu/palu-en**
 AV-dissuade 1S.NOM PPN father-DAT UV-beat/beat-UV
- n-u tao —j/*i.
 GEN-CN others
 ‘I dissuaded Father from being beaten by others.’
- d. Controller: U of UV verb; Pivot: A of UV verb
 ***Ma-lalang** aku_i Ø-ci mama_j **ma-palu/palu-en**
 UV-dissuade 1S.GEN NOM-PPN father UV-beat/beat-UV
- j/*i k-u wawa
 NOM-CN child
 ‘I dissuaded Father from beating the child.’
- e. Controller: U of UV verb; Pivot: NMR argument of AV verb
 ***Ma-lalang** aku_i Ø-ci mama_j **mi-palu** k-u
 UV-dissuade 1S.GEN NOM-PPN father AV-beat NOM-CN
- tao —j/*i
 others
 ‘I dissuaded Father from being beaten by others.’
- f. Controller: U of UV verb; Pivot: U of UV verb
 ***Ma-lalang** aku_i Ø-ci mama_j **ma-palu/palu-en**
 UV-dissuade 1S.GEN NOM-PPN father UV-beat/beat-UV
- n-u tao —j/*i
 GEN-CN others
 ‘I dissuaded Father from being beaten by others.’⁶
- g. Controller: U of UV verb; Pivot: A of UV verb
 ***Lalang-en** aku_i Ø-ci mama_j **ma-palu/palu-en**
 dissuade-UV 1S.GEN NOM-PPN father UV-beat/beat-UV
- j/*i k-u wawa.
 NOM-CN child
 ‘I dissuade Father from beating the child.’

⁶ This sentence is acceptable if it is interpreted as the combination of two clauses: “I dissuade Father from going there; otherwise, he will be beaten by others.” The same condition also applies to sentences (6.7d’) and (6.7f’).

- h. Controller: U of UV verb; Pivot: NMR argument of AV verb
 ***Lalang-en** aku_i Ø-ci mama_j **mi-palu** k-u
 dissuade-UV 1S.GEN NOM-PPN father AV-beat NOM-CN

tao ____j/*i.
 others
 ‘I dissuade Father from being beaten by others.’

- i. Controller: U of UV verb; Pivot: U of UV verb
 ***Lalang-en** aku_i Ø-ci mama_j **ma-palu/palu-en**
 dissuade-UV 1S.GEN NOM-PPN father UV-beat/beat-UV

n-u tao ____j/*i.
 GEN-CN others
 ‘I dissuade Father from being beaten by others.’

The examples (6.8) are regarded as ungrammatical. In these sentences, the pivot in the linked core may be an actor of a UV verb as in (6.8a) and (6.8g), an NMR core argument of an AV verb as in (6.8b), (6.8e), and (6.8h), or an undergoer of a UV verb as in (6.8c), (6.8f), and (6.8i). Only the actor of an AV verb or an intransitive verb can function as a pivot in the linked core.

The control construction initiated by another verb *mi-ucur* ‘assign’ displays the same condition. In other words, it is always the lowest ranking argument of the matrix verb (i.e. the undergoer of a UV verb or the NMR core argument of an AV verb in the matrix core) that functions as the controller. As for the pivot, it is always the actor of an AV or an intransitive verb. The examples that have the matrix and the linked predicates with different voice forms are given in (6.9).

- (6.9) a. Controller: NMR core argument of AV verb; Pivot: A of AV verb
Mi-ucur kaku_i ci aki-an_j **mi-to’or** ____j/*i
 AV-assign 1S.NOM PPN Aki-DAT AV-follow

ci panay-an.
 PPN Panay-DAT
 ‘I am going to assign Aki to follow Panay.’

- a'. Controller: NMR core argument of AV verb; Pivot: A of UV verb

*Mi-ucur	kaku _i	ci	aki-an _j	ma-to'or/to'or-en
AV-assign	1S.NOM	PPN	Aki-DAT	UV-follow/follow-UV

— _{j/*i}	Ø-ci	panay.
	NOM-PPN	Panay

‘I am going to assign Aki to follow Panay.’

b. Controller: NMR core argument of AV verb; Pivot: NMR core argument of AV verb

*Mi-ucur	kaku _i	ci	aki-an _j	mi-to'or
AV-assign	1S.NOM	PPN	Aki-DAT	AV-follow

Ø-ci	panay	— _{j/*i} .
NOM-PPN	Panay	

‘I am going to assign Aki to be followed by Panay.’

b'. Controller: NMR core argument of AV verb; Pivot: U of UV verb

*Mi-ucur	kaku _i	ci	aki-an _j	ma-to'or/to'or-en
AV-assign	1S.NOM	PPN	Aki-DAT	UV-follow/follow-UV

n-i	panay	— _{j/*i} .
GEN-PPN	Panay	

‘I am going to assign Aki to be followed by Panay.’

c. Controller: U of UV verb; Pivot: A of AV verb

Ma-ucur	aku _i	Ø-ci	aki _j	mi-to'or	— _{j/*i}
UV-assign	1S.GEN	NOM-PPN	Aki	AV-follow	

ci	panay-an.
PPN	Panay-DAT

‘I assigned Aki to follow Panay.’

c'. Controller: U of UV verb; Pivot: A of UV verb

*Ma-ucur	aku _i	Ø-ci	aki _j	ma-to'or/to'or-en
UV-assign	1S.GEN	NOM-PPN	Aki	UV-follow/follow-UV

— _{j/*i}	Ø-ci	panay.
	NOM-PPN	Panay

‘I assigned Aki to follow Panay.’

d. Controller: U of UV verb; Pivot: NMR core argument of AV verb

*Ma-ucur	aku _i	Ø-ci	aki _j	mi-to'or
UV-assign	1S.GEN	NOM-PPN	Aki	AV-follow

Ø-ci panay Ø_{j/*i}.
 NOM-PPN Panay

'I assigned Aki to be followed by Panay.'

d'. Controller: U of UV verb; Pivot: U of UV verb

*Ma-ucur	aku _i	Ø-ci	aki _j	ma-to'or/to'or-en
UV-assign	1S.GEN	NOM-PPN	Aki	UV-follow/follow-UV

n-i panay Ø_{j/*i}.
 GEN-PPN Panay

'I assigned Aki to be followed by Panay.'

e. Controller: NMR core argument of AV verb; Pivot: A of intransitive verb

Mi-ucur	kaku _i	ci	aki-an _j	tayra	— _{j/*i}	i
AV-assign	1S.NOM	PPN	Aki-DAT	go.there		PREP

taypak.

Taipei

'I am going to assign Aki to go to Taipei.'

e'. Controller: U of UV verb; Pivot: A of intransitive verb

Ma-ucur	aku _i	Ø-ci	aki _j	tayra	— _{j/*i}
UV-assign	1S.GEN	NOM-PPN	Aki	go.there	

i taypak.

PREP Taipei

'I assigned Aki to go to Taipei.'

The control constructions examined so far all present the same restriction concerning the semantic status of the controller in the matrix core and the pivot in the linked core; it is always the lowest ranking argument of the matrix core that functions as the controller, and the pivot is limited to the actor of an AV or an intransitive verb. That is to say, both the controller and the pivot are semantically determined, and hence, there is no evidence for a grammatical relation being involved in the above-discussed control constructions.

However, not every control construction exhibits the same condition, especially

regarding the pivot in the linked core. Consider the following sentences beginning with the predicate *pa-tangic* ‘beseech; force’:

(6.10) a. Controller: NMR core argument of AV verb; Pivot: A of intransitive verb

Pa-tangic	kaku _i	ci	aki-an _j	tayra	___j/*i
CAU-cry	1S.NOM	PPN	Aki-DAT	go	

i pusong.
 PREP Taitung.
 ‘I beseeched Aki to go to Taitung.’ (Causative, AV)

b. Controller: U of UV verb; Pivot: A of an intransitive verb

Pa-tangic	han	n-i	dongi _i	Ø-ci	<i>kacaw_j</i>
CAU-cry	say.so (UV)	GEN-PPN	Dongi	NOM-PPN	Kacaw

tayra ___j/*i i kakacawan.
 go.there PREP Kakacawan
 ‘Dongi beseeched Kacaw to go to Kakacawan.’

c. Controller: U of a UV verb; Pivot: A of an AV verb

Pa-tangic-en	aku _i	Ø-ci	<i>mayaw_j</i>	mi-palu	___j/*i
CAU-cry-UV	1S.GEN	NOM-PPN	Mayaw	AV-beat	

ci sawmah-an.
 PPN Sawmah-DAT
 ‘I forced Mayaw to go to beat Sawmah.’

d. Controller: U of UV verb; Pivot: A of UV verb

*Pa-tangic-en	aku _i	Ø-ci	<i>mayaw_j</i>	ma-palu	___j/*i
CAU-cry-UV	1S.GEN	NOM-PPN	Mayaw	UV-beat	

Ø-ci sawmah.
 NOM-PPN Sawmah
 ‘I forced Mayaw to go to beat Sawmah.’

e. Controller: U of UV verb; Pivot: A of UV verb

Pa-tangic-en	aku _i	Ø-ci	<i>mayaw_j</i>	palu-en	___j/*i
CAU-cry-UV	1S.GEN	NOM-PPN	Mayaw	beat-UV	

Ø-ci sawmah.
 NOM-PPN Sawmah
 ‘I forced Mayaw to go to beat Sawmah.’

- f. Controller: U of UV verb; Pivot:U of UV verb
***Pa-tangic-en** aku_i Ø-ci mayaw_j **pa-nengneng-en/**
 CAU-cry-UV 1S.GEN NOM-PPN Mayaw CAU-watch-UV
- ma-pa-nengneng** n-u ising ____j/*i.
 UV-CAU-watch GEN-CN doctor
 ‘I forced Mayaw to be seen by the doctor.’

The control construction initiated by *pa-tangic* ‘beseech; force’ presents a very intriguing case regarding the pivot of the linked core. As indicated in the data, the controller in the matrix core is still the lowest ranking argument (i.e. undergoer of a UV verb or NMR direct core argument of an AV verb) of the core. Nevertheless, in addition to the actor of an AV verb or an intransitive verb, the pivot can also be the actor of an *-en* UV verb (e.g. (6.10e)), but not a *ma-* UV verb (e.g. (6.10d)). I have no good explanation for this contrast here.⁷ In fact, the undergoer of a UV verb can also be a pivot of in the linked core, as shown in (6.11c):

- (6.11) a. Controller: NMR core argument of AV verb; Pivot: A of AV verb
Sa-pi-pa-tangic-an kaku_i ci sawmah-an_j
 InA-PI-CAU-cry-MOOD 1S.NOM PPN Sawmah-DAT
- mi-palu** ____j/*i t-u wawa.
 AV-beat DAT-CN child
 ‘I want to force Sawmah to beat the child.’ (Optative, AV)
- b. Controller: NMR core argument of AV verb; Pivot: A of UV verb
Sa-pi-pa-tangic-an kaku_i ci sawmah-an_j
 InA-PI-CAU-cry-MOOD.AV 1S.NOM PPN Sawmah-DAT
- ma-ka-ulah** ____j/*i kaku.
 UV-KA-like 1S.NOM
 ‘I want to force Sawmah to like me.’ (Optative, AV)

⁷ A possible reason may be the different degrees of agentivity inherent in the two UV markers. While *-en* is an agentive marker, *ma-* does not carry such a feature. As the pivot has to be an actor of the linked core, the strong agentivity of *-en* may contribute to its acceptability in such a construction.

- c. Controller: NMR core argument of AV verb; Pivot: U of UV verb
?Sa-pi-pa-tangic-an kaku_i ci sawmah-an_j
 InA-PI-CAU-cry-MOOD 1S.NOM PPN Sawmah-DAT
- ma-pa-nengneng** n-u ising ____j/*i.
 UV-CAU-watch GEN-CN doctor
- ‘I want to force Sawmah to be seen by the doctor.’ (Optative, AV)
- c’. Controller: NMR core argument of AV verb; Pivot: NMR of AV verb
***Sa-pi-pa-tangic-an** kaku_i ci sawmah-an_j
 InA-PI-CAU-cry-MOOD 1S.NOM PPN Sawmah-DAT
- pa-nengneng** k-u ising ____j/*i.
 CAU-watch NOM-CN child
- ‘I want to force Sawmah to be seen by the doctor.’ (Optative, AV)

As illustrated in the data, when the predicate in the matrix core is a *sa-* applicative verb in the optative mood,⁸ the pivot of the linked core can be an actor of an AV verb (e.g. (6.11a) or a UV verb (e.g. (6.11b)), or an undergoer of a UV verb (e.g. in (6.11c)), though the last structure is less favored by the informants. It is possible that the forms of the matrix core (e.g. in the mood form or not) indicate different linkage types between the two cores, and these linkage types can in turn influence the pivot types in the control construction. I will leave this issue for further research.

Before I move on to the discussion of the promise-type of control construction, I would like to comment on one issue based on the work by Chang and Tsai (2001). According them, there is an actor-sensitivity constraint in the persuade-type control construction⁹ in Kavalan and other Formosan languages. They report that verbs in the linked core have to be causativized, and in this way, the actor of the matrix core, not the undergoer, will also be the actor of the causative predicate in the linked core. In other words, the actor of the matrix core has to be the controller of the pivot in the linked core.

⁸ Please refer to Chapter 3 for the discussion of this mood form.

⁹ This construction is discussed under the term obligatory control in their paper.

The following Kavalan sentences are taken from their paper (Chang and Tsai 2001: 3, original transcription and glosses):

- (6.12)a. pawRat a tina-na tu sunis pa-qaynəp.
 force Nom mother-3S.Gen Acc child Cau(AV)-sleep
 lit. 'His mother forces her child such that she causes him/her to sleep.'
- b. ??pawRat a tina-na tu sunis m-qaynəp.
 force Nom mother-3S.Gen Acc child AV-sleep
 for 'His mother forces her child to sleep.'
- c. mərinana=iku tu sunis pa-rusit.
 persuade=1S.Nom Acc child Cau(AV)-leave
 lit. 'I persuade my child such that I cause him/her to leave.'
- d. ??mərinana=iku tu sunis m-rusit.
 persuade=1S.Nom Acc child AV-leave
 for 'I persuade my child to leave.'
- e. pawRat-an-na_i ni abas_i aiku pa-ʔtuŋ tu tuquq.
 force-PV-3S.Gen Gen Abas 1S.Nom Cau-kill Acc chicken
 lit. 'I was forced by Abas such that she caused me to kill a chicken.'
- f. ??pawRat-an-na_i ni abas_i aiku mə-ʔtuŋ tu tuquq.
 force-PV-3S.Gen Gen Abas 1S.Nom AV-kill Acc chicken
 for. 'I was forced by Abas to kill a chicken.'

In the Kavalan sentences in (6.12), no matter how the matrix control predicate is inflected, the predicate in the linked core is always a causativized AV verb, and the actor in the matrix is the controller of the pivot of the causative predicate in the linked core. Chang and Tsai (2001) refer to such obligatory causativization of the predicate in the linked core as the actor-sensitivity constraint, which refers to the fact the actor in the matrix core has to be the controller in this control construction.¹⁰ This constraint is obligatory in

¹⁰ Chang and Tsai (2001) only focus on the controlling property from the actor in the matrix core. However, as pointed out in the discussion, there is more than one controller from the matrix core, as there is more than one missing argument for the causative predicate in the linked core. Hence, calling this structure an example of "actor-sensitivity" phenomenon might be over-simplified.

Kavalan, but may be optional in some other Formosan languages such as Puyuma.¹¹ In other words, it is not unique to a single Formosan language.

With a closer observation of the sentences with a causative non-initial predicate in (6.12), they seem more like purposive constructions, and this is also implied in the English translation. Moreover, in such constructions, not only the actor but also the undergoer or the NMR core argument of the matrix core are controllers, as now there are actually two missing arguments in the causative verbs in the linked core. Such constructions are very different from the English examples and the Amis examples that have been discussed so far in this dissertation. Although the actor-sensitivity constraint has also been found in Formosan languages other than Kavalan, it does not exist in Amis. Nonetheless, I do find examples that have a causativized predicate in the linked core of a control construction, but the causativization is not obligatory, and it is not commonly found in the data. An example is given in (6.13b):

(6.13)a. Controller: U of UV verb; Pivot: A of AV verb

Lalang-en aku_i Ø-ci mama_j **tayra** _____j.
dissuade-UV 1S.GEN NOM-PPN father go.there
‘I dissuade Father from going.’

b. Controller: A and U of UV verb; Pivot: A and NMR core argument of causative AV verb

Lalang-en aku_i Ø-ci mama_j **pa-tayra** _____i _____j.
dissuade-UV 1S.GEN NOM-PPN father CAU-go
‘I dissuade Father from going there.’ (more emphatic than (6.13a))
‘I dissuade Father from doing something in order to cause him to go.’

As seen in (6.13), both the plain form and the causative form of the verb can appear in the linked core, but the interpretations of the two control constructions are somewhat different. There are two possible readings for the causative one, as provided by

¹¹ This observation leads Chang and Tsai (2001) to conclude that “control dependency should be thematically determined rather than grammatically determined” (Chang and Tsai 2001:1), which similar to the proposal made in RRG.

different informants; one involves a more emphatic reading of the jussive tone, while the other involves a reversal of the causing event, as now the whole sentence is rendered as ‘persuade to go’ instead of ‘dissuade from going’. With the lack of consensus in the reading of such kind of structure, it is highly possible that this structure is rarely used. That is why I conclude that the actor-sensitivity constraint does not exist in Amis.

The discussion of the persuade-type of control construction shows that there is no evidence for grammatical relations being involved to define the privileged arguments in this construction, as there is no restricted neutralization. Both the controller and the pivot in this construction are semantically determined. The controller is always the undergoer or the NMR core argument of the matrix core, namely, the lower ranking of the two primary arguments of the matrix predicate.¹² As for the pivot of the linked core, it is the actor of an AV verb or an intransitive verb for the majority of the examples; in other words, it is the highest ranking argument in the linked core. Nonetheless, we do see examples with an actor pivot of a UV verb, or even an undergoer pivot of a UV verb.

6.1.3.2 The Promise-type Control Construction

The promise-type control verb discussed here is *mi-hai* ‘agree (to let); promise’. The linked core following this verb can be structured in two ways in terms of whether the linked core is normalized or not. The first structural type is exemplified in (6.14) in which the linked core is not normalized. This structure has two readings. If there is an undergoer or a NMR direct core argument showing up in the matrix core, the undergoer

¹² The semantic account of control construction is not something unique in Amis, nor is it a proposal exclusively made in the RRG framework. Jackendoff and Culicover (2003) also propose a semantic analysis for the control constructions in English. In their review of the rather extensive literature that deals with control constructions, they mention that there are two traditions of analyzing control; one is primarily based on syntactic factors, and the other, semantic factors. The second tradition can actually be dated back to works as early as Jackendoff (1969).

or the NMR direct core argument will be the controller of the pivot in the linked core, as shown in (6.14a-d). If only the actor shows up in the matrix core, then the actor will be the controller, as seen in (6.14e):

(6.14) a. Controller: U of UV; Pivot: A of AV verb

Ma-hai n-i mama_i kaku_j **mi-aca** _____{j/*i}
 UV-agree GEN-PPN father 1S.NOM AV-buy

t-u waneng.
 DAT-CN candy
 ‘Father agreed to let me buy candy.’
 *‘Father agreed to buy me candy.’

a’. Controller: U of UV; Pivot: A of UV verb

***Ma-hai** n-i mama_i kaku_j ma-aca _____{j/*i}
 UV-agree GEN-PPN father 1S.NOM UV-buy

k-u waneng
 NOM-CN candy
 ‘Father agreed to let me buy candy.’
 *‘Father agreed to buy me candy.’

b. Controller: NMR core argument of AV verb; Pivot: A of AV verb

Mi-hai tu Ø-ci mama_i takuwanan_j mi-aca _____{j/*i}
 AV-agree ASP NOM-PPN father 1S.DAT AV-buy

t-u waneng
 DAT-CN candy
 ‘Father will agree to let me buy candy.’
 *‘Father will agree to buy me candy.’

b’. Controller: NMR core argument of AV verb; Pivot: A of UV verb

***Mi-hai** tu Ø-ci mama_i takuwanan_j **ma-aca** _____{j/*i}
 AV-agree ASP NOM-PPN father 1S.DAT UV-buy

k-u waneng.
 NOM-CN candy
 ‘Father will agree to let me buy candy.’
 *‘Father will agree to buy me candy.’

- c. Controller: U of UV; Pivot: NMR core argument of AV verb
Ma-hai n-i mama_i kaku_j **mi-lisuq**
UV-promise GEN-PPN father 1S.NOM AV-visit
- k-u singsi ____ j/*i.
NOM-CN teacher
- ‘Father promised me that the teacher will visit me.’
* ‘Father_i promised with me that teacher will visit him_i.’
- c’. Controller: U of UV; Pivot: U of UV verb
Ma-hai n-i mama_i kaku_j **ma-lisuq/lisuq-en**
UV-agree GEN-PPN father 1S.NOM UV-visit/visit-UV
- n-u singsi ____ j/*i.
GEN-CN teacher
- ‘Father promised me that the teacher will visit me.’
* ‘Father_i promised me that teacher will visit him_i.’
- d. Controller: NMR core argument of AV verb; Pivot: NMR core argument of AV verb
Mi-hai tu Ø-ci mama_i takuwanan_j **mi-lisuq**
AV-agree ASP NOM-PPN father 1S.DAT AV-visit
- k-u singsi ____ j/*i.
NOM-CN teacher
- ‘Father will promise me that teacher will visit me.’
*‘Father_i will promise me that teacher will visit him_i.’
- e. Controller: A of AV verb; Pivot: A of AV verb
Mi-hai tu Ø-ci mama_i **mi-aca** _____{i/??j} t-u
AV-promise ASP NOM-CN father AV-buy DAT-CN
- waneng.
candy
‘Father agreed to buy candy.’
??‘Father agreed to let someone buy candy.’

The predicate *ma-hai* (*mi-hai*) ‘agree (to let); promise’ in the examples form (6.14a) to (6.14d) behaves like the persuade-type control predicate discussed in the previous section. Similar to those persuade-type predicates, the controller in the matrix core is the lowest ranking argument of the core; hence, it is a semantic controller. However, the pivot in the linked core exhibits more possibilities than the persuade-type predicates; it can be an

actor of an AV verb, as seen in (6.14a-b), an undergoer of a UV verb, as seen in (6.14c'), and a NMR core argument of an AV verb, as seen in (6.14c) and (6.14d), but it cannot be an actor of a UV verb. There is no neutralization of semantic roles involved in the pivot in the linked core. The example given in (6.14e) illustrates a different sub-type of control construction, the promise-type, though it is also initiated by the same predicate *mi-hai*. There is only core argument (i.e. the actor) showing up in the matrix core, and this argument is the controller for the linked core; hence, this is an example of actor control.¹³ The two readings of *mi-hai* (*ma-hai*, UV) 'agree (to let); promise' both involve semantic controllers and pivots; there is no grammatical relation indicated in these sentences.

In the second structural variation of the promise-type control construction, the linked core is a nominal structure, as it is preceded by a case maker and the verb form in the linked core is changed into the *sa-* applicative form with an optional mood marker. This structure has only one reading: the promise-type reading. That is, the actor of the matrix core will be the only possible controller of the missing argument in the linked core. The examples are provided in (6.15):

(6.15)a. Controller: A of UV verb; Pivot: A of UV verb

Ma-hai	<i>n-i</i>	<i>dongi_i</i>	Ø-ci	kacaw _j	t-u
UV-promise	GEN-PPN	Dongi	NOM-PPN	Kacaw	DAT-CN
sa-pi-kadafu-(aw)		— _{i/*j}	i	cingraan _{j/*i}	
InA-PI-spouse-(MOOD)			PREP	3S.DAT	
'Dongi _i promised Kacaw _j that she _i would marry him _j .'					

¹³ This behavior of *mi-hai* (*ma-hai*) 'agree (to let); promise' is similar to the English verb *ask* as in the sentence "Larry asked Sally to leave." discussed in VVLP (1997:545). This sentence can have a jussive reading and a non-jussive reading; the former is a case of undergoer control, while the latter, an actor control.

- b. Controller: A of UV verb; Pivot: NMR core argument of AV verb
 ***Ma-hai** n-i dongi_i Ø-ci kacaw_j t-u
 UV-promise GEN-PPN Dongi NOM-PPN Kacaw DAT-CN

sa-pi-kadafu-an cingra_i Ø_j
 InA-PI-spouse-MOOD 3S.NOM
 ‘Dongi promised Kacaw that she would marry him.’

The sentences in (6.15) again show that the clause linkage might affect the interpretation of the control construction. As the second core in (6.15) is constructed like an argument of the matrix core, this whole sentence exemplifies a juncture-nexus type of core subordination (VVLP 1997:453), which is different from the linkage type found in (6.14). Notice that the predicate in the linked core has to be in UV form (e.g. *sa-pi-kadaf(-aw)* in (6.15a)) but not the AV form (e.g. *sa-pi-kadafu-an* in (6.15b)), and the pivot can only be the actor of the UV verb in the linked core.

6.1.3.3 The Try-type Control Construction

The verbs discussed for this type include *mi-tanam* ‘(go to) try’ and *ma-na’ay* ‘not want’. As there is only one argument in the matrix core, it will be the only choice of the controller for the pivot in the linked core. Notice that this controller does not have to be marked by the nominative case, as illustrated in (6.16b):

- (6.16)a. Controller: A of AV verb; Pivot: A of AV verb
Mi-tanam kaku_i pa-rakat _____i t-u tusiya.
 AV-try 1S.NOM CAU-walk DAT-CN car
 ‘I am going to try to drive the car.’
- b. Controller: A of UV verb; Pivot: A of AV verb
Tanam-en aku_i a pa-rakat _____i k-u-ra
 try-UV 1S.GEN LNK CAU-walk NOM-CN-that
 tusiya.
 car
 ‘I will try to drive that car.’

As for the pivot in the linked core, it has to be the actor of an AV verb like those in (6.16).

The sentence is rendered ungrammatical if the predicate in the linked core appears in the UV form (e.g. (6.17a-b) and (6.17d)):

(6.17)a. Controller: A of AV verb; Pivot: A of UV verb

*Mi-tanam	<i>kaku_i</i>	ma-pa-rakak/pa-rakat-en	_____i
AV-try	1S.NOM	UV-CAU-walk/CAU-walk-UV	
t-u	tusiya.		
DAT-CN	car		

‘I am going to try to drive cars.’

a’. Controller: A of AV verb; Pivot: A of UV verb

*Mi-tanam	<i>kaku_i</i>	ma-pa-rakak/pa-rakat-en	_____i
AV-try	1S.NOM	UV-CAU-walk/CAU-walk-UV	
k-u	tusiya.		
NOM-CN	car		

‘I am going to try to drive the car.’

b. Controller: A of UV verb; Pivot: A of UV verb

*Tanam-en	<i>aku_i</i>	ma-pa-rakak/pa-rakat-en	_____i
try-UV	1S.GEN	UV-CAU-walk/CAU-walk-UV	
t-u	tusiya.		
DAT-CN	car		

‘I am going to try to drive cars.’

b’. Controller: A of UV verb; Pivot: A of UV verb

*Tanam-en	<i>aku_i</i>	ma-pa-rakak/pa-rakat-en	_____i.
try-UV	1S.GEN	UV-CAU-walk/CAU-walk-UV	
k-u	tusiya.		
NOM-CN	car		

‘I am going to try to drive the car.’

c. Controller: A of AV verb; Pivot: A of AV verb

Sa-pi-tanam-an	<i>kaku_i</i>	ma-ulah	_____i	ci	panay-an.
InA-PI-try-MOOD	1S.NOM	AV-like		PPN	Panay-DAT

‘I want to try to like Panay.’ (Optative, AV)

d. Controller: A of AV verb; Pivot: U of UV verb

*Sa-pi-tanam-an	<i>kaku_i</i>	ma-ka-ulah	n-i	panay	_____i.
InA-PI-try-MOOD	1S.NOM	UV-KA-like	GEN-PPN	Panay	

‘I want to try to be liked by Panay.’ (Optative, AV)

The examples in (6.16) and (6.17) indicate the control construction beginning with *mi-nanam* (AV) (or *nanam-en* (UV)) ‘try’ has a semantic controller, which is the actor of the matrix core, and also a semantic pivot, which is the actor of an AV verb.

Now let us consider another control predicate *ma-na’ay* ‘not want’ in (6.18):

- (6.18)a. Controller: A of AV verb; Pivot: A of AV verb
Ma-na’ay *kaku_i* **mi-nanum** _____i t-u sayta.
 AV-not.want 1S.NOM AV-water DAT-CN soda
 ‘I don’t want to drink soda.’
- b. Controller: A of UV verb; Pivot: A of AV verb
Na’ay-en *aku_i* **mi-naunm** _____i k-u sayta.
 not.want-UV 1S.GEN AV-water NOM-CN soda
 ‘I don’t want to drink the soda.’
- c. Controller: A of AV verb; Pivot: A of UV verb
 ***Ma-na’ay** *kaku_i* **ma-nanum** _____i t-u sayta.
 AV-not.want 1S.NOM UV-water DAT-CN soda
 ‘I don’t want to drink soda.’
- c’. Controller: A of AV verb; Pivot: A of UV verb
 ***Ma-na’ay** *kaku_i* **ma-nanum** _____i k-u sayta.
 AV-not.want 1S.NOM UV-water NOM-CN soda
 ‘I don’t want to drink the soda.’

Similar to *ma-tanam* ‘try’, *ma-na’ay* ‘not want’ also has an actor controller from the matrix core. Nevertheless, the pivot in the linked core of *ma-na’ay* shows different property from the pivot of *ma-tanam* ‘try’. Consider:

- (6.19)a. Controller: A of AV verb; Pivot: U of UV verb
Ma-na’ay *kaku_i* **ma-palu** n-u tao _____{i/*j}.
 AV-not.want 1S.NOM UV-beat GEN-CN other
 ‘I don’t want to be hit by others.’
- b. Controller: A of AV verb; Pivot: NMR core argument of AV verb
 ***Ma-na’ay** *kaku_i* **mi-palu** k-u tao _____{i/*j}.
 AV-not.want 1S.NOM AV-beat NOM-CN other
 ‘I don’t want to be hit by others.’

b'. **Ma-na'ay** kaku_i **mi-palu** k-u tao takuwanan.
 NEUT-not.want 1S.NOM AV-beat NOM-CN other 1S.DAT
 'I don't want to be hit by others.'

The example in (6.19a) shows that the missing argument in the linked core can also be an undergoer of a UV predicate, in addition to an actor of an AV verb, as we have seen in (6.18a-b). However, this pivot cannot be an actor of a UV verb, as indicated in (6.18c-c'), nor can it be a NMR core argument of an AV verb, as seen in (6.19b). In other words, the pivot of *ma-na'ay* has to be either an actor of AV verb or an undergoer of a UV verb, which presents a case of restricted neutralization. Thus, for the control construction beginning with *ma-na'ay* 'not want', there is a semantic controller and a syntactic pivot.

The table below summarizes the discussion of the control constructions:

Table 6.2 Controllers and Pivots in the Control Constructions

Types	Matrix Predicate	Controller	Pivot
persuade-type	<i>mi-lalang/ma-lalang/lalang-en</i> 'dissuade'	Semantic: U and NMR core argument	Semantic: A of AV or intransitive V
	<i>mi-ucur/ma-ucur</i> 'assign'	Semantic: U and NMR core argument	Semantic: A of AV or intransitive V
	<i>mi-hai/ma-hai</i> 'agree (to let)'	Semantic: U and NMR core argument	Semantic: A of AV; U of UV; NMR core argument of AV
	<i>pa-tangic/pa-tangic-en</i> 'beseech; force'	Semantic: U and NMR core argument	?Semantic: A of AV or intransitive V; U of -en V
	<i>sa-pi-patangic-an</i> 'want to force'	Semantic: U and NMR core argument	Semantic: A of AV or UV; U of UV (i.e. macroroles)
promise-type	<i>mi-hai</i> 'promise'	Semantic: A	Semantic: A of AV or UV
try-type	<i>mi-tanam</i> 'try'	Semantic: A	Semantic: A of AV Verb
	<i>ma-na'ay/na'ay-en</i> 'not want'	Semantic: A	Syntactic: A of AV or U of UV

As illustrated in Table 6.2, only the pivot of *ma-na'ay* 'not want' is a syntactic pivot.

For other control verbs examined in this section, there is no need to resort to grammatical relations; most of the phenomena can be explained by employing semantic roles if there is any restriction imposed by these constructions regarding controller or pivot types.

6.1.4 Reflexivization

In RRG, the analysis of reflexivization adheres to the following two principles: Role Hierarchy Condition and Logical Structure Superiority (VVLP 1997 398; 400), both of which make crucial reference to the PSA selection hierarchy repeated in (6.20)

(6.20) Privileged Syntactic Argument Selection Hierarchy

Arg of DO > 1st arg of **do'** > 1st arg of **pred'** (x, y) > 2nd arg of **pred'**(x, y) > Arg of **pred'** (x)

The Role Hierarchy Condition and Logical Structure Superiority Condition are given in (6.21) and (6.22):

(6.21) Role Hierarchy Condition on Reflexivization

The reflexive pronoun must not be higher on the PSA selection hierarchy in (6.20) than its antecedent.

(6.22)a. Logical Structure Superiority (LS Superiority)

A constituent P in logical structure is LS-superior to a constituent Q iff there is a constituent R in logical structure such that

- (i) Q is a constituent of R, and
- (ii) P and R are primary arguments of the same logical structures.

b. Superiority Condition on Reflexivization

A bound variable may not be LS-superior to its binder.

Now let us take a look at the data from Amis. Reflexivization in this language is formed by placing a marker *tu*¹⁴ after the pronoun to form a reflexive expression:

- (6.23)a. Mi-palu Ø-ci aki_i cingraan_{i/j}.
 AV-beat NOM-PPN Aki 3S.DAT
 'Aki is beating himself/him.'
- b. Mi-palu Ø-ci aki_i cingraan_{i/*j} **tu**.
 AV-beat NOM-PPN Aki 3S.DAT REFL
 'Aki is beating himself.'
- c. *Mi-palu cingra_i **tu** ci aki-an_i.
 AV-beat 3S.NOM REFL NOM Aki-DAT
 'Himself_i is beating Aki_i.'

¹⁴ The function of this marker is not clear to me at this moment. Tentatively, I will gloss it as "REFL", which stands for "reflexive marker". However, further investigation is needed for better understanding of the nature and distribution of this marker.

As illustrated in (6.23a), when there is no *tu* following *cingraan*, the reference of this pronoun is ambiguous. However, once *tu* is added, as seen in (6.23b), *cingraan* can only refer to *Aki*. Moreover, the example in (6.12c) shows that the reflexive cannot show up before its binder. The UV version of (6.23) is given in (6.24):

- (6.24)a. Palu-en n-i dongi_i cingra_i **tu**.
 beat-UV GEN-PPN Dongi 3S.NOM REFL
 ‘Dongi beat herself.’
- b. Ma-palu nira_i cingra_i **tu**.
 UV-beat 3S.GEN 3S.NOM REFL
 ‘He beat himself.’
- c. Palu-en nira_i cingra_i **tu**.
 beat-UV 3S.GEN 3S.NOM REFL
 ‘He will beat himself/herself.’
- d. *Palu-en nira_i **tu** k-u wawa_i.
 beat-UV 3S.GEN REFL NOM-CN child
 ‘Himself_i will beat the child_i.’

Sentences in (6.24) demonstrates the same phenomenon in which when the pronoun is followed by *tu*, it can only receive a reflexive reading. The same word order constraint between the reflexive and the binder is also observed in (6.24d).

The interpretation of a reflexive form always requires a controller. In (6.23) and (6.24), we can see that it is the actor of the predicate that acts as the controller for the reflexive form. Notice that this actor can be an actor of an AV verb (e.g. *mi-palu* in (6.23)) or a UV verb (e.g. *palu-en* in (6.24)). In other words, the grammatical status of the actor has nothing to do with its being controller in the reflexive construction. Furthermore, as illustrated in (6.23c) and (6.24d), the undergoer cannot function as the controller of the reflexive expression. This observation follows the role hierarchy condition stated in (6.21), as the binder has to be higher on the PSA selection hierarchy

than the reflexive expression.

Nevertheless, the following data in (6.25) seem to present some counterexamples to the role hierarchy:

- (6.25)a. Mi-palu cingra_i **tu** cingraan_i.
AV-beat 3S.NOM REFL 3S.DAT
'He is beating himself.'
- b. Palu-en nira_i **tu** cingra_i
beat-UV 3S.GEN REFL 3S.NOM
'He will beat himself.'

As seen in (6.25), now the reflexive form seems to appear before the non-reflexive form, assuming the pronoun preceding *tu* is the reflexive expression. Judging from the case marking pattern of (6.25b), the pronoun preceding *tu* has to be the actor while the one following *tu* has to be the undergoer. Hence, it looks like an example against the role hierarchy condition, as now the undergoer is the binder for the actor. However, such an exceptional word order is only found when the binder and the reflexive form are both pronominal. For non-pronominal forms, the order in (6.23) and (6.24) is the only possibility, as shown in the ungrammaticality of the sentences in (6.26):

- (6.26)a. *Mi-palu Ø-ci aki_i **tu** cingraan_i.
AV-beat NOM-PPN Aki REFL 3S.DAT
'Aki is beating himself.'
- b. *Palu-en n-i aki_i **tu** cingra_i
beat-UV GEN-PPN Aki REFL 3S.NOM
'Aki will beat himself.'

Compare the sentences in (6.26) with (6.23b) and (6.24a), and we can see that the marker *tu* has to show up after the pronominal form.

There are two possible analyses that can account for the sentences like (6.25). The first one is to analyze these sentences as the violation of the role hierarchy condition; that

is, when both of the binder and the reflexive form are pronouns, they do not have to obey the role hierarchy condition, but if the binder is non-pronominal, then the role hierarchy condition is strictly observed. The other analysis is simply saying that the reflexive marker *tu* can float to the position before the reflexive pronoun, and hence, *cingra* in (6.25a) and *nira* in (6.25b) are still the antecedents of *cingraan* and *cingra* respectively; that is, the actor is still the binder for the undergoer. However, the position after a non-pronominal antecedent is not an acceptable floating site, and that is why sentences like (6.26) are ungrammatical. This restriction might be due to the avoidance of ambiguity. The second analysis is adopted here for two reasons. First, it seems quite unnatural to say that non-pronominal antecedents follow one condition, while pronominal antecedents can break it or follow the other condition. The second reason is provided by the examples in (6.27), where the *tu* marker moves to a position following an NP (i.e. *sasing* ‘photo’) that is not likely to be an antecedent or a reflexive form. That is to say, the NP preceding *tu* is not necessarily the reflexive form; it can be something else.

- (6.27)a. Pa-nengneng-en nira_i t-u sasing nira_i **tu**.
 CAU-watch-UV 3S.GEN DAT-CN photo 3S.GEN REFL
 ‘He showed the photo of himself to others.’
- b. Pa-nengneng-en nira_i t-u sasing **tu** nira_i.
 CAU-watch-UV 3S.GEN DAT-CN photo REFL 3S.GEN
 ‘He will show the photo of himself to others.’
- c. Pa-nengneng-en nira_i **tu** t-u sasing nira_i.
 CAU-watch-UV 3S.GEN REFL DAT-CN photo 3S.GEN
 ‘He will show the photo of himself to others.’
- d. Pa-nengneng-en n-i aki_i t-u sasing nira_i **tu**.
 CAU-watch-UV GEN-PPN Aki DAT-CN photo 3S.GEN REFL
 ‘Aki will show the photo of himself to others.’

- e. Pa-nengneng-en n-i aki_i t-u sasing **tu** nira_i.
 CAU-watch-UV GEN-PPN Aki DAT-CN photo REFL 3S.GEN
 ‘Aki showed the photo of himself to others.’
- f. *Pa-nengneng-en n-i aki_i **tu** t-u sassing nira_i.
 CAU-watch-UV GEN-PPN Aki REFL DAT-CN photo 3S.GEN
 ‘Aki showed the photo of himself to others.’

As illustrated in (6.27b) and (6.27e), the marker *tu* now floats to the position after the noun *sasing* ‘photo’, which is neither an antecedent nor a reflexive expression. These examples also show that *tu* can also appear before the reflexive expressions (i.e. the second *nira* in (6.27b) and *nira* in (6.27e)). The sentence in (6.27f) indicates that *tu* can never move to the position following the non-pronominal antecedent (i.e. *Aki* in this sentence). Based on the two reasons stated above, the floating reflexive marker analysis is adopted, and the role hierarchy condition is still observed in Amis. In fact, as remarked by the informant, the word order that an actor-binder precedes an undergoer reflexive form, as exhibited in (6.23) and (6.24), is more common and preferred than the word order in (6.25).

As for the condition of LS-superiority, it is postulated to account for the behavior of their reflexive forms embedded under another NPs, like those in (6.27a) and (6.27d). To illustrate how this condition works, let us examine the logical structures of (6.27d) and (6.27a) below:

- (6.28)a. Pa-nengneng-en n-i aki_i t-u sasing **nira_i** **tu**
 CAU-watch-UV GEN-PPN Aki DAT-CN photo 3S.GEN REFL
 ‘Aki will show the photo of himself to others.’
- a’. [**do**’ (aki_i, ∅)] CAUSE [BECOME **see**’ (∅, [**have**’ (nira_i, sasing))]
- b. *Pa-nengneng-en **nira_i** **tu** t-u sasing n-i aki_i.
 CAU-watch-UV 3S.GEN REFL DAT-CN photo GEN-PPN Aki
 ‘Himself_i will show Aki_i’s photo’

b'. [**do'** (nira_i, ∅)] CAUSE [BECOME **see'** (∅, [**have'** (aki_i, sasing)])]

c. Pa-nengneng-en nira_i t-u sasing nira_i tu
CAU-watch-UV 3S.GEN DAT-CN photo 3S.GEN REFL
'He will show the photo of himself to others.'

c'. [**do'** (nira_i, ∅)] CAUSE [BECOME **see'** (∅, [**have'** (nira_i, sasing)])]

As exemplified in (6.28a) (= (6.27d)) and (6.28c) (= (6.27a)), the reflexive form (i.e. *nira tu*) and the antecedent (i.e. *aki* and *nira*) are not the arguments of the same predicate; *nira (tu)* is in the embedded predicate **have'**, while *aki* and *nira* the first argument of **do'**.

Hence, the grammaticality or ungrammaticality of (6.28) cannot be explained by the role hierarchy condition stated in (6.21); the acceptability of these sentences is subject to the LS superiority condition stated in (6.22). These principles account for the grammaticality of (6.28a), as the antecedent *aki* is LS-superior than the reflexive from *nira tu*. As seen in the LS in (6.28a'), *aki* is a primary argument (i.e. heads of the fillers of the variable positions in logical structure) of an LS, while *nira (tu)* is not, as it is in the embedded predicate **have'** (*nira*, *sasing*). On the contrary, in (6.28b), the reflexive form is LS-superior than its binder, which is indicated in the LS in (6.28b'), in which *nira (tu)* is the head, while *aki* is not. (6.28b) violates the principles in (6.22).

The reflexivization of Amis analyzed above demonstrates another construction in this language that does not involve grammatical relations.

6.1.5 Consecutive Clauses

Finally, in this section, some constructions that consist of two or more consecutive clauses sharing a purposive or a sequential relation are examined. The second clause may contain a missing argument co-referential with one of the arguments in the first clause. The focus of the discussion is to find out which argument in the first clause can serve as the controller for the missing argument in the consecutive clauses. Let us begin

with consecutive clauses that share a purposive relationship.

The first clause in the following examples all begin with a verb suffixed with the agentive UV marker *-en*, and the second clause indicates the purpose of the first clause.

- (6.29)a. Controller in the first core: A of UV verb; Pivot: NMR core argument of AV verb
 Tireng-en **aku**_i pa-kimad _____i, ta paka-nengneng
 stand-UV 1S.GEN CAU-speech so.that ABLT-watch

kamu _____i.
 2P.NOM

‘I want to stand up when making a speech so that you can see (me) clearly.’

- b. Controller in the first core: A of UV verb; Pivot: U of UV verb
 Tireng-en **aku**_i pa-kimad _____i, ta ma-nengneng
 stand-UV 1S.GEN CAU-speech so.that UV-watch

namu _____i.
 2P.GEN

‘I want to stand up when making a speech so that you can see me clearly.’

- c. Controller in the first core: A of UV verb; Pivot in the second core: A of AV verb/*A of UV verb; Pivot in the third core: A of an intransitive verb

Cahiw-en ho _____i k-u tiyadj, nga’ay hali-ka’en/
 hungry-UV ASP NOM-CN tummy fine love.to-eat

*hali-ka’en-en¹⁵ _____i ma-lafi _____i.
 love.to-eat-UV NEUT-dinner

‘Keep your stomach hungry first (so that) you can eat a lot when having dinner.’

In the sentences provided in (6.29), there is at least one missing argument in the non-initial core(s), and the interpretation of this argument is controlled by one of the arguments in the first core. The following table summarizes the controllers and the pivots in (6.29):

¹⁵ *Hali-ka’en* means ‘love to eat; eat a lot habitually’. This verb has a UV *-en* form, but it cannot be prefixed by the UV marker *ma-*.

Table 6.3 Controllers and Pivots for the Sentences in (6.29)

Sentence Number	Controller in the 1 st Core	Controller and Pivot in the 2 nd Core	Controller and Pivot in the 3 rd Core
6.29a	A of <i>-en</i> intransitive verb	pivot: NMR direct core argument in an AV verb	---
6.29b	A of <i>-en</i> intransitive verb	pivot: U of a UV verb	---
6.29c	A of <i>-en</i> UV verb	pivot: A of an AV verb	pivot: A of an intransitive verb

As shown in the table, these sentences behave similar to the try-type control construction in that they all have the actor¹⁶ in the first core as the controller for the missing argument in non-initial core(s), though the controller actor does not have to bear the nominative case. As for the pivots, they exhibit many varieties, including macroroles as well as NMR direct core arguments. This construction thus has a semantic controller, and it seems that any core argument can serve as a pivot.

The second construction is initiated by a predicate followed by the quotation verb *han* ‘say so (UV)’, which we have seen in the discussion of the ideophone-forming construction in Chapter 4. In addition to introducing a quote (Wu 1995), *han* usually denotes a disposal manner for the predicate preceding it (Liu 2003), and it is followed by another clause indicating the subsequent event after the disposal event. This disposal construction is exemplified in (6.30). Notice that the predicate preceding *han* appears in the bear root form, and the voice marking of the sentence is determined *han*:

- (6.30)a. Tanam han n-i kacaw_i k-u dateng_j,
taste say.so GEN-PPN Kacaw NOM-CN vegetable
- anger ———_j
bitter
- ‘Kacaw (then) tasted the vegetable and (found that) it was bitter.’

¹⁶ More specifically, this actor is an agentive actor, as the verb in the first core is marked by the agentive UV marker *-en*.

- b. Palu han n-i kacaw_i Ø-ci dongi_i,
 beat say.so GEN-PPN Kacaw NOM-PPN Dongi

t-um-angic tu _____j/??i.
 cry<NEUT> ASP
 ‘Kacaw_i beat Dongi_j, (and then she_j/??he_i) cried.’

- c. Palu han n-i kacaw_i Ø-ci dongi_j,
 beat say.so GEN-PPN Kacaw NOM-PPN Dongi

mi-laliw tu _____j/*i.
 AV-run.away ASP
 ‘Kacaw_i then beat Dongi_j, (and then she_j) ran away.’

The *han* sentences in (6.30a-c) indicate that only the undergoer of *V + han* can serve as the controller for the pivot in the following core; if the event in the second clause is about the actor of *V + han*, a full NP or a pronoun has to show up, as illustrated in (6.30d-e):

- (6.30)d. Palu han n-i kacaw_i Ø-ci dongi_j,
 beat say.so GEN-PPN Kacaw NOM-PPN Dongi

mi-laliw tu cingra_i/*j/Ø-ci Kacaw.
 AV-run.away ASP 3S.NOM NOM-MCM Kacaw
 ‘Kacaw then beat Dongi, (and then) he_i/Kacaw ran away.’

- e. Tanam han aku_i k-u nanum_j, ma-piyas
 taste say.so 1S.GEN NOM-CN water NEUT-have.a.diarrhea

kaku/*_____i.
 1S.NOM
 ‘I then tasted the water, (and then) I had a diarrhea.’

The above examples show that in the *V+ han* construction, there is a restricted semantic controller: U of the UV construction.

The construction beginning with *ma-herék + V* ‘after V’¹⁷ exhibits a situation different from *V + han*:

¹⁷ Although the predicate *ma-herék* is glossed as ‘finish’, the derived interpretation of *ma-herék + V* is ‘after doing something’ (Wu 1995), especially when this complex predicate is followed by another clause. *Ma-herék* can also be used independently.

- (6.31)a. Ma-herék mi-palu Ø-ci kacaw_i ci dongi-an_j,
 NEUT-finish AV-beat NOM-PPN Kacaw PPN Dongi-DAT
- mi-laliw _____{i/*j}.
 AV-run.away
 ‘After Kacaw_i beats Dongi, (he_i then) will run away.’
- b. Ma-herék ma-palu n-i kacaw_i Ø-ci dongi_j,
 NEUT-finish UV-beat GEN-PPN Kacaw NOM-PPN Dongi
- mi-laliw tu _____{i/*j}.
 AV-run.away ASP
 ‘After Kacaw_i beat Dongi, (he_i) then ran away.’
- c. Ma-herék ma-palu n-i kacaw_i Ø-ci dongi_j,
 NEUT-finish UV-beat GEN-PPN Kacaw NOM-PPN Dongi
- ma-laliw tu _____{i/*j}.
 UV-run.away ASP
 ‘After Kacaw_i Dongi, he_i/Dongi ran away.’

Unlike the examples of *V + han*, in the consecutive clauses beginning with *ma-herék + V* ‘after V’, the actor of the first clause (an AV verb or UV verb) is the controller.

Based on the examples discussed so far, it seems that most of the time, only macroroles can serve as controllers and pivots, though we do find one example with NMR direct core argument serving as a pivot (e.g. (6.29a)).¹⁸ In fact, it seems less likely for NMR direct core argument to function as a privileged argument, especially controllers. Consider:

- (6.32)a. ??Mi-palal tu Ø-ci dongi_i ci kacaw-an_j,
 AV-wake ASP NOM-PPN Dongi PPN Kacaw-DAT
- ca’ay ka-l-um-uwad _____i.
 NEG KA-get.up<NEUT>
 ‘Dongi has gone to wake up Kacaw, (but he_j) did not get up.’

¹⁸ Here I limit the discussion to macrorole and non-macrorole direct core arguments. As for the behavioral non-macrorole oblique arguments and adjuncts in these constructions, I will leave them for future research.

- a'. Ma-palal tu aku_i Ø-ci kacaw_j, ca'ay
 UV-wake ASP 1S.GEN NOM-PPN Kacaw NEG
- ka-l-um-uwad ______{j/*i}.
 KA-get.up<NEUT>
 'I woke Kacaw_j up, (but he_j) didn't get up.'
- b. *Aka pa-fli ci dongi-an_i t-u waneng,
 NEG.IMP CAU-give PPN Dongi-DAT DAT-CN candy
- ma-liyang ______i.
 NEUT-disobedient
 'Don't give Dongi candy; (she) is disobedient.'
- b'. Aka pa-fli-en k-u-ra wawa_i t-u
 NEG.IMP CAU-give-UV NOM-CN-that child DAT-CN
- waneng, ma-liyang ______i.
 candy NEUT-disobedient
 'Don't give that child candy; (he/she) is disobedient.'

As illustrated in (6.32), for an undergoer to function as a controller, it has to show up in a UV construction; it cannot be a controller if it shows up as NMR direct core argument of an AV verb such as *ci kacaw-an* in (6.32a).

The above discussion shows that the notion macrorole plays an important part in defining the privileged functions of being a controller or a pivot in these consecutive sentences. Such functions are not defined by grammatical relations in these sentences, as we have seen from the examples that an actor can function as a controller regardless as to whether it is an actor of an AV verb (e.g. (6.31a) or an actor of a UV verb (e.g. (6.31b)). In the following discussion of two texts, we will see that the pivot is not necessarily the NP marked by the nominative case, either. Nevertheless, based on the data I have collected, there seems to be some idiosyncratic preference in maintaining the nominative status of the pivot in a text. The two passages in (6.33) and (6.34) are excerpts from two texts, of which the complete versions are provided in the appendix. The one in (6.33) is

from a text in which the informant talked about the chores that she had to do when she was a child, and the hardship she experienced at that time. The excerpted part talks about feeding and driving the cattle:

(6.33)a. Ma-ra'od sa tu k-u ka-lahok-an,
 NEUT-come.near say.so ASP NOM-CN KA-lunch-LA

ci-roma cacay a **ma-lahok** ___i **aroq** ___i
 have-some.times alone LNK NEUT-lunch sit

sa itira.
 say.so there
 'When the lunch time came, sometimes (I) sat there along eating lunch.'

b. **Araw** **han** ___i awa tu k-u maan-maan
 see say.so (UV) not.exist ASP NOM-CN what-RED

awa k-u dateng.
 not.exist NOM-CN vegetable

'(I then) took a look, (and found that) there was nothing (in the lunchbox), no side dishes.'

c. Ci-roma ta'enu adiyam sa **k-um-a'en** ___i.
 have-some.times only hot.peppers say.so eat<NEUT>

'Sometimes (I) only (had) hot peppers to eat.'

d. Ha-tira k-u roray n-u orip niyam
 like.that NOM-CN hardship GEN-CN life 1P.EXCL.GEN

i tiya i ho.¹⁹
 PREP then I ASP

'The hardship of our life in the past was just like that.'

e. Ma-'edeng tu ha-ka-kerem n-u cidal,
 NEUT-enough ASP HA-KA-sun.set GEN-CN sun

mi-sa-tapang tu ___j a **mi-ala** ___j t-u
 AV-SA-start ASP LNK NEUT-take DAT-CN

a'orongen a **mi-nukay** ___j.
 things.to.carry.on.shoulders LNK NEUT-return

'When it was about the sunset, (we) started to get the things to carry on the shoulders and go home.'

¹⁹ "I-tiya i ho" is a fixed expression, meaning 'long time ago'.

missing arguments will be marked by the genitive case. For other positions, they will all be marked by the nominative case, as an actor of an AV verb or an S of an intransitive predicate.

Now consider another piece of text, which is about how a mother cooks a kind of spice vegetable (i.e. *tanaq* in the story) so that her children would not refuse to eat the dishes that are cooked with this kind of vegetable.

(6.34)a. Ya wawa_i n-i-ya Lao3-man3-niang2_j aku ira
 that child GEN-CN-that wife.of.the.owner 1S.GEN exist

i katayalan aku i kakacawan, anu **pa-camul**
 PREP work.place 1S.GEN PREP Kakacawan if CAU-add

han ___j i dateng_i k-u tanaq_k,
 say.so (UV) PREP vegetable NOM-CN tanaq

ca'ay ka-ulah k-um-a'en ___i ___l.
 NEG KA-like eat<NEUT>

'The children of the wife of the boss in my workplace in Kakacawan do not like to eat the dishes if she puts "tanaq" into dishes.'

b. **Sa-maan-maan-en** ___j k-u pi-sanga, ta ma-nga'ay
 InA-what-RED-UV NOM-CN PI-make then NEUT-good

k-um-a'en cangra_i t-u tanaq sa kaku.²¹
 eat<NEUT> 3P.NOM DAT-CN tanaq say.so 1S.NOM

'What should I do to make the dish, and then they are willing to eat tanaq?' so I asked.'

c. U-ni-ni u tanaq **letek** **han** ___j **mi-letek** ___j
 CN-this-RED CN tanaq chop say.so (UV) NEUT-chop

___k, u-ni halu-akaway han nira_j **mi-tangtang** ___j
 CN-this HALU-straw say.so (UV) 3S.GEN NEUT-cook

___k.

'She then chopped the leaves of "tanaq" along with the straws, and then cooked them.'

²¹ The first person pronoun here refers to the wife. In Amis narratives, direct quote is a very common strategy during narration.

- d. **Tenes han** _____j **mi-tangtang** _____j k-u-ya tanaq.
 long.time say.so (UV) NEUT-cook NOM-CN-that tanaq
 ‘Then (she) cooked the *tanaq* for a long time.’

In this text, the discussion will focus on the two pivots that refer to the lady owner of the speaker’s workplace (i.e. _____j) and a special kind of spice vegetable *tanaq* (i.e. _____k). In these examples, the positions for _____j, if filled up, will all be the genitive case (i.e. actor for a UV verb). Notice that even this pivot sometimes shows up after an apparent AV verb prefixed by *mi-* (e.g. *mi-letek* ‘chop into pieces’ in (6.34c), this position is not a position for a nominative actor, as the sentence is a UV construction introduced by *V + han*. In other words, the *mi-* prefix has no voice function there; only its derivational function is retained. As for the pivot _____k, the nominative case will be used if the positions are filled up as it is the undergoer of the *V + han* construction.

The analysis of the consecutive sentences and the two texts show that pivots tend to be macroroles. We do find NMR core arguments serving as pivots (e.g. _____i in (6.34a)), but it is rather uncommon, as the majority of pivots are macroroles.

The discussion of the major constructions is summarized in Table 6.4:

Table 6.4 The Analysis of Controllers and Pivots in Some Grammatical Constructions in Amis

Grammatical Phenomenon	Controller	Pivot	GR
Relative Clause	---	Syntactic	Yes
Displacement and Wh-Q (Nominal)	---	Syntactic	Yes
Displacement and Wh-Q (Verbal)	---	Semantic (NMR oblique argument and adjunct) ²²	No
Control: persuade-type	Semantic U or NMR core argument	Semantic (roles varies among verbs)	No
Control: promise-type	Semantic: A	Semantic: A	No
Control: try-type	Semantic: A	Semantic mostly (roles varies among verbs)	No
Reflexivization	Semantic: A	---	No
V1+ <i>han</i> +V2	Semantic: U of V1+ <i>han</i> (UV)	---	No
<i>ma-herék</i> + V	Semantic: A		No
Texts	---	Semantic: A or U mostly	No

²² This condition is strictly observed in WH-questions, but for displacement constructions, macroroles and NMR direct core arguments are sometimes allowed.

As shown in Table 6.4, the argument exhibiting the behavioral properties of a “subject” (i.e. as a controller or a pivot) does not necessarily always involve restricted neutralization of semantic roles; it may also be defined by semantic notions such as macroroles and direct core arguments, depending on the construction in which the argument(s) appear. We have only found grammatical relations in relative clause and the nominal type of displacement constructions and WH-question constructions;²³ for other grammatical phenomena, the relevant privileged arguments can be defined semantically. In other words, “subject” may not be a term that is always adequate in describing the grammar of Amis; whether or not there is a subject-like grammatical relation depends on the construction.

As for another two grammatical relations: direct object and indirect object, RRG also approaches them in a different way; many grammatical phenomena (e.g. passive, dative shift, and applicative) that are assumed to involve so-called objects (and indirect object) can be more appropriately discussed under the notions of macrorole and direct core argument as well.

In fact, it is difficult to define a direct object or an indirect object in Amis. As I have shown in the discussion of three-place predicates, Amis exhibits a mixed type of direct-indirect object (DO/IO) and primary-second object (PO/SO) languages, which complicates a grammatical-relation based analysis. However, within the RRG framework, these mixed patterns can be simply explained through multiple undergoer selection patterns in terms of different principles; the DO/IO pattern follows Principle A and has the default choice of undergoer based on the AUH, while the PO/SO pattern

²³ Cleft sentences (Liu 1999) also have syntactic pivots. In fact, they can be regarded as type of headless relative clause.

follows Principle B and has the marked choice of undergoer in terms of the AUH.

Hence, there is no need to employ the GR terms in the discussion here.

Starting from the following section, constructions that are crucially related to the status of an argument will be discussed, namely, the applicative constructions and the voice operations.

6.2 The Applicative Constructions

Recall that in Chapter 3, a new analysis for the Amis voice/focus system has been proposed. I have argued that the so-called instrumental voice (or focus) and locative voice (or focus) are applicative makers that either promote non-arguments such as instrument and location NPs to become core arguments and subsequently to become an undergoer, or enhance the status of a NMR core argument to become an undergoer. I have also shown that the undergoer of the applied verb will be marked by nominative case by default with or without the presence of a UV marker in the sentence. In other words, the applicative constructions follow the UV case marking pattern by default, and this indicates the ergative nature of Amis.

The new analysis of the voice system explains why we can have sentences like (6.35), in which we can find the co-occurrence of the UV marker and the instrumental applicative marker *sa-*, but only the instrument NP surfaces as the undergoer instead the patient NP, which would be the undergoer following the AUH.

- (6.35)a. Aka sa-pi-litek-en *k-u-ra* *caklis*
 NEG.IMP InA-PI-chop.tree-UV NOM-CN-that ax
- t-u-ra kilang!
 DAT-CN-that tree
 ‘Don’t use that ax to chop down the tree!’

b. <u>Ma-sa-pi-sanga</u>	n-i	aki	t-u	takid
UV-InA-PI-make	GEN-PPN	Aki	DAT-CN	bottle

<i>k-u-ya</i>	<i>aol.</i>
NOM-CN-that	bamboo

‘Aki used use that bamboo to make the bottle.’

Following the new analysis, the co-occurrence of the applicative marker and the voice marker can be accounted for, as these markers show different operations at the two phases of linking in the RRG linking algorithm. That is to say, the applicative marker affects the linking from the argument positions to macroroles, while the voice marker operates at the linking from macroroles to syntactic functions.

As mentioned, at the phase of linking from argument positions to macroroles, applicative constructions perform two functions. First, they may enhance the status of a non-argument such as instrument or location to become an argument. Second, they can also promote a non-macrorole core argument (e.g. patient) to become a macrorole. The instrumental applicative construction serves the first function, while the locative applicative construction can perform both functions. An interesting feature of these applicative forms is that they can all be used as a noun designating the argument that is affected by them, and some may even be lexicalized. For example, the *sa-* applicative form usually can refer to an instrument or a reason, while *-an* applicative form can designate an object that is acted upon (e.g. *mi-tilid-an* ‘something written’ > *mi-tilid* ‘write; study’) or a location (e.g. *pi-tilid-an* ‘school’). In the following discussion, although I will focus on the predicative function of these applicative forms, I will utilize this nominal feature to discuss the different types of participants of which the semantic status is enhanced by the applicative constructions. Furthermore, a decompositional analysis for the applied verbs will be proposed and the constructional schema that records

the specific properties of each applicative construction will be postulated. Let us begin with the instrumental applicative construction.

6.2.1 The Instrumental Applicative Constructions

The applicative construction marked by *sa-* has been discussed under the label “instrumental focus” or “instrumental voice” in many of the previous works (e.g. Yan 1992; Wu 1995; Liu 1999; Liu 2003), as this construction usually introduces an instrument to the LS of the verb it attaches to, and the added instrument is chosen to be the undergoer of the derived verb. As exemplified in (6.36), repeated from Chapter 3, the instrument is marked by the preposition in the non-applied verb, which indicates its peripheral status. To make the instrument a core argument, the applicative construction has to be employed.

- (6.36)a. **Mi**-dohdoh kaku t-u titi *i* *falah*.
 AV-smoke 1S.NOM DAT-CN meat PREP coal
 ‘I am going to smoke the meat over the coal.’
- b. **Sa**-pi-dohdoh aku t-u titi *k-u* *falah*.
 InA-PI-smoke 1S.GEN DAT-CN meat NOM-CN coal
 ‘I am going to smoke the meat with the coal.’

The applicative function of *sa-* is well-demonstrated in (6.36), in which the oblique NP in (6.36a) becomes a core argument in (6.36b) when the applied verb is used.

Notice that although the *sa-* applicative construction is labeled as an instrumental applicative, the enhanced argument in this construction can sometimes be interpreted as a reason or a motivation, depending on the semantics of the applied verb and the co-occurring context. Consider the following examples:

- (6.37)a. **Sa-pi-diput**²⁴ n-i dongi t-u wawa
 InA-PI-look.after GEN-PPN Dongi DAT-CN child
- k-u-ni* *paysu.*
 NOM-CN-this money
 ‘The money is for Dongi to look after the child.’
- b. **Sa-ka-sadak** aku *k-u-ni* *ra’ic.*
 InA-KA-appear 1S.GEN NOM-CN-this rope
 ‘I used the rope to go out (e.g. escaped).’
 ‘The rope is the tool with which I got out (e.g. escaped).’
- c. U maan k-u **sa-ka-sadak** nira?
 CN what NOM-CN InA-KA-appear 3S.GEN
 ‘What is the reason that he came out?’
- d. **Sa-pi-to’or** aku t-u tao *k-u*
 InA-PI-follow 1S.GEN DAT-CN others NOM-CN
- mi-tayal-an.*
 MI-work-LA
 ‘The reason why I have done such things is to catch up with others.’
- e. **Sa-pa-kungal** t-u titi *k-u-ni* *a*
 InA-CAU-tender DAT-CN meat NOM-CN-this LNK
- kuwaq.*
 papaya
 ‘This papaya is for tendering the meat.’

As seen in (6.37), the interpretations of the argument added by *sa-* can be an instrument (6.37a-b), a reason (6.37c), a motivation (6.37d), or an indirect cause (6.37e); the reading of the enhanced NP definitely involves more than just instrument. Further consider the example in (6.38):

- (6.38) **Sa-pi-diput** n-i dongi t-u wawa, ca’ay
 InA-PI-adopt GEN-PPN Dongi DAT-CN child NEG
- ka-ci-wawa cangra.
 KA-have-child 3P.NOM
 ‘The reason why Dongi adopted the kid (is that) they don’t have children.’

²⁴ The root *diput* has two meanings; one is ‘look after’, and the other one is ‘adopt’, as seen in (6.38).

In (6.38), the argument added by the instrumental applicative construction (i.e. a reason) does not show up in the first clause. Semantically speaking, this reason equals to the second clause in (6.38), and the relation between the two clauses is bridged by the prefix *sa-*.

In general, there are two types of interpretations presented in the instrumental applicative constructions in (6.37) and (6.38). The *sa-* form in the first type manifesting a kind of means by which the event denoted by the applied verb is carried out. The instrument reading belongs to this type. As for the *sa-* form in the second type, it designates a motivation or a reason for the event or action denoted by the applied verb. This type subsumes indirect cause, motivation, and reason. The first type of instrumental applicative often co-occurs with an NP denoting the instrument, while the second type shows up with a reason/cause/motivation denoted by either an NP or a clause. For the semantic representations of these two sub-types of instrumental applicatives, I would like to utilize the semantic structures postulated in RRG originally for signaling two inter-clausal semantic relations: modifying sub-events and reason. According to VV (2005:206), there are four types of modifying sub-events: manner, motion, position, and means. In particular, I will use the semantic structure of “means” to represent one of the readings generated by the instrumental applicative construction. These two semantic representations are given in (6.39), based on VV (2005:206-207):

(6.39) The Semantic Representations of Instrumental Applicative Construction

- a. Modifying sub-event (“means”): **do'** (x, [...] ^ [**pred₂'** (x, y)])
- b. Reason: [LS₁] **BECAUSE'** [LS₂]

In the above semantic representations, the first part (i.e. **pred₁'** in [...] in (6.39a) and LS₁

in (6.39b)) is supplied by the stem predicate. The part in **pred₂**' and LS₂ and are left unspecified; their contents and interpretations depend on the semantics of **pred₁**' and LS₁ and other contextual information. The semantic representations of the *sa-* applicative verbs in (6.37) and (6.38) are given as (6.40):

(6.40)a. Sa-pi-dohdoh aku t-u titi k-u falah.
 InA-PI-smoke 1S.GEN DAT-CN meat NOM-CN coal
 'I am going to smoke the meat with the coal.'

a'. **do'** (aku, [**smoke'** (aku, titi) ^ **use'** (aku, falah)])

b. Sa-ka-sadak aku k-u-ni ra'ic.
 InA-KA-appear 1S.GEN NOM-CN-this rope
 'I used the rope to go out (e.g. escape).'
 'The rope is the tool with which I got out (e.g. escaped).'

b'. **do'** (aku, [**appear'** (aku) ^ **use'** (aku, ra'ic)])

c. Sa-pa-kungal t-u titi k-u-ni a
 InA-CAU-tender DAT-CN meat NOM-CN-this LNK
 kuwaq.
 papaya
 'This papaya is for tendering the meat.'

c'. [**do'** (x, [**use'** (x, kauwq)])] CAUSE [BECOME **tender'** (titi)]

d. Sa-pi-to'or aku t-u tao k-u mi-tayal-an.
 InA-PI-follow 1S.GEN DAT-CN others NOM-CN MI-work-LA
 'I use the things that I have done to catch up with others.'

d'. **do'** (aku, [**follow'** (aku, tao) ^ **use'** (aku, mitayalan)])

e. Sa-pi-diput n-i dongi t-u wawa k-u-ni
 InA-PI-look.after GEN-PPN Dongi DAT-CN child NOM-CN-this
 paysu.
 money
 'The money is for Dongi to look after the child.'

e'. **do'** (dongi, [**look.after'** (dongi, wawa) ^ **use'** (dongi, money)])

- f. Sa-pi-diput n-i dongi t-u wawa, ca'ay
 InA-PI-adopt GEN-PPN Dongi DAT-CN child NEG
- ka-ci-wawa cangra.
 KA-have-child 3P.NOM
 'The reason why Doing adopted the kid is that they don't have children.'
- f'. [**do'** (dongi, [**adopt'** (dongi, wawa)))] **BECAUSE'** [**NOT.have'** (cangra, wawa)]
- g. U maan k-u sa-ka-sadak nira?
 CN what NOM-CN InA-KA-appear 3S.GEN
 'What is the reason that he came out?'
- g'. [**do'** (nira, [**appear'** (nira)))] **BECAUSE'** [LS₂]

Although two semantic representations have to be stipulated for the instrumental applicative verb instead of postulating a unified one, these representations help us better capture the syntactic properties of this applicative construction. To begin with, as the two semantic representations suggest a subordination relationship between the two parts in the logical structures, they actually reflect the original adjunct status of the argument introduced by the instrumental applicative construction. Moreover, postulating one of the functions of *sa-* as signaling **BECAUSE'** LS₂ leaves the possibility that this applied verb might introduce a full-fledged clause, and that is what we have seen in (6.40g). Finally, employing the term **BECAUSE'** for this applied verb has an important consequence in explaining related structures such as the optative mood constructions *sa-...-aw* and *sa-...-an*. As I argued in Chapter 3, the *sa-* in the two mood forms is exactly the same as the applicative marker *sa-*, and this *sa-* has the semantic representation of (6.39b). This analysis explains the Genitive-Dative pattern that *sa-...-aw* always takes and the inquiry of reason reading that these optative constructions may get in their WH-Questions.

Now that we have two semantic representations for the instrumental applicative construction, how do we know which one a particular *sa-* applied verb takes? Although it is not yet possible to build up a set of rules to regulate the choices, there are some tendencies for the selectional restrictions. To begin with, the modifying sub-event LS can only go with a predicate with an activity component, while the reason LS is applicable to the *sa-* predicates with or without an activity component, but the latter is found more commonly. In other words, for predicates with an activity component, their *sa-* applicative forms may have ambiguous readings, as seen in *sa-pi-diput* in (6.40e) and (6.40g). The more dynamic the activity is, the more likely its *sa-* form will get the modifying sub-event reading. This preference can be observed from the following examples:²⁵

(6.41)a. *sa-pi-sadak* ‘tool for getting things out’

b. *sa-ka-sadak* ‘reason for going out or appearing’ or ‘tool for getting out’

Compare the two *sa-* applicative forms derived from the root, and we can see that the activity in *sa-pi-sadak* (i.e. ‘get something out’) is more dynamic than that in *sa-ka-sadak* (i.e. ‘appear’ or ‘come out’), and thus, the unmarked reading for (6.41a) is the modifying sub-event, while for (6.41b), both are acceptable. Consider another pair of examples:

(6.42)a. **Sa-pi-fanaq** aku t-u caciyaw n-u amis
 InA-PI-know 1S.GEN DAT-CN language GEN-CN Amis

k-u-ni a laciyo.
 NOM-CN-this LNK radio
 ‘I use this radio to learn the language of Amis.’

b. **Sa-ka-fanaq** aku t-u-ni a dmak....
 InA-KA-know 1S.GEN NOM-CN-this LNK matter
 ‘The reason why I know about this matter....’

²⁵ The two predicates are actually derived from *sa-* + *mi-sadak* ‘get something out’ and *sa-* + *ma-sadak* ‘appear; come/go out’.

Both predicates in (6.42) are derived from the same root *fanaq* ‘know’. For the derived activity verb in (6.42a), the modifying sub-event is the preferred reading, if not the only reading.²⁶ However, for the state predicate in (6.42b), only the reason reading is possible. Another clue that helps disambiguate the readings of a *sa-* applicative form lies in the context. The *sa-* verb with the modifying sub-event LS only co-occurs with NPs denoting the instrument or means, but the *sa-* verb with the reason LS can show up with an NP or a full-fledged clause denoting the reason. This is illustrated in the contrast between (6.40e) and (6.40g). Finally, when the *sa-* applicative form is affixed with the optative mood markers *-aw* and *-an*, only the reason LS is allowed, but not the modifying sub-event. This can be observed from the following WH-questions:

- (6.43)a. U maan k-u **sa-pi-nanum-aw** isu?
 CN what NOM-CN InA-PI-water-MOOD 2S.GEN
 ‘Why did you want to drink it?’
- b. U maan k-u **sa-ka-fanaq-aw** isu
 CN what NOM-CN InA-PI-know-MOOD 2S.GEN
- ci sawmah-an?
 PPN Sawmah-DAT
 ‘Why did you want to know about Sawmah?’

As illustrated in the data, both WH-questions are about the inquiry for “reason”, not a tool or means denoted by a modifying sub-event.

In the two semantic representations, it is either the lowest ranking argument of **pred₂**’ or LS₂ that is chosen to be the undergoer, or the whole LS₂ when it is constructed like a nominal clause (e.g. (6.40f)). This undergoer will be marked by the nominative case as the applicative form is a UV predicate by default. In other words, it has its own construction-specific properties regarding undergoer assignment, though it follows the

²⁶ The two *sa-* predicates are respectively derived from *sa-* + *mi-fanaq* ‘learn’ and *sa-* + *ma-fanaq* ‘know’.

UV case marking pattern. These properties are recorded in the constructional schema in

Table 6.5:

Table 6.5 Constructional Schema for Amis Instrumental Applicative

Construction: Amis instrumental applicative

Syntax:

Template: default

Linking:

Undergoer: the lowest ranking argument in **pred₂'**, or LS₂ after **BECAUSE'**, or the whole LS₂

Morphology:

sa- (*ka-/pi-*) root

Semantics:

(6.39)

PSA is an instrument, reason, motivation, or indirect cause

Pragmatics:

Illocutionary force: unspecified

Focus Structure: PSA = unspecified

The specific undergoer assignment of the instrumental applicative construction is specified in the linking part in the schema. In addition, the schema also records the morphological information and the semantic representations that are specific to this construction.

6.2.2 The Locative Applicative Constructions

Although both *sa-* and *-an* are analyzed as applicative markers, they behave rather differently regarding the following syntactic structures. First, while *sa-* can co-occur with the UV markers *ma-* and *-en*, these two voice markers may not occur with *-an*. This co-occurrence restriction suggests that the UV markers and *-an* applicative might overlap to a certain extent regarding their functions. Second, while *sa-* can appear on the main predicate in the imperative construction, *-an* is never found on an imperative predicate: Compare:

- (6.44)a. Aka **sa-pi-litek-en** k-u-ra caklis
 NEG.IMP InA-PI-chop.tree-UV NOM-CN-that ax

 t-u-ra kilang!
 DAT-CN-that tree
 ‘Don’t use that ax to chop down the tree!’
- b. **Ka-i** **tira** mi-litek t-u-ra kilang!
 KA-PREP there NEUT-chop DAT-CN-that tree
 ‘Chop that tree **there!**’
- c. **Ka-i** **demiq** mi-tangtang t-u hemay!
 KA-PREP kitchen NEUT-cook DAT-CN rice
 ‘Cook the meal **in the kitchen!**’
- d. *Pi-tangtang-an t-u hemay k-u demiq.
 PI-cook-LA DAT-CN rice NOM-CN kitchen
 ‘Cook the meal in the kitchen!’
- e. *Mi-adup-an k-u fafuy n-u lutuk!
 MI-hunt-LA NOM-CN pig GEN-CN mountain
 ‘Go to hunt the mountain pig!’

As shown in (6.44a), the *sa-* applied verb can be imperativized. However, in an imperative sentence concerning a particular location, a serial verb construction is used with the prepositional phrase functioning as the main imperativized predicate, as shown in (6.44b-c), but the *-an* verb is not used in this context as shown in (6.44d-e). The purposive applicative *mi-...-an* has never been found in the imperative form, either. The different behavioral properties of *sa-* and *-an* suggest that there are finer distinctions among these applicative markers.

As mentioned at a couple of places in earlier discussion, there are three possible interpretations that go with the locative applicative constructions, depending on the affixes co-occurring with *-an*. To facilitate the discussion, let us term them purposive-locative applicative, patient-locative applicative, and location-locative

applicative²⁷ respectively. The comparison among the three interpretations is summarized in Table 6.6:

Table 6.6 The Co-occurring Affixes and the Readings of the Locative Applicative Constructions

Form \ Reading	purposive-locative	patient-locative	location-locative
<i>mi-...-an</i>	✓	✓	x
<i>-um-...-an</i>	x	✓	x
<i>ka-...-an</i>	x	✓	✓
<i>ka-...-um-...-an</i>	x	x	✓
<i>pi-...-an</i>	x	x	✓

As shown in Table 6.6, the readings of purposive and patient seem to be almost in complementary distribution with the reading of location; that is, it is quite unlikely for the form that gets the purposive/patient reading to also get the location reading. The only exception is found with *ka-...-an*, of which both readings are found in the data. The distinction between the patient-locative *ka-...-an* and the location-locative *ka-...-an* lies in the semantics of the verb that *-an* attaches to. For two-place *ma-* predicates (e.g. *ma-ulah* ‘like’(AV)), their *ka-...-an* forms (e.g. *ka-ulah-an* ‘the one liked’) usually affect the status of the patient, while for one-place predicates (e.g. *ma-lahok* ‘have lunch’), their *ka-...-an* forms tend to add a location or time to the core (e.g. *ka-lahok-an* ‘time or place for having lunch’). Another way of telling which reading between the two that a *ka-...-an* form is likely to get is to check whether the verb can also have a *mi-...-an* applicative form. If the same verb also has a *mi-...-an* locative applicative form, then its *ka-...-an* form tends to be the location-locative applicative. For instance, from the root *tayal* ‘work’, one can derive both *mi-tayal-an* and *ka-tayal-an*; with the former, it is the work that is done gets the nominative case, while with the latter, it is the location where the work is carried out gets the nominative case, not the work.

²⁷ The locative applicative construction can also add a temporal NP to the core of the verb. such examples will be treated as a type of location-locative applicative.

As shown in Table 6.6, the purposive-locative reading is only associated with *mi-...-an*. This exclusiveness is definitely attributed to the purposive component inherent in *mi-*. Furthermore, while a *mi-...-an* verb can be either a purposive-locative applicative or a patient-locative applicative, it is the former usually goes with the *mi-...-an* form of one-place predicates (e.g. *mi-cikay-an* ‘something got by running’ from *cikay* ‘run’). The three sub-types of locative applicative constructions will be discussed in the following sections.

6.2.2.1 The Location-Locative Applicative Construction

Consider the following examples repeated from Chapter 3:

- (6.45)a. Mi-adup Ø-ci mama t-u fafuy i
 AV-hunt NOM-PPN father DAT-CN pig PREP
- lutuk.
 mountain
 ‘Father is going to hunt the (mountain) pig in the mountain.’
- b. **Pi-adup-an** n-i mama t-u fafuy *k-u-ni*
 PI-hunt-LA GEN-PPN father DAT-CN pig NOM-CN-this
- lutuk.
 mountain
 ‘This mountain is where Father hunted the boar.’

As illustrated in (6.45), the locative form *pi-adup-an* makes a non-argument (i.e. *lutuk* ‘mountain’ marked by the preposition *i* in (6.45a)) a core argument and an undergoer (marked by the nominative case in (6.45b)). As there is always a location participant or temporal participant in the location-locative construction, the semantic structures of *pi-...-an*, *ka-...-an*, *ka-...-um-...-an* predicates can be represented as (6.46) (VV 2005:194, 207).

(6.46) The LS of the *pi-...-an, ka-...-an, ka-...-um-...-an* location-locative applicative:

be-LOC'/TEMP' (z, [LS₁])

Following (6.46), the LS of (6.45b) is given in (6.47b):

(6.47) a. Pi-adup-an n-i mama t-u fafuy
 PI-hunt-LA GEN-PPN father DAT-CN pig

k-u-ni **lutuk.**
 NOM-CN-this mountain
 'This mountain is where Father hunted the boar.'

b. **be-LOC'** (lutuk, [**do'** (mama, [**hunt'** (mama, fafuy))])])

As mentioned earlier, with the location-locative applicative, it is always the location element or the temporal element (i.e. the *z* argument in (6.46)) that is chosen to be the undergoer; as for the actor, it is the highest ranking argument in the embedded LS. This constructional-specific property is recorded in the following constructional schema:

Table 6.7 Constructional Schema for Amis Location-Locative Applicative

Construction: Amis location-locative applicative

Syntax:
 Template: default
 Linking:
 Undergoer: the first argument of **be-LOC'/TEMP'**

Morphology:
ka-/pi - root-*an*, *ka-root-<um>...-an*

Semantics:
 (6.46)
 PSA is a place or time

Pragmatics:
 Illocutionary force: unspecified
 Focus Structure: PSA = unspecified

6.2.2.2 The Purposive-Locative Applicative Construction

As for the purpose applicative construction, it is only found with *mi-...-an*, as illustrated in (6.48):

- (6.48)a. **Mi-cikay-an**/?**c-um-ikay-an** aku i pitilidan
 MI-run-LA run<UM>-LA 1S.GEN PREP school

k-u-ni *a* *cuudad*.
 NOM-CN-this LNK book
 ‘This is the book that I ran to school to get.’ (i.e. I ran to school for this book.)
- b. **Mi-radiw-an** aku *k-u-ni*.
 MI-song-LA 1S.GEN NOM-CN-this
 ‘This is what I sing.’
 ‘This is what I got by singing.’ (i.e. ‘I sang for (getting) this.’)

In (6.48), the argument bearing the nominative case indicates the purpose of the action, and only the *mi-...-an* form can be used if one wants to refer to this participant, as seen in (6.48a), in which the *-um-...-an* form is rendered problematic. It is not surprising, as *mi-* contains a purposive element in its logical structure, which has been shown in Chapter 4. Adopting the format that Jolly (1993:302) postulates to represent the purposive function of the preposition *for* in English, we may represent the LS of the purposive-locative applicative *mi-...-an* as (6.49):

(6.49) **The LS of *mi-...-an* purposive-locative applicative:**

[**do'** (x, [...]) PURP [BECOME **have'** (x, y)]

The unspecified **pred'** following **do'** (i.e. [...] in the LS) is supplied by the predicate that *-an* attaches to. The LS in (6.49) is illustrated in (6.50):

- (6.50) a. **Mi-cikay-an** **aku** i pitilidan *k-u-ni* a
 MI-run-LA 1S.GEN PREP school NOM-CN-this LNK

 cuudad
 book
 ‘This is the book that I ran to school to get.’
 (i.e. I ran to school for this book.)
- a'. [**do'** (aku, [**run'** (aku)])] & INGR **be-at'** (pitilidan, aku)] PURP [BECOME **have'** (aku, cuudad)]

- b. **Mi-radiw-an** aku k-u-ni.
 MI-song-LA 1S.GEN NOM-CN-this
 ‘This is what I got by singing.’ (i.e. ‘I sang for (getting) this.’)

- b’. [**do’** (aku, [**sing’** (aku)])] PURP [BECOME **have’** (aku, kuni)]

For the purposive applicative, the undergoer will always be the lowest ranking argument of BECOME **have’**, while the actor is the highest ranking argument in the LS. Its constructional schema is provided below:

Table 6.8 Constructional Schema for Amis Purposive-Locative Applicative Construction

Construction: Amis purposive-locative applicative

Syntax:

Template: default

Linking:

Undergoer: the lowest ranking of BECOME **have’**

Morphology:

mi- root *-an*

Semantics:

(6.49)

PSA is the goal of a purpose

Pragmatics:

Illocutionary force: unspecified

Focus Structure: PSA = unspecified

6.2.2.3 The Patient-Locative Applicative Construction

Unlike the above-discussed applicative constructions that add a non-argument to the verb, the patient applicative *-an* does not necessarily involve any addition of an argument.

Compare the following examples:

- (6.51)a. **Mi-adup** Ø-ci aki **t-u-ra** **fafuy** **n-u** **lutuk.**
 AV-hunt NOM-PPN Aki DAT-CN-that pig GEN-CN mountain
 ‘Aki is going to hunt/is hunting that mountain pig.’

- a’. **Mi-adup-an** n-i aki *k-u-ra* *fafuy* *n-u*
 MI-hunt-LA GEN-PPN Aki NOM-CN-that pig GEN-CN

mountain.

‘Aki hunted that mountain pig.’

‘That mountain pig is what Aki hunted.’

a''. **Ma-adup** n-i aki *k-u-ra* *fafuy* *n-u*
 UV-hunt GEN-PPN Aki NOM-CN-that pig GEN-CN

lutuk.

mountain

‘Aki hunted the mountain pig.’

b. **R-um-akat** kaku *t-u* *lalan* *n-u*
 walk<AV> 1S.NOM DAT-CN road GEN-CN

sa-ka-tayra

InA-KA-go.there

i

PREP

wuciya.

Wuciya

‘I am walking on the road that is going to Wuciya.’

b'. **Mi-rakat-an** tu n-i aki *k-u-ni* *a*
 MI-walk-LA ASP GEN-PPN Aki NOM-CN-this LNK

lalan.

road

‘Aki has already walked on this road.’

b''. **Ma-rakat** tu aku *k-u-ni* *a* *lalan.*
 UV-walk ASP 1S.GEN NOM-CN-this LNK road

‘This road has been walked on by me.’

The above two sets of examples display the AV, patient-locative applicative UV, and the plain UV versions of two verbs. As seen in (6.51a') and (6.51b'), the argument that bears the nominative case in the patient-locative applicative construction is the same as the argument that is marked by the nominative case in the plain UV constructions in (6.51a'') and (6.51b''). These plain UV sentences indicate that the patient argument is in the core already. Hence, the *mi-...-an* applicative form does not add a core argument to the verb it attaches to; instead, it performs a different function by making an NMR argument a macrorole. As one may compare the (plain) AV verbs in (6.51a) and (6.51b) and the applied versions in (6.51a') and (6.51b), the same argument is a non-macrorole in the AV verb, as it is marked by the dative case, but it becomes a macrorole in the patient-locative applicative construction, as it is marked by the nominative case in the UV

constructions in (5.51a') and (5.51b'). In other words, for two-place predicates, their patient-locative applicative involves no addition of the core arguments, and it follows the default macrorole assignment rules discussed in Chapter 5 (Figure 5.1 and Principle A of the undergoer selection) and case marking rules of UV verbs stated in (5.54). The function of the patient-locative applicative construction is quite different from the other two locative applicatives discussed earlier; the patient-locative primarily makes a non-undergoer core argument become an undergoer, while the purposive-locative and the location-locative make a non-argument a core argument, which then also becomes the undergoer.

Now let us consider the functions performed by the locative applicatives of three-place predicates. To begin with, consider the three-place predicates marked by *mi-* exemplified in (6.52):

- (6.52)a. Cimanan kisu mi-caliw t-u paysu?
 who.DAT 2S.NOM AV-borrow DAT-CN money
 'From whom are you going to borrow the money?'
- b. U maan k-u **mi-caliw-an** isu i widang?
 CN what NOM-CN MI-borrow-LA 2S.GEN PREP friend
 'What is that that you borrowed from the friend?'
- c. Cima k-u **pi-caliw-an/*mi-caliwa-an** isu
 who.NOM NOM-CN PI-borrow-LA/MI-borrow-LA 2S.GEN
 t-u paysu?
 DAT-CN money
 'Who is the one you borrow the money from?'
- d. *Cima k-u **mi-aca-an** n-u-ra kaying
 who.NOM NOM-CN MI-buy-LA GEN-CN-that young.lady
 t-u hana?
 DAT-CN flower
 'Who is the one that young lady bought the flowers from?'

For the *mi-* verb exemplified above, the patient-locative applicative *mi-...-an* only promotes a NMR core argument to become a macrorole, but not adding a non-argument into the core. That is why only the lowest ranking core argument (e.g. the theme NP in (6.52b)) can co-occur with the patient-locative applicative *mi-...-an* and gets promoted to become a macrorole. As for an adjunct-like source NP in (6.52a),²⁸ it can only co-occur with the location-locative applicative *pi-...-an* for the enhancement of its status but not the patient-locative applicative *mi-...-an*, as illustrated in (6.52c) and (6.52d).

With *pa-* three-place predicates, the patient-locative applicative is allowed to be associated with either the second highest ranking argument (e.g. the recipient NPs in (6.53a) and (6.54a)) or the lowest ranking argument in the LS (e.g. the theme NPs in (6.53b) and (6.54b)). Consider:

- (6.53)a. Ci panay k-u **pa-fli-an** aku t-u
 PPN Panay NOM-CN CAU-give-LA 1S.GEN DAT-CN
- paysu, ca'ay-ay ka Ø-ci aki.
 money NEG-FAC KA NOM-PPN Aki
 'It is Panay that I gave the money to, not Aki.'
- b. U paysu k-u **pa-fli-an** aku ci aki-an,
 CN money NOM-CN CAU-give-LA 1S.GEN PPN Aki-DAT
- ca'ay-ay k-u ucya.²⁹
 NEG-FAC NOM-CN tea
 'It is money that I gave Aki, not tea.'
- (6.54)a. Cima k-u **pa-nanum-an** nira t-u-ni
 who.NOM NOM-CN CAU-water-LA 3S.GEN DAT-CN-this
- sayta?
 soda
 'Who is the one that he gave this soda to drink?'

²⁸ The adjunct-like properties of this NP have been discussed in Chapter 5. To begin with, it can be marked by the preposition. Furthermore, it is never chosen to be the undergoer in the plain UV construction.

²⁹ I don't know why the structure after *ca'ay-ay* is not *ka ku ucya*.

- b. U maan k-u **pa-nanum-an** nira ci
 CN what NOM-CN CAU-water-LA 3S.GEN PPN

aki-an?
 Aki-DAT
 ‘What is that he gave Aki to drink?’

As illustrated in (6.53) and (6.54), the two non-actor participants of *pa-* three-place predicates can both co-occur with the applicative marker *pa-...-an*, regardless whether the predicate has a default undergoer choice or not. For example, as discussed in Chapter 5, the verb *pa-nanum* ‘give water’ selects the second highest ranking argument (i.e. the recipient or the beneficiary) in the LS as the undergoer in the plain UV construction, which indicates the relative importance of this second highest ranking argument over the lowest ranking argument (i.e. the theme or the patient). However, with the *-an* applicative construction, their different degrees of importance have been neutralized. The same neutralization is also found with *pa-fli* ‘give’, which favors the second highest ranking argument as the undergoer in the UV constructions, though the lowest ranking argument is also possible.

Now consider the examples with *pa-pi-* verbs:

- (6.55)a. ??Cima k-u **pa-pi-nanum-an** nira
 who.NOM NOM-CN CAU-PI-water-LA 3S.GEN

t-u-ra soda
 DAT-CN-that sayta?
 ‘Who is the one that he asked to go to drink that soda?’

- a’. U maan k-u **pa-pi-nanum-an** nira ci aki-an?
 CN what NOM-CN CAU-PI-water-LA 3S.GEN PPN Aki-DAT
 ‘What is that he asked Aki to go to drink?’

- b. **Pa-pi-ka’en-an** n-i ina kaku t-u futing.
 CAU-PI-eat-LA GEN-PPN mother 1S.NOM DAT-CN fish
 ‘Mother asked me to go to eat fish.’

It seems that applicative form *pa-pi-...-an* is favored to be used to promote the status of the lowest ranking argument (e.g. the theme NP in (6.55a')), as the co-occurrence of *pa-pi-...-an* with the second highest ranking argument is rendered marginal with some *pa-pi-* verbs (e.g. *pa-pi-nanum* in (6.55a)), though it is perfectly acceptable for other *pa-pi-* verbs (e.g. *pa-pi-ka'en* in (6.55b)). This inconsistency is not surprising, as the second highest ranking argument is the only undergoer choice in the plain UV structures of *pa-pi-* verbs, as pointed out in Chapter 5. The prominent status of this argument may make its co-occurrence with the applicative form a bit unnatural.

Judging from all the three-place predicates discussed above, it seems that the unmarked target choice of the patient-locative applicative form is the lowest ranking argument, though the second highest ranking argument is also possible. The macrorole assignment rules for patient applicative verbs are recorded in the constructional schema in Table 6.9:

Table 6.9 Constructional Schema for Amis Patient-Locative Applicative

Construction: Amis patient-locative applicative

Syntax:

Template: default

Linking:

Undergoer: the lowest ranking argument in LS (default) or
the second highest ranking argument in LS

Morphology:

mi- root-*an*; *ka-* root-*an*; *-um-* root-*an*; *pa-* root-*an*

Semantics:

LS same as the unapplied verbs

PSA is the patient, theme, or recipient

Pragmatics:

Illocutionary force: unspecified

Focus Structure: PSA = unspecified

Based on the constructional schemas proposed above for the applicative constructions, we can see that all of these applicative forms will affect the choice of the undergoer; in other words, with the affixation of the applicative markers, there will be a

specified choice of undergoer, either from an added core argument or from an NMR direct core argument. Although these applicative constructions differ among themselves regarding the choice of the undergoer, they all follow the same case assignment rules and have the case marking patterns for UV verbs, as one can see from the schemas.

Before ending the discussion in this section, there are a few additional comments I would like to make regarding these applicative constructions, especially the patient-locative applicative construction. To begin with, as exemplified in (6.51), this construction overlaps with the plain UV verbs for having the same PSA argument. In spite of this similarity, these two constructions differ from each other pragmatically. One of such pragmatic differences is that the applicative form can also be used as a nominal structure, but it is rare, if not impossible, to find the plain UV form being used nominally without any additional affixes such as the factual marker *-ay*. This difference has been mentioned in the discussion of the relative clause. Another distinction lies in the different information focus provided by the two forms. As remarked by the informants, the plain UV form is used when the focus is on the completion of the event, while the applicative is used when the focus is on the relation between arguments. This is illustrated in the following examples:

(6.56)a. Q: **Anu hakuwa** kisu mi-adup t-u fafuy?
 when what.time 2S.NOM AV-hunt DAT-CN pig
 ‘When will you go to hunt (mountain) pigs?’

A: **Ma-adup** aku k-u fafuy.
 UV-hunt 1S.GEN NOM-CN pig
 ‘I have already hunted the (mountain) pigs.’

b. Q: **Nima** k-u-ni a fafuy?
 who.GEN NOM-CN-this LNK pig
 ‘Whose is this (mountain) pig?’

A: **Mi-adup-an** aku k-u-ni fafuy.
 MI-hunt-LA 1S.GEN NOM-CN-this pig
 ‘This pig is that I hunted.’

The answer denoted by the plain UV form in (6.56a) emphasizes the completion of the event, as a response to a question relevant to the event time. On the contrary, the question in (6.56b) focuses on the ownership of a certain object, and thus an appropriate answer for this question will be the patient-locative applicative form, which shows the relation between the actor and the undergoer.

Besides the applicative constructions, there is another mechanism that can affect the status of an argument in a sentence, namely, the voice constructions. They will be examined in the following section.

6.3 Voice Constructions

RRG approaches the issue of voice constructions by discussing the two functions that voice constructions may play cross-linguistically. These two functions are referred to as PSA modulation and argument modulation. PSA modulation voice permits an argument other than the default argument in terms of the selection hierarchy stated in (6.20) to function as the PSA. As for the argument modulation voice, it gives a non-canonical realization to a macrorole argument by either realizing the macrorole as an oblique element (e.g. the passive construction of English.) or stripping a macrorole argument of its macrorolehood (e.g. the antipassive construction of Kalkatungu as discussed in VV 2005:98 and 117 (Footnote 16))

There are two voice constructions in Amis: the actor and the undergoer voice constructions. The two voice constructions will be discussed in the following sections. In particular, I will argue that the AV constructions perform both PSA modulation and

argument modulation functions. Furthermore, I will show that the UV construction might appear to be the marked voice choice for some predicates that usually appear with the AV pattern by default, though presumably the UV construction should be treated as the basic pattern of Amis, judging from the case marking pattern and default voice choice of the applicative constructions. Therefore, I argue that Amis, in spite of displaying ergative features in the case marking system and in some grammatical constructions such as relative clauses, exhibits a split system in verbal morphology; both the actor voice and undergoer voice are two basic voice forms.³⁰ Besides discussing the characterizations of the voice constructions, I will also examine two constructions exhibiting the voice changes without the affixation of the voice markers.

6.3.1 The Actor Voice Constructions

In Chapter 5, a set of case marking rules (i.e. (5.52)) has been postulated and the application of the rules to verbs with different voice morphology has been demonstrated. AV verbs always have a nominative-dative case marking pattern, as they only have one macrorole, which is assigned the nominative case, and the NMR argument is marked by the dative case. The voice marking function of the AV affixes is demonstrated in their co-occurrence with the volitative mood marker *-aw*. This mood construction has been discussed in Chapter 3. Some of the examples are repeated below:

(6.57)a. Nanum-aw ho aku.
 water-MOOD ASP 1S.GEN
 ‘I will go drink water first.’ (Volitative mood, UV)

a’. **Mi**-nanum-aw ho kaku.
 AV-water-MOOD ASP 1S.NOM
 ‘I will go drink water first.’ (The water is further away than #a.)

³⁰ Based on this proposal, I have maintained the terminology of actor voice and undergoer voice in the discussion, instead of using undergoer voice and antipassive voice, or actor voice and passive voice.

As shown in (6.57a), the suffix *-aw* manifests an optative reading for the derived verb. Notice that the case marking pattern is the UV pattern, as the actor is marked by the genitive case. However, when the *V-aw* form is affixed with *mi-*, the case marking pattern becomes the AV pattern, as the actor is marked by the nominative case. This contrast shows the voice marking function of *mi-*. By the same token, the following two pairs of examples in (6.57b-b') and (6.57c-c') indicate the voice operation function of *-um-* and *ma-*, as they both can change the case marking pattern when they attach to the verbs.³¹

(6.57)b. Ka'en-aw aku k-u dateng.
 eat-MOOD 1S.GEN NOM-CN vegetable
 'I will try that vegetable.' (Volitative mood, UV)

b'. **K-um-**a'en-aw k-u wawa t-u sapaiyu.
 eat<AV>-MOOD NOM-CN child DAT-CN medicine
 '(I am) afraid that the child will take the medicine.'

c. Ulah-aw aku kisu?
 like-MOOD 1S.GEN 2S.NOM
 'May I go to love you?' (Volitative mood, UV)

c'. **Ma-**ulah-aw kaku tisunan.
 AV-like-MOOD 1S.NOM 2S.DAT
 'I am afraid that I will like you.'

The volitative mood constructions in (6.57) demonstrate the voice marking function of the three AV affixes. But, what kind of functions do the AV constructions perform?

Clearly, the AV constructions have a PSA modulation function, as it makes a marked choice of PSA in terms of the PSA selection hierarchy. Given the fact that Amis displays strong ergative features in at least the case marking system and some constructions that involve a PSA such as the relative clause and the nominal type of

³¹ Notice that the interpretation of the mood may become the timerative reading when the actor is not the first person, as seen in (6.57b') and (6.57c').

WH-question, one would expect the lowest ranking argument to be the unmarked PSA choice. But, in the AV construction, it is the highest ranking direct core argument that is chosen to be the PSA.

What about the argument modulation function? For a two-place predicate, the lowest ranking direct core argument in the AV sentences should be assigned an undergoer based on the macrorole assignment principles discussed in Chapter 5, as such verbs can at most take two macroroles. However, this argument does not surface as a macrorole syntactically, as revealed by its case marking and the fact that its semantic status can be promoted by the patient-locative applicative construction. This argument is realized as an NMR core argument in the AV constructions. Its core argument status is indicated by its behavioral property in serving as a semantic controller in the persuade-type control construction. In other words, the lowest ranking argument of a two-place predicate has been stripped of its macrorole status by the AV operation. Hence, the AV constructions also perform an argument modulation function. This function is even more salient for three-place predicates, as a possible undergoer can also be marked by the preposition in the AV construction in addition to the dative case. Consider the following examples:

(6.58)a. **Pa-caliw** \emptyset -ci kacaw *t-u* *singsi* t-u
 CAU-borrow NOM-PPN Kacaw DAT-CN teacher DAT-CN

paysu.
 money
 ‘Kacaw lent the teacher money.’ (Causative, AV)

b. **Pa-caliw** \emptyset -ci kacaw t-u *paysu* *i*
 CAU-borrow NOM-PPN Kacaw DAT-CN teacher PREP

singsi.
 teacher
 ‘Kacaw lent the money to the teacher.’

c. Aka **pa-caliw-en** *k-u* *singsi* t-u
 NEG.IMP CAU-borrow-UV NOM-CN teacher DAT-CN

paysu!
 money
 ‘Don’t lend the teacher money!’

As shown in the above examples, the recipient NP *singsi* can be marked either by the dative case or the preposition in the AV constructions. This NP is the second highest ranking argument in the LS of *pa-caliw* ‘lend’, and it is also a possible undergoer, as indicated in the UV sentence in (6.58c). The presumable undergoer NP is realized as non-macrorole in the AV construction in (6.58a), but it is realized as an adjunct in (6.58c), as the preposition *i* typically marks a locative NP in the periphery. From the above discussion, one can thus conclude that the actor voice not only modulates the PSA choice but also modulates the semantic status of a core argument by either stripping a macrorole argument of its macrorolehood, or realizing a core argument as an oblique element.

6.3.2 The Undergoer Voice Constructions

As mentioned, the UV pattern is deemed as the default pattern in Amis. The default, unmarked nature of the UV construction is proven by the fact that this voice is the unmarked voice of the applicative constructions even when the UV markers do not show up. Although the UV pattern enjoys an unmarked status in Amis, there are some predicates that seem to take the AV pattern by default, and for such predicates, UV appears to be a marked pattern.

Such predicates can be illustrated by the *pa-* verbs. Consider the following examples of a *pa-* verb plus the volitative mood suffix *-aw*:

(6.59)a. **Pa-nanum** kaku t-u kulong.
 CAU-water 1S.NOM DAT-NCM water.buffalo
 ‘I feed water buffalo water.’ (Causative, AV)

- b. **Pa-nanum-aw** ho aku *k-u* *kulong*.
 CAU-water-AW ASP 1S.GEN NOM-CN water.buffalo
 ‘I will feed the water buffalo water first.’ (Volitative, UV)
- c. **Mi-pa-nanum-aw** ho *kaku* t-u *kulong*
 AV-CAU-water-AW ASP 1S.NOM DAT-CN water.buffalo
 ‘I will go to feed water buffalo water first.’

Recall that in the previous section, I have shown that when a root form is attached with *-aw*, it takes the UV pattern. As shown in (6.59a), the *pa-* predicates appear with the AV case marking pattern (i.e. Nominative-Dative). However, when they are suffixed with *-aw*, the case marking pattern becomes the UV pattern. In other words, the *pa-* predicates behave like a bare root form in the volitative mood construction, as one can compare (6.59b) with (6.57a). When the volitative form is affixed with *mi-*, the case pattern becomes the AV pattern again. These examples show that unlike *mi-*, *pa-* does not have a voice marking function. However, *pa-* verbs follow the AV pattern by default. To make *pa-* verbs appear in the UV pattern, the plain UV markers or the applicative forms have to be used. Morphologically, the AV pattern appears to be the default pattern of *pa-* verb, while the UV pattern is a marked one. However, syntactically, the UV forms actually turn a marked pattern (i.e. AV) into an unmarked one. This may explain why the UV form *pa-...-en* is found much more frequently than the plain *pa-* forms in Amis, as pointed out by Starosta (1974) and my investigation also confirms this finding.

Another example for verbs taking the AV pattern by default is found with two-place AV *ma-* verbs, especially psych-predicates such as *ma-ulah* ‘like’ and *ma-fanaq* ‘know’. Some of these predicates have an undergoer form *ma-ka-*, as illustrated below:

- (6.60)a. *Ma-ulah kaku ci panay-an*
 AV-like 1S.NOM PPN Panay-DAT
 ‘I like Panay.’

- a'. Ma-ka-ulah aku Ø-ci panay.
 UV-KA-like 1S.GEN NOM-PPN Panay
 'Panay is liked by me.'
 'I like Panay.'
- b. Ma-fanaq kaku t-u-ra tamdaw.
 AV-know 1S.NOM DAT-CN-that person
 'I know that person.'
- b'. Ma-ka-fanaq n-u tao k-u-ra demak.
 UV-KA-know GEN-CN other NOM-CN-that thing
 'That matter was discovered by others.'

We have shown that the prefix *ma-* has a voice marking function in the discussion of the *-aw* examples in (6.57c) and (6.57c'). The examples in (6.60) show that an UV marker (i.e. *ma-* in *ma-ka-*) is required to make these verbs appear in the UV pattern.

Morphologically, the UV form appears to be the marked one. Notice that, however, the situation of these AV *ma-* verbs differs from the *pa-* verbs in terms of the following features. First, unlike *pa-* verbs, the *ma-* verbs still keep their AV pattern when appearing with the volitive suffix *-aw*, as seen in (6.57c'). Second, unlike *pa-...-en* or *ma-pa-* verbs, these *ma-ka-* UV forms are not found as frequently in the data, and as remarked by the informants, some of them seem innovative. This implies a pragmatically more marked status of these *ma-ka-* forms, though they actually follow the default case marking pattern of this language.

A possible account for the infrequency of the UV form of these *ma-* verbs may be due to the fact that the majority of these verbs do not have **do'** in their logical structures, as these verbs are mostly state predicates. In other words, the highest ranking core argument of these *ma-* verbs is not very actor-like, and according to the macrorole assignment rules, this argument would have been assigned an undergoer macrorole, not an actor. Although the actor status of the highest ranking core argument of such verbs

has been discussed in the section of psych-predicates in Chapter 4, these verbs are not typical examples of AV verbs, as they are cases of violation of macrorole assignment principles. This atypical property of such AV verbs might account for why their UV version is less frequently found.

These two sets of verbs, *pa-* verbs and *ma-* psych-predicates (mostly), indicate that UV is a morphologically more marked form for them. As for other types of verbs, there is no such indication for which voice is a marked one in terms of morphological marking. This observation leads us to conclude that Amis presents a split system in the verbal morphology. Nevertheless, based on the varieties of UV marking (e.g. *ma-*, *-en*, and two applicative markers) and the case marking patterns discussed in Chapter 5, the undergoer voice still display more features to be the unmarked one.

6.3.3 Other Constructions Exhibiting Voice Changes

In addition to the sentences marked by the voice affixes, there are some constructions that also exhibit voice oppositions without the affixation of any voice markers. Two of them have been mentioned in Chapters 3 and 4: the ideophone-forming construction and the optative mood constructions.

The voice differences in the ideophone-forming construction are signaled by the choice of the predicates that introduce the ideophones. As mentioned in Chapter 4, there are two such predicates: *sa/saan* and *han*, both of which are rendered as ‘say so’ and both of which can introduce a direct quote during narration. The structure following *sa* or *saan* appears with the AV pattern, while the one following *han* shows up with the UV pattern. Examples follow:

- (6.61) a. Sa/Saan Ø-ci sawmah cingraan.
 say.so/said.so NOM-PPN Sawmah 3S.DAT
 ‘I want to say/said so to him.’ (AV)
- b. Han n-i sawmah cingra.
 say.so GEN-PPN Sawmah 3S.NOM
 ‘Sawmah said so to him.’ (UV)
- c. Sa-rayaray sa kita pa-sasuluy t-u-ni
 form-row say.so 1P.INCL.NOM CAU-pass DAT-CN-this
- a anengang i tiya alamkam.
 LNK chair PREP there fast
 ‘Let’s line up (and in this way) and we can pass this quickly.’ (AV)
- d. Sa-rayaray han ita pa-sasuluy k-u-ni
 form-row say.so 1P.INCL.GEN CAU-pass NOM-CN-this
- a anengang itiya kalamkam.
 LNK chair ITIYA fast
 ‘Let’s line up (and in this way) and we can pass this quickly.’ (UV)

As shown in (6.61a-b), when the two quotative verbs *sa/saan* and *han* are used independently, they also exhibit voice oppositions, and such oppositions are also found in their respective ideophone-forming constructions in (6.61c-d). Moreover, as seen in the forms of the quotative verb, there is no special marker that particularly indicates the voice operation; these two verbs seem to be individual verbs with their own default choice of voice patterns and, again, exemplify a case of a morphological split in Amis.

The other construction is the optative mood construction *sa-...-aw* and *sa-...-an* mentioned in Chapter 3. The examples are given again in (6.62):

- (6.62) a. Sa-pi-nanum-aw n-u wawa t-u-ni/
 InA-PI-water-MOOD GEN-CN child DAT-CN-this/
- *k-u-ni sayta.
 NOM-CN-this soda
 ‘The child wants to drink this soda.’ (UV)
 (indicating stronger desire and a more specific and remote desired object)

- a'. Sa-pi-nanum-an k-u wawa t-u-ni sayta.
 InA-PI-water-MOOD NOM-CN child DAT-CN-this soda
 'The child wants to drink this soda.' (AV)
- b. Sa-ka-fanaq-aw aku (i) kisuwannan/*kisu.
 InA-KA-know-MOOD 1S.GEN PREP 2S.DAT 2S.NOM
 'I want to know you.' (UV)
- b'. Sa-ka-fanaq-an kaku (i) kisuwannan.
 InA-KA-know-MOOD 1S.NOM PREP 2S.DAT
 'I want to know you.' (AV)
- c. Sa-ka-orad-aw n-u kakarayan/romi'ad.
 InA-KA-rain-MOOD GEN-CN sky/day
 'It looks like rain.' (UV) (indicating an unexpected weather change)
- c'. Sa-ka-orad-an k-u kakarayan/romi'ad.
 InA-KA-rain-MOOD NOM-CN sky/day
 'It looks like rain.' (AV)

While the *sa-...-an* clearly shows an AV pattern, the UV counterpart *sa-...-aw* exhibits a rather interesting pattern of genitive-dative, instead of the genitive-nominative pattern that one would expect to find in a UV construction. As proposed in Chapter 3, this modal expression is composed of the applicative marker *sa-* and the mood markers *-aw* or *-an*. The *sa-* applicative gives a natural account for the genitive-dative pattern that *sa-...-aw* verbs have, as in an instrumental applicative UV construction, the lowest ranking argument in the LS is marked by the dative case but not the nominative case. The nouns or pronouns in (6.62a) and (6.62b) both denote the lowest ranking argument in the LS of the verb. Interestingly, the argument that is supposed to be marked by the nominative does not show up in the sentence. However, it surfaces in the WH-questions in (6.63):

- (6.63)a. U maan k-u **sa-pi-ala-aw** isu?
 CN what NOM-CN InA-PI-take-MOOD 2S.GEN
 'Why did you want to take it?'
 *'What do you want to take?'

- b. U maan k-u **sa-ka-fanaq-aw** isu
 CN what NOM-CN InA-PI-know-MOOD 2S.GEN
- ci sawmah-an?
 PPN Sawmah-DAT
 ‘Why did you want to know about Sawmah?’

The data in (6.63) show that the covert argument in (6.62) can be displaced to form the WH-question, and this argument denotes a kind of reason. It is impossible to interpret this displaced argument as the lowest ranking argument of *ala* ‘take’ or *fanaq* ‘know’. If one wants to form a question for this lowest ranking argument, the verbal type of WH-question will be used but not the nominal type. This feature indicates that the lowest ranking argument is now an oblique argument in the sentence.

- (6.64)a. Sa-ka-fanaq-an kisu t-u maan?
 InA-KA-know-MOOD 2S.NOM DAT-CN what
 ‘What do you want to know?’

- a’. *U maan k-u sa-ka-fanaq-an kisu?
 CN what NOM-CN InA-KA-know-MOOD 2S.NOM
 ‘What do you want to know?’

- b. Sa-ka-fanaq-aw isu t-u maan?³²
 InA-KA-know-MOOD 2S.GEN DAT-CN what
 ‘What do you want to know?’

- c. Sa-pi-palu-an cimanan Ø-ci panay?
 InA-PI-beat-MOOD who.DAT NOM-PPN Panay
 ‘Who does Panay want to beat?’

Like the AV and UV constructions discussed earlier, *sa-...-an* and *sa-...-aw* also perform PSA modulation function. This PSA modulation function of *sa-...-aw* is illustrated in (6.63) in which only the undergoer can be the pivot in this nominal type

³² Notice that this sentence is not acceptable if the one that is questioned is human (i.e. who), as seen below. I have no explanation for this.

- (6.65) b’. *Sa-ka-fanaq-aw isu cimanan?
 InA-KA-know-MOOD 2S.GEN who.DAT
 ‘Who do you want to know?’

WH-question. The PSA modulation function of *sa-...-an* is illustrated in (6.65):

(6.65)a. Ma-liyang-ay k-u **sa-pi-nanum-an**
 NEUT-disobedient-FAC NOM-CN InA-PI-water-MOOD

t-u 'epah a wawa.
 DAT-CN wine LNK child
 'The child who wanted to drink alcohol is disobedient.'

a'. *Ma-liyang-ay k-u **sa-pi-nanum-aw**
 NEUT-disobedient-FAC NOM-CN InA-PI-water-MOOD

t-u 'epah a wawa
 DAT-CN wine LNK child
 'The child who wanted to drink alcohol is disobedient.'

b. Cima k-u **sa-ka-sadak-an?**
 who.NOM NOM-CN InA-KA-appear-MOOD
 'Who wants to go out?'

b'. *Cima k-u **sa-ka-sadak-aw?**
 who.NOM NOM-CN InA-KA-appear-MOOD
 'Who wants to go out?'

As illustrated in the RC and WH-questions in (6.65), only the actor of *sa-...-an* can be the pivot in the two grammatical constructions.

Since both *sa-...-aw* and *sa-...-an* are related to the instrumental applicative construction *sa-*, it is quite natural to find the function of argument modulation of these two forms, as now the lowest ranking argument (i.e. the patient) is marked by the dative case and treated as an oblique argument, as shown in the verbal type of WH-questions in (6.64). However, unlike the argument modulation that has been discussed for the AV verbs such as *mi-* and *pa-*, the undergoer (i.e. the reason NP) in the AV form *sa-...-an* is not stripped of its undergoer status. Consider the following sentences:

(6.66)a. U maan k-u sa-pi-nanum-an isu t-u-ni
 CN what NOM-CN InA-PI-water-MOOD 2S.GEN DAT-CN-this

a 'epah?
 LNK wine
 'Why do you want to drink this wine?'

b. Tati'ih-ay k-u sa-pi-palu-an isu t-u
 bad-FAC NOM-CN InA-PI-beat-MOOD 2S.GEN DAT-CN

wawa (a dmak).
 child LNK matter
 'The fact that you want to beat the child is bad.'

c. Fangcal-ay k-u sa-ka-fanaq-an isu t-u
 good-FAC NOM-CN InA-KA-know-MOOD 2S.GEN DAT-CN

caciyaw n-u pangcah.
 language GEN-CN Amis
 'It is a good thing that you want to know the language of Amis.'

Although the form *sa-...-an* is used in the sentences in (6.65), the WH-question and the relative clauses are not about the actor; rather, they are all about the covert instrumental undergoer NP of *sa-...-an*. In other words, this covert undergoer can serve as a pivot in the *sa-...-an* sentences. Notice that the actor NP of *sa-...-an* is marked by the genitive case rather than the nominative case, and this case marking makes *sa-...-an* appear like a UV form. It seems that the form *sa-...-an* allows variable linking to the PSA; that is, it can be an AV verb that follows the nominative-dative pattern, or a UV verb that has the genitive-dative pattern with a covert nominative NP. The actor PSA is exemplified in (6.65a) and (6.65b), and the undergoer PSA is illustrated in (6.66). Unfortunately, I do not have a good explanation for this peculiar property of *sa-...-an* and the factors that may affect the variable linking. Nevertheless, my data shows that the AV pattern is found more commonly with *sa-...-an*. I will leave these issues for further research.

6.4 Summary

In this chapter, I have examined whether grammatical relations exist in Amis and other related phenomena such as applicative constructions and voice operations. The following claims and analyses have been made in the discussion. First, regarding the existence of grammatical relations in Amis, it is subject to different constructions. For constructions like the relative clause and the nominal type of displacement and WH-question, there are syntactic pivots involved in these constructions, and hence, one may claim that there is a subject-like grammatical relation in these constructions. However, there are constructions such as control constructions and reflexivization that cannot be adequately accounted for by a grammatical-relation based analysis; these constructions may involve controllers or pivots that are not defined syntactically. Second, the semantic representations of the applicative constructions have been worked out, and the constructional schemas that record the properties specific to these constructions have been established in our discussion. In particular, I have proposed two logical structures for the instrumental applicative: the modifying sub-event and the reason, and the choice between the two depends on the semantics of the source predicates and other contextual factors. As for the locative construction marked by *-an*, I have shown that there are three sub-types of this applicative constructions: locative, purposive, and patient, depending on the co-occurring affix with *-an*, and their differences can be found in their respective constructional schema. Finally, regarding the voice operations, I have claimed that the AV construction performs both functions of PSA modulation and argument modulation. I have also shown that, although Amis presents ergative features in the case marking pattern and in the two grammatical constructions that involve a PSA,

it exhibits a split system in verbal morphology, since some predicates such *pa-* verbs and some *ma-* psych-predicates appear with AV by default, not UV. Finally, I have discussed two constructions that display voice changes without the affixation of voice affixes: the *sa* and *han* constructions and the optative mood expressions *sa...-aw* and *sa...-an*. The discussion of *sa* and *han* sentences provides another piece of evidence for a morphologically split system in Amis, as there is no evidence indicating which voice is the basic one for the two predicates. As for *sa...-aw* and *sa...-an*, though they display voice oppositions between UV and AV, the AV form *sa...-an* seems to allow variable linking to the PSA and may function like a UV construction sometimes. For this pair of predicates, UV seems to be the basic pattern.

Chapter 7

Conclusion

This dissertation has explored the following three issues related to the verbal semantics and syntax of Amis within the framework of Role and Reference Grammar (VVLP 1997; VV 2005): verb classification, case marking, and grammatical relations. Although these three issues have been discussed to various degrees of thoroughness in the previous research related to the Amis grammar, most of these studies share the following similarities in their approaches and analyses. First, most of them employ the voice (focus) morphology, semantic features (e.g. transitivity parameters in Hopper and Thompson 1980), and/or case frames as the major criteria for classifying the verbs. Second, most of these studies propose a four-voice or four-focus system (most commonly agent, patient, instrument, and locative) for Amis, and the semantic roles are mainly discussed under the thematic relations related to the voice distinctions. Third, most of these studies acknowledge the existence of an accusative case in the case marking system of Amis, which implies an accusative system or a split ergative system in this language. Finally, most of these studies explicitly or implicitly regard the NP marked by the nominative case as the grammatical subject of Amis, but the behavioral properties of a “subject” have not been thoroughly explored to prove the existence of a grammatical relation in Amis.

The RRG framework offers perspectives remarkably different from the approaches or frameworks adopted in the previous research regarding the analyses of the three issues mentioned above. To begin with, verbs are classified into different classes based on the Aktionsart features such as dynamicity, telicity, and punctuality. This approach was

firstly proposed by Vendler (1967) and later elaborated by Dowty (1979). RRG further expands it by incorporating two more classes, active accomplishment and semelfactive, into Vendler's four basic classes: states, activity, achievement, and accomplishment.

The features of each class are given in Table 7.1:

Table 7.1 Aktionsart Features of Each Verb Class

Class	Aktionsart Features
State	[+static], [-dynamic], [-telic], [-punctual]
Activity	[-static], [+dynamic], [-telic], [-punctual]
Achievement	[-static], [-dynamic], [+telic], [+punctual]
Semelfactive	[-static], [\pm dynamic], [-telic], [+punctual]
Accomplishment	[-static], [-dynamic], [+telic], [-punctual]
Active Accomplishment	[-static], [+dynamic], [+telic], [-punctual]

These classes can be differentiated by a set of tests that are designed to diagnose the features displayed in Table 7.1. Each verb is represented in a decomposition-based logical structure, as shown in Table 7.2:

Table 7.2 Lexical Representations for Aktionsart Classes

Verb Class	Logical Structure (LS)
State	predicate' (x) or (x, y)
Activity	do' (x, [predicate' (x) or (x, y)])
Achievement	INGR predicate' (x) or (x, y), <i>or</i> INGR do' (x, [predicate' (x) or (x, y)])
Semelfactive	SEML predicate' (x) or (x, y), <i>or</i> SEML do' (x, [predicate' (x) or (x, y)])
Accomplishment	BECOME predicate' (x) or (x, y), <i>or</i> BECOME do' (x, [predicate' (x) or (x, y)])
Active Accomplishment	do' (x, [predicate₁' (x) or (x, y)]) & INGR predicate₂' (z, x) or (y)
Causative	α CAUSE β , where α , β are LSs of any type

Furthermore, semantic roles are examined in terms of generalized semantic roles, termed macroroles, in addition to thematic relations. The former consists of two macroroles, actor and undergoer, while the latter is composed of the five possible argument positions in the logical structures, and these positions respectively subsume a group of thematic relations that are adopted in traditional grammar. The assignment of

an argument as a certain macrorole makes crucial reference to the Actor-Undergoer Hierarchy (AUH) in Figure 7.1:

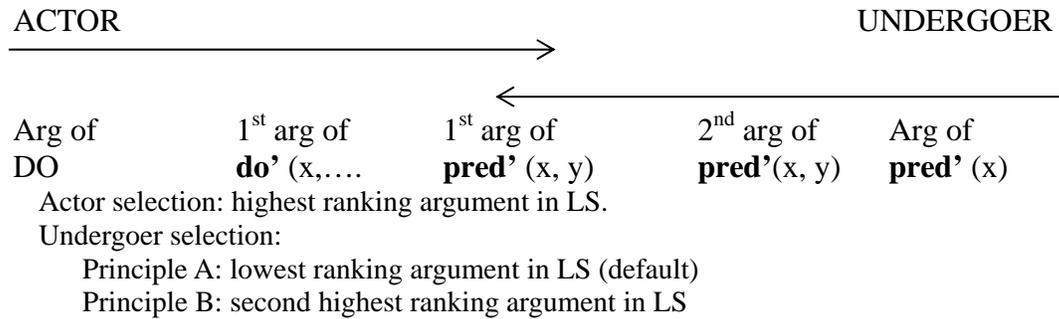


Figure 7.1 Actor-Undergoer Hierarchy (AUH, VV 2005:126)

The notion of macrorole is extremely important in the discussion of case assignment, the definition of transitivity, and the examination of subject properties. Unlike most of the previous works that define the transitivity in terms of the semantic valence of a verb, RRG defines the transitivity of a verb based on the number of macroroles it takes. This is referred to as macrorole transitivity (M-transitivity), in which there are three possibilities: M-transitive (for two-macrorole verbs), M-intransitive (for one-macrorole verbs), and M-atransitive (for zero-macrorole verbs).

Finally, RRG also offers a rather different perspective of looking into the grammatical relations in a language. This framework does not view grammatical relations as a basic component for a language system, nor does it regard grammatical relations as a universal. On the contrary, grammatical relations are treated as construction-specific phenomena, and in fact, many grammatical phenomena in a language can be accounted for solely by semantic roles without an additional postulation of a grammatical relation. There is only one syntactic function posited in RRG, termed privileged syntactic argument (PSA), which refers the restricted neutralization of semantic roles for syntactic purposes. There are two types of privileged arguments:

controller and pivot. Privileged arguments of a certain construction can be defined semantically, syntactically, or pragmatically. Only a syntactically defined privileged argument is deemed as a kind of grammatical relation, but it only makes sense for the construction containing that argument, not the whole language.

Incorporating the aforementioned RRG viewpoints, this dissertation has proposed the following analyses and claims for the Amis grammar. First, I have argued that there are only two voice oppositions in Amis: actor voice and undergoer voice. The so-called instrumental voice and locative voice are analyzed as applicative constructions, and they follow UV pattern by default. This new analysis is presented in Table 7.3 and 7.4, which are repeated from Tables 3.13 and 3.14:

Table 7.3 Amis Voice Markers

Actor Voice (AV)	<i>mi-</i>	<i>-um-</i>	<i>ma-</i>
Undergoer Voice (UV)	<i>ma-</i>	<i>ma-</i> <i>ma-...-um-</i>	<i>ma-ka-</i>
	<i>-en</i>		<i>-en</i> <i>ka-...-en</i>

Table 7.4 Amis Applicative Markers and the Co-occurring Affixes

Instrumental applicative	<i>sa-pi-, sa-ka-, sa-ka-...-um-</i>			
Locative Applicative	Goal	<i>mi-...-an</i>		
	Patient	<i>mi-...-an</i>	<i>-um-...-an</i>	<i>ka-...-an</i>
	Location	<i>pi-...-an</i>	<i>ka-...-um-...-an</i>	<i>ka-...-an</i>

The voice markers exhibit robust derivational functions in addition to their inflectional property of indicating voice operations. The applicative makers promote the semantic status of an NP by either making a non-argument become a core argument, or an NMR core argument become a macrorole. The promoted NP will be the undergoer of the sentence, and it is marked by nominative case.

Besides, this dissertation has also proposed a new analysis for the case marking system in Amis; in particular, the so-called accusative/locative case in Amis is treated as

dative case in the new analysis. Following this proposal, I have argued that the two-place predicates that follow the AV case marking pattern (i.e. nominative-dative) should be M-intransitive, as the dative NP is not a macrorole. That is, the AV verbs pattern like intransitive verbs in Amis, and the marking of the S argument in both types of verbs is the same as the undergoer in a UV verb; Amis exhibits an ergative pattern in terms of case marking. This is shown in the following table:

Table 7.5 Transitivity and Case Patterns: An Ergative Pattern in Amis

Voice	Case Pattern and Macrorole	M-transitivity	Ergative Pattern
AV	Nominative-Dative (actor) (NMR argument)	M-intransitive	Nominative-Dative S_A - NMR argument
Neutral	Nominative (actor or undergoer)	M-intransitive	Nominative S_A or S_U
UV	Genitive-Nominative (actor) (undergoer)	M-transitive	Genitive- Nominative A_T U_T

Employing the decompositional modal of RRG, I have proposed the following logical structures for the voice affixes, as listed in Table 7.6.

Table 7.6 The Logical Structures of The Voice Affixes

Affix	Voice	Logical Structures
<i>mi-</i>	AV	(do' (x, [go' (x)]) & INGR be-at' (z, x)) PURP) do' (x, [pred' (x, y)]) (<i>motional/purposive</i> activity)
<i>-en (-en1)</i>	UV	DO (x, [do' (x, [pred' (x, y)])]) ...BECOME (pred' (y)) (<i>agentive active/causative accomplishment</i>)
<i>ma-1</i>	AV or NEUT	do' (x, [pred' (x, (y))]) (<i>activity</i>)
<i>ma-2</i>	AV or NEUT	INGR/BECOME (pred' (x, (y))) (<i>result state</i>)
<i>ma-3</i>	UV	do' (x, [pred' (x, y)]) ...BECOME (pred' (y)) (<i>active/causative accomplishment</i>)
<i>ma-4</i>	AV or NEUT	pred' (x, (y)) (<i>transient/plain state</i>)

This decompositional analysis helps us better understand the properties of these affixes, such as their TAM inferences reported in Zeitoun et al. (1996) and Tsukida (1993) and their derivational functions. Furthermore, I have also utilized the following diagnostic tests to differentiate the verb classes in Amis:

Table 7.7 Tests for Amis Aktionsart Classes

Criterion	States	Activities	Accomp	Achieve	Seml	Active Accomp
1. Occurs with <i>X ccay tu</i> <i>tatukain</i> “for an hour”	Yes*	Yes	irrelevant*	No	Yes*	irrelevant*
2. Occurs with <i>X i ccay</i> <i>tatukian</i> “in an hour”	No	No	Yes	No*	No	Yes
3. Occurs with adverbs like <i>harakat</i> “quickly”, <i>rara saan</i> “slowly”, etc.	No	Yes	Yes	No*	No*	Yes
4. Occurs with <i>tu</i>	change of state	perfectiveness or inception of activity	inception of activity or result state	result state	inception of activity	completion of the activity
5. Occurs with <i>ho</i>	continuing state	anticipatory telic point or progressive	anticipatory telic point or DNA (ma-)	iterative	anticipatory telic point or iterative*	iterative
6. The Reading of <i>X sa</i>	on-going state	on-going activity	result state	iterative	iterative	irrelevant

Almost all of the major Aktionsart classes are found in Amis, though the distinctions among some classes such as accomplishments and result states, and semelfactives and achievements are not very clear sometimes.

Following the identification of the verb classes, I have discussed the macrorole assignment for verbs with different numbers of core arguments, especially verbs that display a mismatch between syntactic transitivity and macrorole transitivity. I have argued that both the two-place and three-place AV verbs are M-intransitive. Furthermore, I have also shown that both Principle A and Principle B of undergoer selection based on the Actor-Undergoer Hierarchy are required in Amis to account for the case marking patterns of the three-place UV predicates. In other words, Amis presents a mixed type of undergoer selection, though it behaves more like a primary object language. The following set of case assignment rules is proposed for Amis based on the case assignment rules for ergative languages proposed in RRG:

(7.1) Case Assignment Rules in Amis

- a. Assign nominative case to the lowest macrorole argument in terms of (5.58)¹
- b. Assign genitive case to the other macrorole argument.
- c. Assign dative case to other direct core argument (s)

Besides the rules in (7.1), two sets of rules that account for the case pattern of *-en* verbs and the assignment of the preposition *i* have also been postulated. The rules are listed in (7.2) and (7.3) respectively.

(7.2) Case Assignment Rules for Verb Marked by *-en*

- a. Assign genitive case to the highest ranking macrorole in terms of (5.58)
- b. Assign nominative case to the other macrorole argument.
- c. Assign dative case to other direct core argument (s).

(7.3) Preposition Assignment Rules for Amis

Assign the preposition *i* to the first argument of ...**pred'** (x, y)... if it is a non-macrorole argument:

- (i) obligatory if **pred'** (x, y) = **pred-loc'** (x, y), x = common noun
- (ii) optional if **pred'** (x, y) = **pred-loc'** (x, y), x = personal proper noun
- (iii) optional if **pred'** (x, y), **pred'** = cognition, possession, and perception

The above three sets of rules can account for the major case marking patterns of the participants in Amis.

The last major chapter of this dissertation probed the existence of grammatical relations in Amis. I have shown that except for the relative clause and the nominal type of displacement construction in which there exists a subject-like grammatical relation (i.e. a syntactic PSA) and this grammatical relation has an ergative pattern, other constructions that have been examined such as control, reflexivization, and pivots in consecutive clauses mostly have semantic controllers and/or pivots. I have also stipulated constructional schemas for the instrumental applicative and the locative applicative constructions. For the instrumental applicative, two logical structures have been proposed (i.e. modifying sub-event and reason), and three (i.e. location, goal, and patient)

¹ (5.58) refers to the PSA selection hierarchy of RRG.

have been proposed for locative applicative to fully account for their functions and semantics. This dissertation ended with the discussion of the voice constructions in Amis. I have argued that the AV construction performs both PSA modulation and argument modulation functions, while the UV, in spite of being the default pattern, may appear to be the marked voice choice for some verbs, which indicates that Amis presents a split-ergative system morphologically, though syntactically it is ergative. The functions of voice constructions in Amis are summarized in Table 7.8, and the discussion of the ergativity in Amis is summarized in Table 7.9:

Table 7.8 Functions of Voice Constructions in Amis

	PSA Modulation	Argument Modulation
AV Constructions	Yes. Allowing the actor, but not the default argument in terms of the selection hierarchy, as the PSA	Yes. Realizing the undergoer as a non-macrorole argument
(Plain) UV Constructions	NA (basic voice)	NA (basic voice)
Applicative UV Constructions	NA (basic voice)	Yes. Allowing a marked choice of the undergoer

Table 7.9 Split-Ergativity in Amis

Grammatical Phenomena	AV Pattern	UV Pattern
Voice Morphology	basic	basic
Voice Oppositions		basic
Case Marking		basic
Grammatical Relations (in RC and WH-Q formation)		basic

Although the issues investigated in this dissertation are not unfamiliar, yet with the different perspectives and insights provided by RRG, we have achieved a better and more thorough understanding about the verbal syntax and semantics of Amis. The decompositional model of verbal analysis helps us more adequately describe the important derivational functions of the voice affixes. The incorporation of the notion macrorole lets us more accurately identify the different semantic status of the NPs and the

transitivity value of a sentence, and consequently elucidate the ergative nature of Amis. Finally, discussing the phenomenon of grammatical relations by means of examining the privileged arguments of different constructions makes it possible to avoid the potential problems of identifying the NP marked by the nominative case as the only argument with the subject properties in Amis. These problems were long ago pointed out in Schachter (1977) for Tagalog, a language genetically related to Amis.

References

- Anward, Jan. 2000. A dynamic model of part-of-speech differentiation. In Petra M. Vogel and Bernard Comrie (eds), *Approaches to Typology of Word Classes*, 3-45. Berlin: Mouton de Gruyter.
- Blake, Barry J. 1994. *Case*. Cambridge: Cambridge University Press.
- Blust, Robert. 1998. A note on covert structure: Ca- reduplication in Amis. *Oceanic Linguistics* 38.1:168-174
- _____. 1999. Subgrouping, circularity and extinction: some issues in Austronesian comparative linguistics. In Elizabeth Zeitoun and Pau Jen-kuei Li (eds), *Selected Papers from the Eighth International Conference on Austronesian Linguistics*, 31-94. Taipei: Institute of Linguistics, Academia Sinica.
- Chang, Yung-li. 1997. *Voice, Case, and Agreement in Seediq and Kavalan*. Hsinchu: National Tsing-hua University Ph.D. Dissertation.
- _____. 2006. Complex predicates in some Formosan languages. Paper presented at the 10th International Conference of Austronesian Linguistics (10-ICAL), Puerto Princesa, Philippines.
- Chang, Yung li, Chih-chen Jane Tang, and Dah-an Ho. 1998. A study of noun-class marker in Kavalan and some other Formosan languages. *Language and Linguistics* 2.1:1-20.
- Chen, Teresa. 1987. *Verbal Constructions and Verbal Classification in Nataoran-Amis*. Pacific Linguistics C-85. Canberra: The Australian National University

- Childs, Tucker. 1994. African ideophones. In Leanne Hinton, Johanna Nicholas, and John Ohala (eds), *Sound Symbolism*, 178-204. New York: Cambridge University Press.
- Chu, Ching-yi. 2005. *Amis Lexical Structure--An Anthropological-Linguistic Study* (In Chinese). Hualian: National Dong Hwa University MA Thesis.
- Clark, Eve V. 1978. Locational: existential, locative, and possessive Constructions. In Joseph H. Greenberg (ed.), *Universals of Human Language Vol.4: Syntax*. Stanford: Stanford University Press.
- Croft, William. 2000. Parts of speech as language universals and as language-particular categories. In Petra M. Vogel and Bernard Comrie (eds), *Approaches to Typology of Word Classes*, 65-102. Berlin: Mouton de Gruyter.
- Dixon, R. M. W. 1977. Where have all the adjectives gone? *Studies in Language* 1.1: 19-80.
- Doke, Clement. 1935. *Bantu Linguistic Terminology*. London: Longman, Green.
- Dowty, David. 1979. *Word meaning and Montague Grammar*. Dordrecht: Reidel.
- Dryer, Matthew. 1986. Primary objects, secondary objects, and antitativity. *Language* 62.4:808-845.
- Evans, Bethwyn and Malcolm Ross. 2001. The history of proto-oceanic *ma-. *Oceanic Linguistics* 40.2:269-290
- Ferrell, Raleigh. 1969. *Taiwan Aboriginal Groups: Problems in Cultural and Linguistic Classification*. Institute of Ethnology, Academia Sinica, Monograph No. 17. Taipei: Academia Sinica.

- Fey, Virginia. 1986. *Amis Dictionary*. Taipei: Evangelical Alliance Mission.
- Fillmore, Charles J. 1968. The case for case. In Emmon Bach and Robert Harms (eds), *Universals in Linguistic Theory*, 1-88. New York: Holt, Reinhart and Winston.
- Foley, William A. and Robert D. Van Valin, Jr. 1984. *Functional Syntax and Universal Grammar*. Cambridge: Cambridge University Press.
- French, Koleen Matsude. 1988. The focus system in Philippine languages: an historical overview. *Philippine Journal of Linguistics* 18.2 & 19.1:1-27.
- Guerrero Valenzuela, Lilián and Robert Van Valin Jr. (2004). Yaqui and the analysis of primary object languages. *International Journal of American Linguistics* 70:290-319.
- Harvey, Mark. 1982. Subgroups in Austronesian. In Amran Halim, Lois Carrington, and S.A. Wurm (eds), *Papers from the Third International Conference on Austronesian Linguistics, Vol. 2: Tracking the Travelers*. Pacific Linguistics C-75, 47-99. Canberra: The Australian National University.
- He, Ru-fen, Tseng Si-qi, Lin Deng-xian, and Tian Zhong-shan. 1986. *The Sketch of the Languages of Mountain Tribes (Amis)* (In Chinese). Beijing: Min-Zu Publishing Co.
- Himmelman, Nikolaus, P. (in press). Lexical categories and voice in Tagalog. In Peter Austin and Simon Musgrave (eds), *Grammatical Relations and Voice in Austronesian*. Stanford: CSLI.
- _____. 2002. Voice in western Austronesian: an update. In Fay Wouk and Malcolm Ross (eds), *The History and Typology of Western Austronesian Voice Systems*. Pacific Linguistics 518, 7-16. Canberra: The Australian National University.

- _____. 2005a. The Austronesian languages of Asia and Madagascar: Typological characteristics. In Alexander Adelaar and Nikolaus P. Himmelmann (eds) *The Austronesian Languages of Asia and Madagascar*. London/New York: Routledge, 110-181.
- _____. 2005b. Tagalog. In Alexander Adelaar and Nikolaus P. Himmelmann (eds) *The Austronesian Languages of Asia and Madagascar*. London/New York: Routledge, 350-376.
- Holisky, Dee A. 1987. The case of the intransitive subjects in Tsova-Tush (Batsbi). *Lingua* 71:103-132.
- Hopper, Paul J. and Sandra A. Thompson. 1980. Transitivity in grammar and discourse. *Language* 56:251-99.
- Huang, Lillian M. 1995. The case markers and pronominal system in Amis. *The Journal of National Chengchi University* 70:217-58.
- _____. 2000. Verb Classification in Mayrinax Atayal. *Oceanic Linguistics* 39.2:364-390.
- Huang, Shuanfan. 2005. Split O in Formosan languages--A localist interpretation. *Language and Linguistics* 6.4:783-806.
- Huang, Ya-jiun. 1988. *Amis Verb Classification*. Taipei: Fu-jen Catholic University MA Thesis.
- Jackendoff, Ray. 1969. *Some Rules of Semantic Interpretation for English*. Cambridge: MIT Ph.D. Dissertation.
- Jackendoff, Ray and Peter W. Culicover. 2003. The semantic basis of control in English. *Language* 79.3:517-556.

- Jeng, Heng-hsing. 1977. *Topic and Focus in Bunun*. Institute of History and Philology
Special Publication No. 72. Taipei: Academia Sinica.
- _____. 1981. Yami verbal classification and the co-occurrence of cases. *Philippine
Journal of Linguistics* 12.1.
- Jolly, Julia. 1993. Preposition assignment in English. In Robert Van Valin (ed.)
Advances in Role and Reference Grammar, 275-310. Amsterdam and Philadelphia:
John Benjamins,.
- Keenan, Edward. L. 1985. Relative clause. In Timothy Shopen (ed.), *Language
Typology and Syntactic Description, Volume II: Complex Constructions*, 141-70.
Amsterdam: John Benjamins Publishing Company.
- Lee, Hanjung. 1999. Aspectual and thematic licensing. *CLS 35: The Main Session*, 203-
222.
- Li, Paul J.-K. 1985. The position of Atayal in the Austronesian family. In Andrew
Pawley and Lois Carrington (eds), *Austronesian Linguistics at the 15th Pacific
Science Congress*. Pacific Linguistics C-88, 257-280. Canberra: The Australian
National University,
- _____. 1990. Classification of Formosan languages: lexical evidence. *Bulletin of the
Institute of History and Philology*, Academia Sinica, 56.4: 809-844.
- _____. 1997. A syntactic typology of Formosan languages -- case markers on nouns and
pronouns. In Chiu-yu Tseng (ed.), *Chinese Languages and Linguistic IV:
Typological Studies of Languages in China*, 343-378. Taipei: Academia Sinica.
- Liao, Hsiu-chuan. 2002. The interpretation of *tu* and Kavalan ergativity. *Oceanic
Linguistics* 41.1:140-158.

- _____. 2004. *Transitivity and Ergativity in Formosan and Philippine Languages*.
Honolulu: University of Hawai'i Ph.D. Dissertation.
- Lin, Michelle H. 1995. Two Amis suffixes: *-ay* and *-an*. *Studies in English Literature and Linguistics* 21:159-173.
- Liu, Dorinda Tsai-hsiu. 1999. *Cleft Constructions in Amis*. Taipei: National Taiwan University MA Thesis.
- Liu, Emma En-hsin. 2003. *Conjunction and Modification in Amis*. Hsinchu: National Tsing Hua University MA Thesis.
- Mairal, Ricardo and Pamela Faber. 2002. Functional Grammar and lexical templates'. In Ricardo Mairal and M. J. Pérez Quintero (eds), *New Perspectives on Argument Structure in Functional Grammar*, 39-94. Berlin/New York: Mouton de Gruyter,
- _____. 2005. Decomposing semantic decomposition: towards a semantic metalanguage for RRG. Paper presented at the 2005 International RRG Conference, Taipei: Academia Sinica.
- Parson, Terrence. 1990. *Events in the Semantics of English: A Study in Subatomic Semantics*. Cambridge: MIT Press.
- Payne, Thomas E. 1994. The pragmatics of voice in a Philippine language: actor-focus and goal-focus in Cebuano narrative. In Talmy Givon (ed.) *Voice and Inverse*. Amsterdam: John Benjamins Publishing Company, 317-364.
- _____. 1997. *Describing Morphosyntax: A Guide for Field Linguists*. Cambridge: Cambridge University Press.

- Przepiórkowski, Adam. 1999. *Case Assignment and the Complement-Adjunct Dichotomy: A Non-Configurational Constraint-Based Approach*. Tübingen: University of Tübingen Ph.D. Dissertation.
- Pustejovsky, James J. 1991. The generative lexicon. *Computational Linguistics* 17:409-441.
- _____. 1995. *The Generative Lexicon*. Cambridge: MIT Press.
- Reid, Lawrence A. 1982. The demise of Proto-Philippines. In Amran Halim, Lois Carrington, and S.A. Wurm (eds), *Papers from the Third International Conference on Austronesian Linguistic, Vol. 2: Tracking the Travelers*. Pacific Linguistics C-75, 201-216. Canberra: The Australian National University.
- Rijkhoff, Jan. 1992. *The Noun Phrase: A Typological Study of its Form and Structure*. Amsterdam: University of Amsterdam Ph.D. Dissertation.
- Ross, John Robert. 1967. *Constraints on Variables in Syntax*. Cambridge: MIT Ph.D. Dissertation.
- Schachter, Paul. 1977. Reference-related and role-related properties of subjects. In Peter Cole and J. M. Sadock (eds), *Syntax and Semantics, Vol. III: Grammatical Relations*, 279-306. New York: Academic Press.
- Shibatani, Masayoshi. (ed.) 1988. *Passive and Voice*. Typological Studies in Language 16. Amsterdam and Philadelphia: John Benjamins.
- Smith, Carlotta. 1997. *The Parameters of Aspect (2nd Edition)*. Dordrecht: Reidel.
- Starosta, Stanley. 1974. Causative verbs in Formosan languages. *Oceanic Linguistics* 13: 279-369.

- _____. 1988. *The Case for Lexicase: an Outline of Lexicase Grammatical Theory*. London and New York: Pinter.
- _____. 1995. A grammatical subgrouping of Formosan languages. In Paul J. K. Li, Cheng-hwa Tsang, Ying-kuei Huang, Dah-an Ho, and Chiu-yu Tseng (eds), *Austronesian Studies Relating to Taiwan*. Symposium Series of the Institute of History and Philology, Academia Sinica, No. 2, 683-726. Taipei: Institute of History and Philology, Academia Sinica.
- Starosta, Stanley, Andrew Pawley, and Lawrence Reid. 1982. The demise of Proto-Philippines. In Amran Halim, Lois Carrington, and S.A. Wurm (eds), *Papers from the Third International Conference on Austronesian Linguistic, Vol. 2: Tracking the Travelers*. Pacific Linguistics C-75, 145-170. Canberra: The Australian National University.
- Trask, R. L. 1993. *A Dictionary of Grammatical Terms in Linguistics*. London: Routledge.
- Tsai, Zhong-han and Si-qi Tseng, 1997. *The Structural Analysis of Amis Grammar* (In Chinese). Taipei: Taiwan Aboriginal Foundation.
- Tseng, Si-qi. 1991. *Amis Grammar* (in Chinese). Beijing: Central Min-zu College Press.
- Tsuchida, Shigeru. 1988. Amis. In Takashi Kamei, Rokuro Kono, and Eiichi Chino (eds), *The Sanseido Encyclopedia of Linguistics Vol. 1: Languages of the World, Part One*, 447-449. Tokyo: Sanseido Press.
- Tsukida, Naomi. 1993. The use of *-en* form in Fataan-Amis. *Asian and African Linguistics* 22:123-40.

- _____. 2005a. Seediq. In Alexander Adelaar and Nikolaus Himmelmann (eds), *The Austronesian languages of Asia and Madagascar*, 291-325. London and New York: Routledge.
- _____. 2005b. Verb classification in Seediq and Amis. Ms.
- Van Valin, Robert D., Jr. 1990. Semantic parameters of split intransitivity. *Language* 66.2: 221-260.
- _____. (ed.) 1993. *Advances in Role and Reference Grammar*. Amsterdam and Philadelphia: John Benjamins.
- _____. 2005. *Exploring the Syntax-Semantics Interface*. Cambridge: Cambridge University Press.
- Van Valin, Robert D., Jr. and David P. Wilkins 1996. The case for 'effector': case roles, agents, and agency revisited. In Masayoshi Shibatani and Sandra Thompson (eds) *Grammatical Constructions*, 140-63. Oxford: Oxford University Press.
- Van Valin, Robert D., Jr. and Randy LaPolla. 1997. *Syntax: Structure, meaning and function*. Cambridge: Cambridge University Press.
- Vendler, Zeno. 1967. *Linguistics in philosophy*. Ithaca: Cornell Univ. Press.
- Walton, Charles. 1986. *Sama Verbal Semantics: Classification, Derivation, and Inflection*. Manila: Linguistic Society of the Philippines.
- Wang, Samuel Hsu. 1976. *The Syllable Structure of Fataan-Amis*. Taipei: National Taiwan Normal University MA Thesis.
- Wouk, Fay and Malcolm Ross (eds). 2002. *The History and Typology of Western Austronesian Voice Systems*. Pacific Linguistics 518. Canberra: The Australian National University.

- Wu, Joy Jing-lan. 1995. *Complex Sentences in Amis*. Taipei: National Taiwan Normal University MA Thesis.
- _____. 2000. *Amis Reference Grammar (in Chinese)*. Taipei: Yuan-liu Publishing Company.
- _____. 2001. Amis noun phrase structures: A Role and Reference Grammar analysis. Buffalo: University at Buffalo, the State University of New York Qualifying Paper.
- _____. 2003. Clausal modifiers in Amis. *Concentric: Studies in English Literature and Linguistics* 29.2: 59-81
- Yan, Zhi-kuang. 1992. *Syntactic Structure of Amis: A Study of Participants and Events (in Chinese)*. Taipei: National Chengchi University MA Thesis.
- Zeitoun, Elizabeth and Lillian Huang. 2000. Concerning *ka-*, an overlooked marker of verbal derivation in Formosan languages. *Oceanic Linguistics* 39.2: 393-414.
- Zeitoun, Elizabeth, Lillian M. Huang, Marie. M. Yeh, and Anna H. Chang. 1999. Existential, possessive, and locative constructions in Formosan languages. *Oceanic Linguistics* 38.1: 1-42.
- Zeitoun, Elizabeth, Lillian M. Huang, Marie. M. Yeh, Anna H. Chang, and Joy J. Wu. 1996. The temporal, aspectual and modal system of some Formosan languages: a typological perspective. *Oceanic Linguistics* 35.1: 21-56.

Appendix

Amis Text 1

Provided by: Hsiou-mei Lin (Ngaday)

1. **S-um-wal** **kaku** **t-u** **ca'ay** **ka-tawal** **a**
 say-AV 1S.NOM DAT-CN NEG KA-forget LNK

demak.

thing

‘I am going to talk about the unforgettable thing.’

2. **Su'elin** **tu,** **i** **tiya** **i** **ho,**¹ **u** **matu'asay** **mi-ucer**
 indeed ASP PREP here I ASP CN old.people AV-assign

i-tini **i** **tamiyanan** **a** **mi-pa-ka'en** **t-u**
 PREP-then PREP 1P.EXCL.DAT LNK AV-CAU-eat DAT-CN

kulong.

water.buffalo

‘Indeed, long long time ago, the senior would then assign us to feed the cattle.’

3. **Kami** **a** **fafahian** **tada** **ma-talaw** **a** **mi-pa-ka'en**
 1P.EXCL.NOM LNK womon very NEUT-afraid LNK AV-CAU-eat

t-u **kulong.**
 DAT-CN water.buffalo

‘We girls were very afraid to feed the cattle’

4. **Nawhani,** **tala-lutuk** **anu** **sa** **adihay** **k-u**
 why toward-mountain when SA many NOM-CN

holam.

Taiwanese.man

‘Why? On the way up to the mountain, there were sometimes many Taiwanese people.’

5. **Ci-roma,** **ma-la-litemoh** **t-u** **roma** **a** **kolong.**
 have-some.times NEUT-RECP-run.intoDAT-CN other LNK water.buffalo
 ‘Sometimes, we would accidentally run into others’ cattle.’

6. **I** **tira** **ho** **k-u** **ukang** **a** **ma-ca-curaq.**
 PREP then ASP NOM-CN ox LNK NEUT-RECP-fight
 ‘At that time, the oxen would fight with each other.’

¹ “*I tiya i ho*” is a fixed expression, meaning “long long time ago”.

7. **U-ra ho tangic u sa saan kami a**
 CN-that ASP cry CN SA said.so 1P.EXCL.NOM LNK
mi-hakelong t-u-ra kulong.
 NEUT-go.with DAT-CN-that water.buffalo
 ‘We wanted to cry then when following the cattle (and seeing them) fighting.’
8. **Tangasa-an u sa i pi-pa-ka’en-an t-u**
 arrive-AN CN SA PREP PI-CAU-eat-LA DAT-CN
kulong, anu cacay sa k-u tireng.
 water.buffalo when alone say.so NOM-CN body
 ‘...when it came to the time of feeding the cattle, we were all alone.’
9. **Ma-talaw aca, to’or sa kami t-u**
 NEUT-afraid only follow say.so 1P.EXCL.NOM DAT-CN
kolong a r-um-akat.
 water.buffalo LNK walk<NEUT>
 ‘We were very afraid, so I we walked following the cattle closely.’
10. **Nawhani, ma-talaw kami ira k-u**
 why NEUT-afraid 1P.EXCL.NOM exist NOM-CN
holam tu² i lutuk.
 Taiwanese.man ASP PREP mountain
 ‘Why? (It was because) we were afraid that there were already Taiwanese people in the mountain.’
11. **Saka, to’or han niyam k-u rakat n-u**
 so follow say.so 1P.EXCL.GEN NOM-CN walk GEN-CN
kolong.
 water.buffalo
 ‘So, we then followed the cattle’s footsteps closely.’
12. **Ma-tira ho ci-roma patadu-en niyam**
 NEUT-then ASP have-some.times help-UV 1P.EXCL.GEN
a mi-ala k-u talod a padteng
 LNK NEUT-take NOM-CN grass LNK intend

² Later corrected as “*ira tu ku holam...*”

kami a pa-fli a mi-pa-ka'en.
 1P.EXCL.NOM LNK CAU-give LNK NEUT-CAU-eat
 'At that time, we sometimes randomly got the grass and we intended to feed (the cattle with the grass).'

13. Ma-tira ho k-u pi-pa-pa'en niyam
 NEUT-then ASP NOM-CN PI-CAU-eat 1P.EXCL.GEN

t-u kolong.
 DAT-CN water.buffalo
 'At that time, that was the way we fed the cattle.'

14. Ma-ra'od sa tu k-u ka-lahok-an,
 NEUT-come.near say.so ASP NOM-CN KA-lunch-LA

ci-roma cacay a ma-lahok aro' sa i tira.
 have-some.times alone LNK NEUT-lunch sit say.so PREP there
 'When the lunchtime came, sometimes (I) sat there alone eating lunch.'

15. Araw han awa tu k-u maan-maan awa
 see say.so not.exist ASP NOM-CN what-RED not.exist

k-u dateng.
 NOM-CN vegetable
 '(I then) took a look, (and found that) there was nothing (in the lunchbox), no side dishes.'

16. Ci-roma ta'enu adiyam sa k-um-a'en.
 have-some.times only hot.peppers say.so eat-UM
 'Sometimes (I) only (had) hot peppers to eat.'

17. Ha-tira k-u roray n-u orip niyam
 like.that NOM-CN hardship GEN-CN life 1P.EXCL.GEN

i tiya i ho.
 PREP the PREP ASP
 'The hardship of our life in the past was just like that.'

18. Ma'edeng tu ha-ka-kerem n-u cidal,
 NEUT-enough ASP HA-KA-sun.set GEN-CN sun

mi-sa-tapang tu a mi-ala t-u
 AV-SA-start ASP LNK NEUT-take DAT-CN

'a-'orong-en³ a mi-nukay.
 RED-carry.on.the.shoulder-UV LNK NEUT-return
 'When it was about the sunset, (we) started to get the things to carry on the shoulders and go home.'

19. I tira ho mi-kasuy.
 PREP then ASP AV-woods
 'At that time, (we had to) pick up woods.'

20. Ma-fukil ho kami a mi-su'ot.
 NEUT-unable ASP 1P.EXCL.NOM LNK NEUT-tie.up
 'We didn't know how to tie up the woods.'

21. Pa-tedu han a mi-so'ot, ta mi-nukay
 CAU-do.at.random say.so LNK MI-tie.up then AV-return

sa tu ci-'enurong mi-koko
 say.so ASP have-things.to.carry.on.the.shoulder NEUT-drive.cattle

t-u kolong.
 DAT-CN water.buffalo

'We thus tied up the woods at random, and then went home with things carrying on the shoulders and drove the cattle (at the same time).'

22. Mala-litomah t-u alumna-ay kolong ma-talaw tu
 RECP-meet DAT-CN many-FAC water.buffalo NEUT-afraid ASP

i tira.
 PREP then

'(We) met many water buffalos of each other's; (we) were afraid at that time.'

23. Ma-talaw t-u ka-ca-curaq-an n-u kolong.
 NEUT-afraid DAT-CN KA-RECP-fight-LA GEN-CN water.buffalo

'We were afraid of the water buffalos' fighting with each other.'

24. Ha-tira u k-u nokay n-u niyam
 HA-then CN NOM-CN return GEN-CN 1P.EXCL.GEN

pa-ka'en t-u kolong.
 CAU-eat DAT-CN water.buffalo

'We fed the cattle on the way home like that at that time.'

³ This word means "things to be carried on the shoulders".

Amis Text 2:

Provided by: Jin-mei Li (Panay)

1. **Ya** **wawa n-i-ya** **Lao3-man3-niang2** **aku** **ira**
that child GEN-CN-that wife.of.the.owner 1S.GEN exist
- i** **ka-tayal-an** **aku** **i** **kakacawan,** **(ca'ay ka-ulah**
PREP work.place 1S.GEN PREP Kakacawan NEG KA-like
- k-u)**⁴ **anu** **pa-camul** **han i dateng** **k-u**
NOM-CN if CAU-add say.so PREP vegetable NOM-CN

tanaq, ca'ay ka-ulah k-um-a'en.
tanaq NEG KA-like eat<NEUT>.

'The children of the wife of the boss in my workplace in Kakacawan do not like to eat the dishes if she puts "tanaq" into dishes.'

2. **Sa-maan-maan-en** **k-u** **pi-sanga,** **ta** **ma-nga'ay**
SA-what-RED-UV NOM-CN PI-make then NEUT-good

ma-k-um-a'en⁵ **cangra** **t-u** **tanaq sa kaku.**
UV-eat<UM> 3P.NOM DAT-CN tanaq say.so 1S.NOM

'What should I do to make the dish, and then they are willing to eat tanaq?' so I asked.'

3. **U-ni-ni** **u** **tanaq letek** **han mi-letek** **u-ni**
CN-this-RED CN tanaq chop say.so NEUT-chop CN-this

halu-akaway **han nira** **mi-tangtang.**
HALU-straw say.so 3S.GEN NEUT-cook

'She then chopped the leaves of "tanaq" along with it straws, and then cooked (them).'

4. **Tenes** **han** **mi-tangtang** **k-u-ya** **tanaq.**
long.time so.said NEUT-cook NOM-CN-that tanaq
'Then (she) cooked the tanaq for a long time.'

5. **U-ya** **kuhaw** **nira** **urira** **tu** **(k-u**
CN-that soup 3S.GEN that.one TU NOM-CN

kaliling kaliling), **ka-camul** **i** **mi-safal-an** **t-u**
bean bean KA-add PREP MI-cook-APPL DAT-CN

⁴ The part in the parenthesis is irrelevant to the story; it either a false starter or slips of the tongue during the narration.

⁵ Later corrected as "kuma'en".

dateng, ta ma-ulah cingra k-um-a'en
 vegetable then AV-like 3P.NOM eat<NEUT>

t-u-ni-ni, u mi-ha'en-an.
 DAT-CN-this-RED CN MI-do.so-LA

‘She added the soup of the cooked tanaq to the cooked dish, and then he liked to eat that. That is what she did.’

6. **Anu tangtang han i dateng k-u tanaq, ca'ay**
 if cook say.so PREP vegetable NOM-CN tanaq NEG

ka-ulah k-um-a'en, sa mi-harateng kaku maan-maan-en
 KA-like eat<NEUT> so AV-think 1S.NOM what-RED-UV

k-u pi-tayal, ta ma-nga'ay k-um-a'en
 NOM-CN PI-work then NEUT-good eat<NEUT>

k-u-na wawa t-u tanaq sa kaku.
 NOM-CN-this child DAT-CN tanaq say.so 1S.NOM

‘When cooking the “tanaq” with the dish, (they) do not like to eat, so I was thinking what I should do, and then the children are willing to eat (it)...’ so I asked.

7. **Ha'en han aku mi-tangtang, sa ha'en han aku**
 do.so say.so 1S.GEN NEUT-cook so do.so say.so 1S.GEN

mi-pa-camul kiya kuhaw nira i tiya
 NEUT-CAU-add that.NOM soup 3S.GEN PREP there

i mi-safal-an.
 PREP MI-cook-LA

‘I then cooked it this way; I then added its soup to the cooked dish.’

8. **Ma-ulah k-u wawa aku saan kiya**
 AV-like NOM-CN child 1S.GEN said.so that.NOM

Lao3-man3-niang2 i raw i Kakacawan a pilafinan.
 wife.of.the.owner PREP there PREP Kakacawan LNK hotel.

‘My children like (it)’, said the wife of the owner of Kacacawan Motel.