VOICE AND VALENCE-ALTERING OPERATIONS IN FALAM CHIN: A ROLE AND REFERENCE GRAMMAR APPROACH

by

DEBORAH KING

Presented to the Faculty of the Graduate School of

The University of Texas at Arlington in Partial Fulfillment

of the Requirements

for the Degree of

DOCTOR OF PHILOSOPHY

THE UNIVERSITY OF TEXAS AT ARLINGTON

December 2010

DEDICATION

To my mother, who first taught me, and to my father, who now “knows as he is known” (I Corinthians 13:12).

ACKNOWLEDGEMENTS

> Where is God my Maker, who gives songs in the night, who teaches us more than the beasts of the earth and makes us wiser than the birds of the heavens?
>
> *Job 35:10-11*[1]

A few pages of acknowledgements are wholly inadequate to express my thanks to those who have labored with me on this dissertation. Truly God, the "giver of every good gift and every perfect gift" (James 1:17), has blessed me with every needed resource along the way. Apart from Him, I can do nothing (John 15:5); with Him, all things are possible (Matthew 19:26). He "hem[med] me in, behind and before, and [laid His] hand upon me" (Psalm 139:5). May He receive the glory.

Each member of my dissertation committee deserves special recognition for their unique contribution to the writing and refining of this work. Dr. Jerold A. Edmondson, my supervising professor, has been a constant encouragement from the beginning of my studies at the University of Texas at Arlington, with his enthusiasm for little-studied languages and for the thrill of discovery. I am especially grateful for his willingness to spend long hours fine-tuning various aspects of my discussion. I am also extremely grateful to Dr. Michael Boutin, who constantly went above and beyond the call of duty, giving me extensive help with formatting, always pointing me to helpful resources, and sharing with me his constant encouragement and enthusiasm for RRG. In addition, two members of my committee graciously agreed to join after the dissertation was already

[1] All Scripture references are taken from the English Standard Version.

underway. Dr. Colleen Fitzgerald's help with organization is much appreciated. Dr. Joey Sabbagh also spent many hours of discussion with me, encouraging me to rethink my assumptions and pushing me to sharpen and clarify my argumentation. Thank you all.

Furthermore, I would like to thank Dr. Don Burquest for his help in preparing and defending my proposal and Dr. Paul Kroeger for his help with my proposal, as well as his comments on Chapter 2 of this dissertation. Thanks are also due to Dr. Robert Van Valin, Jr., for reading my dissertation and returning helpful comments which have clarified my thinking on many aspects of RRG.

To each of my language consultants, to whom I owe much more than I can ever repay, I am more grateful than I can say. Thank you, Paul Van Hre, Dr. Mang Herh, Phun Khar Thang, Peter Lal Din Thar, Eunice Ngungte, Hniang Tum, and Samuel Ngun Thawm Lian. Your selfless sacrifice of your time, sharing of your knowledge, and commitment to the good of the Falam Chin people have touched and changed me. *Ka lung a awi zet.* A special thanks is due to Dr. Mang Herh, who painstakingly proofread and corrected all the examples used in this dissertation.

I am further grateful to the Dean of the College of Liberal Arts and to Drs. Ben and Trudy Termini for their provision of a travel grant to fund research travel to Burma. In addition, I would like to thank the Graduate School for a four year Graduate Fellowship and the Linguistics Department for the Dissertation Completion Fellowships which helped to fund my final year and a half of studies.

Last, but not least, I would like to thank all my dear family and friends who have prayed for me and encouraged me over these many years of seemingly interminable

study. My dear mother deserves special recognition for her emotional support through this journey and for letting me talk her ear off about linguistics all the time. Thanks, Mom—I love you.

November 2, 2010

ABSTRACT

VOICE AND VALENCE-ALTERING OPERATIONS

IN FALAM CHIN: A ROLE AND

REFERENCE GRAMMAR

APPROACH

Deborah King, Ph.D.

The University of Texas at Arlington, 2010

Supervising Professor: Jerold A. Edmondson

This dissertation describes and analyzes voice and valence-altering operations in Falam Chin, a Tibeto-Burman language of Burma. The data is explained within the framework of Role and Reference Grammar (RRG), which supplies several key concepts particularly useful for generalizing the behavior of the Falam Chin operations. The first is RRG's system of semantic decomposition, based on Dowty (1979), which is used to formulate each predicate's underlying *logical structure* (LS). Second is the concept of *macroroles*, generalized semantic roles *actor* and *undergoer*, which are assigned to the arguments of a predicate according to a hierarchy of LS positions. *M-transitivity* refers to

the number of macroroles assigned to a given predicate (Van Valin & LaPolla 1997; Van Valin 2005).

Within this framework, each of the primary voice and valence-altering operations of Falam Chin are shown to be lexical operations which affect the underlying LS and/or macrorole assignment of the base predicate. Causatives and applicatives are valence-raising operations which fuse two LSs by means of a lexical rule, such that their arguments are treated as the arguments of a single predicate. On the other hand, reflexives, reciprocals, and middles assign coreferentiality to two arguments of the base predicate, after which they lower M-transitivity by joining the macroroles of the two coreferential arguments into a single macrorole. Finally, antipassives lower M-transitivity by blocking macrorole assignment to the lower-ranking argument of the base predicate.

While Falam Chin displays both dependent-marking and head-marking characteristics, this dissertation argues that it is a fundamentally head-marking language. As is characteristic of head-marking languages, Falam Chin's NPs are in semantic apposition to its cross-reference pronominals, which are the true core arguments. In light of this, a number of unusual features of Falam Chin's voice and valence-altering operations are revealed to be natural results of its head-marking makeup. Furthermore, as claimed by Nichols (1986), head-marking languages tend to downplay syntactic distinctions in favor of semantic and pragmatic ones, a characteristic evident in Falam Chin's preference for lexical operations with semantic and pragmatic functions.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF ABBREVIATIONS AND SYMBOLS

1	first person
2	second person
3	third person
A	agent-like argument of a transitive verb
A_T	actor of a transitive verb
AAJ	argument-adjunct
ABL	ablative case
ABS	absolutive case
ACC	accusative
ACT	actor
ACV	active
ADJ	adjective
ADV	adverb
AFF	affirmative
AJT	adjunct
AJT	adjunct clause
AOR	aorist tense
AP	antipassive voice
ARG	argument
ASP	aspect
AUG	augmentative
AUH	actor-undergoer hierarchy
BECOME	become
BEN	benefactive applicative
BNU	brand new unanchored
CAUS	causative
CAUSE	cause
CLF	numeral classifier
CM	clause mate condition
CMPV	comparative
COH	cohortative mood
COM	comitative applicative
COMP	complementizer
CONJ	conjunction
CTR	contrastive pronoun
DAT	dative
DEIC	deictic
DET	determiner
DIM	diminutive
d-S	derived subject of an intransitive clause
EMPH	emphatic
ERG	ergative case
FEM	feminine
FOC	focus
FUT	future tense
GEN	genitive case
GB	Government and Binding Theory
H	high tone
HAB	habitual aspect
HL	high to low contour tone; falling tone
IDEO	ideophone
IF	illocutionary force
IMP	imperative mood
IND	indicative mood
INGR	ingressive
INST	instrumental
INTG	interrogative
INTR	intransitive
INTS	intensifier
IPFV	imperfective aspect
ITER	iterative aspect
IU	information unit
L	low tone
LDP	left-detached position
LFG	Lexical-Functional Grammar
LH	low to high contour tone; rising tone
LOC	locative case
LS	logical structure

MAL	malefactive applicative
MASC	masculine
MD	mood
MID	middle voice
MIR	mirative
MOD	modal
MP	Minimalist Program
MR	macrorole
N	noun
NA	non-absolutive
NEG	negation
NF	non-future
NMLZ	nominalizer
NMR	non-macrorole
NOM	nominative
NP	noun phrase
NPIP	NP-initial position
NUC	nucleus
NUM	number
O	patient-like argument of a transitive verb
OBJ	object
OBL	oblique marker
OPT	optative mood
PAR	particle
PASS	passive
PFV	perfective aspect
PL	plural
PN	personal name marker (Chamorro)
PO	primary object
PoCS	postcore slot
PP	pre- or postpositional phrase
PrCS	precore slot
PRED	predicate
PRS	present tense
PRF	perfect tense
PRO	pronominal cross-reference/ indexation
PSA	privileged syntactic argument
PST	past
PSTP	past participle
PTB	Proto-Tibeto-Burman
PTCP	participle
PURP	purpose
QNT	quantifier
RC	relative clause
RDP	right-detached position
RECP	reciprocal voice
REFL	reflexive voice
REL	relative clause
RELQ	relinquitive applicative
RG	Relational Grammar
RP	reference phrase
RRG	Role and Reference Grammar
S	subject of an intransitive verb
SA	subject antecedence condition
SBJV	subjunctive mood
SC	strict clause condition
SEML	semelfactive
SG	singular
SO	secondary object
SP	subject agreement prefix (Bantu)
SR	semantic representation
SUPR	superlative
STD	standard pronoun
SUBJ	subject
TNS	tense
TOP	topic
U_T	undergoer of a transitive verb
UND	undergoer
V	verb
verb.1	stem 1 verb
verb.2	stem 2 verb
VSA	verbal stem alternation
X	unidentified part of speech
XP	unidentified phrasal unit
^	and simultaneously
&	and then

Bracketing conventions:

/…/	phonemic transcription
[…]	phonetic transcription
<…>	practical orthography
=	clitic (word boundary)
-	morpheme boundary
*	Kleene star, multiple of category are possible

Tone:

ˊ	high tone
ˋ	low tone
ˇ	low to high contour tone; rising tone
ˆ	high to low contour tone; falling tone

Notations for marking ungrammaticality:

*	native speakers consulted judged the sentence ungrammatical
?	native speakers disagreed or judged the sentence as grammatically questionable
!	native speakers judged the sentence semantically unusual
#	native speakers judged the sentence pragmatically infelicitous in the given context

CHAPTER 1

INTRODUCTION

The description and analysis of voice has occupied grammarians from the earliest history of linguistics, going back at least as far as 500 BC and the first known Sanskrit grammar (Klaiman 1991). Yet, despite this long tradition of study, voice continues to elude precise definition, and the best method of formal representation remains contested. Naturally, the discussion has been fuelled by the vast expansion of typological work during the 20th century. As linguists have increasingly explored the languages of Asia, Africa, and the Americas, they have uncovered phenomena which challenge traditional notions of voice. Nevertheless, many linguists would today accept the broad definition of voice as "any alternation in or deviation from the normal relations … between a predicate/verb and its core arguments/nominals" (Klaiman 1991:6).[2]

Valence-raising operations, although not traditionally classed as "voice," could perhaps reasonably be included in this definition. As Croft (1993:94) notes, "[Valence-raising operations] appear to be related to voice functions; they are sometimes subsumed with 'true' voice alternations under the term 'diathesis.'" Dixon and Aikhenvald (2000) likewise group these two together as two types of valence-altering operations.

This dissertation focuses on voice and valence-altering operations in Falam Chin, a little-studied Tibeto-Burman language in the Kuki-Chin family, spoken primarily in the

[2] Such alterations may also occur with nominalizations and their arguments.

hills of western Burma (Myanmar). Within the framework of Role and Reference Grammar (RRG), this dissertation explores the unique properties as well as overarching similarities of these operations. My goals are both typological and theoretical. As one of few researchers who have studied Falam Chin, I wish to provide a basic grammatical description of the language and enlarge typological knowledge of voice and valence-altering operations within Tibeto-Burman languages. In addition, I seek to contribute to the broader field of linguistics by applying and expanding on current syntactic theory regarding voice and valence.

This chapter begins with an introduction to Falam Chin in its social and cultural setting in §1.1, along with an overview of Kuki-Chin literature. This is followed in §1.2 by a literature review examining critical work on grammatical relations, valence and transitivity, and voice and valence-altering operations. Section 1.3 states the broader research questions, while §1.4 discusses methodology. Finally, §1.5 gives the outline for the remainder of the dissertation.

1.1 An introduction to Falam Chin and Chin languages

A grammar overview of Falam Chin is presented in Chapter 2; this introduction does not repeat the information given there. However, this section includes both some discussion of the sociolinguistic background for Falam Chin (§1.1.1), as well as a presentation of the literature on Falam (§1.1.2) and other Chin languages (§1.1.3) which is informative for voice and valence-altering operations.

1.1.1 Sociolinguistic background

Falam Chin is a Central Kuki-Chin language within the Kuki-Chin-Naga subdivision of the Tibeto-Burman language family (VanBik 2006).[3] The Kuki-Chin languages are spoken primarily in the hills of Western Burma (Myanmar) and neighboring northeast India. Falam Chin has roughly 100,000 speakers concentrated in the Falam district of the Chin Hills, as well as around 21,000 speakers across the border in India (Lewis 2009).

According to VanBik (2006), Falam is most closely related to and is mutually intelligible with the better-studied Hakha (Lai) Chin, and is also closely related to Mizo (Lushai) and Laamtuk Thet (all Central Chin languages). VanBik lists Sim, Laizo, Lente, Bawm, Bualkhua, Khualsim, Khuangli, Tlaisun, and Za-ngiat as mutually intelligible dialects of Falam. Khar Thuan (2008) identifies all of the above, with the exception of Khuangli and Bawm, plus Zahau, Hualngo, Ngawn, Tapong, and Hlawnceu as tribal groups within Falam township (Figure 1.1). As he notes, the name *Falam* does not refer to a particular people group, but rather to the area in which it is spoken, and has only been in use to refer to the language since the 1960s. He claims that not all of the dialects spoken within this linguistic area are mutually intelligible, but that Falam is used as the lingua franca of the area. He groups Laizo, Hlawnceu, Sim, Zahau, and Hualngo together as one mutually intelligible group.

[3] Falam has at times been listed as a Northern Chin language (Lewis 2009; Matisoff 1996). However, Osburne (1975:1), classifies it as a Central Chin language, and more recently, VanBik's (2006) reconstruction of Proto-Kuki-Chin gives a strong recommendation for the Central Chin designation.

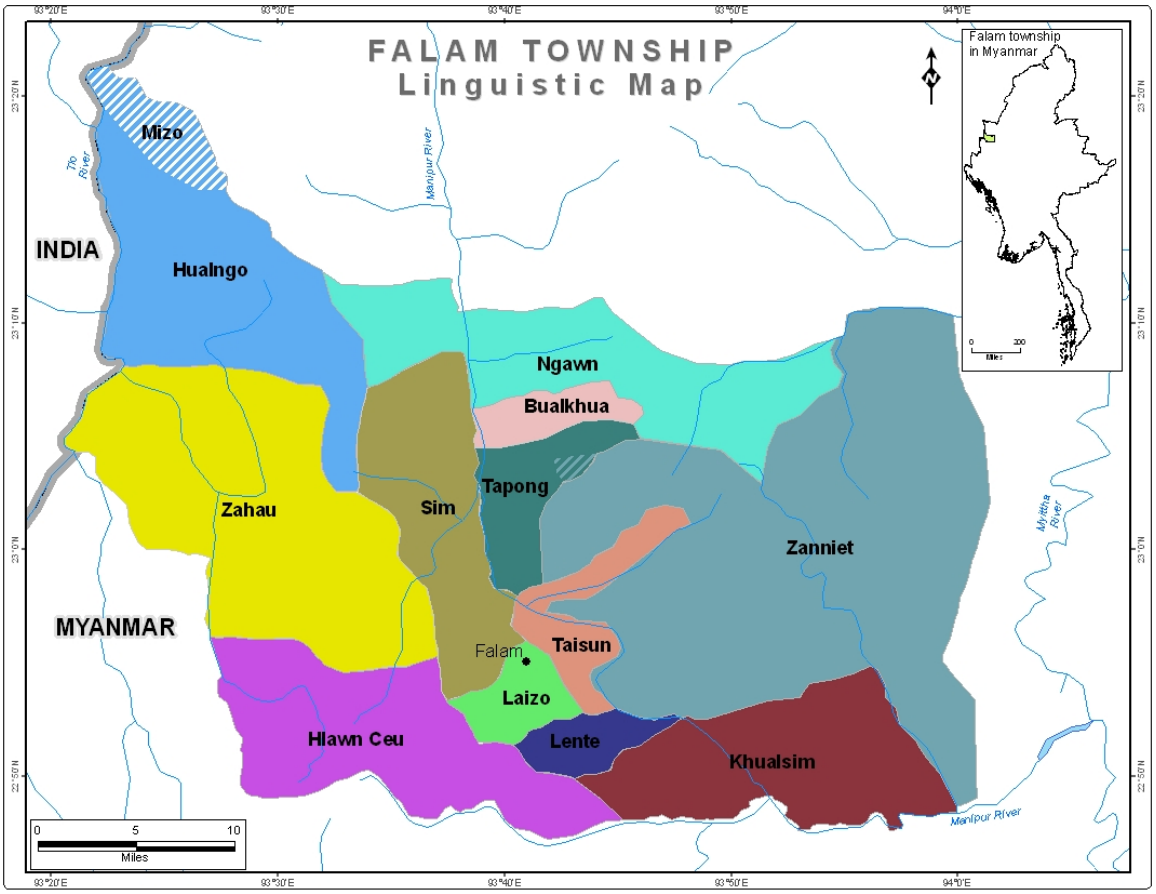


Figure 1.1: Language map of Falam (Ujlakyova 2007)

The Falam Chin language has had a writing system for only a little over a hundred years. Baptist missionaries Arthur and Laura Carson first entered the Chin Hills in 1899, and by 1907, Rev. Carson had adapted the Roman script for use with Chin languages (Carson 1927). Nevertheless, the Chin languages differ in their current orthographies, and the Falam—unlike some of their neighboring Chin languages—do not represent either vowel length or tone (both of which they have) in their orthography.[4] An orthographic issue which has been disputed is the spelling of the phoneme /ɔ/, one group preferring the

[4] There is some discussion of adding these features to the orthography. See Khar Thuan (2008) for a full description of the phonology of Falam.

symbols *o* and *aw* for the short and long forms respectively, and the second group preferring to simply use *aw* for both short and long forms (Khar Thuan n.d.), because it is not principally focused on matters of the sounds system. This dissertation follows the second convention.

Until recently, there were no commonly held standards for morpheme divisions in Falam Chin. An attempt to remedy this situation was made with the publication of the *Chin Writer's Handbook* (Champeon 2008). The examples in this dissertation follow the practical orthography of this handbook rather than a phonemic one. The Chin have a strong love for their language and culture, and it is hoped that language development, beginning with descriptive study and followed by the production of dictionaries, grammars, and literacy materials, may help them to increase their output of written material, strengthen their domains of use, and generally aid them in preserving their language.

1.1.2 Falam Chin literature

The linguistic literature on Falam Chin is scarce and has primarily been focused on phonology (Khar Thuan 2008), with special emphasis on tone (Osburne 1975; Hyman 2003; see also Yip 2004). Discussion of valence-altering operations has been minimal. However, both Osburne and Khar Thuan examine the grammatical phenomenon of *verbal stem alternation* (VSA), a common topic in Chin literature as a whole. This section looks at Falam Chin phonology, valence-altering operations, and verbal stem alternations.

1.1.2.1 Falam Chin phonology

Osburne's (1975) dissertation, *A Transformational Analysis of Tone in the Verb System of Zahao (Laizo) Chin*, was the first major linguistic work to look at Falam Chin, focusing on the Zahau[5] dialect. She begins with a description of Falam phonology, including consonant types, vowels and vowel length, syllable structure, and elision. The second half of her dissertation is dedicated to tone as it appears in the verb system.

Khar Thuan (2008) also describes the phonemes and syllable structure of Falam Chin. In his analysis, Falam contrasts voiceless and voiceless aspirated labial, dental, alveolar, and velar stops, voiced labial and dental stops, and a glottal stop. Falam also has voiceless and voiced labial, alveolar, and velar nasals, voiceless and voiced laterals, and voiceless and voiced flaps. In addition, Falam includes voiceless labio-dental, alveolar, and glottal fricatives, a voiceless alveolar affricate, a voiceless lateral affricate and a voiceless aspirated lateral affricate, and two glides.

The consonant phonemes of Falam Chin, as described by Khar Thuan (2008:18), are summarized in Table 1.1. As the examples in this dissertation are orthographic, rather than phonemic, I have also supplied the Falam Chin orthographic counterpart for each phoneme in brackets (< >) where it differs from the IPA symbol. The primary differences can be summarized as follows: *h* symbolizes voicelessness in sonorants, aspiration of stop consonants, glottalization, and the glottal fricative, *ng* symbolizes the velar nasal, *y* symbolizes the palatal glide, and *c* symbolizes the alveolar affricate.

[5] The spelling *Zahau* is preferred by my language consultants.

Table 1.1: Falam Chin consonant phonemes

		Labial	Labio-dental	Dental	Alveolar	Palatal	Velar	Glottal
Stops	vl	/p/ /p^h/ <ph>		/t̪/ <t̪> /$t̪^h$/ <t̪h>	/t/ /t^h/ <th>		/k/ /k^h/ <kh>	/ʔ/ <h>
	vd	/b/		/d̪/ <d>				
Nasals	vl	/m̥/ <hm>			/n̥/ <hn>		/ŋ̊/ <hng>	
	vd	/m/			/n/		/ŋ/ <ng>	
Fricatives	vl		/f/		/s/			/h/
Affricates	vl				/ʦ/ <c>			
Lateral affricate	vl				/tl/ /tl^h/ <thl>			
Flap	vl				/ɾ̥/ <hr>			
	vd				/ɾ/ <r>			
Laterals	vl				/l̥/ <hl>			
	vd				/l/			
Glides		/w/				/j/ <y>		

Of the consonant phonemes identified by Khar Thuan, only the voiced sonorants and the glottal stop can be syllable final. While he notes the existence of the phonetic forms [v] and [z] in Falam, Khar Thuan argues that they are allophones of [w] and [j], respectively; therefore, he does not list them as separate phonemes in the phoneme chart.

There are five vowel phonemes in Falam Chin: /i/, /ɛ/, /a/, /u/, and /ɔ/, as shown in Table 1.2 (Khar Thuan 2008:28). Vowel length is contrastive in closed syllables, although long vowels are not allowed in glottal-stop final syllables.

Table 1.2: Falam Chin vowel phonemes

	Front	Central	Back
Close	/i/		/u/
Open-mid	/ɛ/ <e>		/ɔ/ <aw>
Open		/a/	

In addition, Khar Thuan discusses stress, intonation, and various morphophonemic changes that take place in Falam.

Osburne (1975) posits a three tone inventory for Falam: L, H, LH.[6] By contrast, Hyman (2003) and Khar Thuan (2008) report that Falam Chin has four tones: L, H, LH, and HL. Each author gives a distinct, yet overlapping, set of tone sandhi rules for Falam. For example, Osburne describes a tone sandhi rule which says that a LH tone followed by a LH or H tone becomes a L H sequence. This is illustrated in (1.1).

(1.1) a. *Osburne's tone sandhi rule 1*
LH {LH, H} → L H

b. **ɾə̌əl kán** ěj. → **ɾə̀əl kán** ěj.
food 3PL.NOM eat
'We eat food.' (Osburne 1975:18)

Both Hyman and Khar Thuan describe two tone absorption rules which, together, are similar to Osburne's first tone rule. However, these rules incorporate the HL tone which Osburne does not recognize. Hyman's *tone absorption rule a* says that a LH tone becomes L before a H or a HL tone (1.2). His *tone absorption rule b* says that a LH LH tone sequence will simplify to L H (1.3).

(1.2) a. *Tone absorption rule a*
LH → L / ____ {H, HL}

b. **ɾə̌əl siâ** kà ěj. → **ɾə̀əl siâ** kà ěj.
food bad 3SG.NOM eat
'I eat the poor food.' (Khar Thuan 2008:50)

(1.3) a. *Tone absorption rule b*
LH LH → LH

b. **wŭuj ɾăaŋ** → **wùuj ɾáaŋ**
elephant white
'white elephant.' (Khar Thuan 2008:51)

[6] Osburne's (1975) system of segmental transcription differs significantly from that used by Khar Thuan (2008) and Hyman (2003). I have adjusted Osburne's data to conform to their conventions. In addition, Khar Thuan uses numeric tone superscripts, which I have changed to standard tone diacritics.

In addition, both Osburne and Khar Thuan describe a tone sandhi rule which says that a LH tone on a vowel-final syllable becomes short and H before a syllable of any tone (T) (1.4).

(1.4) a. *Osburne's tone sandhi rule 2*
LH → $H_{[+V, -long]}$ / __T

b. À **ṭʰǐi ɖîŋ.** → À **ṭʰí ɖîŋ**.
3SG.NOM die FUT
'He will die.' (Khar Thuan 2008:49)

1.1.2.2 Falam Chin valence-altering operations

As Osburne's (1975) primary interest is tone, she spends little time discussing voice and valence-altering operations. However, she briefly mentions three types of valence-raising operations in Zahau: causatives, benefactives, and comitatives. Causatives are formed by adding the suffix *-těr* to a stem 2 verb, benefactives require the suffix *-sak* in conjunction with a stem 2 verb, and comitatives are formed by adding *-piĭ* to a stem 2 verb. There also exist simplex-causative/benefactive pairs, such as *thăng* 'be famous' → *thán* 'broadcast', which are formed according to similar segmental alternations to those found in verbal stem alternations (see §1.1.2.3 for discussion of verbal stem alternation).[7] Double causatives combining a lexical and morphological causative are also possible (1.5).

(1.5) Thú án **tʰán-těr.**
word 3PL.NOM broadcast-CAUS
'They **had** the news **broadcast**.' (Osburne 1975:110)

Osburne (1975) also describes what she calls *captive verbs* (p. 188ff). While these are not technically valence-lowering, they share many similarities with the antipassive

[7] Quite likely a reflex of the Proto-Tibeto-Burman (PTB) causative suffix *-*t* (cf. Benedict 1972).

constructions discussed in Chapter 7 of this work. Captive verbs are composed of two parts: a verb and an obligatory accompanying noun. Some captive verbs, such as *ril rawng* 'hungry', are always marked with third person singular *a* and include an obligatory, unvarying nominal element (i.e., *ril* 'intestine') (1.6).

(1.6) Án **ɾĭl** **a** **ɾɔ̆ɔŋ.**
3PL intestine 3SG.NOM empty
'They are hungry.'
lit., 'Their intestine, it is empty.' (Osburne 1975:189)

Others have normal verbal indexation and allow more variation in the accompanying noun (1.7).

(1.7) **Tí/zŭu/cɔ́ɔ hnɔ́ɔi** **ka** **háal.**
water/beer/cow.milk 1SG.NOM thirst
'I'm thirsty for water/beer/milk.' (Osburne 1975:190)

While the meanings of the parts in the above two examples can be identified, many captive verbs can only be defined as a unit; the parts are considered meaningless.[8]

1.1.2.3 Falam Chin verbal stem alternation

Verbal stem alternation (VSA) is an irregular verb phenomenon characteristic of Kuki-Chin languages whose forms are recognizable from one Kuki-Chin language to the next (with some lexical and phonological variation). VSAs are commonly categorized as *stem 1,* the basic form, and *stem 2,* the grammatically-marked form.[9] In terms of phonological features, VSAs can be categorized either by tone changes or segmental changes from stem 1 to stem 2.

[8] A hypothesis to be pursued, however, is that these pieces were not always meaningless, but that time has obscured their individual meanings. This seems plausible in light of English compounds such as *cobweb,* in which the derivation of *cob* from ME *coppe* 'spider' is opaque to modern speakers.
[9] Some authors (Löffler 2002; Henderson 1965) use the terms *form 1* and *form 2*; Chhangte (1993) calls them *independent* and *dependent* stems; Khar Thuan (2008) speaks of *primary* and *secondary* stems.

Osburne (1975), for example, divides Falam verbs into various classes based on their stem 1 and stem 2 tones. She describes the following classes: 1) *Rigid Tone Class*—verbs whose tone is invariably H or L; 2) *Stem Distinguishing Class*—verbs whose stem 1 form is either H or L and the inverse in stem 2; 3) *Toneless Class*—verbs whose underlying form is toneless, but take on either H or L tone depending on the previous syllable; 4) *Mixed Class*—verbs which have H or L tone in stem 1, but are toneless in stem 2; and 5) *Rising Tone Class*—verbs with a HL tone in stem 1 and either a H or L tone in stem 2. Examples of these tone classes are given in Table 1.3.

Table 1.3: Osburne's VSA classes by tonal changes

Rigid Tone Class (H/L)	/ɦúa/ ~ /ɦúat/ 'hate'	/m̥àan/ 'be correct'
Stem Distinguishing Class (H→L or L→H)	/súaŋ/ ~ /sùan/ 'cook'	/bàal/ ~ /bálʔ/ 'be dirty'
Toneless Class (?→H/L)	/sik/ 'pinch'	
Mixed Class (H/L→?)	/ɾúat/ ~ /ɾuaʔ/ 'think'	/ɾə̀əl/ ~ /ɾəlʔ/ 'rest'
Rising Tone Class (HL→H/L)	/ɾěe/ ~ /ɾéet/ 'insert'	/bằaŋ/ ~ /bàan/ 'stop'

Khar Thuan (2008) also examines tonal changes in VSAs, finding that while verbs may have any of the four tones of Falam in stem 1, they only have L or HL tone in stem 2. Verbs which have HL tone in their stem 1 form take L tone in stem 2, whereas L, H, and LH tone verbs may take either L or HL in stem 2, depending on the coda of the stem 1 verb. This is shown in Table 1.4. Khar Thuan's tonal analysis can be reconciled with Osburne's when we consider that Osburne does not recognize the existence of a HL tone in Falam.

Table 1.4: Khar Thuan's VSA classes by tonal changes

Stem 1	Stem 2
L	L/HL
H	L/HL
LH	L/HL
HL	L

Both Osburne and Khar Thuan also use segmental changes to categorize the VSAs. Khar Thuan lists five categories of changes: "nasal alternation, stop alternation, glottalization, vowel shortening, and vowel coalescence" (p. 75). Nasal alternation refers to a change from final velar nasal to alveolar nasal (/-ŋ/ → /-n/). Stop alternation indicates either the addition of a /-t/, /-k/, or /-ʔ/ to a vowel-final stem, or syllables that end in /-p/, /-t/, or /-k/ may also alternate with /-ʔ/. Glottalization can apply to syllables ending in /w/, /j/, /l/, or /ɾ/. Vowel shortening simply changes a long vowel to a short one. Lastly, vowel coalescence changes diphthongs into a single vowel. Examples of these changes are shown in Table 1.5.

Table 1.5: Khar Thuan's VSA classes by segmental changes

Nasal alternation	/súaŋ/ ~ /sùan/ 'cook'	
Stop alternation	/tʰàa/ ~ /tʰàt/ 'good'	/tʰàt/ ~ /tʰàʔ/ 'kill'
Glottalization	/dàaj/ ~ /dàjʔ/ 'cold'	
Vowel shortening	/bàaŋ/ ~ /bâŋ/ 'tired'	
Vowel coalescence	/lìan/ ~ /lên/ 'wealthy'	

Osburne includes a brief discussion of the syntactic uses of VSAs in Zahau. In her explanation, she states that independent clauses and agentive nominalizations take stem 1, while relative clauses, subordinate clauses, other nominalizations, causatives, benefactives, comitatives, and verbs with motion prefixes take stem 2. She further proposes that information focus is the true determiner of stem choice in Zahau. In her

view, the information focus usually falls on the verb of the independent clause; thus, stem 1 is used. However, in less common cases of marked narrow focus (by which she appears to mean that an NP is in focus), stem 2 is used. Subordinate contexts tend to remove the information focus from the verb; thus, stem 2 is also used there. Table 1.6 summarizes Osburne's proposed uses of VSAs in Zahau.

Table 1.6: Osburne's syntactic uses of VSAs

Stem 1	Stem 2
independent clauses	relative clauses/ subordinate clauses
agentive nominalizations	other nominalizations
	causatives/ benefactives/ comitatives verbs with motion prefixes
unmarked focus	marked narrow focus

In King (2009), I expand in a number of ways on Osburne's description of VSA usage in Falam Chin. In contrast to her data, I found that causatives in Falam Chin take stem 1.[10] Furthermore, only a subset of relative clauses take stem 2, those in which an argument other than the subject is relativized. Clauses which relativize the subject take stem 1. The same pattern can be seen in focused WH-questions.

Despite Osburne's findings, marked narrow focus did not appear to be an environment for stem 2 use in independent clauses for my language consultants. Furthermore, according to my data, subordinate clauses can be divided in a number of ways. Complement clauses of verbs of speaking or cognition, as well as purpose and some conditional clauses, take stem 1. Complement clauses of psych verbs and verbs of

[10] It is possible this discrepancy is due to some dialectal variation.

direct perception, as well as adverbial clauses and a second type of conditional clause take stem 2.

As this section demonstrates, the published data regarding Falam Chin is meager. This dissertation seeks to remedy this situation through both a short grammatical overview in Chapter 2, as well as discussion of voice and valence-altering operations in Chapters 4-7.

1.1.3 Other Chin literature

The previous section examined the literature describing Falam Chin. Other Chin languages, such as Central Chin languages Hakha Lai and Mizo (Lushai), Southern Chin languages K'Chò and Daai Chin, and Northern Chin languages Sizang Chin and Tiddim Chin have been studied in somewhat more depth, Hakha Lai perhaps most notably among them. While this brief survey cannot mention every piece of Chin literature, it examines descriptions of voice and valence-altering operations, specifically causatives and applicatives; reflexives, reciprocals, and middles; and antipassives and captive verbs/psycho-collocations.

1.1.3.1 Causatives and applicatives in Chin literature

As shown in this section, most Chin languages appear to have an array of causative and applicative morphemes. Hakha Lai, a Central Chin language like Falam, includes three causative forms, two of which are no longer productive (VanBik 2002; Peterson 1998). The first is formed by a prefixal devoicing or aspiration feature (corresponding to PTB **s-*; cf. Matisoff 2003), the second by final glottalization (PTB **-s* (VanBik 2002; cf. Matisoff 2003) or perhaps **-t* (Peterson 1998; cf. Benedict 1972)), and

the third by the addition of the suffix *-ter* to a stem 2 verb. The first two types apply only to a limited set of intransitive verbs and indicate direct causation (e.g., *kaaŋ ~ kaʔŋ* 'burn' → *khaʔŋ* 'set fire to'). The third type can apply to any Lai verb and indicates indirect causation (*kaʔŋter* 'cause to burn') (VanBik 2001:167), either permissive or facilitative (Peterson 1998). In addition, the third type can combine with the first type to create two levels of causation (VanBik 2001).

Peterson (1998, 1999, 2007) also discusses a variety of applicative morphemes in Lai, including benefactive *-piak,* additional benefactive *-tseʔm,* comitative *-pii,* malefactive *-hnoʔ,* prioritive *-kaʔn,* relinquitive *-taak,* and instrumental *-naak.* In Lai, all of these suffixes must combine with the stem 2 form of the verb.

An important aspect of valence-raising operations in Lai is the syntactic preference in Lai for the causee/applied object over the base object. Peterson (1998, 1999, 2007) systematically explores this property using object tests including object indexation, use with discourse markers, left-dislocation, reflexivization/reciprocalization, and purposive control. For example, with the exception of instrumental applicatives, all applicative types mark the applied object on the verb to the exclusion of the theme. Thus, in (1.8), the beneficiary, 'me', rather than the theme, *ka-law* 'my field', is indexed as an object on the verb.

(1.8) Ka-law ʔan-**ka**-thloʔ-piak.
1SG-field 3SG.NOM-1SG.ACC-hoe.2-BEN
'They hoed my field for **me**.' (Peterson 1999:14)

Likewise, it is more natural for discourse marking to appear on the applied object and for the applied object to be left-dislocated, than for either of these properties to

appear with the theme. Finally, it must be the applied object which is coreferential with the subject in a reflexive/reciprocal construction, or which controls a purposive clause, except in the case of instrumentals where the base object is coreferential with the subject or controls the purposive clause. Two characteristics which Peterson (1999, 2007) claims do not correlate with object status in Lai are word order and ability to be relativized.

Another Central Chin language, Mizo (Lushai), also requires a stem 2 verb with valence-raising operations like causatives and applicatives (Lorrain 1940; Chhangte 1986, 1993). Chhangte (1993) describes several valence-raising morphemes: a causative morpheme *-tîîr*, a benefactive *-sak*, an associative *-pûy*, and a relinquitive *-sàn.* In addition, there are a handful of others such as *-khùm* and *-nhàn*, which indicate motion over and on the applied object, respectively, and *-cil?* and *-khùŋ*, which indicate a negative affect on the subject and applied object, respectively. From the few examples Chhangte provides, it seems that Mizo's valence-raising operations are similar to Lai in how they treat both causees and applied objects, at least in regard to verbal indexation. As seen in (1.9), the causee is indexed on the verb.

(1.9) Kâ-pàà-in keel **mín**-veen-tîîr.
1SG-father-ERG goat 1SG.ACC-watch.2-CAUS
'My father made **me** watch the goats.' (Chhangte 1993:101)

In (1.10), the applied object, a beneficiary, is also marked on the verb.

(1.10) Kór **mî**-ley-sak.
dress 1SG.ACC-buy.2-BEN
'S/he bought a dress for/from **me**.' (Chhangte 1993:102)

Chhangte also mentions a few causative forms which seem to be remnants of the PTB causative forms mentioned for Lai, for example, *tlaa* ‘to fall off’ vs. *tlhaa* ‘to drop’ (PTB **s*-) and *mûû* ‘sleep’ vs. *mut* ‘put someone to sleep’ (PTB **-t*).

The Southern Chin language K’Chò also takes a stem 2 verb with valence-raising morphemes (Mang 2006). Mang reports the existence of direct causatives *m-* and *k-*, indirect causative *-hlak,* an instrumental *-na(k),* a benefactive/malefactive *-pe(k)/peit,* a comitative *-püi,* a malefactive *-shi,* and a relinquitive *-ta* in K’Chò.[11] Causatives can be formed from intransitive and transitive verbs. Since K’Chò includes more than one causative morpheme, sometimes double causatives are possible. In such cases, the causee is marked with the dative case marker *am* (1.11) (Mang 2006:59).

(1.11) Nú noh **Yóng am** a-k’hmó m’ih-hlak-ci.
Mother ERG Yóng DAT child CAUS-sleep.2-CAUS-NF
‘Mother asked/made **Yóng** to put the child to sleep.’

However, in applicative constructions, such as the instrumental applicative in (1.12), both the base object *meh* ‘meat’ and the applied object *k’khìm* ‘knife’ are unmarked (Mang 2006:63).

(1.12) Om noh **k’khìm meh** ah-na(k)-ci.
Om ERG knife meat cut.2-INST-NF
‘Om used **the knife** for cutting **meat**.’

None of Mang’s examples illustrate object marking for either causatives or applicatives.

Like K’Chò, Daai Chin includes two prefixes *k-* and *m-* which selectively act as a causativizer or transitivizer (Hartmann-So 2009) (1.13). (They each bear a number of other functions as well.)

[11] Mang (2006) does not name the applicatives; these names are based on his descriptions of the functions of the various morphemes.

(1.13) Ye Shak=noh shakkhi ah **k-pha** lo.
Ye Shak=ERG deer 3SG.NOM CAUS-arrive come
'Ye Shak brought a deer along.'

In addition, Daai has a productive causative, *-shak,* and a number of applicative morphemes, including benefactive *-pee:t*, comitative *-püi*, and reliquitive *-taa:k*. These require stem 2 (Hartmann-So 2002). As has been noted in other Chin languages, object indexation references the applied object (1.14).

(1.14) Ling So no h lou: **nah** phyoh püi kti.
Ling So ERG field 1SG.ACC weed.2 COM NF
'Ling So weeds the field with **me**.' (Hartmann-So 2002:93)

In contrast to the previous examples, the Northern Chin language Sizang Chin uses stem 1 for causatives (*-sak*), and stem 2 for benefactive and malefactive (*-sak*), as well as associative (*-pui*) and "transitive" (*-san*) applicatives (Stern 1963:243). The causative aspiration feature which occurs selectively in Lai and Mizo (PTB **s-*) also occurs with certain verbs in Sizang (e.g., *ken* 'leave' → *khen* 'disperse' (Stern 1963:251)).

In Tiddim Chin, another Northern Chin language, causatives and benefactives follow a very similar pattern to that found in Sizang, with the morpheme *-sak* plus a stem 1 verb used for causatives, as well as for benefactives with a stem 2 verb (1.15) (Henderson 1965).

(1.15) Á **dám-sák** hî:.
3SG.NOM heal.1-CAUS PAR
'He **healed** him.' (Henderson 1965:83)

Note that, as both Tiddim and Sizang use a single valence-raising morpheme, *-sak,* for causatives and benefactives, only the verb stem used distinguishes the two. Tiddim Chin

also includes a limited number of causative forms that involve segmental changes to the final consonant, such as *dǐm ~ dîm* 'to be full' → *dîm ~ dìp* 'to fill' (PTB **-t*).

The Chin causative and applicative morphemes (including the Falam Chin morphemes described by Osburne (1975)) are compared in Table 1.7. Those morphemes that require a stem 1 verb (or if the stem type is unknown) are found in white boxes, while those that require a stem 2 verb are shaded in gray.

Table 1.7: Causatives and applicatives in Chin languages

	Hakha Lai	Mizo	Falam (Zahau)	K'Chò	Daai	Sizang	Tiddim
Causative: direct	**s-, *-s/-t*	**s-, *-t*	**-t*	*m-, k-*	*m-, k-*	**s-*	**-t*
Causative: indirect	*-ter*	*-tîîr*	*-tĕr*[12]	*-hlak*	*-shak*	*-sak*	*-sak*
Benefactive	*-piak, -tseʔm*	*-sak*	*-sak*	*-pe(k)/ peit*	*-pee:t*	*-sak*	*-sak*
Malefactive	*-hnoʔ*	*-khùŋ*		*-pe(k)/ peit, -shi*		*-sak*	
Instrumental	*-naak*			*-na(k)*			
Comitative/ associative	*-pii*	*-pûy*	*-piĭ*	*-püi*	*-püi*	*-pui*	
Relinquitive	*-taak*	*-sàn*		*-ta*	*-taa:k*	*-san*	
Priorative	*-kaʔn*						
Adversative		*-cilʔ*					
Locative		*-khùm, -nhàn*					

Key: white=stem 1; gray=stem 2

1.1.3.2 Reflexives, reciprocals, and middles in Chin literature

Turning from valence-raising to valence-lowering operations, this section discusses reflexives, reciprocals, and middles. Little has been written regarding these constructions in Chin languages, and much of what is available is simple description of

[12] In contrast to Osburne (1975), my data indicates that Falam Chin causatives take a stem 1 verb.

the morphemes involved. For example, Smith (1998) describes the reflexive pronouns in Lai as being formed from two independent pronouns joined by *-le.* These pronouns are optional. There is also special reflexive/reciprocal indexation on the verb, *a-* (Peterson 2003; or vowel lengthening; Smith 1998) for singular subjects and *ʔii-* for plural subjects. These are combined with the usual subject indexation forms (1.16).

(1.16) **(kan-maʔ-le kan-maʔ)** **kan-ʔii**-thooŋ
ourselves 1PL.NOM-REFL-hit.1
'We hit **ourselves**.' (Smith 1998:5)

In clauses marked as having perfective aspect, *ʔii-* can also be used with singular subjects (see (1.17)), and it must be used in irrealis clauses (Smith 1998).

Smith's data shows that reflexive clauses sometimes pattern like Lai transitives in taking ergative marking and a stem 2 verb (1.17), and sometimes pattern like Lai intransitives in not taking ergative marking and having a stem 1 verb (1.18).

(1.17) Nii-huu **niʔ** thlaa-laaŋ ʔaʔ ʔa-rak-ʔii-**hmuʔ**.
Ni Hu ERG mirror LOC 3SG.NOM-PERF-REFL-see.2
'Ni Hu saw himself in the mirror.' (Smith 1998:6)

(1.18) Nii-huu ʔaa-**thooŋ**.
Ni Hu 3SG.NOM.MID-hit.1
'Ni Hu hit himself.' (Smith 1998:7)

What constrains this alternation is left unaddressed.

Smith also looks briefly at combinations of causative with reflexive morphemes. In causatives, the reflexive marking may indicate coindexation of either the causer or the causee with the theme. If a reflexive pronoun is used, however, the causee must be coindexed with the theme. The combination of reflexive and causative morphology can also mean 'pretend to do as a pretext' (Smith 1998:46) or 'let do to oneself' (VanBik

2002:112). In addition, reflexive morphology with transitive verbs in which an object is supplied can give a self-benefactive sense.

The reflexive morphology in Lai is often ambiguous with reciprocal meaning. Certain verbs, however, such as *sii ~ siik* 'quarrel' or *ton ~ toŋ* 'meet', require a reciprocal interpretation. Others have idiomatic meaning. For example, *kom ~ koʔm* 'stick together', comes to mean 'be friends' when combined with reciprocal morphology (Smith 1998).

The same morphology is also used for middles in Lai (Smith 1998). As LaPolla (1996), notes, middle voice is often overlooked in Tibeto-Burman languages, being lumped with reflexives or general intransitivizers. However, Smith demonstrates that this morphology can have a range of middle meanings, including grooming, change in body posture, body actions and body positionals, cognition, and spontaneous events, as well as a few other types (cf. Kemmer 1993).

Chhangte (1993) briefly describes Mizo reflexives and reciprocals. Similar to Lai, Mizo forms its reflexive/reciprocal pronouns by joining two pronouns with the conjunction *leʔ.* The verb is indexed using normal subject marking plus the reflexive marker *in-* (1.19).

(1.19) **âmaʔ leʔ âmaʔ â-in**-mèèt.
3SG and 3SG 3SG.NOM-REF-shave
'He is shaving **himself**.' (Chhangte 1993:93)

The same marking can also serve as a detransitivizer or for anticausation (middle functions; cf. LaPolla 1996).

In K'Chò, a verbal prefix, *ng-*, indicates general detransitivization, reflexivization, and reciprocalization (Mang 2006). The use of this prefix makes stem 2 verb forms and ergative marking ungrammatical, indicating the detransitivization of the verb (1.20).[13]

(1.20) Tam k'khìm on ng'-**át/*áh**-ci.
Tam knife with REFL-cut.1/cut.2-NF
'Tam **cut himself** with a knife.' (Mang 2006:55)

At least some of the detransitivized examples given by Mang could feasibly be categorized as middles according to Kemmer's (1993) classification system.

Similarly, Daai Chin also includes a detransitivizing/reflexive/reciprocal prefix *ng-* (Hartmann-So 2009). Unlike K'Chò, it appears to occur with ergative marking at least some of the time.

(1.21) Khoyaai=e=no meh **ng'-yetei** ve=u.
h
spirit-PL=ERG meat RECP-share.among ASP=PL
'The spirits are **sharing** the meat **among each other**.' (Hartmann-So 2009:62)

The data regarding reflexives, reciprocals and middles in Northern Chin languages is even more meager. In Sizang, Stern (1963) states that the prefix *ki-* indicates reciprocal and stative voice (1.22).

(1.22) **Ki-**ha-u hi.
RECP-fight-PL PAR
'They fight **each other**.' (Stern 1963:256)

Tiddim Chin includes a cognate prefix, *ki-*, which Henderson (1965) indentifies as being either passive or reflexive. As seen in (1.23), it combines with person indexation, as in Lai and Mizo.

[13] Some, but not all, transitive constructions require the use of stem 2 and ergative marking in K'Chò (Mang 2006).

(1.23) **Ka** **ki** sat kha hi.
1SG.NOM REFL hit.1 accidentally PAR
'I hit **myself** by mistake.' (Henderson 1965:96)

Some of Henderson's examples could be analyzed as middle or reciprocal, while a few others have the self-benefactive sense described by Smith (1998) for Lai.

Table 1.8 summarizes the formation of reflexives, reciprocals, and middles in Chin languages as described in the preceding discussion. Boxes left unfilled indicate that the information is unknown for that language.

Table 1.8: Reflexives, reciprocals, and middles in Chin languages

	Hakha Lai	Mizo	K'Chò	Daai	Sizang	Tiddim
Indexation / derivational morphology	*a-, ʔii-*	*in-*	*ng-*	*ng-*	*ki-*	*ki-*
Pronoun	*P-le P*	*P leʔ P*				
Stem use	*1/2*		*1*			*1*
Ergative marking	*no/yes*		*no*	*yes*		

1.1.3.3 Antipassives and captive verbs in Chin literature

The third and final type of valence-altering operation discussed in this section is the antipassive, a construction not generally attested in Chin languages. However, transitive ergative clauses in some Chin languages can alternate with a non-ergative form which appears to have features of an antipassive. This analysis was first suggested for certain notionally transitive clauses in Lai (Peterson 1998; Kathol & VanBik 2001). In Lai, transitive clauses require ergative marking and a stem 2 verb (1.24). However, if the same two arguments appear with a stem 1 verb, ergative marking is ungrammatical (1.25).

(1.24) Maŋkio **ni?** vok (khaa) ʔa-**tsook**.
Mangkio ERG pig TOP 3SG.NOM-buy.2
'Mangkio bought a/the pig.' (Kathol & VanBik 2001:4, 7)

(1.25) Maŋkio **(khaa)/*ni?** vok ʔa-**tsoo**.
Mangkio TOP/ERG pig 3SG.NOM-buy.1
'Mangkio bought a pig.' (Kathol & VanBik 2001:5, 7)

The second type can be neutrally termed the "non-ergative construction" (Peterson 1998:88). Kathol and VanBik (2001) argue that the subject of the non-ergative construction receives topic status, which it cannot have as an ergative subject. Thus, (1.24) may be used in response to a question such as *What is happening to the pig?*, in which *vok* 'pig' is established as the topic, whereas (1.25) may be used as a response to a question which establishes *Mangkio* as the topic, such as *What about Mangkio?*

There are two primary objections to the non-ergative construction in Lai being considered an antipassive. First, the "demoted" object cannot be omitted and remains direct rather than oblique, contrary to two characteristic features of antipassives. Furthermore, the "demoted" object in Lai still receives object indexation on the verb if the object is first or second person (third person objects are not marked in Lai). However, Kathol and VanBik (2001) suggest that the "oblique" nature of this argument is expressed in the fact that it cannot be marked as topical, although the object of an ergative structure or the subject of the non-ergative structure can be (compare (1.24) and (1.25) with (1.26)).

(1.26) Maŋkio vok ***khaa** ʔa-**tsoo**.
Mangkio pig TOP 3SG.NOM-buy.1
Intended: 'Mangkio bought the pig.' (Kathol & VanBik 2001:9)

A similar situation is found in K'Chò, which includes three possible notionally transitive structures. The first type, similar to the basic ergative clause in Lai, requires both ergative marking and stem 2 (1.27).[14]

(1.27) Ui **noh** vok **a-htuih**.
dog ERG pig 3sg.nom-bite.2
'A/the dog bit a/the pig.' (Mang 2006:87)

Mang claims this structure is used only for sentences with either marked narrow focus or contrastive focus, for example, in response to questions in which either the particle *ang* shows marked narrow focus or the particle *nei* shows contrastive focus when placed directly after the focused NP.

The second type of notionally transitive clause in K'Chò has ergative marking in combination with stem 1 (1.28).

(1.28) Ui **noh** vok **htui**-ci.
dog ERG pig bite.1-NF
'A/the dog bit a/the pig.' (Mang 2006:87)

Mang (2006) argues that this structure is used to indicate sentence focus, as it is the appropriate answer the the question *What happened?* It can also be used for unmarked narrow focus.

The final type of notionally transitive structure in K'Chò has stem 1 and lacks ergative marking (1.29).

(1.29) Ui **(cuh)** vok **htui**-ci.
dog TOP pig bite.1-NF
'The dog bit a/the pig.' (Mang 2006:87)

[14] There are two other differences among these examples which are correlaries of stem type. That is, stem 2 verbs have overt third person marking, while stem 1 verbs do not, and stem 2 verbs cannot bear the non-future tense marker *-ci* which is found on the stem 1 verbs (Mang 2006).

According to Mang, this structure indicates predicate focus, as it is the appropriate response to a question which establishes the subject *ui* 'dog' as the topic (e.g., *What about the dog?*). This is similar to the analysis given by Kathol and VanBik (2001) for the non-ergative structure in Lai. However, Mang rejects the antipassive analysis of these structures, arguing that the "demoted" object does not receive oblique marking. He also rejects an object incorporation analysis, noting that the "demoted" object can still be modified in various ways.

In Daai Chin, all notionally transitive clauses must have ergative marking on the subject. They also usually take stem 2 (1.30). However, if the subject of the transitive clause is in focus, perhaps marked with the focus marker *ta*, then stem 1 is used (1.31) (Hartmann-So 2009:104).[15]

(1.30) Thi:ng-thu: phi kei:=noh kah **kkoh** lo.
tree-branch also 1SG=ERG 1SG.NOM carry.2 come
'Also the tree branch only I [and nobody else] carried [home].'

(1.31) **Kei:=noh ta** thi:ng=thu: kah **kkot** lo=kti.
1SG=ERG FOC tree-branch 1SG.NOM carry.1 come=NF
'It was **I** who carried the tree branch home.'

Table 1.9 summarizes the use of up to three possible notionally transitive sentence types in Chin languages. I have also included here Osburne's discussion of focus governing stem types in Zahau, although it is not clear from her data whether ergative case is or is not used with the stem 1 form.

[15] As in K'Chò, tense marking can only occur with stem 1 verbs.

Table 1.9: Antipassives in Chin languages

	Hakha Lai	Falam (Zahau)	K'Chò	Daai
Ergative/stem 2	all other focus types	marked focus	marked narrow/ contrastive focus	marked focus
Ergative/stem 1	NA	unmarked focus	sentence/ unmarked narrow focus	all other focus types
Non-ergative/ stem 1	predicate focus		predicate focus	NA

The preceding paragraphs described an antipassive-like construction with pragmatic significance in a number of Chin languages. In Chapter 7, I draw a connection between this structure and another common Chin phenomenon: what Osburne (1975) termed *captive verbs*. Chhangte (1993) notes a pattern in Mizo which she calls "verbs with obligatory subjects" and "verbs with obligatory objects" (p. 96ff), comparable to Osburne's captive verbs (see §1.1.2.2). These verbs must appear with a given cognate nominal, or may choose from a limited class of nominals. In (1.32), the combination of *thin* 'liver' and *chia* 'bad' means 'be bad-tempered'.

(1.32) Â-thin â-chia.
3SG-liver 3SG.NOM-bad
'She is bad-tempered.' (Chhangte 1993:97)

Like Osburne, Chhangte does not give examples which include overt subjects, so it is uncertain which or if any of these verbs could appear with ergative marking or not.

VanBik (1998) describes a similar structure in Lai, which he identifies as psycho-collocations, a common phenomenon in Southeast Asian languages. The term comes from Matisoff (1986), who describes these constructions as consisting of a *psycho-noun* and its *psycho-mate*. VanBik explains that there are several sub-types of psycho-

collocations: those which use real body parts in metaphorical ways; those which use nominal verbs as the psycho-noun; those which use non-body part psycho-nouns; those for which meaning can only be attributed to the entire psycho-collocation, as the individual parts are meaningless; and those which take the middle voice. While captive verbs/psycho-collocations are not true valence-lowering structures, it will be claimed in this work that they share some crucial properties of the non-ergative structures discussed above.

In summary, this section has laid some sociolinguistic background for Falam Chin, as well as examining the literature on voice and valence-altering operations in Falam Chin and other Chin languages. In this literature, Chin voice and valence-altering operations have been described in more or less detail. Nevertheless, no current work has attempted to integrate this description with either current typological or theoretical understanding of voice and valence-altering operations, a primary goal of this dissertation.

1.2 Literature review

Before proceeding to a statement of the research question and methodology, a review of the pertinent theoretical literature will lay a foundation of critical concepts. First, §1.2.1 examines the topic of *grammatical relations.* Next, §1.2.2 looks at the interrelated notions of *valence* and *transitivity*. Finally, §1.2.3 surveys the typological possibilities for several pertinent types of *voice* and *valence-altering operations*.

1.2.1 Grammatical relations

It is well established that a given semantic role (*agent, patient, theme,* etc.) does not always display identical behavior in terms of syntactic properties such as case marking, word order, relativizability, control, etc., either within a given language or cross-linguistically (Croft 2003). Accordingly, grammatical relations (traditionally *subject, direct object,* and *indirect object*) may be invoked in an attempt to capture features of syntactic behavior within and across languages. Pertinent to this dissertation, grammatical relations are altered by voice and valence-altering operations.

The approaches used to define grammatical relations vary from theory to theory. Thus, a frequent starting point in typological discussions of syntactic phenomena is the intermediate notion which Croft (2003:144) terms "participant role clusters." By this, he refers to the following widely-used notations: S 'single argument of an intransitive clause'; A 'agent-like argument of a transitive clause'; and O 'patient-like argument of a transitive clause.[16] These will be employed throughout this dissertation as a pre-theoretical method of disambiguating arguments.

Although various theories of syntax discuss grammatical relations in different ways, there are some constants. For example, it is common to distinguish *terms,* or *core arguments,* from *adjuncts*. Core arguments can be further divided into *direct* and *indirect* arguments. Direct core arguments are those arguments which are licensed by the predicate itself; in other words, the predicate subcategorizes for them. In traditional grammar, as well as Government and Binding (GB), these are *subject* and *object*.

[16] Some use P rather than O (Comrie 1978).

Similarly, in Lexical-Functional Grammar (LFG), they are *subject* (SUBJ), *object* (OBJ), and *object theta* (OBJ_θ). In Relational Grammar (RG), the corresponding terms are *1* and *2*. As explained further in Chapter 3, the theoretical framework employed in this dissertation, Role and Reference Grammar (RRG), recognizes only one grammatical relation, the *privileged syntactic argument* (PSA). This corresponds roughly to *subject* in other frameworks.[17]

Indirect core arguments are those which are only indirectly licensed when the predicate subcategorizes for an adposition. GB identifies indirect core arguments as *indirect object,* LFG as *oblique theta (*OBL_θ*),* and RG as *3*.

Adjuncts, finally, are not licensed in any way by the predicate; they rather modify it. Most theories simply call these *adjuncts,* but RG distinguishes two types, *obliques* (benefactives, locatives, instrumentals, etc.) and *chômeurs* (demoted terms). RG is unusual among the theories in treating the benefactives, etc., as peripheral in nature; most other theories view them as more closely aligned with indirect objects.

While it is relatively easy to reconcile the various theories' terminology for grammatical relations, it is more difficult to demonstrate the grammatical relation status of a given argument. A common practice is to justify the identification of an argument with a given grammatical relation based on properties or bundles of properties which that argument demonstrates. Typically, more properties means greater syntactic privilege and a higher ranking on a scale of grammatical relations, such as the following: subject>direct object>indirect object>adjunct.

[17] The *object* and *indirect object* relations are handled in RRG in terms of macrorole assignment, a concept discussed more fully in Chapter 3.

Two types of properties may typically be used to argue for a certain grammatical relation status of an argument in a given language: coding properties and behavioral properties (Keenan 1976). Coding properties include case, indexation, and word order. Behavioral properties include such tests as ability to become the subject of a passive clause or the direct object in a ditransitive/applicative, to be relativized, or to control an argument in an embedded clause. In any given language some properties can occur with more than one grammatical relation, whereas others occur with only a single type of grammatical relation in that language. For example, the subject relation is more commonly indexed than the direct object relation, and the direct object relation is more commonly indexed than the indirect object relation. However, sometimes a given argument may have some, but not all the expected properties of a certain grammatical relation. Such an argument could be characterized as either a quasi-subject or a quasi-object.

At least two major typological patterns provide a challenge for any theory of grammatical relations, as well as for discussion of voice and valence-altering operations. The first is the typological parameter of *accusative* versus *ergative* languages.[18] A basic definition of accusative versus ergative patterns is that accusative languages treat S and A in the same way (nominative case) and O differently (accusative case). Ergative languages treat S and O in the same way (absolutive case) and A differently (ergative case).

[18] Fillmore (1968) was among the first to analyze accusative and ergative systems in terms of the oppositions between their treatment of participant role clusters. Two further options, tripartite and split-intransitive systems, will not be discussed here.

These patterns can be manifested in either morphological or syntactic properties. *Morphological* ergativity reflects an ergative pattern of marking arguments: word order, case marking, and/or indexation of the arguments on the verb will have a similar pattern for the S and O arguments, and a different pattern for the A argument. *Syntactic* ergativity, on the other hand, reflects an ergative pattern for syntactic operations such as coordination, subordination, complementation, questioning, and relativization. On this basis, it is frequently argued that the O argument in syntactically-ergative languages is the subject, as it has the syntactic properties prototypically ascribed to this grammatical relation.

Many languages are split-ergative, having both accusative and ergative characteristics.[19] There are several subtypes of split-ergativity. In one type, more animate NPs have accusative marking, while less animate NPs have ergative marking (the exact division varies by language). A second type marks bound pronominals in an accusative way, but free NPs in an ergative way. A third type is governed by tense, aspect, and/or mood. In such a case, ergative marking appears with past or perfective forms, while accusative marking appears elsewhere. Lastly, some languages manifest a split in terms of main versus subordinate clauses (Dixon 1994).

A second typological pattern which presents a challenge for theories of grammatical relations is that identified by Dryer (1986) as primary versus direct object languages. Dryer argues that many languages include the grammatical relations direct and indirect object, which map to the theme and recipient arguments of a three argument

[19] While fully accusative languages have been attested, Dixon (1994) notes that no fully ergative language has been found.

predicate, respectively. Others, however, include primary and secondary object grammatical relations, which map to the recipient and theme arguments of a three argument verb, respectively. In languages of the direct object type, the theme receives object properties, while the recipient appears as an oblique argument. In the primary object type, the recipient receives the greatest share of object properties, while the treatment of secondary objects varies from language to language (it may have oblique properties, object properties, or a mixture of both).

The type of case assigned based on direct core argument status (nominative/accusative; ergative/absolutive) is known as grammatical case. Many languages also assign dative case based on direct core argument status. There are, however, lexical (or semantic) cases as well, which are assigned based on semantic roles (Kroeger 2005). These can include *instrumental, ablative, locative, partative,* and many more. It is often the case that one or more lexical case forms is homophonous with a grammatical case form in the same language (Blake 1994).

In this section, I have discussed both types of grammatical relations and methods for identifying them. In subsequent chapters, I apply RRG's conception of grammatical relations to Falam Chin data, appealing to both coding and behavioral properties to demonstrate those alterations to grammatical relations which are the direct result of voice and valence-altering operations.

1.2.2 Valence and transitivity

In this section, I discuss the relationship between the sister concepts of *valence* and *transitivity.* As voice and valence-raising operations are claimed to alter the valence

or transitivity of a verb,[20] clear definitions for both are needed. First, valence may have either a semantic or a syntactic sense. Semantic valence is a measure of all semantically-necessary arguments, those participants specified in a verb's lexical entry. A predicate may be categorized as monovalent (one participant), bivalent (two participants), or trivalent (three participants). By contrast, syntactic valence refers to the number of these arguments which appear as direct, rather than oblique, in the resulting syntactic structure. To illustrate the distinction, a passive has the same semantic valence as its active counterpart, but is lowered in syntactic valence.

Transitivity, on the other hand, is always a syntactic notion, referring to the number of direct object arguments a verb has, whether none (intransitive), one (transitive), or two (ditransitive). Thus, a verb such as *give* is always semantically trivalent, yet may be syntactically transitive or ditransitive, depending on whether the beneficiary is represented as an oblique or direct argument, respectively (Kroeger 2005; Dixon & Aikhenvald 2000; Van Valin & LaPolla 1997).

Hopper and Thompson (1980) viewed transitivity as a prototype, and sought to identify prototypical transitive clauses based on ten isolatable facets of transitivity. They suggest that the higher any given clause is rated, the more prototypically transitive it is. These features are reproduced below in (1.33) (Hopper & Thompson 1980:252).

[20] However, some operations which have been labeled voice do not alter transitivity/valence. See Klaiman's (1991) discussion of pragmatic voice.

(1.33)

		High	Low
a.	PARTICIPANTS	2 or more participants, A and O	1 participant
b.	KINESIS	action	non-action
c.	ASPECT	telic	atelic
d.	PUNCTUALITY	punctual	non-punctual
e.	VOLITIONALITY	volitional	non-volitional
f.	AFFIRMATION	affirmative	negative
g.	MODE	realis	irrealis
h.	AGENCY	A high in potency	A low in potency
i.	AFFECTEDNESS OF O	O totally affected	O not affected
j.	INDIVIDUATION OF O	O highly individuated	O non-individuated

In addition, Hopper and Thompson postulate the following *Transitivity Hypothesis*:

(1.34) *Transitivity hypothesis*
> If two clauses (a) and (b) in a language differ in that (a) is higher in Transitivity according to any of the features in (1.33), then, if a concomitant grammatical or semantic difference appears elsewhere in the clause, that difference will also show (a) to be higher in Transitivity (1980:255).

To paraphrase, if two clauses in any given language differ in two or more features, all the high transitive features will be in one clause and the low transitivity features in the other. Hopper and Thompson conclude that the universality of transitivity features relates to their discourse function. High transitivity features correlate positively with foregrounding in the discourse, whereas they correlate less highly with backgrounding.

In *Prototypical Transitivity*, Næss (2007) begins where Hopper and Thompson (1980) left off, moving beyond a particular grouping of characteristics to search for the fundamental underlying principle behind them. Næss makes a logical distinction between the semantic relationship of transitivity (valence) and a transitive syntactic construction. The first refers only to the notion of two "obligatory participants" (Dixon 1994:114), which may or may not surface as a transitive clause. The second Næss defines as "a

construction with two syntactically privileged arguments" (2007:6), as defined by language-specific criteria such as case, verbal indexation, eligibility for syntactic operations, etc.

In Næss's view, the key semantic principle of transitivity is *distinctness of participants,* the notion that participants in a prototypically transitive clause must "play maximally distinct roles in the event in question" (Næss 2007:8). Ultimately, languages differ in how they encode non-prototypically transitive clauses with two participants; some may cast them as syntactically transitive, others as intransitive with oblique phrases.

In summary, semantic bivalence, while a logical necessity for syntactic transitivity, does not unilaterally result in a transitive clause. In fact, Chapters 6 and 7 of this dissertation show that neither semantic nor syntactic bivalence are sufficient to qualify a clause as transitive. A third type of transitivity, identified in RRG as *M-transitivity,* is needed to explain these structures (Van Valin & LaPolla 1997).

1.2.3 Voice and valence-altering operations

This section surveys the typological variety of pertinent voice and valence-altering operations found in the world's languages. As defined in the opening paragraphs of this dissertation, voice and valence-altering operations are structures which change the relationship of a predicate and its arguments. They can do so in two basic ways: 1) by altering the number of syntactic arguments in a clause; and/or 2) by altering the

assignment of grammatical relations to semantic roles[21] (Klaiman 1991; Van Valin & LaPolla 1997; Dixon & Aikhenvald 2000). Those operations that reduce the number of direct syntactic arguments[22] (valence-lowering operations) have traditionally been called *voice* (passive, antipassive, reflexive/reciprocal); those which increase the number of direct syntactic arguments (causatives, applicatives) simply *valence-raising operations* (Croft 1993).

Typologically speaking, voice and valence-altering operations may be categorized by either their form or their function. Approaches based on form use criteria such as the existence of certain types of morphology and changes in word order, case marking, adpositions, or indexation—that is, coding properties of the arguments involved. They may also examine behavioral properties of the arguments, such as their ability to antecede a reflexive or to be relativized. Those based on function, on the other hand, primarily examine the use of the structure, whether syntactic, semantic, or pragmatic. Croft argues that "the solution to the problem of cross-linguistic comparability is to use external definitions of grammatical categories" (2003:14), by which he refers to functional factors. Givón (1994) agrees when he states that

> The alternative to the purely structural approach to grammatical typology is to recognize explicitly what has been implicit in the practice of grammatical typology all along, namely that in human language there is always more than one structural—grammatical, syntactic—means of performing the same communicative function. And that grammatical typology is thus the study of the diversity of structures that can perform the same type of function (p. 7).

[21] Philippine and inverse voice systems are types of voice which do not fulfill the first diagnostic (see Klaiman 1991).
[22] Despite this prototypical view of voice, it is shown in Chapters 6 and 7 that Falam Chin reflexives, reciprocals, and antipassives, although valence-lowering, do not reduce *syntactic* transitivity.

On the other hand, Cooreman argues that it is necessary to begin with a formal definition "in order to avoid a potentially circular argument" (1994:49). In practice, researchers must employ both formal and functional approaches to some degree. Dixon and Aikhenvald (2000), for example, present a formal description of various voice and valence-raising operations, followed by their functional uses. Likewise, the following sections survey some of the typological features of causatives and applicatives, reflexives, reciprocals, and middles, and antipassives, with discussion of both form and function.

1.2.3.1 Valence-raising operations: causatives and applicatives

This section discusses both formal and functional characteristics of the two overarching types of valence-raising operations: *causatives* and *applicatives*. The first, causatives, raise the valence of the base predicate by licensing a *causer* participant (Dixon 2000). In terms of formal structure, this may be accomplished in one of three ways: 1) through the addition of a distinct causative predicate (*analytic* or *periphrastic* causatives), 2) through the addition of causative affixation[23] (*morphological* causatives), or 3) through suppletion (*lexical* causatives) (Comrie 1981; Kroeger 2004).

There is a great deal of typological variation regarding what type of base clause can undergo causativization and the resulting syntactic treatment of the causee. Only rarely can causatives apply to impersonal verbs or copulas (Dixon 2000). In many languages, causatives can apply to intransitive clauses only. Dixon and Aikhenvald

[23] Including discontinuous or suprasegmental forms of affixation such as vowel lengthening or tonal change (Dixon 2000).

(2000) describe the prototypical base intransitive causative as having the following features:

(1.35) *Causative (intransitive base)*
a. an intransitive clause becomes transitive;
b. S becomes O;
c. a new A argument is added; and
d. causative marking is used.

To current knowledge, this pattern is found in all languages with morphological causatives, as well as many with analytic causatives (Dixon 2000), although other patterns may coexist with it. A Turkish example is given in (1.36).

(1.36) Ali **Hasan-ı** öl-dür-dü.
Ali Hasan-ACC die-CAUS-PST
'Ali killed **Hasan**.' (Comrie 1981:169)

In many languages, causatives can apply to transitive and ditransitive clauses as well as intransitive clauses. However, there are no known languages where causatives can apply to transitive clauses but not to intransitive clauses. Comrie (1976, 1981) suggests that a very common way to deal with the causee of any clause type is to assign it the highest available function in the hierarchy shown in Figure 1.2.

subject > direct object > indirect object > oblique object

Figure 1.2: Comrie's causee assignment hierarchy

Thus, the causee of an initial intransitive clause is treated like a direct object, that of an initial transitive clause like an indirect object, and that of an initial ditransitive clause like an oblique object, typically like the demoted agent of a passive. This pattern is found in Turkish. In (1.36), above, an intransitive clause has been causativized and the causee, *Hasan,* receives accusative marking as the direct object. In (1.37), however, a transitive

clause has been causativized. Since both the subject and direct object grammatical relations are unavailable, the causee, *müdür* 'director', receives dative marking as an indirect object.

(1.37) Dişçi mektub-u **müdür-e** imzala-t-tı.
dentist letter-ACC director-DAT sign-CAUS-PST
'The dentist got **the director** to sign the letter.'

Finally, in (1.38), a ditransitive clause has been causativized. In this case, the highest three grammatical relations on the hierarchy in Figure 1.2 are already in use; thus, the causee, *müdür* 'director', is marked by *tarafından* 'by', the postposition which is also used to mark the agent of a passive construction.

(1.38) Dişçi Hasan-a mektub-u **müdür tarafından** göster-t-tı.
dentist Hasan-DAT letter-ACC director by show-CAUS-PST
'The dentist got **the director** to show the letter to Hasan.'

Comrie also allows that "doubling" may occur, such that both the causee and the theme are treated as direct objects, or the causee and the recipient/goal are both treated alike (p. 171). In the Sanskrit example in (1.39), both the causee, *bhṝtyaṁ* 'servant', and the theme, *kataṁ* 'mat', are in accusative case.

(1.39) Rāmo **bhṝtyaṁ** kataṁ kārayati.
Rama.NOM servant.ACC mat.ACC prepare.CAUS
'Rama makes **the servant** prepare the mat.' (Comrie 1981:171)

Similar to Comrie, Baker (1988) presents two possible rules for the treatment of causees in base intransitive or transitive clauses. The first rule states that the causee of a base transitive clause (base A) is treated as an indirect object, while both the causee of a base intransitive clause (base S) and the theme of a base transitive clause (base O) are

treated as a direct object. The second rule states that both the causee (base S/A) and the theme (base O) of a transitive clause are treated as direct objects (1.40).

(1.40) *Baker's causative rules*

a. Causative rule 1: A → IO
   S/O → O
b. Causative rule 2: S/A → O
   O → O

Baker illustrates these rules using two dialects of the Bantu language Chichewa. In (1.41), from Chichewa A, the causee, *buluzi* 'lizard' is marked with the preposition *kwa* 'to'. Thus, Chichewa A follows causative rule 1.

(1.41) Anyani a-na-meny-ets-a ana **kwa** **buluzi.**
baboons SP-PST-hit-CAUS-ASP children to lizard
'The baboons made **the lizard** hit the children.' (Baker 1988:163)

In an example from Chichewa B (1.42), however, the causee *mwana wake* 'her child' is unmarked, just like the original O, *chimanga* 'corn'. Thus, Chichewa B follows causative rule 2.

(1.42) Catherine a-na-kolol-ets-a **mwana** **wake** chimanga.
Catherine SP-PST-harvest-CAUS-ASP child her corn
'Catherine made **her child** harvest the corn.' (Trithart 1977:81)

Baker makes the significant observation that which of the two rules a language follows correlates with how the language treats the arguments of a ditransitive verb. Those languages which do not allow dative shift in ditransitive verbs follow causative rule 1, while those which allow a double object construction follow causative rule 2. Thus, Chichewa A, which canonically expresses a recipient as an oblique argument, also treats the causee as an oblique, but Chichewa B, which canonically treats a recipient as a primary object (Dryer 1986), also treats the causee as a primary object. The first type

Baker terms “non-double object languages” (p. 186). The second type he further subdivides into “true double accusative languages” (p. 174), in which both O arguments share most or all object properties, and “partial double object languages” (p. 180), in which the causee and original O share morphological case, but the causee appropriates object properties such as agreement and ability to serve as the subject of a passive, stripping them from the original O.

To summarize both Comrie and Baker’s insights, there appear to be two major syntactic patterns followed by causatives, the non-double object and the double object pattern. The second of these can be split into two sub-types, true or partial double object languages.

A final aspect of causatives to be considered is their function. Dixon (2000) argues that causatives rarely have a discourse function, although there are exceptions. Rather, they are primarily semantic, licensing an argument which could not otherwise appear in the clause. Some languages may include two or more semantically-distinct causative constructions, which differ in terms of the type of predicate to which they can apply, the degree of control, willingness, or affectedness of the causee, or the degree of directness, intentionality, effort, or involvement of the causer (Dixon 2000).

These semantic distinctions may also be marked through alternate ways of coding the causee in such clauses. The two Kannada examples below differ only in the case assigned to the causee. The dative case in (1.43) signals the causee has little control over the action, while the instrumental case in (1.44) indicates that the causee has greater control (Comrie 1981:175).

(1.43) Avanu **nanage** bisketannu tinnisidanu.
3SG.NOM 1SG.DAT biscuit eat.CAUS
'He fed **me** a biscuit.'

(1.44) Avanu **nanninda** bisketannu tinnisidanu.
3SG.NOM 1SG.INST biscuit eat.CAUS
'He got **me** to eat the biscuit.'

A second type, or group, of valence-raising operations is known collectively as applicatives. Whereas causatives license a causer participant which becomes the new A argument of the causative construction, applicatives license a participant which in many cases can alternatively be included with the predicate as an oblique. In the applicative structure, the applied argument becomes the new O. The semantic role of this participant varies with the type of applicative. Some of the more frequently occurring applicative types are *recipient/dative, benefactive, malefactive, instrumental,* and *locative* (Peterson 1999, 2007; Baker 1988). If a language has an applicative construction at all, it is most likely to encode recipient and/or benefactive/malefactive meaning (Peterson 1999, 2007).

Formally, applicatives may be morphological or lexical, just like causatives. Some languages allow a non-valence raised alternative along with the morphological applicative construction, while others allow only the valence-raised form. Two contrasting instrumental examples from Hakha Lai (Peterson 1999:41) show how the same semantic information may be expressed using either an instrumental case marker on the participant *tiiloon* 'boat' (1.45a), or by an instrumental applicative affixed to the verb (1.45b).

(1.45) a. **tiiloon=ʔin** tivaa (khaa) kan-tan
boat=INST river TOP 1PL.NOM-cross
'We **used the boat** to cross the river.'

b. **tiiloo**ŋ khaa tivaa kan-tan-**naak**.
boat TOP river 1PL.NOM-cross-INST
'We **used the boat** to cross the river.'

In many languages, however, the applicative is the only possible method of expressing the desired information, especially for recipient or benefactive applicatives (Peterson 1999, 2007).

Applicatives also differ as to what type of clause they can combine with and how the applied participant is affected. It appears that in some languages, such as Tzotzil and Chichewa, applicatives are somewhat restricted in how they combine with intransitive verbs, while others such as Yimas, Alamblak, and Sesotho allow applicatives to be formed from intransitive and transitive verbs, but do not allow them to be formed from ditransitive verbs (Baker 1988; Peterson 1999, 2007).

In a way quite similar to causatives, applicatives demonstrate different syntactic patterns. Dixon and Aikhenvald (2000) describe how applicative constructions affect intransitive base verbs as given in (1.46).

(1.46) *Applicative (intransitive base)*
a. an intransitive clause becomes transitive;
b. S becomes A;
c. an oblique argument becomes O;
d. applicative marking is used.

This intransitive pattern can be illustrated using Kinyarwanda data (Kimenyi 1980), as shown in (1.47). Because the verb is marked with the locative applicative morpheme *-ho*, the theme *ameeza* 'table' no longer needs the preposition *ku* 'on', as it would in the non-valence raised alternative. Rather, it appears as a direct argument of the predicate.

(1.47) Abaana b-iica-ye-ho **ameeza**.
children SP-sit-ASP-on table
'The children are sitting on **the table**.'

Dixon and Aikhenvald (2000) also describe one type of transitive applicative structure (1.48).

(1.48) *Applicative (transitive base a)*
a. a transitive clause remains transitive;
b. A remains A;
c. an oblique argument becomes O;
d. O becomes oblique;
e. applicative marking is used.

The Austronesian language Chamorro follows this transitive applicative pattern, as seen in (1.49), where the beneficiary *yu'* 'me' is unmarked, but the theme, *bäbui* 'pig', receives the oblique marker *nu*.

(1.49) Ha punu'-i **yu'** si Miguel **nu** **i** **bäbui.**
3SG.NOM kill-BEN me PN Miguel OBL the pig
'Miguel killed **the pig** for **me**.' (Gibson 1980)

A second transitive option is that the transitive clause becomes a ditransitive clause and the theme and the applied participant are both treated as objects (1.50) (Peterson 1999, 2007; Baker 1988).

(1.50) *Applicative (transitive base b)*
a. a transitive clause becomes ditransitive;
b. A remains A;
c. a peripheral argument becomes O;
d. O remains O;
e. applicative marking is used.

Example (1.51), from Chichewa, illustrates the transitive applicative type b (Baker 1988:248). Both the beneficiary *mbidzi* 'zebras' and the theme *nsapato* 'shoes' are treated as O in that they are left unmarked (overtly) for case.

(1.51) Kalulu a-na-gul-ir-a **mbidzi** **nsapato.**
hare SP-PST-mold-BEN-ASP zebras shoes
'The hare bought **shoes** for **the zebras**.'

However, as Baker (1988) shows, even if both objects share morphological case, this does not mean they equally share all object properties of that language. In many cases, the original O argument loses many or most of its object properties, such as object agreement or ability to become the subject of a passive. This last property is illustrated in (1.52). The beneficiary of the applicative construction, *mbidzi* 'zebras', can become the subject of a passive, but the theme, *nsapato* 'shoes' cannot (Baker 1988:248).

(1.52) a. **Mbidzi** zi-na-gul-ir-idw-a nsapato (ndi kalulu).
zebras SP-PST-buy-BEN-PASS-ASP shoes by hare
'**The zebras** were bought shoes by the hare.'

b. ***Nsapato** zi-na-gul-ir-idw-a mbidzi (ndi kalulu).
shoes SP-PST-buy-BEN-PASS-ASP zebras by hare
'**Shoes** were bought for the zebras by the hare.'

Languages which follow causative rule 1 (1.40) (non-double object languages) do not typically allow applicative constructions. Languages which follow causative rule 2 (double object languages) can be sub-divided in two ways, just as was seen with causatives. Following Marantz (1982, 1984), Baker argues that the applied object as a rule will be more object-like in its properties than the original O argument, a characteristic of applicatives which he terms *Marantz's Generalization* (Baker 1988:246). Nevertheless, the original O may retain some object properties, such as its ability to be extracted for relativization. Languages in which the applied object is more syntactically privileged (has more object properties) than the theme are partial double object languages, whereas those in which the two arguments share most or all properties can be

classified as true double accusative languages (Baker 1988). Bresnan and Moshi (1990) term these types *asymmetric* and *symmetric* languages, respectively.

In summary, applicatives, like causatives, may be classified as either a true or partial double object type. However, the treatment of applied objects may vary from one type of applicative to another even within one language (Baker 1988:290; Peterson 1999, 2007).

The functions of applicatives vary from language to language. In some cases, the functions appear to be primarily semantic, as in those languages which have no non-valence raised alternative. Some languages, such as Hakha Lai, include multiple morphologically-distinct applicative types with distinct semantics. However, in many Bantu languages it is common to subsume several of these semantic concepts under a single general applicative morpheme (Peterson 1999, 2007).

In those languages where applicative constructions co-exist with non-valence raised options for expressing identical semantics, there may be other motivations for the applicative construction. Possible pragmatic motivations include animacy or discourse salience of the raised participant; possible syntactic motivations include making the argument available for operations such as relativization or passivization (Peterson 1999, 2007).

1.2.3.2 Reflexives, reciprocals, and middles

This section examines the formal and functional characteristics of three types of valence-lowering operations which share a number of similarities: reflexives, reciprocals, and middles. Reflexives prototypically signify that a single participant both acts and

undergoes the action, whereas reciprocals prototypically signify two or more participants, each simultaneously an actor upon the other participant(s) and an undergoer of the other participants' action. Less literal is the chaining use of reciprocals, in which the participants engage in the action on a subset of the others, e.g, *The spelunkers followed each other through the narrow crevice* (Lichtenberk 1994). Middle voice is more difficult to define, as it has a wide variety of applications. However, Kemmer (1993:73) claims that middles share the semantic relationship of "subject-affectedness" with reflexives and reciprocals. It is thus not surprising that, in many languages, reflexives, reciprocals, and/or middles share the same or similar morphology (Kemmer 1993; Geniušienė 1987). Kemmer lists a variety of situation types which cross-linguistically have been found to bear middle marking, including: *grooming/body care*, *change in body posture*, *self-benefactive*, *naturally reciprocal*, *translational (self-induced) motion*, *emotion*, *cognition*, *spontaneous events*, and *logophoric* (the speaker or experiencer is coreferential with the agent of the dependent clause) (pp. 16-20).

Formally, reflexives can be divided in three primary ways. Dixon and Aikhenveld (2000) describe two of these: they can be formed either as transitives with a coreferential reflexive pronoun, or as intransitives whose S is simultaneously agent and patient. Only the second type can be considered a valence-lowering operation. The features of such a reflexive would be:

(1.53) *Reflexive (valence-lowering)*
- a. a transitive clause becomes intransitive;
- b. A and O merge into S;
- c. reflexive/reciprocal marking is used.

Van Valin and LaPolla (1997) term these two types *coreference reflexives* and *lexical reflexives*, respectively. Coreference reflexives (or *NP-reflexives* (Faltz 1985)), which are not detransitivizing, are characterized by a (pro)nominal reflexive form which indicates the coindexed argument. Faltz (1985) subdivides this type into *compound* and *pronominal* reflexives, which he argues behave in syntactically-distinct ways. English provides an example of the first type (1.54), whereas German exemplifies the second (1.55).

(1.54) Janine$_i$ saw **herself**$_i$ in the lake.

(1.55) Hans$_i$ sah **sich**$_i$ im Spiegel.
Hans see.PST REFL.3SG in mirror
'Hans$_i$ saw **himself**$_i$ in the mirror.' (Faltz 1985:46)

Lexical reflexives (or *verbal reflexives* (Faltz 1985)), on the other hand, are valence-lowering, involving a fundamental change to the argument structure of the verb. In Dyirbal, for example, the suffix *-yiri/-mariy* expresses reflexivity. The subject of (1.56), *yaɽa* 'man', would normally be ergative marked in a transitive clause. Here, it is marked absolutive, indicating the reduced transitivity of the clause.

(1.56) Ba-yi **yaɽa**$_i$-Ø buyba-**yiri**$_i$-ɲu.
DEIC-ABS.1 man-ABS hide-REFL-TNS
'The **man**$_i$ is hiding **himself**$_i$.' (Van Valin & LaPolla 1997:392)

Van Valin and LaPolla (1997) also describe a third type, *clitic reflexives.* Many researchers group these as a type of coreference reflexive or see them as a transitional stage between the first two types (e.g., Faltz 1985; Lichtenberk 1994). However, syntactic evidence demonstrates that, unlike coreference reflexives, they are intransitive (Alsina 1996).

Furthermore, Van Valin (1990) and Van Valin and LaPolla (1997) show that clitic reflexives are distinct from the other two types semantically. For example, in Italian, (1.57), a typical coreference reflexive, contrasts semantically with (1.58), a clitic reflexive form. In (1.57), *Maria* is obligatorily interpreted as the agent, whereas in (1.58), there is no implication of agency. This suggests that in the clitic reflexive, the A argument is suppressed, producing an intransitive form.

(1.57) **Maria$_i$** ha taglia-to **se stess-a$_i$** di proposito/*per sbaglio.
Maria have.3SG cut-PSTP REFL-FEM.SG on.purpose/by.mistake
'**Maria$_i$** cut **herself$_i$** on purpose/*accidentally.' (Van Valin & LaPolla 1997:408)

(1.58) **Maria$_i$** **si$_i$** è taglia-t-a. di proposito/per sbaglio.
Maria REFL be.3SG.PRS cut-PSTP-FEM.SG on.purpose/by.mistake
'**Maria$_i$** cut **herself$_i$** on purpose/accidentally.' (Van Valin & LaPolla 1997:407)

There are two primary syntactic features of reflexives to discuss. The first important feature regards the possible antecedent of reflexives. It is a universal property of reflexives that the antecedent must in some sense be higher than the reflexive. Jackendoff (1972, 1992) proposed that the relevant hierarchy was semantic: agent>location, source, goal>theme. However, in some languages a syntactic hierarchy appears to account better for the data: subject>object>oblique argument>non-argument (Kroeger 2004:94).

Languages further differ as to whether or not the antecedent must be a subject. Faltz (1985) terms this parameter the *subject antecedence* (SA) *condition*. Some languages, such as English, are non-SA languages, meaning that any argument can antecede a reflexive as long as it is higher on the appropriate hierarchy than the reflexive.

Thus, in (1.59), the reflexive pronoun *himself*, a non-argument, can be coindexed grammatically with either *Drew* (subject) or *Ethan* (oblique argument).

(1.59) **Drew$_i$** texted with **Ethan$_j$** about **himself$_{i/j}$**.

In SA languages, such as German, only the subject of the clause can antecede a reflexive. Thus, in (1.60), the subject, *Hans,* can antecede the reflexive pronoun *sich,* but *Fritz* cannot.

(1.60) **Hans$_i$** sprach mit **Fritz$_j$** über **sich$_{i/*j}$**.
Hans speak.PST with Fritz about REFL.3SG
'**Hans** spoke with **Fritz** about **himself**.' (Faltz 1985:76)

A second important syntactic feature of reflexives is their domain. Universally, the smallest domain of obligatory reflexivization appears to be coreferential semantic arguments of the same predicate (Van Valin & LaPolla 1997). In (1.61), because the two semantic arguments of *bruise* are marked as coreferential, only the reflexive pronoun is a grammatical expression of the second argument.

(1.61) **Seth$_i$** bruised **himself$_i$/*him$_i$**.

In some languages, reflexivization is limited to this very small domain. Other languages require reflexivization for any coreferential argument within the clause, regardless of whether it is a semantic argument of the same predicate as its antecedent. Faltz (1985) terms this requirement the *strict clause* (SC) *condition*. German is a SC language, as shown in (1.62). The reflexive pronoun *sich* signals coreferentiality with *Hans,* despite the fact that it is not an argument of the predicate *sehen* 'see'.

(1.62) **Hans$_i$** sah eine Schlange neben ***ihm$_i$/sich$_i$**.
Hans see.PST a snake near 3SG/REFL.3SG
'**Hans$_i$** saw a snake near **him(?self)$_i$**.' (Faltz 1985:100)

A third type of language falls between these two. In English, reflexivization is obligatory for semantic co-arguments, but only optional for coreferential arguments within the clause which are not arguments of the same predicate (1.63). English is thus a non-SC language.

(1.63) **Alexis$_i$** spilled fingernail polish on **her$_i$/herself$_i$**.

Kuno (1987) advances a functional explanation for the two options in (1.63): the reflexive form suggests a greater degree of affectedness than the plain pronoun.

Finally, the *clause mate* (CM) *condition* (Postal 1971) distinguishes those languages which limit reflexivization to the clause only (*local* reflexives) from those which allow inter-clausal reflexivization (*long distance* or *logophoric* reflexives). English is a CM language (1.64),[24] whereas Japanese is not (1.65).

(1.64) **Lydia$_i$** said [that Alison pinched ***herself$_i$/her$_i$**].

(1.65) **Mitiko$_i$** wa [**zibun$_i$** ga suki na] seinen o yatto ryoosin
Michiko TOP REFL NOM like young.man ACC finally parents

ni syookai sita.
DAT introduce.PST
'**Michiko$_i$** finally introduced to her parents the young man [whom **she$_i$** loved].' (Faltz 1985:152)

A number of languages include both primary and secondary reflexivization devices (e.g., German, French, Norwegian). In such cases, their use is frequently governed by which of the preceding constraints they follow. In particular, Faltz (1985) proposes that 1) pronominal reflexives are SA and SC, and mixed in regard to CM; 2) compound reflexives are non-SA, non-SC, but CM; and 3) verbal reflexives are SA, non-

[24] But see Lichtenberk (1994) for some exceptions.

SC, and CM. Although these characterizations are not without exception, it is clear that verbal reflexives are universally much more constrained in the types of reflexive situations they can convey, being restricted to subject antecedents whose reflexive argument is within the clausal domain (Lichtenberk 1994).

Although reciprocals have distinct semantics from reflexives, morphologically and syntactically they share many similarities with reflexives. Like reflexives, they may be nominal, verbal, or clitic in form. They are also subject to the same types of syntactic parameters of antecedence and domain discussed above for reflexives (Lichtenberk 1994). However, as Everaert (2000) notes, the reflexive and reciprocal forms in a given language may not be identical in regard to their range of syntactic uses. Likewise, middles frequently overlap morphologically with reflexives. However, some languages such as English typically encode middles lexically with no distinct pronominal or verbal marking (e.g., *John dressed for dinner.*) or with a periphrastic construction (e.g., *John got dressed.*).

The function of reflexives, reciprocals, and middles is overwhelmingly semantic. Nevertheless, in many languages, long-distance reflexives, reciprocals, and middles are used to coindex participants across clauses, extending their function to the pragmatic (Huang 2006).

1.2.3.3 Antipassives

This section examines the formal and functional characteristics of a final type of valence-lowering operation: the antipassive. Antipassives prototypically involve syntactic suppression of the O argument (by contrast with passives, which suppress the A

argument). Since the O argument is demoted in some way, the A becomes the new S of the construction. This is summarized as in (1.66) (Dixon & Aikhenvald 2000):

(1.66) *Antipassive*
- a. a transitive clause becomes intransitive;
- b. A becomes S;
- c. O becomes peripheral or omitted;
- d. antipassive marking or a periphrastic construction is used.

Antipassives frequently are found in ergative languages, in which O is the unmarked argument for subject. When the O is demoted in such languages, the A argument takes on subject properties. However, antipassives can also occur in accusative languages, in which case the same argument begins and ends as subject (Polinsky 2008).

A typical antipassive sentence from Greenlandic is illustrated in (1.67). The verb is marked by a special antipassive affix, *-i*, as well as an affix to indicate it is now an intransitive verb (*-pu*). In addition, the original O argument, *atuartut ilaanik* 'one of the students', appears in the instrumental case, indicating it is no longer a core argument.

(1.67) Atuartut ilaannik ikiu-**i**-sariaqar-**pu**-nga.
of.students one.of.them.INST help-AP-must-INTR.IND-1SG.ABS
'I must help one of the students.' (Bittner 1987:211)

In ergative languages, the intransitivity of the resulting antipassive clause is clear from the absolutive marking on the A (new S) argument. Thus, in the antipassive clause in (1.68) from Chukchi, the subject, *ʔaaček* 'youth', is absolutive-marked.

(1.68) ʔaaček-**ət** ine-niʔetet-gʔe-t kimitʔ-e
youth-ABS AP-carry-AOR.3SG.SUBJ-PL load-INST
'The young men carried away the/a load.' (Kozinsky, et al. 1988:652)

However, not all antipassives conform to this prototype. For example, in K'iche', the *agent-focus antipassive* is morphologically intransitive, but in some ways syntactically transitive (Campbell 2000).

Most of the discussion regarding antipassives has focused on morphological antipassives. Some languages, such as Greenlandic, have multiple antipassive morphemes (including a zero morpheme) expressing varying types of verbal aspect (Bittner 1987). Conversely, a single morpheme can express other detransitivizing functions in addition to antipassive (e.g., reflexive, middle, anticausative, etc.). In terms of formal typology of antipassives, the primary distinction made has been between whether the O argument is either omitted or becomes oblique (Polinsky 2008).

Cooreman (1994) discusses two main functions of the antipassive, which she describes as the semantic/pragmatic use and the structural use. The semantic/pragmatic use has to do with the "degree of difficulty with which an effect stemming from an activity by A on an identifiable O can be recognized" (Cooreman 1994:51). There are several subtypes. First, there are antipassives which function to lower the degree of identifiability of O—either its definiteness, referentiality, number, or some combination thereof. An example of this was given in (1.67), where the phrase *atuartut ilaanik* 'one of the students' must be taken to mean 'any individual who fits the characterization "student"', as opposed to 'a particular student'.

A second subtype of antipassive alters the aspect of the predicate, making it less complete or punctual. For example, in Chamorro, the antipassive marker *mang-* suggests iterative or habitual action (1.69).

(1.69) **Mang**-galuti gue' ni ga'lago.
AP-hit ABS.3SG OBL dog
'He pounded on/repeatedly hit the dog.' (Cooreman 1994:57)

A third subtype lowers the affectedness of O. Another example from Chamorro demonstrates that *ga'lago* 'dog', although the intended recipient of the action, does not actually feel the effects of it (1.70).

(1.70) **Mamatek** hao gi ga'lago.
AP.kick 2SG.ABS LOC dog
'You kicked at the dog.' (Cooreman 1988:578)

Finally, Cooreman lists some infrequent uses of the antipassive, such as to indicate non-volitionality of A or to show the counterfactualness of the statement. Cooreman connects the semantic/pragmatic uses of the antipassive with Hopper and Thompson's (1980) transitivity properties shown in (1.33). Not surprisingly, antipassives are used in situations where the Transitivity Hypothesis predicts lowered transitivity.

The second main use which Cooreman posits for antipassives is the structural use. Structural uses include feeding syntactic pivots in clause coordination or subordination, or in focus constructions or WH questions. For example, in Chukchi, only an absolutive argument can be relativized. For the subject of a transitive clause to be extracted, the clause must first undergo antipassivization (1.71).

(1.71) [ŋinqey-ək ine-nyegtelewə-lʔ-ən] tumgətum
boy-LOC AP-save-PTCP-ABS friend
'the friend [that saved the boy]' (Polinsky 2008)

The structural uses of the antipassive, although they may share morphological features in a given language with the semantic uses, are rather different in that they focus on an altered syntactic role of A, rather than a semantic downplaying of O. Some

languages may include both semantic/pragmatic and structural uses for the antipassive, whereas others include only one or the other.

In conclusion, the operations discussed in this section are all similar in their valence-affecting nature. However, it is clear that there is much variation between constructions, as well as cross-linguistically, in terms of their formal and functional properties. In this dissertation, I compare and contrast Falam Chin voice and valence-altering operations with the typologies I have outlined here, showing how they both fit and do not quite fit current understanding of these constructions.

1.3 Research questions

The previous two sections have summarized the literature regarding voice and valence-altering operations, both in regard to Kuki-Chin languages and more broadly typological and theoretical material. In this section, I present the two interrelated research questions I seek to answer in this dissertation, based on two perceived gaps in the literature (1.72):

(1.72) *Research questions*

a. What is the range of voice and valence-altering operations in Falam Chin and where does Falam Chin fit in a typology of voice and valence-altering operations?
b. What theoretical explanations can account for both the expected and unexpected features of Falam Chin's voice and valence-altering operations?

Comprehensive answers to these questions must be delayed until later chapters. However, I outline here some of the major points I intend to cover in those chapters. The first research question will be approached in terms of basic linguistic theory, or general typological theory (Dixon 1994). Some "topics for further investigation" in Dixon and Aikhenvald (2000:25) provide three sub-topics for consideration. First, Dixon and

Aikhenvald suggest that study of valence-altering operations must take place within the grammatical context of the language; grammatical judgments cannot be made in a vacuum. To that end, Chapter 2 provides a grammatical overview of Falam Chin.

Second, Dixon and Aikhenvald promote exploration of the various types of constructions in a given language, particularly looking at how they vary in regard to the prototypical examples. Chapters 4-7 discuss various voice and valence-altering constructions in Falam Chin, exemplifying their features both usual and unusual. For example, in one type of applicative, the promoted argument retains oblique marking. Reflexives allow an optional O argument, in spite of having other features of intransitivity. Antipassives go further and *require* the presence of a non-oblique O argument.

Third, Dixon and Aikhenvald encourage the researcher to study how various valence-altering operations can combine in a given language. This is also addressed in Chapters 4-7.

My second research question queries what theoretical explanation can account adequately for Falam Chin's voice and valence-altering operations. In Chapter 3, I present evidence that Falam Chin is a primarily head-marking language, and argue that this fact has important ramifications for voice and valence-altering operations in Falam. As a head-marking language, Falam segregates aspects of syntax and semantics in a way impossible in solely dependent-marking languages, resulting in some unusual features. Using the framework of Role and Reference Grammar (RRG), as summarized in Chapter 3, these features can be described and represented in an insightful way. RRG is a theory

which stresses the principle of *typological adequacy*: the ideal linguistic theory is equipped to account equally satisfactorily for all languages. To this end, RRG implements a system of semantics to syntax linking which combines crucial language universals with language-specific parameters. This *linking algorithm* is able to elegantly capture important similarities and distinctions among Falam Chin's voice and valence-altering operations, as well as those of other languages.

1.4 Methodology

This final section describes the methodology used in conducting the research for this work. My research took place over a period of three years, from 2007-2009. During this period I made two short data-gathering trips to Burma (one in June of 2007 and the other from October to December of 2009). My language consultants in Burma were Paul Van Hre (Lente), Mang Herh (Zahau), Peter Lal Din Thar (Zahau), Eunice Ngunte Cin Sung, and Samuel Ngun Thawm Lian. I had two additional language consultants in the United States, Phun Kar Thang (Zahau) and Hniang Tum. When possible, I have also drawn examples from a small corpus of texts compiled and translated with the help of native Falam Chin speakers.

Other than the texts mentioned, my data consists primarily of elicited sentences. At first, this involved simply asking my consultants to translate a given English sentence. Later, I would form sentences in minimal pairs or sets and ask my language consultants to make grammaticality judgments on members of the set, sometimes in the context of a previous sentence. Working with multiple consultants and sources inevitably results in

discrepancies of opinion. I have noted any such discrepancies and explained their source to the best of my ability.

I managed my data using Toolbox software. Although I did make some recordings along the way, the vast majority of my data was gathered in written, orthographic form. While I believe that tone and prosody may reveal some interesting and pertinent information about the data, I was limited in my ability to gather and analyze the data within the time constraints of my trips and my consultants. These elements will have to wait for further research efforts.

1.5 Organization

In this chapter, I have introduced Falam Chin and Kuki-Chin languages, discussed pertinent literature regarding grammatical relations, valence, and voice and valence-altering operations, and outlined my research goals and methodology. In Chapter 2, I present an overview of Falam Chin grammar, while in Chapter 3, I explain my theoretical framework, Role and Reference Grammar (RRG), and provide some reanalysis of Falam Chin data within this framework. In Chapters 4 and 5, I discuss two types of valence-raising operations in Falam Chin: causatives and applicatives, respectively. In Chapters 6 and 7, I look at valence-lowering operations in Falam Chin, first reflexives, reciprocals, and middles, and then antipassives. Finally, in Chapter 8, I develop my conclusions regarding the broader implications of this work.

CHAPTER 2

FALAM CHIN GRAMMAR OVERVIEW

In this chapter, I present an overview of some of the basic grammatical elements of Falam Chin. As Dixon and Aikhenvald (2000) suggest, study of any individual phenomenon is most reliable within the context of the grammar of the language as a whole. This chapter, therefore, lays the groundwork for the discussion of Chapters 4-7 regarding voice and valence-altering operations in Falam Chin. As this chapter is intended to be primarily descriptive in its approach, I have largely avoided RRG-specific terminology for the time being.

The organization of this chapter is as follows: first, §2.1 examines Falam Chin morphology, including phrasal affixes, inflectional morphology, and derivational morphology. Second, §2.2 discusses types of nominals and ordering of dependents in relation to the noun. Third, §2.3 looks at types of predicates and ordering of dependents in relation to the predicate. Lastly, §2.4 discusses types of clauses, clausal coordination, and the formation of non-indicative sentence patterns (mood).

The reader who wishes to procede more quickly to the discussion of voice and valence-altering operations will find a few key sections most useful: §2.1.1 describes case marking and verbal cross-reference, two key valence-coding properties; §2.2.1.2 discusses relational nouns, which have bearing on the analysis of applicatives; and §2.3.2 explains basic clause ordering in a non-valence raised clause.

It is helpful to note before beginning that Falam is a language which follows AOV[25] ordering, and has split-ergative case marking. NP case marking appears as phrase-marking enclitics, following an ergative-absolutive pattern. Verbal cross-reference appears as phrase-marking proclitics, following a nominative-accusative pattern.

2.1 Morphology

The morphology of Falam Chin is agglutinative and manifests only minimal phonological changes. Like many Tibeto-Burman languages, Falam Chin has sparse inflectional morphology (LaPolla 1996). To compensate, Falam uses *phrasal affixes* for a number of prototypically inflectional categories; these are discussed in §2.1.1. Falam Chin's only truly inflectional forms are the suppletive *verbal stem alternations* found in a subset of Falam Chin verbs; these are discussed in §2.1.2. Derivational morphology includes both nominalizing and various other noun-associated forms as well valence-changing and other verb-associated forms, discussed in §2.1.3.

2.1.1 Phrasal affixes

Phrasal affixes are a type of clitic which, rather than attaching to the head of its respective phrase or clause, either precedes or follows the entire phrase or clause (Kroeger 2005). In Falam Chin, these include NP case marking, clause marking, and verbal and nominal cross-reference.[26] As Falam is morphologically ergative in its NP case marking system, yet accusative in its verbal cross-referencing and syntax, it can be

[2525] A variant on the more usual SOV designation, in which A indicates "agent-like argument of a transitive clause."

[26] The term *cross-reference* will be used throughout because, as Croft (2003:34) notes: "The term agreement, although used far more commonly than [cross-reference and indexation], implies that there is a phrase in the utterance that is 'agreed with' (the controller) that is necessarily present. In fact, it often is not..."

described as a split-ergative system (Dixon 1994). With both NP case (a dependent-marking feature) and cross-reference (a head-marking feature), Falam can also be characterized as a double-marking language (Nichols 1986).[27] This section discusses NP case marking and verbal cross-reference, two key indicators of valence in Falam Chin clauses. (Nominal cross-reference is discussed in §2.2.2.1 and clause marking in §2.4.1.)[28]

2.1.1.1 NP case marking

Case marking identifies the function of a dependent noun phrase (NP) in relation to the head of its clause or phrase (Blake 1994). Along with verbal cross-reference, case is an important indicator of valence. There are only three overt forms of case marking in Falam Chin, *in*, *ah,* and *ih,* all of which occur NP-finally. Depending on syntactic factors, they can serve multiple, at times overlapping, functions. Types of NP case marking include *ergative/ablative, absolutive, locative,* and *genitive.*

The first case form, *in*, serves both ergative and ablative functions.[29] In its ergative function, it marks the A argument in a transitive clause, regardless of the semantic role or animacy of the argument (e.g., agent (2.1) or experiencer (2.2); animate (2.1) or inanimate (2.3)).

[27] It should be noted that in regard to possessive phrases, however, Falam is *head-marking* for pronominals but *dependent marking* for nouns.

[28] Phonologically, both case and clause marking are bound as enclitics to the final unit of the phrase/clause with which they are associated. Likewise, cross-reference pronominals are bound as proclitics to their head or intervening elements. However, as these are phonological distinctions not pertinent to the topic of this dissertation, I have chosen in my examples to primarily follow the Falam Chin orthographic representation, using an equals sign (=) to represent word boundaries only when the Falam orthography joins a clitic to another word.

[29] As Dixon (1994) notes, it is not unusual to find ergative case coinciding with instrumental and other functions.

(2.1) Thangte **in** hrampi a at.
Thangte ERG grass 3SG.NOM cut.1[30]
'Thangte cut the grass.'

(2.2) Thangte **in** a lo duh.
Thangte ERG 3SG.NOM 2.ACC love
'Thangte loves you.'

(2.3) Thlisia **in** inn a siatbal.
storm ERG house 3SG.NOM destroy
'The storm destroyed the house.'

This case marker can be demonstrated to be ergative, not nominative, case by examining an intransitive clause, whose S argument cannot take *in* (2.4).

(2.4) Ka kawr ***in/Ø** a bal.
1SG shirt ERG/ABS 3SG.NOM dirty.1
'My shirt is dirty.'

In its ablative function, *in* marks an oblique NP. It can follow the marked noun directly (2.5) or else follow an intervening relational noun,[31] such as *par* 'on' (2.6).

(2.5) Thangte cu **khua=in** a ra.
Thangte TOP village=ABL 3SG.NOM come.1
'Thangte came **from the village**.'

(2.6) Nam cu cabuai **par=in** a tla.
knife TOP table on=ABL 3SG.NOM fall.1
'The knife fell **off** the table.'
(lit., '**from the on-location of** the table')

Ablative case can have locational meanings such as *source* (motion away from an original location; (2.5) and (2.6)) or *location in motion* (2.7). In such cases, the ablative

[30] This numeral indicates the stem form, as explained in §2.1.2. Many verbs have a single form which performs both functions; thus, only those verbs which have two forms are marked in this way.
[31] Relational nouns are a special class of nouns with spatial, time, or other relational meanings. They work in conjunction with ablative case, locative case, or clause marking to express concepts encoded in many languages as adpositions and subordinating conjunctions (Blake 1994). See §2.2.1.2 for further discussion.

marker may optionally be combined with *ihsi* ‘from’, which is not possible in its ergative function. (Note that *in* contracts to *=n* when preceded by a vowel.)

(2.7) Ka **dung** **(ihsi)=n** i thlun aw.
1SG behind from=ABL 1SG.ACC follow IMP.SG
‘Follow **behind** me.’

Ablative case can also indicate *accompaniment* (2.8), *means* (2.9), or *instrument* (2.10).

(2.8) Thangte cu Aungte **thaw=n** hrampi an[32] at.
Thangte TOP Aungte with=ABL grass 3PL.NOM cut.1
‘Thangte cut the grass **with** Aungte.’

(2.9) Tlangleng=**in** Rangoon=ah a feh.
train=ABL Yangon=LOC 3SG.NOM go
‘He went to Yangon **by** train.’

(2.10) Thangte in favah **thaw=n** hrampi a at.
Thangte ERG sickle with=ABL grass 3SG.NOM cut.1
‘Thangte cut the grass **with** a sickle.’

As seen in (2.8) and (2.10), accompaniment and instrumental uses of *in* usually appear in conjunction with *thaw* ‘with’.

Ablative case is also used in comparative constructions (2.11).

(2.11) Khi ui **hnak=in** hi ui a zamrang-deuh.
that dog than=ABL this dog 3SG.NOM fast-CMPV
‘This dog is faster **than** that dog.’

Absolutive case is zero-marked in Falam Chin, as it is in many ergative languages.[33] It marks the S in an intransitive clause (2.12) and the O in a transitive clause (2.13).

[32] Constructions using *thaw* require cross-reference which equals the sum of the animate participants involved.
[33] Absolutive is the unmarked case functionally, and is frequently formally unmarked as well (Dixon 1994:57; See also Greenberg 1963:95).

(2.12) Ka kawr ***in/Ø** a bal.
1SG shirt ERG/ABS 3SG.NOM dirty.1
'My shirt is dirty.'

(2.13) Cinte in rawl **Ø** a suang.
Cinte ERG food ABS 3SG.NOM cook
'Cinte cooked some food.'

The second case form, *ah,* marks locative case. Like ablative case, locative case may directly follow the located noun (2.14); however, it is more usual for a relational noun, such as *sung* 'inside', to intervene between the two (2.15).

(2.14) Anih cu **inn=ah** a um.
3SG.CTR TOP house=LOC 3SG.NOM be
'He is **at the house**.'

(2.15) Hai cu kho **sung=ah** a um.
mango TOP basket inside=LOC 3SG.NOM be
'The mango is **in** the basket.'
(lit., 'The mango is **at the inside of** the basket')

Locative case can indicate either *static location* ((2.14) and (2.15)) or *final location* ((2.16) and (2.17)).

(2.16) Inn **par=ah** thingkung a tlu.
house on=LOC tree 3SG.NOM fall.1
'The tree fell **on** the house.'

(2.17) Cabuai **par=ah** nam ret aw.
table on=LOC knife put IMP.SG
'Put the knife **on** the table.'

Finally, locative case can also specify a *location in time,* as well as space (2.18).

(2.18) Lian in nikum=**ah** thingkung a phun.
Lian ERG last year=LOC tree 3SG.NOM plant
'Lian planted a tree last year.'

The primary function of the final case form, *ih*, is genitive case. It indicates animate possession (2.19) or relationship (2.20).[34]

(2.19) Cinte in **Tlem ih hni** a hlang.
Cinte ERG Tlem GEN skirt 3SG.NOM borrow
'Cinte borrowed **Tlem's skirt**.'

(2.20) **Mang ih nupi in** hni a tah.
Mang GEN wife ERG skirt 3SG.NOM weave
'**Mang's wife** wove a skirt.'

However, inanimate nominals cannot appear with genitive marking (2.21).

(2.21) Hi **thing (*ih) theirah** cu a ṭha.
this tree GEN fruit TOP 3SG.NOM good.1
'The **fruit of this tree** is good.'

In fact, animate nominals are not required to have genitive marking either, and thus have two grammatical options, analogous to English -*'s* vs. *of*-type possessives (2.22).

(2.22) a. **Bikte ih** pa
Bikte GEN father
'**Bikte's** father'

b. **Bikte** pa
Bikte father
'the father of **Bikte**'

An unusual feature of genitive marking is that it can also optionally occur with animate NPs preceding relational nouns (2.23).

(2.23) **Thangte (ih) hnen=ah** ka feh ding.
Thangte GEN to=LOC 1SG.NOM go FUT
'I will go **to Thangte**.'
(lit., 'I will go **to Thangte's to-location**.')

However, as might be expected, inanimate NPs never take genitive marking with relational nouns (2.24).

[34] Orthographically, genitive case is connected to proper names with a hyphen, e.g., *Tlem-ih hni* 'Tlem's skirt' (Champeon 2008).

(2.24) **Thingkung** **(*ih)** **lam=ah** ka feh ding.
tree GEN toward=LOC 1SG.NOM go FUT
'I will go **toward the tree**.'

Both syntactic and phonological environments can alter the form of the case markers just discussed. When ergative, locative, or ablative case is marked in some types of embedded clauses, *ih* is used as an embedded clause case allomorph. Thus, in (2.25) and (2.26), ergative, locative, and ablative case markers all appear as *ih* because they are within a type of embedded clause. (See §2.4.1 for further discussion of which clause types condition this allomorph.)

(2.25) [Thangte **ih** lo sung=**ih** ___$_i$ cin=mi] fang=pawl$_i$ cu
Thangte ERG field in=LOC plant.2=REL rice.plant=PL TOP

tilik in a siat ṭheh.
flood ERG 3SG.NOM destroy PFV
'As for the rice$_i$ [which Thangte planted ___$_i$ **in** the field], the flood completely destroyed it.'

(2.26) Cinte in [Mang cu tlangleng=**ih** a ra tlun
Cinte ERG Mang TOP train=ABL 3SG.NOM go return.2

ding] a duh-sak.
FUT 3SG.NOM want-BEN
'Cinte wants Mang$_i$ [___$_i$ to return **by** train].'

Furthermore, when a locative or ablative-marked NP modifies a noun (is embedded in the NP), it is also marked with *ih* (2.27).

(2.27) [Na **hmai=ih]** lukham kha la aw.
2SG front=LOC pillow TOP take.1 IMP.SG
'Take that pillow [**in front of** you].'

Phonological allomorphs exist for both *in* and *ih* when they are preceded by a word that ends in a vowel or vowel plus glottal stop.[35] *In* contracts by dropping the /i/, producing forms like *thaw=n* (2.10) (*thaw*[36] 'with'). *Ih* contracts by dropping the glottal stop, producing forms like *thaw=i* and *ihsi,* as well as numerous other forms in its genitive function (2.28).

(2.28) Ka **pa=i** hnen=ah ka feh ding.
1SG father=GEN to=LOC 1SG.NOM go FUT
'I will go to my **father**.'

As argued in the introduction to this section, case marking of all types is phrase-final; this can be seen in (2.29), where ergative marking follows the entire NP.

(2.29) **Ka naunu mawi zet in** puan a hlang.
1SG sister pretty very ERG blanket 3SG.NOM borrow
'**My very pretty sister** borrowed a blanket.'

However, the ordering of case and pragmatic marking varies by type of pragmatic marking. Case marking follows topic marking, as in (2.30).

(2.30) Cinte le Thangte **cu=n** Pathian an rian.
Cinte and Thangte TOP=ERG God 3PL.NOM serve.1
'Cinte and Thangte serve God.'

Case marking precedes focus marking (2.31).

(2.31) Zo **in si** Parte a hua?
who ERG FOC Parte 3SG.NOM hate.1
'Who hates Parte?'

The types and forms of Falam Chin case are summarized in Table 2.1.

[35] Although the *Chin Writer's Handbook* (Champeon 2008) states that phonologically shortened forms should be written out in full, I have chosen to represent the shortened forms in this work.

[36] *Aw* is the orthographic rendering of /ɔ/ (Champeon 2008).

Table 2.1: Case forms

Case	**Basic form**	**Contracted form**	**Embedded form**
Ergative/ablative	in	=n	ih
Absolutive	Ø	Ø	Ø
Locative	ah	not applicable	ih
Genitive	ih	=i	ih/=i

The adjunct clause markers, which are discussed in §2.4.1.2, are formally identical to the ergative/ablative and locative case markers.

2.1.1.2 Verbal cross-reference

Falam has two sets of verbal cross-reference pronominals,[37] which may optionally be accompanied by a coreferential NP in the clause. Unlike Falam's ergative-absolutive system of NP case marking, verbal cross-reference patterns in a nominative-accusative manner. The nominative case cross-reference forms are shown in Table 2.2.[38]

Table 2.2: Nominative verbal cross-reference

	Singular	Plural
1	ka	kan
2	na	nan
3	a	an

These forms are used to cross-reference both the S in an intransitive clause (2.32) and the A in a transitive clause (2.33).

(2.32) **Mang** cu tlawngta ṭha **a** si.
Mang TOP student good.1 3SG.NOM be
'**Mang** is a good student.'

[37] Although proclitics, both verbal and nominal cross-reference are written as separate words according to Falam Chin orthography (Champeon 2008).
[38] Falam also has nominal cross-reference, which is identical in form to the nominative case verbal cross-reference forms. Its use is discussed in §2.2.2.1.

(2.33) **Parte** in **a** lo tham.
Parte ERG 3SG.NOM 2.ACC touch
'**Parte** touched you.'

Accusative case cross-reference indexes the O in a transitive clause, but according to a somewhat more complicated system. The set of accusative verbal cross-reference forms is found in Table 2.3.

Table 2.3: Accusative verbal cross-reference

	Singular	Plural
1	i	in
2	lo	lo … (hai)
3	Ø	Ø … (hai)

A few remarks will help to clarify how these forms are used. When the O argument is first person, the accusative cross-reference forms are *i* or *in*, but nominative cross-reference is phonologically null. In (2.34) below, although the A argument is second person singular *nangmah*, the expected nominative cross-reference form *na* does not appear with the verb.

(2.34) Nangmah in **Ø** **i** duh.
2SG.STD ERG NOM 1SG.ACC love
'You love **me**.'

If both the A and O arguments are singular, *i* is used to represent a first person O argument. If either the A or O, or both, are plural, *in* is used. This form, it must be stressed, may indicate the plurality of either the A or the O argument, thus (2.35) is ambiguous, meaning either 'You (PL) love me' or 'You (PL) love us'.

(2.35) Nanmah in **Ø** **in** duh.
2PL.STD ERG SUBJ 1PL.ACC love
'You (PL) love **me/us**.'

Second person O arguments take the form *lo,* regardless of whether they are singular or plural (2.36). *Lo* comes between the nominative cross-reference and the predicate. For human arguments, the post-verbal word *hai* can be used to indicate plurality of the O argument (2.37).[39]

(2.36) Ka **lo** duh.
1SG.NOM 2.ACC love
'I love **you**.'

(2.37) Ka **lo** duh **hai**.
1SG.NOM 2.ACC love PL.ACC
I love **you (PL)**.

Third person accusative marking is phonologically null (2.38). However, the post-verbal plural word may optionally be used to represent plurality of human O arguments (2.39).

(2.38) Ka **Ø** duh.
1SG.NOM 3.ACC love
'I love **him/her/it/them**.'

(2.39) Ka **Ø** duh **hai**.
1SG.NOM 3.ACC love PL.ACC
'I love **them**.'

Ditransitive verbs add an interesting complication to the discussion of accusative cross-reference. It is only possible to cross-reference one object argument; however, ditransitives include two possible object arguments. When there are two possible candidates for accusative cross-reference, Falam consistently cross-references the recipient or goal rather than the theme. This can be seen in (2.40) and (2.41), where *me* and *you* are cross-referenced.

[39] This form seems to be dialectal; one of my language consultants did not feel comfortable producing it, although he was familiar with it.

(2.40) Parte in kawr **i** pe.
Parte ERG shirt 1SG.ACC give.1
'Parte gave **me** a shirt.'

(2.41) Parte in Chin ca a **lo** zirh maw?
Parte ERG Chin grammar 3SG.NOM 2.ACC teach INTG
'Did Parte teach **you** Chin grammar?'

Thus, Falam fits Dryer's (1986) description of a *primary object language:* a language which chooses the recipient or goal as syntactically primary over the theme—in this case, through cross-reference.

However, there is a further twist to the account of ditransitives and cross-reference. Falam Chin consultants struggle with the construction of such sentences as 'Parte showed you to Thangte' or 'Parte showed you to me', finding them awkward, if not impossible to form. This suggests that person (a subset of animacy) also plays a role, such that the theme of a ditransitive verb cannot be first or second person, since only the recipient/goal can receive cross-reference.

To summarize the preceding discussion, when there are two possibilities for accusative cross-reference, the chosen argument must be the recipient/goal, not the theme, and the accompanying theme must be third person. This is pictured in Table 2.4.

Table 2.4: Falam Chin possible cross-reference combinations in ditransitive verbs

	Recipient/goal	Theme
✓	1st/2nd	3rd
✓	3rd	3rd
*	1st/2nd	1st/2nd
*	3rd	1st/2nd

The preceding discussion accounts for many of the uses of verbal cross-reference in Falam Chin. It has already been noted that verbal cross-reference forms do not always

agree with their corresponding NPs in terms of case; ergative NPs (A arguments) are cross-referenced by nominative case forms, while absolutive NPs may be cross-referenced by either nominative (for S arguments) or accusative (for O arguments) case forms. In addition to this, however, sometimes cross-reference forms disagree in person and/or number features with the NPs they index. This suggests that Falam Chin has what Bickel (2000) describes as an *associative,* rather than *integrative,* agreement system, which he argues is a feature of Tibeto-Burman languages.

The two types of agreement systems are characterized very differently. The verbal agreement forms of integrative agreement systems have a strict correspondence with the NPs they reference in terms of person, number, and case. In associative agreement systems, however, NPs and their verbal indexation are independent features of the grammar, only loosely linked by construction-specific associations. This means that many times coreferential forms will disagree in person, number, and/or case features. The association types Bickel identifies are *identificational* (including the sub-type *external possessor*), *appositional, partitional,* and *relational.*

The first three of these association types are found in Falam. Identificational cross-reference is the most common variety, bearing the expected one-to-one correspondence between NP and cross-reference in person and number. This type is exemplified in many of the preceding examples, as well as in (2.42), where a third singular NP, *Thangte,* is cross-referenced by a third singular cross-reference form, *a*. Example (2.42) also displays external possessor agreement, which allows the possessor

of the targeted head to be cross-referenced.[40] Thus, the second singular possessive form, *na*, is indexed by a second singular cross-reference marker, *lo*.

(2.42) **Thangte** **in** **na** **kut** **a** **lo** kai maw?
Thangte ERG 2SG hand 3SG.NOM 2.ACC hold INTG
'Did **Thangte** hold **your hand**?'

In appositional agreement, one or more NPs preceding the verbal agreement function as appositional explanation of its reference. Example (2.43) includes a third singular NP, *pa* 'man', with a third plural oblique NP, *nauhakpawl* 'children', that together are cross-referenced by a third plural form, *an*. This sentence could perhaps be translated more literally as: 'The man, with the children—they played together'. Both the direct and the oblique NP are in apposition to the cross-reference form.

(2.43) **Pa** **pa=khat** **cu** **nauhak=pawl** **thaw=n** **an** lek-tlang.
man CLF=one TOP child=PL with=ABL 3PL.NOM play.1-together
'**The man** played together **with the children**.'

Example (2.44) provides a second example in which a third singular NP, *pa* 'father', is cross-referenced by a first singular form, *ka*.

LNM 014[41]
(2.44) Na **pa** **ka** sual tuk.
2SG father 1SG.NOM evil very
'**I**, your **father**, am very evil.'

Although both reference the same individual, they do not share grammatical person features.

In the third type, partitional agreement, verbal cross-reference represents a set of which the subject NP forms a part. Thus, in (2.45), the verbal cross-reference

[40] Bickel (2000:590) notes "an affected possessor can take precedence over its host in providing agreement features." Often, the possessor is "affected" because it is a part of his body that is in question.
[41] All LNM examples are from "Lahka Suah Ni Mitthli" (Payday Tears), by Salai Ram Ling Hmung (2004). Spelling has been altered in places to reflect current Falam Chin orthography.

encompasses all the listeners and is second person plural, *nan*, whereas the corresponding NP refers to one individual of that set and is third person singular, *zo* 'who'.

KIF 053[42]

(2.45)	["**Zo**	tal	in	**nan**	hmu	maw?"	ti=n]	an
	who	at.least	ERG	2PL.NOM	see.1	INTG	say=AJT	3PL.NOM

sut-aw-khawm.
ask-RECP-together
'["Did **any** of **you** at least see her?"] they asked each other.'

In summary, this section has examined two key types of phrasal affixes in Falam Chin: NP case marking and verbal cross-reference. While both are important indicators of valence, they have been shown to behave in rather different ways. NP case marking patterns in an ergative manner, while verbal cross-reference patterns in an accusative manner. NP case marking marks core and oblique arguments, as well as adjuncts, while verbal cross-reference is confined to the two most prominent arguments of the clause. In addition, their relationship to each other seems to be one, not of strict agreement, but of loose apposition. As I argue in Chapters 4-7, the slightly discordant relationship between the two types is a defining characteristic of Falam syntax.

2.1.2 Inflectional morphology: Verbal stem alternations

As shown in the previous section, phrasal affixes carry much of the inflectional burden in Falam Chin. However, Falam Chin does include a set of inflectional verbal forms which do not change verb meaning, but rather alter grammatical function. These are known as *verbal stem alternations* (VSAs), a characteristic feature of Chin languages in general. Although VSAs have roots in one or more historically productive morphemes,

[42] All KIF examples are from the folktale "Keiti In Falanu" (The Girl Who Drank Tiger-water). In some cases, spelling has been altered to reflect current Falam Chin orthography.

they are no longer productive, and they are only partially predictable. There are two forms: the grammatically unmarked form, *stem 1,* and the grammatically marked form, *stem 2*. It is important to note, however, that many verbs are invariant, having only one form.

The VSA phenomenon is found to a greater or lesser degree in most Chin languages, but is somewhat varied as to its grammatical use from language to language. A very general characterization of the grammatical uses of VSAs in Falam is that the unmarked form, stem 1, is found in independent clauses, while stem 2 appears in certain subordinate clauses. Stem 2 also appears with applicatives, and in some types of relative clauses, questions, nominalizations, and passives. These grammatical uses are discussed in further detail throughout the remainder of this chapter in appropriate sections.

The remainer of this section discusses the phonological properties of VSAs in Falam Chin. There are five basic segmental changes which can occur to change a stem 1 to a stem 2 verb. In the first type, a voiceless stop, either /t/ or /k/, is added to a stem 1 verb ending in a vowel. In the second type, a final velar nasal (/ŋ/) is changed to an alveolar nasal (/n/). In the third type, a final stop (/t/ or /k/) becomes a glottal stop. In the fourth type, final sonorants are glottalized. Finally, a few forms undergo ablaut. Vowel shortening and/or tonal changes are also possible with or without the previously mentioned changes. Table 2.5 summarizes the phonological forms which stem alternations may take in Falam Chin.

Table 2.5: Types of verbal stem alternations in Falam Chin[43]

Alternation Type	Falam	English
(1) addition of voiceless stop (/t/ or /k/) to vowel	pe ~ pek na ~ nat	'to give' 'to be sick'
(2) /ŋ/ ~ /n/	suang ~ suan	'to cook'
(3) final stop (/t/ or /k/) ~ glottal stop	that ~ thah[44]	'to kill'
(4) glottalization of final sonorant (vowels, glides, /l/, and /ɾ/)	hmu ~ hmuh	'to see'
(5) vowel ablaut/shortening[45]	nuam ~ nawm	'to be happy'
(6) ~ tone[46]	vák ~ vàk	'to crawl, walk'
(7) invariant forms	duh	'to like'

As stem forms are suppletive and unpredictable, whenever there is an alternation of types 1-5 these forms are marked as either 'verb.1' or 'verb.2' in the example glosses, as in (2.46). Alternations of tone or vowel length are not marked.

(2.46) [Ka ihthah lai=ah,] a ra thleng.
1SG.NOM **sleep.2** while=AJT 3SG.NOM come **arrive.1**
'[While I was sleeping,] he arrived.'

2.1.3 Derivational morphology

The derivational morphology of Falam Chin is quite productive. This section discusses the nominalizing morphology, other noun-related morphology, and verb-related morphology of Falam.

2.1.3.1 Nominalizing morphology

First, Falam Chin includes several types of nominalizing morphemes. The nominalizer *mi-* 'one who is V' plus a predicate derives an experiencer nominalization

[43] Table adapted from King (2009).
[44] *H* is the orthographic rendering of /ʔ/ in Falam.
[45] Vowel shortening often co-occurs with all the other types as well.
[46] Tone change often co-occurs with all the other types as well.

(2.47). The nominalizer *-tu* ‘one who does V’ plus a predicate indicates the agent of the predication (2.48). Both of these nominalizing morphemes require a stem 1 verb.

LNM 012

(2.47)	A	mitthli	cu	**mi-na**	ihkhun	tlun=ih	Bikte	hmai
	3SG	tear	TOP	NMLZ-sick.1	bed	over=LOC	Bikte	face

par=ah	an	rung	fawr.
on=LOC	3PL.NOM	come.down	drip

‘His tears drip down on the face of Bikte on the sickbed.
(lit., ‘bed of the **sick person**’)

(2.48)	Mang	cu	**mawtaw**	**mawng-tu**	a	si.
	Mang	TOP	vehicle	drive.1-NMLZ	3SG.NOM	be

‘Mang is a **taxi/bus driver**.’

Two other nominalizers focus on the process (*-nak* ‘act of doing V’ (2.49)) or manner (*-dan* ‘way of doing V’ (2.50)) of the action. These require stem 2 verbs.

LNM 056

(2.49)	**Ih-nak**	khan=ah	zamrang-te=n	a	va	lut.
	sleep.2-NMLZ	room=LOC	quick-DIM=AJT	3SG.NOM	go	enter.1

‘He went quickly to his bedroom.’
(lit., ‘**sleeping** room’)

(2.50)	A	**leh-dan**	a	mawi.
	3SG	play.2-NMLZ	3SG.NOM	pretty

‘His **style of playing** is beautiful.’

Two final nominalizers include *-zia* ‘quality of V’, which occurs with attributive state verbs (2.51), and *-pi* ‘fellow-doer of V’ (2.52), both of which also take stem 2 verbs.

LNM 079

(2.51)	A	**daih-zia**	cu	sim	thiam	a	si	lo.
	3SG	cold.2-NMLZ	TOP	tell	well	3SG.NOM	be	NEG

‘It’s difficult to describe its **coldness**.’

LNM 085

(2.52)	Zu	**rit-pi-le**	um	nawn	lo …
	beer	drunk.2-NMLZ-PL	be	yet	NEG

‘No longer with [his] **fellow drunks**, …’

In addition to the above-mentioned nominalizers, there are also a number of derived nouns which include the stem 2 form of the verb (e.g., *nit-lak* ‘sunset’, lit., ‘sun-fall.2’).

2.1.3.2 Other derivational noun morphology

In addition to the nominalizing morphology just discussed, additional noun morphology exists which changes the meaning but not the lexical category of the root. This includes *augmentative -pi* and *diminutive -te.* These morphemes can be used to derive the names of the adult or young of a species, respectively (*caw* ‘cow’, *cawpi* ‘adult female cow’, *cawte* ‘calf’); to derive a larger or smaller version of the base noun (*tiva* ‘river’, *tivapi* ‘large river’, *tivate* ‘stream’); or as part of a nickname (*Cinte* ‘little Cin’).

The morphemes *-nu* (*feminine*) and *-pa* (*masculine*) derive feminine and masculine forms of the root. For example, *fa* ‘child’ becomes *fanu* ‘daughter’ and *fapa* ‘son’. The morpheme *-mi* when joined with nouns indicates ‘people’.

(2.53) Kanmah cu **Lai-mi** kan si.
1PL.STD TOP Lai-people 1PL.NOM be
‘We are the **Lai people**.’

2.1.3.3 Derivational verb morphology

Falam Chin includes three basic types of derivational operations which alter the valence of verbs: *causatives, applicatives,* and *reflexives* (as well as *reciprocals* and *middles*). These are discussed in Chapters 4, 5, and 6, respectively. In addition to the valence-altering morphology, Falam Chin also includes various other types of verbal morphology. Some (of which the following list is not exhaustive) share similarities with aspectual, directional, or applicative morphemes, yet they are more closely bound to the

verb than these categories. This set includes *-sal* ‘again’ (2.54), *-kir* ‘back’, *-suak* ‘out’, *-khawm* ‘together’, and *-tlang* ‘together’ (2.55).

KIF 055
(2.54) A thaisun cu **hual-sal** an tum thotho.
3SG tomorrow TOP hunt-again 3PL.NOM plan as.usual
‘The next day, they planned to **hunt again** as before.’

KIF 004
(2.55) Cuti=n nuam lutuk=in an **feh-tlang** ṭheu.
thus=ABL enjoyable too=AJT 3PL.NOM go-together HAB
‘So, they used to **go together** very happily.’

Next, there are the comparative suffixes *-deuh* and *-sawn* and the superlative suffix *-bik*. These forms modify either predicates (2.11) or modifiers ((2.56) and (2.57)).

(2.56) Lian a **ei** **tam-bik**.
Lian 3SG.NOM eat much-SUPR
‘Lian **eats the most**.’

(2.57) Nauhak-pa in nga **tum-bik** a kai.
boy-MASC ERG fish big-SUPR 3SG.NOM catch.1
‘The boy caught the **biggest** fish.’

Lastly, the augmentative and diminuitive suffixes mentioned as noun affixes can also appear as an obligatory or strongly preferred part of many state verbs denoting either largeness on the one hand (*tumpi* ‘big’), or else smallness or delicateness on the other (*mawite* ‘pretty’, *tawite* ‘short’).

To summarize this discussion of Falam Chin’s morphology, Falam includes several types of phrasal affixes which play a role in valence-altering operations, especially NP case marking and verbal cross-reference. Falam’s one truly inflectional category is its verbal stem alternations. Falam also includes significant derivational

morphology, including nominalizing, valence-altering, and other noun and verb-related forms.

2.2 Noun phrases

Like many Tibeto-Burman languages, Falam Chin is AOV in the ordering of its primary clausal constituents. It is, thus, not surprising to find a similar head-final pattern in NPs, reflecting a strong tendency in Falam Chin to be left-branching from the head with regard to phrasal dependents, while correspondingly right-branching with non-phrasal dependents (cf. Dryer 1992). As one of several criteria for transitivity, NPs play a crucial role in any discussion of valence-altering operations. This section examines types of nominals in §2.2.1, as well as NP ordering in §2.2.2.

2.2.1 Types of nominals

Nominals may be subdivided into several types, including common nouns, proper nouns, and pronouns. Common and proper nouns are discussed extensively in §2.2.2. This section examines types of pronouns in Falam, followed by a discussion of *relational nouns*, a category which replaces adpositions in Falam.

2.2.1.1 Pronouns

This section discusses the five main forms of pronouns in Falam: *standard, contrastive, indefinite, interrogative,* and *demonstrative.* The first two pronoun types, standard and contrastive, can both be used as subject, object, noun complement, or in a possessive phrase. However, neither type is obligatory, and pronouns are commonly omitted unless needed for emphasis, as in (2.58).

(2.58) **(Amah** kha) rak sawm aw.
3SG.STD TOP then invite IMP.SG
'Invite ***him***.'

Accordingly, Falam might conventionally be termed a "pro-drop" language. However, this term suggests a marked situation in which pronouns have been omitted, when in fact it is the inclusion of a pronoun which is the marked situation in Falam (cf. Jelinek 1984).

Both standard and contrastive pronouns differentiate person and number. The standard pronoun forms are shown in Table 2.6.

Table 2.6: Standard pronouns

	Singular	Plural
1	keimah	kanmah
2	nangmah	nanmah
3	amah	anmah

In combination with the genitive case marker *ih*, standard pronouns become possessive (2.59), e.g., *keimai* 'my', *nangmai* 'your', *amai* 'his', 'her', 'its'. (Recall that *ih* is contracted when following a vowel.)

(2.59) Hi-mi hi **ama=i** hai a si.
this-NMLZ TOP 3SG.STD=GEN mango 3SG.NOM be
'This is **his** mango.'

When combined with the morpheme *ta* 'one', genitive marked pronouns are able to stand alone as possessive substantives, e.g., *keimai ta* 'mine', *nangmai ta* 'yours', *amai ta* 'his', 'hers', 'its' (2.60).

(2.60) Hai cu **ama=i** ta a si.
mango TOP 3SG.STD=GEN one 3SG.NOM be
'The mango is **his**.'

The standard pronouns are also used in the formation of reflexive pronoun phrases, made by joining a pair of standard pronouns with the nominal conjunction *le*,[47] e.g., *keimah le keimah* 'myself', *nangmah le nangmah* 'yourself', *amah le amah* 'himself', 'herself', 'itself'. The reciprocal pronoun is formed in a similar manner, using the cardinal number *pakhat* 'one' to create the form *pakhat le pakhat* 'each other'.

There is also a second reflexive pronoun form, a combination of a standard pronoun and the diminutive morpheme *-te*. This form is interchangeable with the first.

(2.61) Thangte cu thlalang sung=ah (**amah-te**) a hmu-aw.
Thangte TOP mirror in=LOC 3SG.STD-DIM 3SG.NOM see.1-REFL
'Thangte saw **himself** in the mirror.'

However, it also serves a function the first form cannot; with the addition of the ablative case marker (expressing *means*), it can be used to stress the performance of an action by the subject without any aid.

(2.62) Thangte in inn cu **amah-te=n** a hnih.
Thangte ERG house TOP 3SG.STD-DIM=ABL 3SG.NOM paint
'Thangte painted the house **by himself**.'

LNM 042
(2.63) Bawngbi cu **nanmah-te=n** lei uh …
shorts TOP 2PL.STD-DIM=ABL buy IMP.PL
'Buy the shorts **on your own** …'

The second type of pronoun, *contrastive* pronouns, may be used to stress the distinction between the pronominalized referent and another referent, as in (2.64).[48]

[47] A separate conjunction, *ih*, exists for joining predicates.
[48] Cf. Lehman and VanBik's (1997) discussion of pronoun forms in Lai. While the nature of the distinction between the two sets of pronouns is clearly pragmatic rather than syntactic, the text frequency of these forms is so low that it is impossible to attempt further demarcation of their use at this point.

(2.64) **Kannih** cu Lai-mi kan si nan, **nannih** cu
3PL.CTR TOP Lai-people 3PL.NOM be but 2PL.CTR TOP

Kawl-mi nan si.
Burmese-people 2PL.NOM be
'***We*** are the Lai people, but ***you*** are Burmese.'

The contrastive pronoun forms are shown in Table 2.3.

Table 2.7: Contrastive pronouns

	Singular	Plural
1	kei	kannih
2	nang	nannih
3	anih	annih

The *indefinite* pronouns, the third type, refer to an undefined thing or person. There are four indefinite pronouns: *ziangkhal* 'something', 'everything', *zokhal* 'someone', 'everyone', *zianghman* 'anything' (2.65), and *zohman* 'anyone'.

(2.65) **Zianghman** ka thei lo.
anything 1SG.NOM know.1 NEG
'I don't know **anything**.'

It is clear that the indefinite pronouns are derived from the *interrogative* pronouns *zo* 'who' and *ziang* 'what'. Some of the other interrogative pronouns themselves are also derived from *ziang: ziang tikah* 'when' (lit., 'at what time'), *ziang (ruang)ah* 'why' (lit., 'because of what'), *ziangtin* 'how' (lit., 'in what way'), *ziangzat* 'how many', and *ziangtluk* 'how much', 'how long'. Two other interrogative pronouns include *khui* 'which' and *khui (tawk)ah* 'where' (lit., 'at which place').

Lastly, Falam Chin includes four *demonstrative* pronouns. All four forms optionally end in the nominalizing morpheme *-mi*.

(2.66)

cu(mi)	'this','that'	(discursive)
hi(mi)	'this'	(proximal spatial)
khi(mi)	'that'	(distal spatial; far from speaker and hearer)
kha(mi)	'that'	(distal spatial; far from speaker, close to hearer)

As can be seen in (2.67), *cu(mi)* is most frequently used as a discourse deictic to indicate discursive proximity. The three other forms, on the other hand, are most frequently used when spatial proximity is indicated (2.68).

(2.67) a. Lian ih nupi in naute a hring.
Lian GEN wife ERG baby 3SG.NOM bear.1
'Lian's wife had a baby.'

b. **Cu-mi** cu ka thei ual lo.
that-NMLZ TOP 1SG.NOM know.1 MIR NEG
'I didn't know **that**!'

(2.68) **Hi-mi** hi ka inn a si.
this-NMLZ TOP 1SG house 3SG.NOM be
'**This** is my house.'
(referent is right by speaker)

2.2.1.2 Relational nouns

This section discusses *relational nouns* in Falam Chin, a particular category of noun notable for its role as an adpositional substitute. Similar in function to adpositions, relational nouns represent an abstract notion of place, time or, in some cases, concepts such as *cause* and *comparison*.[49] A few, such as *hmai* 'face', can actually function as independent nouns.

One indication that these are nouns, rather than postpositions, is that they usually appear in conjunction with either locative or ablative case, as shown in Table 2.8. (See §2.1.1.1 for sentential examples.)

[49] Following Peterson (2003), who mentions this phenomenon in Hakha Lai. Chhangte (1993:62) calls these "relator nouns" for closely-related Mizo. See also Blake (1994:16-17).

Table 2.8: Relational nouns with locative and ablative case

Noun	Noun=LOC	Noun=ABL
hmai ‘face’, ‘in front-area’	*hmai=ah* ‘in front of’	-
dung ‘behind-area’	*dung=ah* ‘behind’	*dung=in* ‘from behind’
par ‘on-area’	*par=ah* ‘on’	*par=in* ‘from on’
sung ‘in-area’	*sung=ah* ‘in’	*sung=in* ‘from in’

Secondly, these words can be modified by a limited set of adjectives (such as *khal* ‘also’ or *lawng* ‘only’) which can interpose between the relational noun and the case marking. Furthermore, if two relational nouns appear in a compound phrase, the whole phrase is marked for case, rather than each individual relational noun, and the nominal conjunction *le* ‘and’ is used to join them (2.69).

(2.69) Thangte cu tlang **par** **le** thingkung **lak=ah** a
Thangte TOP hill on and tree among=LOC 3SG.NOM

vak-tawi rero.
roam-roam IPFV
‘Thangte was roaming **on** the hill **and among** the trees.’

A final indication of these words’ noun status is that they can be possessed. In (2.70), the possessor, *tlangvalpa*, is followed by the genitive case marker. Such possession is optional and only possible with human possessors.

KIF 049
(2.70) Fala-nu cu **tlangval-pa=i** **hmai=ah** a
young.woman-FEM TOP young.man-MASC=GEN front=LOC 3SG.NOM

suak ngaingai.
out.1 really
‘The young woman immediately came out in front of the young man.’
(lit., ‘to **the young man’s front**’)

In summary, this section has discussed the five types of pronouns and relational nouns in Falam Chin.

2.2.2 NP ordering

The ordering of the elements of the Falam Chin NP is closely related to the ordering of clausal elements (AOV). Those dependents which precede the noun are primarily phrasal or clausal, while those which follow it are primarily non-phrasal. This accords with Dryer's (1992) claim that languages which are left-branching in one type of phrase (i.e., the phrasal categories precede the head) show a strong cross-linguistic tendency to be left-branching in all phrase types, and vice-versa; he terms this the *branching directionality principle*. Functional categories, however, are commonly organized in terms of their scope over the various layers of the clause/NP in the opposite direction from the phrasal categories (Van Valin & LaPolla 1997). This section discusses first pre-nominal dependents of the noun, followed by post-nominal dependents.

2.2.2.1 Pre-nominal dependents

There are three basic types of dependents which can precede the noun in Falam Chin: *complements*, *determiners*, and *adjuncts*. The first of these, noun complements, are constituents which are licensed by the semantic structure of the noun (Kroeger 2005). Just like verbal complements, they immediately precede their head. In Falam Chin, the clearest cases of complements can be found in nominalizations, where the complement corresponds to an argument of the root verb. In (2.71), the complement of *zuarnak* 'selling' is *zu* 'beer', in this case, the object of the transitive root verb, *zuar* 'sell'.

LNM 025

(2.71)	… **[zu**	**zuar-nak]**	hmun=ah	Lai	zureu	an	in.
	… beer	sell-NMLZ	place=LOC	Lai	alcohol	3PL.NOM	drink

'… they drink Lai spirits at the bar.'
(lit., 'the place of [**the selling of beer]**')

In (2.72), however, the complement corresponds to the subject of an intransitive verb, *ruat* 'think.'

KIF 012
(2.72) … [**mi-kei** **ruah-nak]** a nei ve.
… NMLZ-tiger think.2-NMLZ 3SG.NOM have.1 also
'… she also had [the **thinking of a tiger-human]**.'

The second type of pre-nominal dependent, the *determiner*, has three subtypes: *possessive phrases*, *demonstrative pronouns*, and *interrogative pronouns*. These precede noun complements and are mutually exclusive. The first of these, possessive phrases, may be either genitive-marked NPs or nominal cross-reference. Genitiv-marked NPs consist of an NP plus genitive marking, as shown in (2.73) and (2.74).

(2.73) **[Lian Lian** **ih** banhla kung]
Lian Lian GEN banana tree
'[**Lian Lian's** banana tree]'

(2.74) **[keima=i** banhla kung]
1SG.STD=GEN banana tree
'[**my** banana tree]'

By contrast, nominal cross-reference refers to a set of pronominal proclitics which are inherently possessive and lack genitive marking. They are identical in form to the verbal cross-reference pronominals discussed in §2.1.1.2, as shown in Table 2.9.[50]

Table 2.9: Nominal cross-reference

	Singular	Plural
1	ka	kan
2	na	nan
3	a	an

[50] Like the verbal cross-reference, the singular forms act as proclitics, attaching to the immediately following element of the phrase. However, Falam orthography represents them as free morphemes (Champeon 2008).

Unlike verbal cross-reference, however, which is obligatory regardless of the existence of an overt pronoun or noun phrase, nominal cross-reference is mutually exclusive with genitive-marked NPs (2.75).

(2.75) a. **[ka** banhla kung]
1SG banana tree
'[**my** banana tree]'

b. *[**Lian Lian ih a** banhla kung]
c. *[**keima=i ka** banhla kung]

The demonstrative pronouns, a second type of determiner, were discussed in §2.2.1. When modifying a noun, they are less likely to occur with the nominalizing morpheme *-mi* than when standing alone.

(2.76)

cu	'the', 'this', 'that'	(discursive)
hi	'this'	(proximal spatial)
khi	'that'	(distal spatial; far from speaker and hearer)
kha	'that'	(distal spatial; far from speaker, close to hearer)

As discussed before, *cu* is usually used to indicate proximity in discourse (2.77),[51] while the three other forms (*hi, khi,* and *kha*) usually indicate proximity in space (2.78).

(2.77) **[Cu** nam cu] cabuai par=ah a si.
The knife TOP table on=LOC 3SG.NOM be
'[**The** knife] is on the table.'
(knife has previously been referenced in the conversation)

(2.78) **[Kha** nam kha] i lak aw.
that knife TOP 1SG.ACC take IMP.SG
'Bring me [**that** knife].'
(referent is far from speaker, but next to hearer)

The third type of determiner, interrogative pronouns *khui* 'which' and *ziang* 'what', can also be used to modify a noun ((2.79) and (2.80)).

[51] Further evidence of the discursive tendency of *cu* is that it is frequently combined with other morphemes to produce conjunctions such as *curuangah* 'therefore', *cutin* 'thus', *culole* 'otherwise', and *cuticun* 'in that way'.

(2.79) **[Khui** zunghruk so] a ruk?
which ring FOC 3SG.NOM steal.2
'[**Which** ring] did he steal?'

(2.80) **[Ziang** hang-hnah hang-rah] na zuar?
what vegetable-leaf vegetable-fruit 2SG.NOM sell
'[**What** vegetables] are you selling?'

As dependents belonging to the broader category of *determiner*, possessive phrases, demonstratives, and interrogatives are all mutually exclusive elements, as shown in (2.81). Only a single determiner per noun phrase is permitted.

(2.81) a. **[Khi** khua cu] **[Tlem ih** khua] a si.
that village TOP Tlem GEN village 3SG.NOM be
'[**That** village] is [**Tlem's** village].'

b. *[**Tlem ih khi** khua]
c. *[**khi Tlem ih** khua]

The final type of pre-nominal dependent is the adjunct, either *relational NPs* or *relative clauses*. Relational NPs are normally marked with *ah* or *in* when functioning as adjuncts of verbs (cf. (2.69)). However, they take the embedded clause case allomorph *ih* when used as noun adjuncts (2.82).

(2.82) [Na **hmai=ih** lukham kha] la aw.
2SG front=LOC pillow TOP take.1 IMP.SG
'Take [the pillow **in front of** you].'

Relative clauses, which are discussed in detail in §2.4.1, are a second type of noun adjunct (2.83).

(2.83) Cinte in **[[___$_i$ a san=mi]** Tlem ih cabu$_i$ cu]
Cinte ERG 3SG.NOM borrow.2=REL Tlem GEN book TOP

a pe-kir-sal.
3SG.NOM give.1-back-again
'Cinte returned [Tlem's book$_i$ **[which she borrowed ___$_i$]]**.'

2.2.2.2 Post-nominal dependents

This section discusses those dependents which follow the noun in Falam Chin. By contrast with the dependents discussed above, the right-branching, or post-nominal, dependents of the NP are primarily non-phrasal. These elements include *adjectival modifiers*, *numeral classifiers*, *number*, *quantification*, and *topic marking*. Adjectival modifiers are the first element to follow the noun, as shown in (2.84).

(2.84) Sung in [hai **kuh** hrekkhat] a lei.
Sung ERG mango unripe some 3SG.NOM buy
'Sung bought [some **unripe** mangoes].'

Adjectival modifiers can be intensified, either by the addition of an intensifier such as *zet* 'very', or by joining two of the same form with the conjunction *ih* 'and' (the conjunction used to join predicates) (2.85).

(2.85) a. Sung in [hai thlum **zet]** a lei.
Sung ERG mango sweet very 3SG.NOM buy.
'Sung bought [**a very sweet** mango].'

b. Sung in [hai a **thlum ih thlum]** a lei.
Sung ERG mango 3SG sweet and sweet 3SG.NOM buy
'Sung bought [a **sweet, sweet** mango].'

Adjectival modifiers are followed by numeral classifiers, which must be followed by a cardinal number. The generic classifier *pa* is the most frequently appearing numeral classifier (2.86).

(2.86) [hai hring **pa=thum]**
mango green CLF=three
'[**three** green mangoes]'

Other classifiers include *tluan* ‘elongated item’, *pum* ‘round or oblong item’, *fawr* ‘drops of liquid’, *zun* ‘clothing’, *kheng* ‘dishware’, *dur* ‘small container’, *fang* ‘small item’, *bur* ‘group of animals’, *tlap* or *tlep* ‘flat item’, *thuah* ‘layered item’, and *tuak* ‘pair’.[52]

(2.87) [Fu **tluan nga]** ka nei.
sugarcane CLF five 1SG.NOM have.1
‘I have [**five stalks of** sugarcane].’

Both number and terms of quantification follow adjectival modifiers and classifiers, if present (2.88).

(2.88) [hai hring **zaten/hmuahhmuah/mallai]**
mango green **all/all/few**
‘[**all** the green mangoes]/[**few** green mangoes]’

The pluralizing word *pawl* is optional, and is dispreferred when quantifiers or numbers are present in the NP. When it does appear, it follows all of the above-mentioned elements.

(2.89) Cinghnia in [Mang ih **ar thau zet pawl]** a deh.
wolf ERG Mang GEN chicken fat very PL 3SG.NOM seize
‘A wolf killed [Mang’s **very fat chickens]**.’

Topic marking[53] is the final element in the NP. Topic marking in Falam Chin is identical in form to the demonstrative pronouns (2.90).

(2.90) *cu* ‘TOP’ (discursive)
hi ‘TOP’ (proximal spatial)
khi ‘TOP’ (distal spatial)
kha ‘TOP’ (distal spatial)

Unlike the demonstratives, topic marking is functional in nature, primarily serving to indicate discourse topicality. The WH question in (2.91a) demands that the question

[52] Cf. similar classifiers in Lai (Peterson 2003).
[53] Peterson (2003:412) refers to cognate forms in Lai as “discourse deictics” and “markers of information status.”

word, *zo* ‘who’, be replaced by an answer in narrow focus. Those answers where the questioned element, *Thangte,* is marked with topic marking are infelicitous.

(2.91) a. **Zo** in sakhi a awk?
who ERG deer 3SG.NOM trap
‘**Who** trapped a deer?’

b. [Thangte in] sakhi a awk.
Thangte ERG deer 3SG.NOM trap
‘[Thangte] trapped a deer.’

b.' #[Thangte **cun]** sakhi a awk.
b." #[Thangte **cu]** sakhi a awk.

c. Sakhi awk-tu **cu** [Thangte] a si.
deer trap-NMLZ TOP Thangte 3SG.NOM be
‘The deer-trapper is [Thangte].’

d. #[Thangte **cu]** sakhi a awk=tu a si.
Thangte TOP deer 3SG.NOM trap=REL 3SG.NOM be
‘[Thangte] is the one who trapped a deer.’

A few textual examples are given below. In (2.92), the wife admonishes her husband not to drink beer. She is not referring to a particular bottle of beer in the immediate vicinity (as would be indicated if she used the prenominal form), rather, she references an element salient to their discussion.

LNM 106
(2.92) [Zu **hi]** in lo rori=in um thei awla …
beer TOP drink NEG must=AJT live can SBJV.2SG
‘Could[n’t] you live without having to drink [beer] …’

In another example, Bikte tells his father he was chosen to be on the school soccer team. He introduces a previously unmentioned, yet anchored topic—his *angki* ‘(team) shirt’. Not only is *angki* topic-marked, it is also fronted pre-subject, for an extra measure of topicality.

LNM 042

(2.93)	**[Angki**	**cu]**	tlawng	in	in	lei-sak	ding	an	ti.
	shirt	TOP	school	ERG	1PL.ACC	buy-BEN	FUT	3PL.NOM	say

‘As for [the **shirt]**, they said the school will buy it for us.’

Like its demonstrative counterpart, *cu* tends to have a discursive function. It is the default topic marker, occurring much more frequently than any of the others. When *hi*, *khi*, and *kha* are used, however, they may serve to stress the spatial proximity of the referent.

(2.94)	[Nam-te	**kha]**	hi/hei	la	aw.
	knife-DIM	TOP	at	take.1	IMP.SG

‘Take [the little knife] (near you).’

The spatial reference need not be present, however, as seen in (2.92) above.

While it does impart a sense of definiteness, topic marking can appear with proper names (2.95), pronouns, possessed NPs, and whole clauses (2.96), unlike a definite article.

LNM 055

(2.95)	[Bikte	**cu]**	ṭap	zik	vek=in	a	um.
	Bikte	TOP	cry.1	almost	as=AJT	3SG.NOM	be

‘[Bikte] was almost crying.’

LNM 070

(2.96)	[An	innsang	ih	thil$_i$	cang=mi	**kha]**	___$_i$	a	ruat
	3PL	family	ERG	thing	become.1=REL	TOP		3SG.NOM	think.1

thei	lai.
can	IPFV

‘He could only think about [the thing$_i$ which their family was becoming ___$_i$].’

Topic marking may occur on more than one argument per clause (2.97), or on none at all (2.98).

KIF 008

(2.97) [Fala-nu **cu=n]** [a tlangval-pa=i hnen=ah
young woman-FEM TOP=ERG 3SG young man-MASC=GEN to=LOC

cu=n] "Ka ti a hal," a ti.
TOP=NA 1SG water 3SG.NOM thirsty 3SG.NOM say
'[The young woman] said, "I'm thirsty," [to her young man].'

WSB 007[54]

(2.98) A dang sung=ah ar ruh a tang.
3SG throat in=LOC chicken bone 3SG.NOM stuck
'A chicken bone was stuck in her throat.'

If both topic marking and a demonstrative appear with the same noun, they frequently "match" in form. If, however, the two do not match, it is always the default topic marker, *cu*, which appears.

(2.99) **[Hi** inn **hi/cu]** keima=i ta a si.
this house TOP 1SG.STD=GEN one 3SG.NOM be
'[**This** house] is mine.'

To summarize the foregoing discussion of NP ordering, the elements which may precede the noun, in order, are: adjuncts (a relational NP or relative clause), a single determiner, and a single NP complement. Those which follow the noun are: adjectival modifiers, a numeral classifier, a number or quantifier, the plural word, and topic marking. This is visualized in the following rule of linear precedence:

$$\{(NP_{[LOC/ABL]}), (RC)\}^* > (DET) > (NP_{[ABS]}) > N > (ADJ)^* > (CLF) > \{(NUM), (QNT)\} > (PL) > (TOP)$$

Figure 2.1: Falam Chin NP phrase structure[55]

[54] All WSB examples are from the folktale "The Woman Who Swallowed a Bone" in Osburne (1975), Appendix II. Spelling has been altered to reflect current Falam Chin orthography.
[55] The * indicates that it is possible to have multiple of the given category.

2.3 The clause

The structure of the clause also has bearing on voice and valence-altering operations. This section examines the Falam Chin clause, beginning with types of predicates in §2.3.1, then looking at clause ordering in §2.3.2.

2.3.1 Types of predicates

The term *predicate* encompasses not only verbs, but also adjectives and nouns with predicative function. This section describes the formation of attributive (adjectival), equative (nominal), and locative predications (relational nouns) in Falam Chin.

2.3.1.1 Attributive predicates

Attributive predicates encode a characteristic of the subject. Many languages encode attributive predications with a structure syntactically distinct from verbal predications in terms of sentence ordering and/or the use of a copula. In Falam, however, there is no morphological difference between the two, as seen in (2.100) and (2.101).

(2.100) Lian a **sang**.
Lian 3SG.NOM tall.1
'Lian is **tall**.'

(2.101) Lian a **it**.
Lian 3SG.NOM sleep.1
'Lian is **sleeping**.'

In addition, there is no distributional difference between them—both types can be the primary predicate, as in the preceding examples, or can act as an attributive modifier to a noun, as in (2.102) and (2.103).

(2.102) Lian cu [thing **sang]** par=ah a kai.
Lian TOP tree tall on=LOC 3SG.NOM climb
'Lian climbed [a **tall** tree].'

(2.103) Lian in [uico **it]** lai a sit.
Lian ERG dog sleep.1 IPFV 3SG.NOM kick
'Lian kicked [a **sleeping** dog].'

Based on the preceding formal similarities between attributive and verbal predicates, attributive predicates are classed as a type of stative verb in this work. There are, of course, semantic distinctions between the two, reflected in various combinatory constraints. For example, attributive predicates cannot appear with certain aspectual modifiers such as the imperfective *rero* (2.104).

(2.104) *Lian a sang **rero**.
Lian 3SG.NOM tall IPFV
*'Lian is **being** tall.'

2.3.1.2 Equative predicates

Equative predicates identify a nominal set to which the subject belongs or an individual who is coequal with the subject.[56] Equative predications require the copula *si* 'be', plus a predicate complement (2.105).

(2.105) Cinte cu ka zirh-tu a **si**.
Cinte TOP 1SG teach-NMLZ 3SG.NOM be
'Cinte **is** my teacher.'

Equatives usually take a bare NP (absolutive case) as predicate complement, as seen in (2.105), except in a few cases where the NP is headed by a relational noun (2.106).

(2.106) Himi ca cu Mang **hrang=ah** a si.
this letter TOP Mang for=LOC 3SG.NOM be
'This letter is **for** Mang.'

There are two other uses of the equative copula. It may be used in the formation of *pseudo-clefts* by pairing a headless relative clause with *si* (2.107).

[56] While semantically it is possible to distinguish equative (or equational), identificational, and specificational predications (cf. Van Valin 2005), they are not formally distinguished in Falam Chin, and are here subsumed under the general title of equative.

(2.107) Hrampi cu **[Thangte ih a ah=mi] a si.**
grass TOP Thangte ERG 3SG.NOM cut.2=REL 3SG.NOM be
'The grass **is** [**what Thangte cut]**.'

It can also be used to form a type of agentless passive construction (2.108).[57]

(2.108) Zunghruk cu **ruk zo a si.**
ring TOP steal.2 PRF 3SG.NOM be
'The ring **was stolen**.'

2.3.1.3 Locative predicates

Locative predicates identify the location of the subject. Locatives require a distinct copula, *um* 'be'. In contrast to equatives, locative predications always take a relational NP marked with locative or ablative case as predicate complement (2.109).

(2.109) Hai cu kho **sung=ah** a **um**.
mango TOP basket inside=LOC 3SG.NOM be
'The mango **is in** the basket.'

2.3.2 Clause ordering

As I have previously noted, Falam Chin is a language which follows AOV ordering. Thus, phrasal dependents precede the head, while most non-phrasal dependents follow it, consistent with Dryer's (1992) branching directionality principle. Unlike the NP, however, whose ordering is fairly rigid, there is some flexibility in how the phrasal dependents of the clause may be ordered with respect to each other. The primary motivation for marked ordering of complements seems to be information structure (*topic* and *focus*), while the ordering of adjuncts follows the principle of scope. This section discusses both pre- and post-predicate dependents of the verb.

[57] This passive construction appears to be a fairly recent introduction to the language and has limited distribution.

2.3.2.1 Pre-predicate dependents

Dependents which precede the predicate include complements (either NPs or complement clauses) and adjuncts (oblique/relational NPs or adjunct clauses). The first type, complements, are licensed by the predicate. Whether NPs or complement clauses, they are canonically ordered as AOV (2.110).

	A		O		V
(2.110)	Mang	in	thingkung	a	phun.
	Mang	ERG	tree	3SG.NOM	plant
	'Mang planted a tree.'				

Arguments which are topic-marked may be left-dislocated, indicating a special measure of topicalization (2.111). However, complements can never follow the verb.

	O		A			V
(2.111)	**Thingkung**	**cu**	Mang	in	a	phun.
	tree	TOP	Mang	ERG	3SG.NOM	plant
	'As for **the tree**, Mang planted it.'					

As argued in §2.1.1.2, Falam is a primary object language in that it treats beneficiary/goal arguments as syntactically more significant than themes (Dryer 1986) (as demonstrated by cross-reference). When both arguments of a ditransitive verb are third person, the unmarked ordering is for a primary object (PO) (beneficiary/goal) to precede a secondary object (SO) (theme) (2.112).

	A			PO	SO		V
(2.112)	Thangte	in	**a**	**pi**	**ti**	a	khaih.
	Thangte	ERG	3SG	grandmother	water	3SG.NOM	draw.for
	'Thangte drew **water** for **his grandmother**.'						

However, both primary and secondary objects can be left-dislocated if topic marked ((2.113) and (2.114)).

		PO		A		SO		V
(2.113)	**A**	**pi**	**cu**	Thangte	in	ti	a	khaih.
	3SG	grandmother	TOP	Thangte	ERG	water	3SG.NOM	draw.for

‘As for **his grandmother**, Thangte drew water for her.’

	SO		A			PO		V
(2.114)	**Ti**	**cu**	Thangte	in	a	pi	a	khaih.
	water	TOP	Thangte	ERG	3SG	grandmother	3SG.NOM	draw.for

‘As for **the water**, Thangte drew it for his grandmother.’

The second type of pre-predicate dependent is the adjunct phrase or clause. Relational NP adjuncts most frequently appear between the subject and object complement(s) (2.115), although they can also precede the subject.

KIF 043

(2.115)	Fala-nu	cu=n	**zing**	**tin-te=n**	**an**
	young.woman-FEM	TOP=ERG	morning	every-DIM=ABL	3PL

	thlam=ah	sakhi	cawn	…	a	rak	ret	ṭheu.
	tent=LOC	deer	thigh	…	3SG.NOM	then	put	HAB

‘The young woman would put a deer thigh … **at their tent every morning**.’

The placement of adjuncts is partially governed by the principle of scope, whether the adjunct modifies the entire clause, or is limited to some subset thereof (e.g., the verb and its object complement(s)). In both (2.116) and (2.117), the adjunct clause modifies the entire matrix clause, and therefore precedes the subject of the matrix clause.

KIF 011

(2.116)	**[Tlangval-pa**	**cu**	**a**	**va**	**rei-deuh**
	young.man-MASC	TOP	3SG.NOM	go	take.long-CMPV

	ruang=ah,]	fala-nu	in	a	ti-hal
	because=AJT	young.woman-FEM	ERG	3SG	water-thirst

	a	rak	tuar	thei	nawn	lo	…
	3SG.NOM	then	bear	can	still	NEG	

‘[**Because the young man was gone such a long time,]** the young woman could no longer bear her thirst …’

KIF 040

(2.117)	…	**[zanlam**	**khua**	**a**	**sim=in,]**	tlangval-pa	cu=n
		evening	dark	3SG.NOM	invade=AJT	young.man-MASC	TOP=ERG

“Tlung	uhsi,”	a	ti	…
return.1	COH.PL	3SG.NOM	say	

‘… [**as evening was creeping in,]** the young man said “Let’s go home,” …’

2.3.2.2 Post-predicate dependents

Most non-phrasal dependents follow the predicate, but there are two exceptions to this: the time adverb *rak* and the *directionals* fall between verbal cross-reference and the predicate. Other non-phrasal dependents discussed in this section include *adverbial modifiers, aspect, modals, negation, tense,* and *mood*. The categories of adverbial modifier, directional, aspect, and modal include numerous lexical items which have separate identity as state verbs, directional verbs, aspectual verbs, or modal verbs, respectively, and can appear as the primary verb of a construction. When they occur in conjunction with another verb, however, they form serial verb constructions.[58] In this role, they cannot head a clause, and thus are treated as non-phrasal.[59] A smaller set of items exists solely as adverbial, directional, aspectual, or modal modifiers.

There are several subtypes of adverbial modifiers, including *manner adverbs, extent adverbs,* and *adverbs of time.* Manner adverbs are the most common, and many of them can be the main predicate of a clause as well. Like adjectival modifiers, manner adverbs must follow their head (in this case, the predicate) (2.118).

(2.118)	Uico	cu	a	tlan	**cak**	**zet**.	
	dog	TOP	3SG.NOM	run	strong.1	very	

‘The dog runs **very quickly**.’

[58] See Kroeger’s (2004:229-30) list of serial verb construction properties, for example.
[59] When in a supporting role, these verbs uniformly take stem 1, regardless of syntactic environment.

Also like adjectival modifiers, manner adverbs can be modified by intensifiers such as *zet* 'very'.

A subtype of manner adverbs are called *ideophones*. Ideophones describe something about how a verbal predicate is performed in a colorful and idiomatic manner. Some ideophones can be used with various predicates, but their translation may vary widely depending on the verb with which they occur. Other ideophones are restricted to one or two predicates with which they collocate. Ideophones are characteristic of Chin languages.[60] Some examples are given in (2.119)–(2.121).

(2.119) A tlan **hmohmo**.
3SG.NOM run IDEO
'He runs **crazily**.'

(2.120) Khuai an zam **hluarhlo**.
bees 3PL.NOM fly IDEO
'The bees fly **in a stream**.'

(2.121) Hla an sak **ciamco**.
song 3PL.NOM sing IDEO
'They sing **heartily**.'

Extent adverbs tell to what extent the action occurred (e.g., how completely, how often) ((2.122) and (2.123)).

KIF 041
(2.122) An khua an thleng **zik**.
3PL village 3PL.NOM arrive.1 almost
'They had **almost** reached their village.'

KIF 044
(2.123) zing-ti=n sa an ngah **ringring** ruang=ah
morning-every=ABL meat 3PL.NOM get always because=AJT
'Because [they] **always** got meat every morning …'

[60] Lai ideophones have been described by Patent (1998).

Adverbs typically follow the verb. (Like adjuncts, their exact placement with regard to other dependents is somewhat flexible, but they most frequently fall between aspect and modals.) The *adverb of time, rak* ‘then’, however, has a special position preceding the verb. This word indicates a time defined by the context. In some instances, the time indicated is delineated by an adjunct in the same sentence, e.g., the phrase *zing tinten* ‘every morning’ in (2.124).

KIF 043

(2.124) Fala-nu cu=n **zing** **tin-te=n** an
young woman-FEM TOP=ERG morning every-DIM=ABL 3PL

thlam=ah sakhi cawn … a **rak** ret ṭheu.
tent=LOC deer thigh … 3SG.NOM then put HAB
‘The young woman would put a deer thigh … at their tent **every morning**.’

In other instances, it must be recovered from the preceding sentence or two.

Two contrasting sentences show how *rak* can refer to past or future times, depending on contextual clues (2.125).

(2.125) a. Mizan=ah thil ka **rak** sawp.
yesterday=LOC clothes 1SG.NOM then wash
‘I washed the clothes yesterday.’

b. Thaisun=ah thil **rak** sawp aw.
tomorrow=LOC clothes then wash IMP.SG
‘Wash the clothes tomorrow.’

The placement of *rak* is unusual in another way. While it uniformly follows nominative cross-reference (2.125c) and first person accusative cross-reference (2.126), it precedes second person accusative cross-reference (2.127).

(2.126) Hna ka tuan-sak hnu=ah, Thangte in paisa **i**
work 1SG.NOM do-BEN after=AJT Thangte ERG money 1SG.ACC

rak pe.
then give.1
'After I worked for him, Thangte gave **me** money.'

(2.127) Hna na tuan-sak hnu=ah, Thangte in paisa **a**
work 2SG.NOM do-BEN after=AJT Thangte ERG money 3SG.NOM

rak **lo** pe ding.
then 2SG.ACC give.1 FUT
'After you work for him, Thangte will give **you** money.'

Another type of modifier, directionals, also falls between verbal cross-reference and the verb. Directionals are derived from directional verbs which can stand alone. In (2.128a), *ra ~ rat* 'come' is the main verb, whereas in (2.128b), it modifies *lut ~ luh* 'enter'.

(2.128) a. **Ra** aw.
come.1 IMP.SG
'Come.'

b. **Ra** lut aw.
come enter.1 IMP.SG
'Come in.'

The directional forms are given in (2.129).[61]

(2.129)

va	'go'	(horizontal motion away from the deictic center)
ra(k)	'come', 'return'	(horizontal motion toward the deictic center)
vung	'go down'	(downward motion away from the deictic center)
hun(g)	'go up', 'come up'	(general upwards motion)
rung	'come down'	(downward motion towards the deictic center)
hi/hei	'at'	(horizontal motion towards something far from the deictic center)

[61] When used as primary verbs, directionals have the following stem 2 forms, in order of appearance: *vat, rat, vun, hun, run. Hi/hei* does not have a stem 2 form.

Some example sentences are given in (2.130)–(2.132).

KIF 010

(2.130) Tiva-pi ita khi ka **vung** khai ding.
river-AUG from that 1SG.NOM go.down draw FUT
'I will **go down** and draw it from the river.'

(2.131) Ka **rung** lei ding.
1SG.NOM come.down buy FUT
'I will **come down** and buy it.'

(2.132) Ka **hi** hmu.
1SG.NOM at see.1
'I see it **over there**.'

A third category, aspect, immediately follows the verb. Some of the more common forms include habitual *ṭheu* (cf. (2.115)), perfectives *ṭheh*, *thluh* (2.133), and *ngah* (2.134), imperfectives *lai* and *rero*, and iterative/continuative[62] *vivo*.

(2.133) Tiva-pi pa=hra lak=ah, pa=thum pawl cu an
river-AUG CLF=ten among=LOC CLF=three PL TOP 3PL.NOM

kang **ṭheh/thluh**.
dry.up PFV
'Out of ten rivers, three dried up **completely**.'

(2.134) Mang cu amah le amah a at-aw
Mang TOP 3SG.STD and 3SG.STD 3SG.NOM cut.1-REFL

ngah pang.
PFV accidentally
'Mang cut himself accidentally.'

KIF 031

(2.135) Tlangval-pa cu=n a **hnem** **rero** nan,
young.man-MASC TOP=ERG 3SG.NOM comfort IPFV but

a hnem thei cuang lo.
3SG.NOM comfort can even.so NEG
'The young man kept **comforting** her, but he could not comfort her even so.'

[62] Dependent on the nature of the verb it is combined with. Yu (2007) points out the second function.

It is possible to have multiple aspectual forms per clause, as seen in (2.136).

(2.136) Rawl ka **ei** **lai** **rero**.
food 1SG.NOM eat IPFV IPFV
'I am **eating and eating**.'

The next category, modals, follows aspect. *Rori* 'must' indicates obligation or necessity. *Thei* 'can', 'able to' and *men* 'may' are used for permission, ability, or possibility. More than one modal may appear per clause, as seen in (2.137).

(2.137) Na lek **men** **thei**.
2SG.NOM play.1 may can
'You **may** play.'

Modals frequently appear with future markers *ding, ke/kei*, or *pei* to demonstrate future possibility ((2.138) and (2.139)).

(2.138) Mawtaw ka lei **rori** **ding**.
car 1SG.NOM buy must FUT
'I **have to** buy a car.'

(2.139) A feh **men** **ding**.
3SG.NOM go may FUT
'He **might** go.'

The next category, negation, most frequently follows modals. (As with adverbial modifiers, scope plays a role in where it appears.) The most frequent indicator of negation is *lo* (2.140).

LNM 005
(2.140) Bikte nu cu a ṭah a bang **thei** **lo**.
Bikte mother TOP 3SG cry.2 3SG.NOM stop.1 can NEG
'Bikte's mother **can't** stop her crying.'

For imperative and subjunctive clauses, however, the negator *hlah* is used (2.141).

(2.141) Ring-pi=in au aw **hlah.**
loud-AUG=AJT shout IMP.SG NEG
'**Don't** shout so loudly.'

There are also various negative expressions formed by combining these two negation words with extent adverbs ((2.142)–(2.144)).

(2.142) Hai ka ei **dah** **lo**.
mango 1SG.NOM eat ever NEG
'I **never** eat mangoes.'

(2.143) Hai ka ei **nawn** **lo**.
mango 1SG.NOM eat again NEG
'I **no longer** eat mangoes.'

(2.144) Hai ka ei **hrih** **lo**.
mango 1SG.NOM eat still NEG
'I **haven't** eaten mangoes **yet**.'

In addition to various types of negation, there are also the affirmative words *e* and *(a) si.* These elements stress the truth of the statement made ((2.145) and (2.146)).

LNM 146
(2.145) Khrismas puai tla nuam zet=in kan tel-tlang
Christmas festival also happy.1 very=AJT 3PL.NOM involve-together

thei ding **e**, Bikte.
can FUT AFF Bikte
'We ***will*** be able to take part together happily in the Christmas festival, Bikte.'

KIF 028
(2.146) A tlangval a duh fawn **si**.
3SG young.man 3SG.NOM love also AFF
'She also loved her young man.'

The emphatic expression *ko* stresses the speaker's certainty of what he says (2.147), while the mirative *ual* emotes an element of surprise (2.148).

LNM 046
(2.147) Bawhlung sit-nak bawngbi cu na nei **ko** si-si.
ball kick-NMLZ shorts TOP 2SG.NOM have.1 EMPH AFF-AFF
'You ***do*** have soccer shorts.'

(2.148) Cu-mi cu ka thei **ual** lo.
that-NMLZ TOP 1SG.NOM know.1 MIR NEG
'I didn't know that!'

The category of tense follows negation. Future tense is expressed by *ding, ke/kei,* or *pei,* although *ding* is by far the most common (2.149).

(2.149) Ka lei **ding/ke/pei**.
1SG.NOM buy FUT
'I **will** buy it.'

Both present and past tense are unmarked. If necessary, adjuncts are used to make the time of the action clear. In addition, the perfect markers *zo* or *cia* are sometimes used to emphasize completed action (2.150).

(2.150) Rawl na ei **zo** maw?
food 2SG.NOM eat PRF INTG
'**Have** you eaten?'

The expression *zo ding* means 'should/would have' (2.151).

(2.151) Ka pa cu inn a thleng zo **ding**.
1SG father TOP house 3SG.NOM arrive.1 PRF FUT
'My father **should have** arrived home.'

Lastly, the category of mood completes the clause. The main types of mood are: *cohortative, imperative, optative, subjunctive,* and *interrogative*. Indicative mood is unmarked. The use of these forms is discussed in §2.4.3.

In summary, the canonical Falam Chin clause includes complement and adjunct NPs or clauses which precede the predicate. Canonical ordering of complements is A-PO-SO-V, but complements may be left-detached. Following the predicate are aspect, adverbs, modals, negation, tense, and mood. This is portrayed in the rule of linear precedence shown in Figure 2.2.

$(NP_{[SUBJ]}) > \{(NP_{[LOC/ABL]}), (AJT)\}^* > (NP_{[OBJ]})^* > V > (ASP)^* > (ADV)^* > (MOD)^* > (NEG) > (TNS) > (MD)$

Figure 2.2: Falam Chin clause structure

2.4 The sentence

The previous sections have examined individual units of Falam Chin morphology, NPs, and simple indicative clauses. This final section discusses various other more complex clause types in §2.4.1, clausal coordination in §2.4.2, and non-indicative sentence patterns in §2.4.3.

2.4.1 Types of clauses

The features of the clause presented in §2.3 were largely illustrated using independent clauses. Independent clauses do not require any kind of clause marker and are the only type of clause in which verbal cross-reference is always obligatory. They normally take stem 1 verbs, as shown in (2.152).[63]

KIF 019

(2.152) Tlangval-pa cu a tidai thaw=n a hung **thleng**
young.man-MASC TOP 3SG water with=ABL 3SG.NOM come.up **arrive.1**
'The young man arrived with her water.'

Subordinate clauses, on the other hand, can be divided into three basic types which are discussed in this section: *complement* clauses, *adjunct* clauses, and *relative* clauses. These three clause types and their subtypes are distinguished in a number of ways: how they are used in the sentence, how the clause itself is marked, and what stem type is used. Verbal cross-reference is not always obligatory in subordinate clauses, depending the type of clause and the coreferentiality of the pivot argument with an

[63] The only exception would be applicativized verbs, as discussed in §2.1.3.3.

argument of the matrix clause. However, certain types of subordinate clauses have a stronger tendency for cross-referencing than others.

2.4.1.1 Complement clauses

Complement clauses are clauses which act as complements of the verb. In Falam Chin, there are two subtypes of complement clauses which pattern with various subclasses of predicates (cf. Kroeger 2005): ti-*type complement clauses* and *bare stem complement clauses*. Verbs of knowing (*thei* 'know', *ruat* 'think'), indirect perception (*hmu* 'see', *thei* 'hear'), and feeling (*phang* 'afraid') take complement clauses marked by the complementizer *ti* (2.153).

(2.153) Mang cu [rul in a cuk ding **ti]** a phang.
Mang TOP snake ERG 3SG.NOM bite FUT COMP 3SG.NOM afraid
'Mang is afraid [**that** the snake will bite him].'

Complement clauses of the *ti* type share three features with independent clauses. First, they always include cross-reference. Second, unlike many of the clause types to be discussed below, NPs in *ti*-type clauses are *not* case marked by the embedded clause case allomorph *ih;* rather, they take the regular independent clause case forms. Third, the verb in such a clause must be stem 1. These features are seen in (2.154).

(2.154) Khawpi=pawl in [tlangval-pa **in** fala-nu
villager=PL ERG young.man-MASC ERG young.woman-FEM

a **that** ti] an thei.
3SG.NOM kill.1 COMP 3PL.NOM hear.1
'The villagers heard [that the young man killed the young woman].'

A second type of complement clause is used with phase verbs (e.g., *thawk* 'begin', *tawp* 'stop'), psych-action verbs (e.g., *duh* 'want', *tum* 'try'), and verbs of direct perception (*hmu* 'see', *thei* 'hear'). This type of complement clause takes no

complementizer, simply a bare stem 2 verb. In contrast to *ti*-type complement clauses, if the subject of the complement clause is coreferential with the subject of the matrix clause (in a control relationship), cross-reference is ungrammatical in the complement clause (2.155).

(2.155) Cinte$_i$ **[___$_i$ /(*a) ihthah]** a tum.
Cinte 3SG.NOM **sleep.2** 3SG.NOM try
'Cinte$_i$ tried [___$_i$ **to sleep]**.'

However, if the subject of the complement clause is different from that of the matrix clause, cross-reference is obligatory (2.156). Note that, unlike the English translation, the cross-reference is nominative and grouped with the embedded verb (2.156a), rather than accusative and grouped with the matrix verb (2.156b).

(2.156) a. **[Na** ihthah ding] ka duh.
2SG.NOM sleep.2 FUT 1SG.NOM want
'I want **you**$_i$ **[**___$_i$ to sleep].'

b. ***[**___ Ihthah ding] ka lo duh.
sleep.2 FUT 1SG.NOM 2SG.ACC want
'I want **you**$_i$ **[**___$_i$ to sleep].'

In this type of complement clause, all non-absolutive NPs are marked with the embedded clause case allomorph *ih* (2.157).

(2.157) [Cinte **ih** i **kawh]** ka thei.
Cinte ERG 1SG.ACC call.2 1SG.NOM hear
'I heard Cinte$_i$ [___$_i$ call me].'

2.4.1.2 Adjunct clauses

In contrast to complement clauses, adjunct clauses add extra information about when, how, or why an action occurred. There are two subtypes: ah-*type* and in-*type*

adjunct clauses. The clause markers used with adjunct clauses are identical in form to locative (*ah*) and ablative case (*in*).[64]

Ah-type adjunct clauses are typically marked by the clause marker *ah*, sometimes alone, but usually in conjunction with a relational noun (e.g., *ruang* 'because', *lai* 'while', *hnu* 'after') to create a subordinating conjunction. *Ah*-type adjuncts typically provide background information about the time of or reason for the matrix clause (2.158).

WSB 008

(2.158)	Cuti=n,	[a	thaw	a	thawt	thei	lo	**ruang=ah]**
	therefore=ABL	3SG	breath	3SG.NOM	breathe	can	NEG	because=AJT
	…	an	phum.					
	…	3PL.NOM	bury					

'So, [**because** she couldn't breathe,] … they buried her.'

Ah-type adjuncts are similar to independent clauses in that they always appear with verbal cross-reference and take the independent clause case forms. However, unlike independent clauses, *ah*-type adjuncts take a stem 2 verb (2.159).

(2.159)	[Thangte	**in**	vawk	**a**	**thah**	**hnu=ah,]**
	Thangte	ERG	pig	3SG.NOM	kill.2	after=LOC
	Cuaite	in	a	sa	a	suang.
	Cuaite	ERG	3SG	meat	3SG.NOM	cook.1

'[**After** Thangte killed the pig,] Cuaite cooked the meat.'

If *ah* is the sole indicator of subordination, the relationship between the clauses must be inferred from context, as in (2.160).

[64] Ohori (1996) argues that the reason for this cross-linguistically common phenomenon is that both oblique NPs and adjunct clauses act as the "ground" in relation to core NPs and main clauses, the "figure" (p. 701ff).

KIF 002

(2.160)	[Hmun-khat=ih	hna	an	ṭuan-tlang	hi	an	**nawm**
	place-one=LOC	work	3PL.NOM	do-together	TOP	3PL.NOM	**happy.2**

tuk=**ah**,] …
very=AJT
'[[Because] they enjoyed so much that they worked together at the same place,] …'

However, a particular relational noun usually indicates whether the relationship is time, manner, reason, or concession, as in (2.158) and (2.159).

The second type of adjunct clause is marked by the clause marker *in*, usually on its own, but sometimes in conjunction with a relational noun. *In*-type adjuncts usually convey information about the manner in which the matrix clause is carried out, accompanying action, or reason for the matrix clause (2.161).

WSB 005

(2.161)	[___$_i$	A	thaw	thaw	thei	lo=**in,]**	a_i	thi	lawk.
		3SG	breath	breathe	can	NEG=AJT	3SG.NOM	die.1	temporarily

'[___$_i$ Not being able to breathe,] she$_i$ passed out.'

In contrast to *ah*-type adjunct clauses, the subject of the adjunct clause is usually coreferential with the subject of the matrix clause, which means that they typically lack cross-reference. They also require a stem 1 verb ((2.162) and (2.163)).

(2.162)	[___$_i$	A	fate=pawl	**hmu**	lo=in]	a_i	thi.
		3SG	child=PL	**see.1**	NEG=AJT	3SG.NOM	die.1

'He$_i$ died [without ___$_i$ seeing his children].'

(2.163)	Mang$_i$	cu	[___$_i$	Pathian	**rian**=in]	a	um.
	Mang	TOP		God	**serve.1**=AJT	3SG.NOM	be

'Mang$_i$ is here [___$_i$ serving God].'

A few subordinating conjunctions, such as *(asi)le* 'if' and *cun* 'when' can stand on their own without *ah* or *in*. These pattern with the *ah*-type adjunct clauses, in that they

take stem 2 verbs, usually have verbal cross-reference, and take the independent clause case forms.

(2.164) [Ka pa a **thih** **asi=le**,] kan farah ding.
1SG father 3SG.NOM **die.2** AFF=if 1PL.NOM poor FUT
'[**If** my father died], we would become poor.'

KIF 017
(2.165) ["Mi-kei ka cang zo," ti a **theih** **cun**,]
NMLZ-tiger 1SG.NOM become.1 PRF COMP 3SG.NOM **know.2** when
'[**When** she knew that she was already a tiger-human,] …'
(lit., '… that "I already became a tiger-human…"')

A few others, such as *tiang* 'until' and *vete* 'as soon as', are marked with *in,* yet still pattern like *ah*-type adjunct clauses in the ways mentioned above.

(2.166) [Van ka **thlen** **tiang=in]** Bawipa ka thangṭhat ding.
heaven 1SG.NOM arrive.2 until=AJT Lord 1SG.NOM praise FUT
'I will praise the Lord [until I get to heaven].'

(2.167) [Thangte **in** sakhi a **hmuh** **vete=n**,] a kap.
Thangte ERG deer 3SG.NOM see.2 as.soon.as=AJT 3SG.NOM shoot.1
'[As soon as Thangte saw the deer,] he shot it.'

2.4.1.3 Relative clauses

Relative clauses, the third type of subordinate clause, modify a noun. In Falam Chin, relative clauses are typically externally-headed, preceding the noun which they modify (2.168). All non-absolutive NPs in relative clauses are marked with the embedded clause case allomorph *ih.*

(2.168) **[Parte ih ___$_i$ (a)** **suan=mi]** **rawl$_i$** a thaw.
Parte ERG 3SG.NOM cook.2=REL food 3SG.NOM delicious
'**The food$_i$ [which Parte cooked ___$_i$]** was delicious.'

Relative clauses can also stand on their own as headless relative clauses (2.169).

LNM 019

(2.169) A thinlung-te=n … **[a ṭawng=mi]** a si.
3SG heart-DIM=ABL … 3SG.NOM speak=REL 3SG.NOM be
'[**What he speaks]** is … from his heart.'

Just as there are three main types of nominalizations, there are three different types of relative clauses, and three different relative markers corresponding to the different types. The first type relativizes an ergative argument (A). In this type, the clause must be marked with *tu*, and a stem 1 verb is used (2.170). The relativized element is extracted to the position following the relative clause, leaving a gap behind. However, the relativized element may optionally be represented within the clause by cross-reference.

(2.170) **[___$_i$ Zunghruk (a) ru=tu]** **pa$_i$** an kai.
ring 3SG.NOM steal.1=REL man 3PL.NOM catch
'They caught **the man$_i$ [who ___$_i$ stole the ring]**.'

The second type relativizes an absolutive argument (S or O), and must be marked with *mi*. If it is the single argument of an intransitive clause (S), a stem 1 verb is used. As before, the relativized element is extracted to the position following the relative clause, but in this case, cross-reference is obligatory.

(2.171) Cinte in **[___$_i$ a ṭap rero=mi]** **naute$_i$** a cawi.
Cinte ERG 3SG.NOM cry.1 IPFV=REL girl 3SG.NOM pick.up
'Cinte picked up **the girl$_i$ [who ___$_i$ was crying]**.'

However, if the O argument of a transitive clause is the relativized element, a stem 2 verb is used (2.172). Cross-reference is optional unless the subject is unstated (2.173).

(2.172) **[Mang ih ___$_i$ (a) ruk=mi]** **zunghruk$_i$** ka sar.
Mang ERG 3SG.NOM **steal.2=**REL ring 1SG.NOM find
'I found **the ring$_i$ [which Mang stole ___$_i$]**.'

(2.173) Palik=pawl in **[___$_i$ a ruk=mi]** **zunghruk$_i$** an sar.
police=PL ERG 3SG.NOM steal.2=REL ring 3PL.NOM find
'The police found **the ring$_i$ [which he stole ___$_i$]**.'

Both objects of a ditransitive verb may be relativized using *mi* and a stem 2 verb ((2.174) and (2.175)).

(2.174) **[Parte ih ___$_i$ paisa (a) cawih=mi]** **nu$_i$** **in**
Parte ERG money 3SG.NOM lend=REL woman ERG

a rul-sal.
3SG.NOM repay-again
'**The woman$_i$ [to whom Parte lent the money ___$_i$]** repaid it.'

(2.175) Parte in **[Cinte ih ___$_i$ (a) rak cawih=mi]** **paisa$_i$**
Parte ERG Cinte ERG 3SG.NOM then lend=REL money

a rul-sal.
3SG.NOM repay-again
'Parte repaid **the money$_i$ [which Cinte lent her ___$_i$]**.'

A third type of relative clause relativizes an adjunct phrase or clause. This type is marked by *nak* and takes a stem 2 verb ((2.176) and (2.177)).

(2.176) **[___$_i$ A hnih=nak]** **san$_i$** ka thei lo.
3SG.NOM **laugh.2=REL** reason 1SG.NOM know NEG
'I don't know **the reason$_i$ [why he laughs ___$_i$]**.'

(2.177) **[Parte ih ___$_i$ pangpar (a) lei=nak]** **bazar$_i$**=ah
Parte ERG flower 3SG.NOM buy=REL market=LOC

Cinte a feh.
Cinte 3SG.NOM go
'Cinte went to **the market$_i$ [where Parte bought the flowers ___$_i$]**.'

2.4.1.4 Other dependent clause types

In addition to its complement, adjunct, and relative clauses, Falam Chin includes two types of clauses which do not fit neatly into any of the above categories: *dingah/dingin* clauses and speech clauses. The first of these, *dingah/dingin* clauses, are marked by the clause markers *dingah* or *dingin*, which are formed by joining the future tense marker *ding* with one of the two adjunct clause markers *ah* or *in*. They can occur in three environments: in *purposive clauses*, with *commissive* matrix verbs, or with *jussive* matrix verbs. Generally, an argument of the matrix clause controls an argument of the embedded clause. As a result, *dingah/dingin* clauses do not allow cross-reference.

The first subtype, purposive clauses, occur with predicates that bring about another action or state. If the action is done with a strong intent of a future result, *dingah* is used (2.178). When there is not a strong connotation of purposive intent, *dingin* is used (2.179).

(2.178) Thangte$_{i}$ in [___$_{i}$ Mang **that** **ding=ah]** thang a kam.
Thangte ERG Mang kill.1 FUT=AJT trap 3SG.NOM lay
'Thangte$_{i}$ laid a trap [___$_{i}$ to kill Mang].'

(2.179) Thangte$_{i}$ cu [___$_{i}$ leilet **ding=in]** a feh.
Thangte TOP plow FUT=AJT 3SG.NOM go
'Thangte$_{i}$ went [___$_{i}$ to plow].'

When an argument of the matrix clause is coreferential with the A or S argument of the purposive clause, the purposive clause takes a stem 1 verb (2.178). If, however, an argument of the matrix clause is coreferential with the O argument of the purposive clause, the verb will be stem 2 and its A argument will take the embedded clause case allomorph (2.180).

(2.180) Thangte$_i$ cu [Cinte **ih** **___$_i$** **hmuh** ding=ah] a kut a zap.
Thangte TOP Cinte ERG see.2 FUT=AJT 3SG hand 3SG.NOM wave
'Thangte$_i$ waved his hand [so Cinte would see him$_i$].'

Dingah/dingin clauses can also occur with commissive and jussive matrix verbs. These always take a stem 1 verb because, unlike purposives, they must always control the S or A argument of the embedded clause. The S or A argument of a commissive verb controls the *dingah/dingin* clause (2.181), while the O argument of a jussive verb controls the *dingah/dingin* clause (2.182).

(2.181) **Cinte$_i$** in [**___$_i$** Parte thaw=n lek ding=in] i dil.
Cinte ERG Parte with=ABL play.1 FUT=AJT 1SG.ACC request
'**Cinte$_i$** asked me [if **she$_i$** could play with Parte].'

(2.182) Cinte in [**___$_i$** Parte thaw=n lek ding=in] **i$_i$** sawm.
Cinte ERG Parte with=ABL play.1 FUT=AJT 1SG.ACC ask
'Cinte asked **me$_i$** [**___$_i$** to play with Parte].'

The last type of clause to be discussed is *speech clauses*. Speech clauses in Falam Chin can be divided into three types: direct speech, indirect speech, and semidirect speech. When direct speech occurs with the verb *ti* 'say', either no complementizer is used (2.183) or the speech clause is subordinated using the verb *ti* plus the adjunct clause markers *ah* or *in* (2.184). According to Osburne (1975), *tiin* is used in the spoken style, while *tiah* is used for the literary style.

KIF 008
(2.183) Fala-nu cu=n a tlangval-pa=i hnen=ah
young.woman-FEM TOP=ERG 3SG young.man-MASC=GEN to=LOC

cu=n ["Ka ti a hal,"] a ti.
TOP=ERG 1SG water 3SG.NOM thirsty 3SG.NOM say
'The young woman said, ["I'm thirsty,"] to her young man.'

(2.184) Thangte in [“Rangoon=ah ka feh ding,” **(ti=ah)]** a ti.
Thangte ERG Yangon=LOC 1SG.NOM go FUT say=AJT 3SG.NOM say
‘Thangte said [“I will go to Yangon.”]’

Other verbs of saying, however, require *tiin* or *tiah* ((2.185)–(2.187)).

(2.185) Cinte in Thangte cu [“Rangoon=ah na feh ding maw?”
Cinte ERG Thangte TOP Yangon=LOC 2SG.NOM go FUT INTG

ti=n] a sut.
say=AJT 3sg.NOM ask
‘Cinte asked Thangte, [“Will you go to Yangon?”]’

LNM 047
(2.186) A fapa in [“A hlun tuk thlang …” **ti=ah]** a
3SG son ERG 3SG.NOM old too now … say=AJT 3SG.NOM

sim.
tell
‘His son told him, [“They are too old now …”]’

WSB 012
(2.187) Sangka ihsi=n a nupi in [“Inn awng aw!”
door from=LOC 3SG wife ERG house open.1 IMP.SG

ti=n] a hei ko.
say=AJT 3SG.NOM at call.1
‘At the door, his wife called him, [**saying**, “Open the door!”]’

Indirect speech constructions cannot be formed with the verb *ti*. With other verbs of speaking, indirect speech constructions require the addition of the word *thu* ‘word’ as well as the complementizer *ti.*

(2.188) Thangte in Cinte cu [Rangoon=ah a feh ding **ti]**
Thangte ERG Cinte TOP Yangon=LOC 3SG.NOM go FUT COMP

thu a sim.
word 3SG.NOM tell
‘Thangte told Cinte [that he would go to Yangon].’

(2.189) Cinte in Thangte cu [Rangoon=ah a feh ding maw **ti]**
Cinte ERG Thangte TOP Yangon=LOC 3SG.NOM go FUT INTG COMP

thu a sut.
word 3SG.NOM ask
'Cinte asked Thangte [whether he would go to Yangon].'

The final type of speech clause, semidirect speech, shares elements of both direct and indirect speech.[65] Like indirect speech, it requires a complementizer, *ti*. Furthermore, it appears with thought or emotion predicates like *thei* 'know' and *phang* 'worry', which prototypically occur with indirect speech. However, as with direct speech, the participant remains the deictic center of the clause, such that the participant refers to him/herself using first person cross-reference ((2.190) and (2.191)).

KIF 073
(2.190) Fala-nu khal cu=n ["**I** that thlang ding"
young.woman-FEM also TOP=ERG 1SG.ACC kill.1 also FUT

ti] a thei.
COMP 3SG.NOM know.1
'The young woman knew [**that** he would kill her].'
(lit., '… **that** "He will kill **me**."')

KIF 068
(2.191) ["Mi-dang tla **in** deh pang ding," **ti]** an
NMLZ-other also 1PL.ACC seize might FUT COMP 3PL.NOM

phang.
worry
'They worried [**that** she might kill one of them].'
(lit., '… **that** "She might kill one of **us**."')

In summary, Falam Chin includes various types of subordinate clause types, including two types of complement clauses, two types of adjunct clauses, relative clauses,

[65] Note, however, that semidirect speech has a rather different set of properties in African languages such as Adioukrou (Hill 1995) and Manambu (Aikhenvald 2008).

dingin/dingah clauses, and three types of speech clauses. The use of complement clauses, *dingin/dingah* clauses, and speech clauses is governed by the kinds of verbs with which they can occur. Adjunct clauses and relative clauses, on the other hand, are freely used to modify verbs and nouns, respectively.

2.4.2 Clausal coordination

The previous section examined various types of subordinate clauses, many of which occur with specific subordinating clause markers. In addition to these, Falam also includes at least three coordinating conjunctions used to join two or more independent clauses. The basic clausal coordinating conjunction is *ih* 'and' (2.192).

(2.192) Vawk a that **ih**, a suang.
pig 3SG.NOM kill.1 and 3SG.NOM cook.1
'He killed a pig **and** he cooked it.'

There is also the adversative coordinating conjunction, *nan* 'but' (2.193).

(2.193) Vawk a that **nan**, a suang lo.
pig 3SG.NOM kill.1 but 3SG.NOM cook.1 NEG
'He killed a pig, **but** he didn't cook it.'

Lastly, there is a special coordinating conjunction used to join imperatives and subjunctives, *la* 'and' (2.194).

(2.194) Sual hua aw=**la,** tlan-san aw.
evil hate.1 IMP.SG=and run-RELQ IMP.SG
'Hate evil **and** run from it.'

Coordination of nominals, including relational nouns, requires a distinct conjunction, *le* 'and' (see (2.69)).

2.4.3 Non-indicative sentence patterns (mood)

The previous sections have focused on indicative clauses in Falam Chin. This section discusses three main non-indicative types of mood in Falam: *imperative* (commands), *subjunctive,* and *interrogative* (questions).

2.4.3.1 Imperative mood

This section examines the imperative mood in Falam Chin. The imperative mood can be further subdivided into *cohortative* (first person), *imperative* (second person), and *optative* (third person) forms. All three types follow the normal ordering for indicative clauses, but lack cross-reference. However, the mood marker conveys both person and number information.

The cohortative marker is *uhsi* (2.195).

(2.195) Bawhlung lek **uhsi**.
soccer play.1 COH.PL
'**Let's** play soccer.'

The imperative and optative markers each have a singular and a plural form; the imperative forms are *aw* (singular) (2.196) and *uh* (plural) (2.197).

KIF 020
(2.196) A fala-nu=i hnen=ah ["Tidai in **aw** hen,"
3SG young.woman-FEM=GEN to=LOC water drink IMP.SG INTS

ti=n] a hun pe.
say=AJT 3SG.NOM go.up give.1
'He gave it to his young woman, [saying "Drink the water."]'

WSB 015
(2.197) "Sangka awng hram **uh**!"
door open.1 please IMP.PL
'Please open the door!'

The optative forms are *seh* (singular) (2.198) and *hai seh* (plural) (2.199).

(2.198) A khan thianfai **seh**.
3SG room clean OPT.SG
‘**Let** him clean his room.’

(2.199) An khan thianfai **hai seh**.
3PL room clean OPT.PL
‘**Let** them clean their rooms.’

All commands are negated using the form *hlah,* rather than the indicative form *lo* (2.200).

(2.200) Ring-pi=in au aw **hlah.**
loud-AUG=AJT shout IMP.SG NEG
‘**Don’t** shout so loudly.’

2.4.3.2 Subjunctive mood

The subjunctive mood is used to express pragmatically polite requests, statements of desire, and contrafactual statements. The second and third person markers are clearly constructed from the imperative and optative forms plus the imperative conjunction *la*, but the first person forms are unique. The first person forms are: *ningna, ningla,* or *dingla* (singular) (2.201) and *nungna* or *nungla* (plural) (2.202).

(2.201) Feh thei **ningla** ka duh.
go can SBJV.1SG 1SG.NOM want
‘I wish I could go.’

(2.202) Rul that lo **nungla**, in cuk ding.
snake kill.1 NEG SBJV.1PL 1PL.ACC bite FUT
‘If we do not kill the snake, it will bite us.’

The second person subjunctive forms are: *la* or *awla* (singular) (2.203) and *uhla* (plural) (2.204). The addition of the morpheme *ci* to form *cila* (singular) or *uhcila* (plural) makes the request more polite (2.205).

(2.203) Feh **awla** ka duh.
go SBJV.2SG 1SG.NOM want
'I want you to go.'

(2.204) Rul that lo **uhla**, a lo cuk ding.
snake kill.1 NEG SBJV.2PL 3SG.NOM 2.ACC bite FUT
'If you do not kill the snake, it will bite you (PL).'

(2.205) Feh **cila** ka ti.
go SBJV.2SG 1SG.NOM say
'I wish you to go.'

The third person subjunctive forms are *sehla* (singular) (2.206) and *hai sehla* (plural) (2.207).

(2.206) Feh **sehla** ka duh.
go SBJV.3SG 1SG.NOM want
'I want him to go.'

(2.207) Rul that lo **hai sehla**, a cuk ding.
snake kill.1 NEG SBJV.3PL 3SG.NOM bite FUT
'If they do not kill the snake, it will bite them.'

Like the imperative mood, the subjunctive mood uses the negative form *hlah* and lacks cross-reference.

2.4.3.3 Interrogative mood

This section examines two types of questions in Falam Chin: yes-no questions and WH questions. Only yes-no interrogatives are marked for mood. *Maw* is the yes/no interrogative marker ((2.208) and (2.209)).

(2.208) Na dam **maw**?
2SG.NOM healthy INTG
'How are you?'
(lit., 'Are you healthy?')

KIF 022

(2.209)	Tlangval-pa	cu=n	[“Kei-ti	na	in	si	fawh
	young.man-MASC	TOP=ERG	tiger-water	2SG.NOM	drink	AFF	yes

maw?”]	a	ti.
INTG	3SG.NOM	say

‘The young man said, [“Did you drink the tiger water?”]’

While *maw* normally appears at the end of the question clause, it can also follow a focal element of the question. In (2.210), the act of going is not questioned, rather, the purpose for the going.

(2.210)	[___$_i$	Cinte	hmu	ding=ah	**maw]**	khua=ah	na$_i$	feh?
		Cinte	see.1	FUT=AJT	INTG	town=LOC	2SG.NOM	go

‘Did you $_i$ go to town [[just] ___$_i$ to see Cinte]?’ OR
‘Was it [___$_i$ to see Cinte] that you$_i$ went to town?’

Maw can also be combined with imperative or indicative forms to produce a sense of uncertainty (2.211).

LNM 015

(2.211)	Ka	fa,	hung	dam-sal	zangzang	**aw**	**maw**.
	1SG	son	come up	well-again	soon	IMP.SG	INTG

‘My son, may you get well again very soon.’

In contrast to yes-no questions, WH questions in Falam Chin have no word to mark interrogative mood. WH questions are usually formed with the interrogative pronouns *in situ*, as is typologically consistent with Falam’s nature as a head-final, AOV language (2.212a). However, interrogative pronouns may also be moved to the focus position to the immediate left of the predicate ((2.212b) and (2.213)).

(2.212)	a.	**Zo**	**in**	**(so)**	zunghruk	a	ru?
		who	ERG	FOC	ring	3SG.NOM	steal.1

‘**Who** stole the ring?’

b. Zunghruk **zo in (so)** a ru?

(2.213) Buh **ziang-ti=n** na suang?
rice which-way=AJT 2SG.NOM cook.1
'How do you cook rice?'

Leftward movement of an interrogative pronoun is ungrammatical unless marked by a focus marker, either *so, si,* or *ha* (2.214).[66]

(2.214) a. Thangte in **ziang** a ru?
Thangte ERG what 3SG.NOM do
'What did Thangte steal?'

b. ***Ziang** Thangte in a ru?
c. **Ziang si** Thangte in a ruk?

Focus markers indicate that the questioned element is already discourse active in some way. WH questions which lack a focus marker always take stem 1 verbs, while the verb stem varies for WH questions with a focus marker. With a focus marker, S and A-focused questions take stem 1 (2.215).

(2.215) Zo si a ṭap?
who FOC 3SG.NOM cry.1
'Who is crying?'

Stem 2 is found in O-focused and adjunct-focused questions ((2.216)–(2.218)).

(2.216) Zo so a **hmuh**?
who FOC 3SG.NOM **see.2**
'Whom did he see?'

(2.217) Mang in ziang si a lo **suh?**
Mang ERG what FOC 3SG.NOM 2.ACC **ask.2**
'What did Mang ask you?'

(2.218) Ziang-ruang=ah so a **ruk**?
what-reason=LOC FOC 3SG.NOM **steal.2**
'Why did he steal it?'

[66] *Ha* is a dialectal variant, primarily Zahau and Laizo. In addition, one language consultant has emphasized that ergative marking is incompatible with the focus markers, while other consultants consistently use them together.

In summary, this section has discussed the many types of subordinating and coordinating structures used in Falam to express a wide variety of interclausal relationships. In addition, it examined the construction of imperative, subjunctive, and interrogative sentences in Falam Chin.

2.5 Conclusion

This chapter has discussed the major grammatical structures of Falam Chin. Section 2.1 looked at Falam's phrase-marking NP case marking and verbal cross-reference systems, which are the morphological expression of a verb's valence, as well as other types of Falam Chin morphology. Section 2.2 examined the structure and arrangement of the NP. Section 2.3 explained the canonical ordering of the clause, as well as possible marked orderings. Finally, §2.4 looked at the structure of complex sentences, including various types of subordinate clauses and non-indicative sentences. Chapter 3 revisits the most pertinent of these concepts, reframing them in terms of Role and Reference Grammar.

CHAPTER 3

THEORETICAL FRAMEWORK: ROLE AND REFERENCE GRAMMAR

This chapter presents a summary of Role and Reference Grammar (RRG), the theoretical framework of this dissertation, as described in Van Valin and LaPolla (1997) and Van Valin (2005). This framework was chosen first for its commitment to developing a theory which can account for languages of all types with equal ease (the principle of *typological adequacy*). To this end, RRG accords equal weight to semantic and pragmatic representations as it does to the ultimate syntactic output. These characteristics render RRG an ideal framework in which to analyze Falam Chin, a language which, in many cases, appears to prioritize semantic motivations over syntactic ones (as Chapters 4-7 exhibit). Throughout this chapter, I use Falam Chin data for exemplification wherever possible, revising or expanding on the analysis of Chapter 2 in the process.

RRG is a "structural-functionalist" approach to syntactic theory (Van Valin 1993:1), both recognizing the systematic structures of language, while also emphasizing the roles of semantics and pragmatics in their formation. In this regard, it falls halfway on the continuum between formal and functional frameworks. On the one hand, RRG stresses the communicative nature of language, claiming that semantics and pragmatics motivate a single syntactic representation. For this reason, structural explanations for case assignment, agreement, and word order (such as adjacency requirements) and the accompanying abstract underlying representations, movement, and empty categories, are

rejected. On the other hand, RRG views the interchange between semantics, pragmatics, and syntax as a systematic process, governed by a linking algorithm which includes both universal and language-specific elements. A general representation of the organization of RRG is given in Figure 3.1 (Van Valin 2005:2).

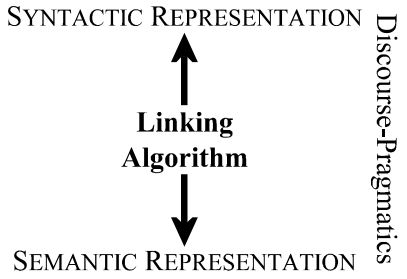


Figure 3.1: The organization of RRG

Corresponding to Figure 3.1, RRG employs three formal systems of representation: 1) the syntactic representation, which has two subparts, the constituent projection and the operator projection, 2) the semantic representation (SR), based on the logical structure (LS) of the predicate, and lastly 3) the information structure representation, or focus projection. The linking algorithm which joins them is based on notions of semantic, syntactic, and pragmatic relations which obtain between predicates and their arguments.

This chapter begins, in §3.1, with an explication of the syntactic representation (the constituent and operator projections) within the RRG framework. Next, §3.2 deals with verb classes, construction of the semantic representation from the logical structure of the predicate, and the RRG conception of semantic relations. Third, §3.3 discusses both pragmatic relations and the focus projection. Then, §3.4 explains grammatical relations within the RRG framework and their relationship to valence-altering operations.

Finally, §3.5 fits the various components together to show how the semantic structure ultimately links to the syntactic structure.

3.1 The layered structure of the clause and NP

In this section, I discuss the syntactic representation as envisioned in RRG. Unlike traditional forms of syntactic representation (e.g., X-bar, immediate constituency), RRG uses two separate syntactic projections, the *constituent projection* and the *operator projection,* to represent the qualitative distinction between lexical categories (*constituents*) and functional categories (*operators*). Lexical categories are further divided into *phrasal lexical categories* (nouns, verbs, and adpositions, which can function as heads of phrases) and *non-phrasal lexical categories* (adjectives and adverbs)[67] (Van Valin & LaPolla 1997; Van Valin 2005). RRG conceives of phrasal categories as having a layered structure, with the layers representing important universal relationships between the head, its complements, and peripheral modifying elements. Non-phrasal constituents and operators do not have a comparable layered structure. The following sections describe the constituent projection of clauses and NPs (§3.1.1), followed by a brief discussion of the operator projection for each of these categories (§3.1.2).

3.1.1 The constituent projection

This section describes the constituent projection as conceived of in RRG. The constituent projection represents the constituents of the clause or NP—its arguments and adjuncts—clustered around the head. As discussed in Chapter 2, in Falam Chin, the

[67] While it is true that adjectives and adverbs can be modified by intensifiers, Van Valin and LaPolla (1997:68-69) argue that they are not fully phrasal in the same sense as nouns, verbs, and adpositions, as they do not take arguments.

majority of these precede the head of the clause or NP. While the constituent structure of the clause and that of the NP share many similar features, they also differ in some significant ways; thus, they are treated separately in this section.

3.1.1.1 The clausal constituent projection

The basic parts of the clausal constituent projection, representing the predicate and its arguments and adjuncts, are shown in Figure 3.2. The first element of the layered structure is the *nucleus* (NUC). In clauses, the nucleus is always a predicate (thus, followed by a PRED node), yet it may be a predicate of a category other than verb, such as an adjective, noun, or adpositional phrase (e.g., *Cecilia is fidgety/a tomboy/in the conservatory*).

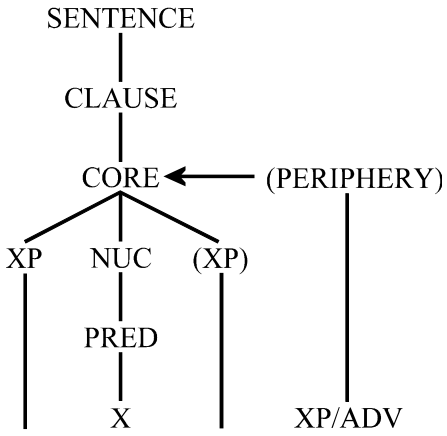


Figure 3.2: Formal representation of the layered structure of the clause

The nucleus plus its lexically-specified arguments compose the core; nominals within the core are *core arguments.* The ordering of a predicate and its arguments is determined by language-specific constraints which specify an inventory of syntactic templates possible in that language (Van Valin & LaPolla 1997). Thus, the template shown in Figure 3.2 is a possible template for English, in which dependents can precede

and/or follow the predicate, but not for Falam, where all arguments and adjuncts must precede the predicate.

Adjuncts, whether adpositional phrases, adverbs, or adjunct clauses, are located in the *periphery,* which is optional. Adjuncts can modify the nucleus, core, or clause according to their scope. That is, an aspectual adverb such as *completely* tells us about the predicate; it modifies the nucleus. A manner adverb like *carefully* or a location phrase like *in the park* tell us about the predicate as well as its core arguments; they modify the core. Finally, an evidential adverb like *evidently* tells us about the entire clause, including any peripheral elements of the core or nucleus (Van Valin 2005).

The components represented in Figure 3.2 are universal. This is supported by their close identification with semantic distinctions common to all languages (predicate vs. non-predicating elements, arguments of the predicate vs. adjuncts; Van Valin 2005). There are, however, several non-universal elements of the constituent projection which are, by contrast, pragmatic in nature. Some languages include a *pre-* or *postcore slot* (PrCS or PoCS), the locus of extraposed focused elements such as WH words.[68] These slots, if available in a given language, are a part of the *clause*. Figure 3.3 provides an example.

[68] In languages which do not include a PrCS or PoCS, WH NPs are either left *in situ,* or else moved to a language-specific focus position. In either case, they remain at the level of the core.

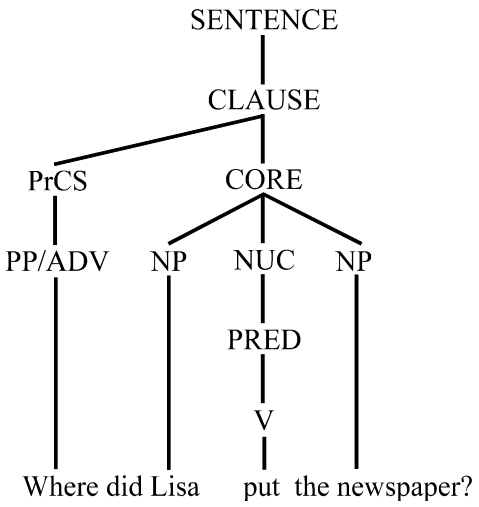


Figure 3.3: Pre-core slot

Also possible is a *left-* or *right-detached position* (LDP or RDP), the locus of dislocated elements. These are phrases which are separated from the clause by means of a pause or break in intonation (Van Valin & LaPolla 1997). Thus, they are outside of the clause, but a part of the *sentence*. This is illustrated in Figure 3.4.

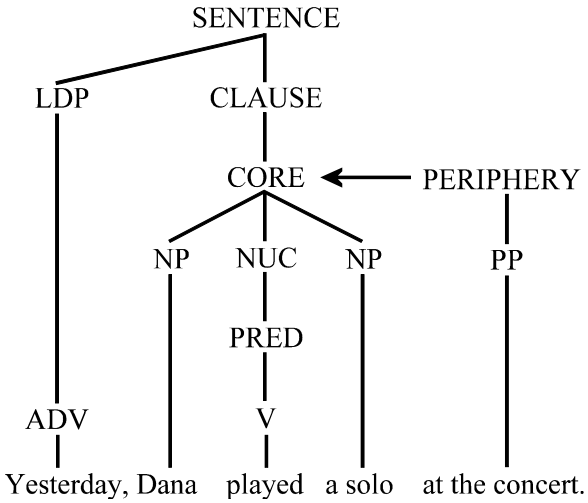


Figure 3.4: Left-detached position

There is one final non-universal feature of the constituent projection which must be discussed here in some depth, as it crucially impacts the syntactic representation of Falam Chin data throughout this work. The feature in question distinguishes two typologically-defined groups, dependent-marking languages and head-marking languages (Nichols 1986; Nichols & Bickel 2008). Dependent-marking languages signal predicate-argument relations by marking their dependents. For example, nouns may be marked with NP case marking to show their relationship to the verb. As illustrated in Figure 3.2, such arguments appear in the core of the syntactic representation.

Head-marking languages, on the other hand, primarily rely on the strategy of verbal cross-reference, pronominal forms which mark the head of the clause (the predicate). Many linguists, including Boas (1911), Van Valin (1977, 1985, 1987), Jelinek (1984), and Nichols (1986) have maintained that it is these verbal cross-reference forms, and not the NPs, which constitute the core arguments in head-marking languages. The NPs are simply appositives to the core arguments to flesh out their semantic sense (Bloomfield 1933; Milewski 1967; Nichols 1986; Van Valin 2008).

One ramification of such a claim is that the core pronominals of a head-marking language should be expected to pattern syntactically with the NPs of a dependent-marking language. Nichols (1986) and Van Valin (1985, 1987, 2009) argue that the simplest and most straightforward explanation of the data supports that this is so. First, in a head-marking language, the verb and its pronominal arguments can (and very frequently do) stand alone without any NP arguments, something which occurs much less frequently in dependent-marking languages. As Nichols (1986:107) states,

> In head-marked grammatical relations, the dependent is usually an optional element of the constituent. For instance, in languages with consistently head-marked clauses, the verb itself normally constitutes a complete sentence; full NPs are included only for emphasis, focus, disambiguation, etc.

This indicates that the bound pronominals satisfy the syntactic requirements of the predicate in a head-marking language,[69] just as NP arguments do in a dependent-marking language. As a result, the bound pronominals can also antecede reflexive arguments and control arguments in embedded clauses, just as NP arguments would be expected to do.[70]

If indeed the cross-reference pronominals are core arguments, the constituent projection of head-marking languages must be modified to allow for both cross-reference and its corresponding NPs. The cross-reference pronominals, which are the core arguments, are placed in the core, analogous to the NP arguments in a dependent-marking language. But where should the NPs be placed? Neither the extracore slots, nor the detached positions can hold them, for these are not pragmatically-marked NPs. Nor do they modify like adjuncts, so they cannot be placed in the periphery. It is concluded that the argument-associated NPs of a head-marking language appear in the clause.[71]

To illustrate the similarities and differences, a dependent-marking language, English, and a head-marking language, Lakhota, are compared in Figure 3.5 (Van Valin

[69] I reference generally what is formulated in various frameworks as the Projection Principle (Chomsky 1982), the Completeness Condition (Kaplan & Bresnan 1982), and the Completeness Constraint (Van Valin 2005; see §3.5.4).

[70] One alternate, although more abstract, analysis is that these syntactic effects are achieved through the introduction of empty category pronominals at some non-surface level. See Van Valin (1985) for argumentation against this approach. Others have suggested weakening the Projection Principle in certain cases (e.g., Hale 1983; see also Austin & Bresnan 1996).

[71] Van Valin (2009) gives a number of reasons to show that these clause-level NP slots are distinct from extraposed elements (the Pr/PoCS). First, their function is not pragmatic; the Pr/PoCS are. Second, there can only be one Pr/PoCS, but multiple NP slots. Third, they can only include argument-associated NPs, while the Pr/PoCS can also include adjuncts. Fourth, they can occur in any type of clause, while the Pr/PoCS can occur only in main clauses.

2005:17). With the optional NPs of the Lakhota clause placed at the clausal level, the cores and the core arguments of the two languages are analogous (ordering excepted).

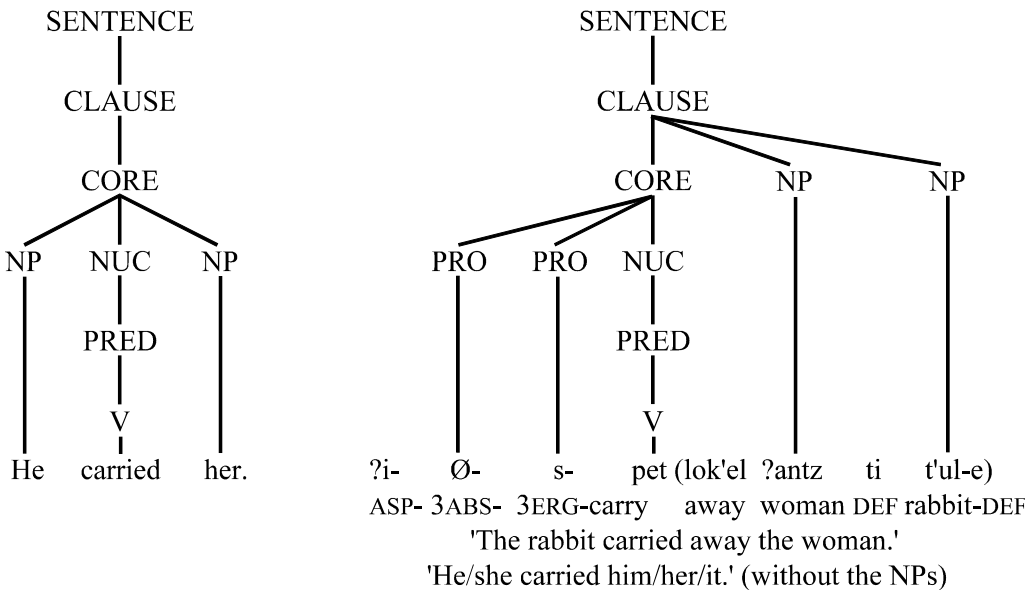


Figure 3.5: Dependent-marking versus head-marking constituent projection

Unlike Lakhota, which is clearly head-marking, Falam Chin is a *double-marking* language—a language with both dependent- and head-marking features. On the one hand, it has NP case-marking following an ergative-absolutive pattern, while it also has verbal cross-reference following a nominative-accusative pattern. If the dependent marking is taken as primary, the Falam Chin constituent projection should appear as in Figure 3.6, in which the NPs are represented as the syntactic arguments of the core, while the cross-reference is merely the realization of the person/number features of those arguments on the verb. This would suggest that Falam syntax is more similar to that of English as represented in Figure 3.5.

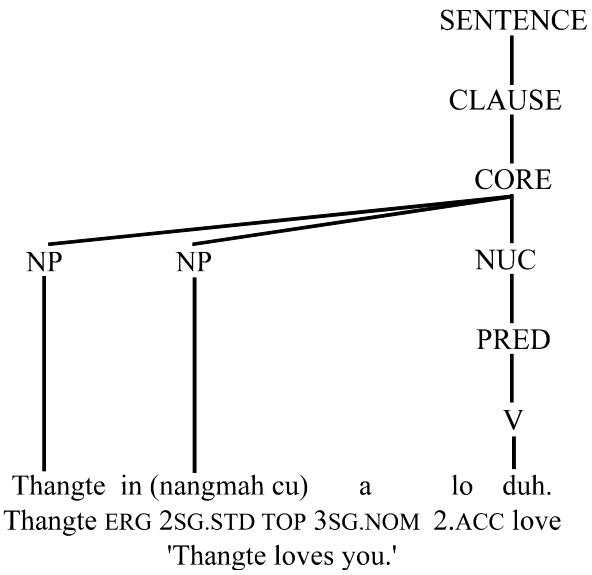


Figure 3.6: Dependent-marking analysis of Falam Chin

If the head marking is taken as primary, the constituent projection should be as in Figure 3.7, in which the cross-reference is taken to be the core arguments, while the NPs provide extra semantic information at the clausal level, in apposition to the cross-reference.

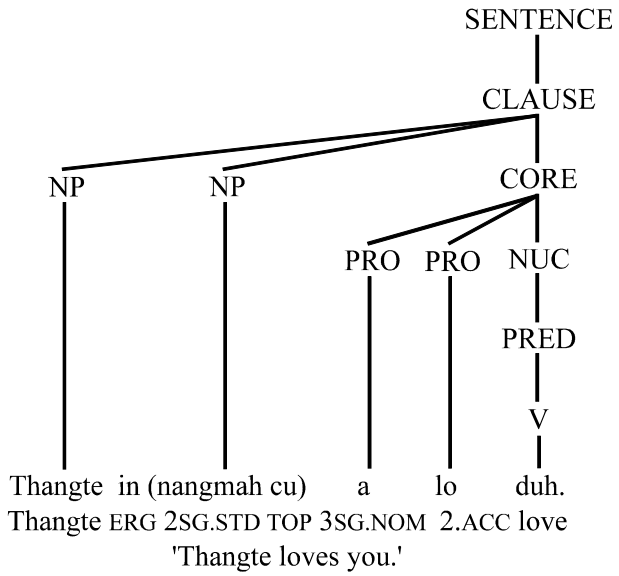


Figure 3.7: Head-marking analysis of Falam Chin

This analysis would suggest that Falam syntax is more similar to that of Lakhota, as shown in Figure 3.5.

Which of these two analyses is correct? On the basis of the preceding discussion and data presented in Chapter 2 (see §2.1.1.2), I argue that the head-marking analysis is more insightful for Falam Chin for several reasons. First, its NPs may be freely omitted, whereas the cross-reference pronominals, on the other hand, are nearly always obligatory. Likewise, NPs are not necessary for reflexive antecedence or for control; the cross-reference pronominals are sufficient to perform these syntactic functions. Thus, in (3.1), the cross-reference pronominal *ka* (1sg) is the sole antecedent for the reflexive morphology.

(3.1) **Ka**$_i$ at-**aw**$_i$ pang.
1SG.NOM cut.1-REFL accidentally
'**I**$_i$ cut **myself**$_i$ accidentally.'

In (3.2a), *ka* is the controller of the embedded verb *itthat ~ ihthah* 'sleep'. Note that in the case of control this is not simply a matter of the embedded verb being non-finite and therefore uninflected for person. In the comparable example in (3.2b), the embedded verb is not controlled by an argument of the matrix verb; therefore, the cross-reference pronominal *na* (2sg) is necessary with the embedded verb.

(3.2) a. [___$_i$ Ihthah] **ka**$_i$ duh.
sleep.2 1SG.NOM want
'**I**$_i$ want [___$_i$ to sleep].'

b. [Na ihthah] ka duh.
2SG.NOM sleep.2 1SG.NOM want
'I want you$_i$ [___$_i$ to sleep].'

Second, as shown in §2.1.1.2, Falam Chin cross-reference pronominals sometimes disagree in either person or number, and even more frequently in case, with their corresponding NP. This indicates a loose linkage of apposition between the two, rather than a strict agreement relationship. Their relationship is *associative,* rather than *integrative* (Bickel 2000). As Jelinek (1984:44) argues, for a clearly head-marking language, Warlpiri, "the clitic pronouns do not constitute agreement (AGR) with a nominal, since, as will be demonstrated, a clitic may be coindexed with a nominal that does not agree with it in person, number, or case." Although Jelinek does not use the term "head-marking," she references a key feature of head-marking languages.

It must be noted that an associative-type relationship does not allow just any NP to stand in apposition to any given cross-reference pronominal. Rather, apposition conforms to the general principle that *Semantic specificity explains grammatical generality.* That is, the NP must reiterate or else further explain the cross-reference; it cannot be more general or broad than the cross-reference. This can occur in at least three ways. First, the cross-reference may identify a whole of which the NP is a part, as in (2.42) (you=your hand) and (2.45) (group of listeners=one unknown listener). Second, the cross-reference may designate a grammatical function whereas the NP explains a semantic role, as in (2.43) (cross-reference=oblique comitative relational NP). Third, the cross-reference may designate grammatical person whereas the NP explains the specific nature or characteristics of that person, as in (2.44) (I=your father).

In conclusion, these data all suggest that the relevant distinction in Falam Chin is between a core which must include pronominal arguments (both nominative and

accusative, if the predicate is transitive) and a clause which then encompasses the NPs appositive to those arguments. I therefore adopt the analysis for Falam Chin that the cross-reference pronominals constitute the core arguments, while the NPs are appositional to the cross-reference, providing additional semantic information about them. Figure 3.8 shows constituent projection for an intransitive Falam Chin clause according to this analysis.

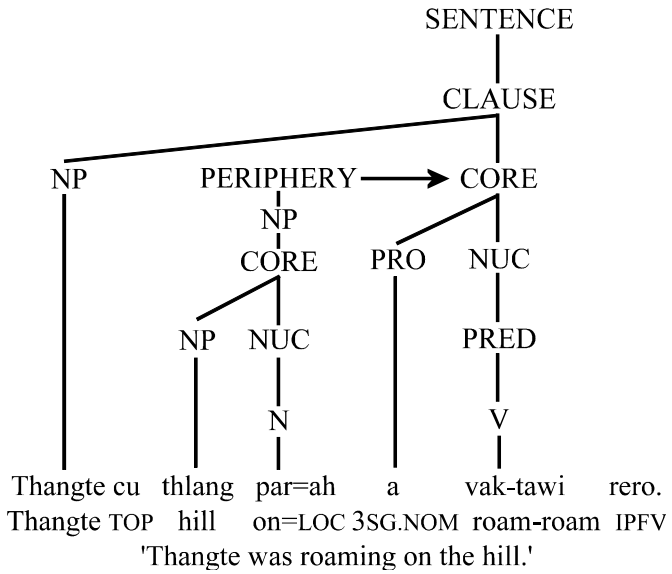


Figure 3.8: Intransitive Falam Chin syntactic structure

Figure 3.9 shows the constituent projection for a transitive clause, and Figure 3.10 that for a ditransitive clause in Falam Chin.

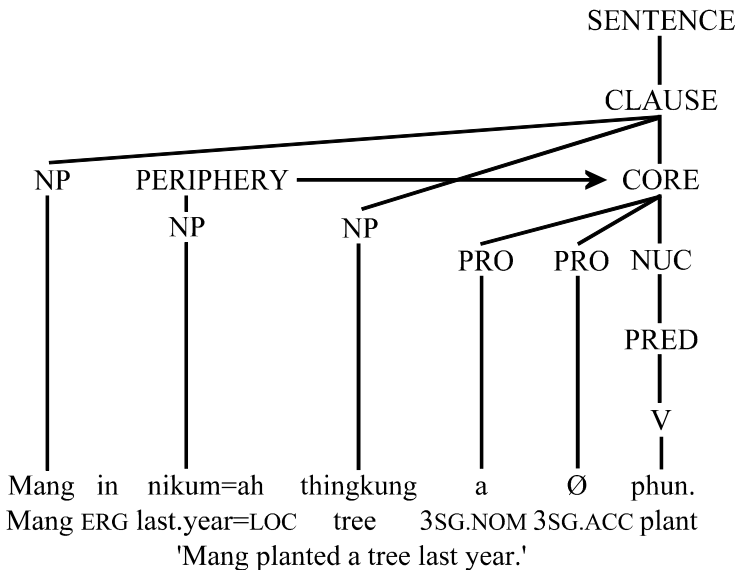


Figure 3.9: Transitive Falam Chin syntactic structure

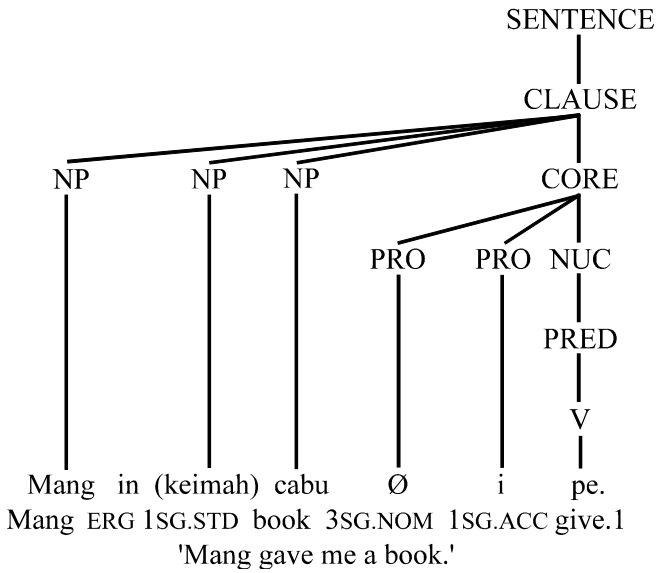


Figure 3.10: Ditransitive Falam Chin syntactic structure

I return now to the other non-universal elements of the syntactic structure, the extra-core slots and the detached positions. Falam Chin includes no Pr/PoCS for focal elements; recall that questioned elements either remain *in situ*, or else move to the focus position to the immediate left of the verbal complex (§2.4.3.3). However, it does include

an LDP for both core and adjunct NPs which have been left-dislocated. Figure 3.11 shows an example of an argument NP which has been fronted, while Figure 3.12 shows an example of an adjunct NP which has been fronted.

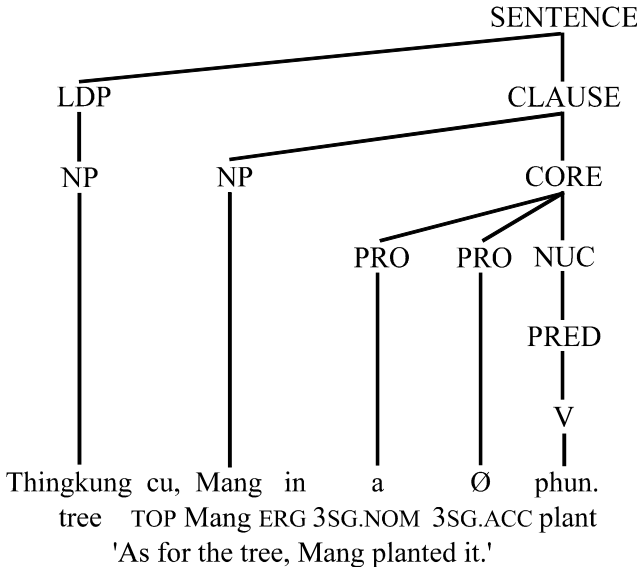


Figure 3.11: Left-dislocated NP in the LDP

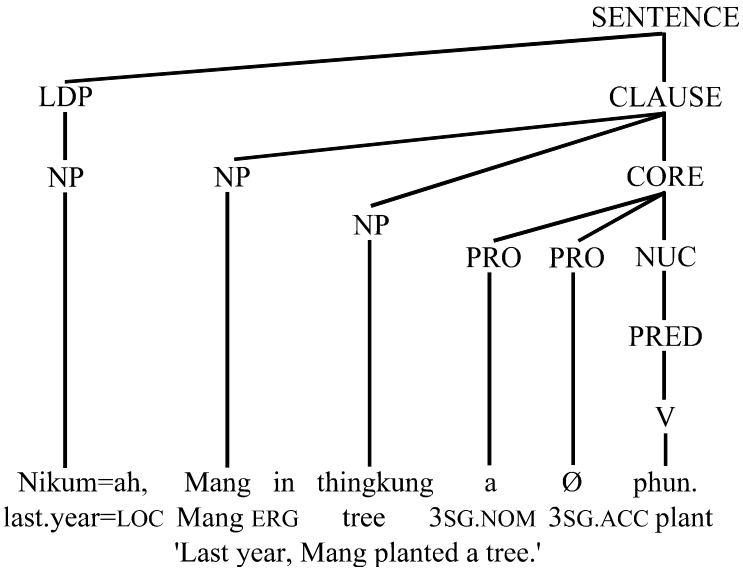


Figure 3.12: Adjunct in the LDP

In summary, the Falam Chin constituent projection represents its nature as a head-marking language having clause-level NPs in apposition to the core cross-reference pronominals. It also includes an optional LDP and a periphery when necessary. In Falam, all of these elements precede the verb.

3.1.1.2 The NP constituent projection[72]

This section discusses the constituent projection of the NP, which shares many similarities with that of the clause. However, there are a few differences. Like the clause, the NP constituent projection has a nucleus, core, and periphery. The periphery can modify the nucleus, core, or NP, depending on the scope of its modification (Van Valin 2005). One aspect in which the NP differs from the clause is that it has only a single node above the core, the NP (rather than both a clause and a sentence node). In addition, the NP can include a structural position unique to the NP, either the *NP-initial position* (NPIP) or the *NP-final position* (NPFP). This NP position shares commonalities with the subject argument position, the LDP/RDP, and the PrCS/PoCS in the sentence (Van Valin 2005), and is where possessive phrases, demonstratives, and interrogative pronouns appear. The syntactic structure of the NP is shown in Figure 3.13.

[72] Recent work in RRG (Van Valin 2008) has begun speaking of the reference phrase (RP) in lieu of the noun phrase (NP). This is intended to encompass phrases which are not headed by nominals and yet have a referring function. For my purposes here, however, NP will suffice.

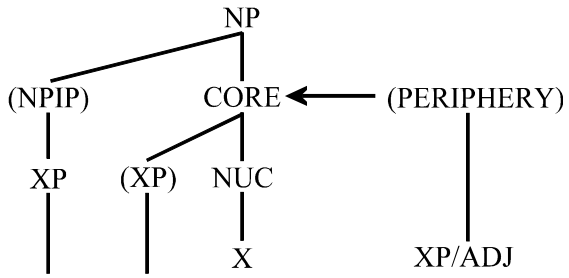


Figure 3.13: Formal representation of the layered structure of the NP

Unlike its double-marking clauses, Falam Chin NPs are either solely dependent-marking or solely head-marking. As seen in Figure 3.14a, dependent-marked possessive NPs, such as *Cinte ih* 'Cinte's', appear in the NPIP, while the complement of a nominalization, *Yangon*, appears in the core.

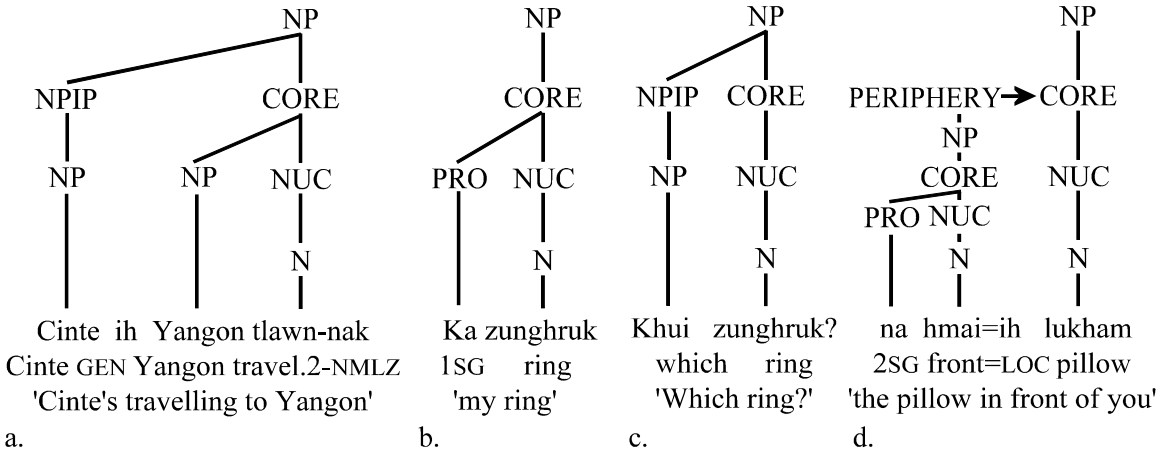


Figure 3.14: Falam Chin sample NPs

When possessive phrases take a head-marking cross-reference form (identical to the nominative cross-reference forms), they also appear in the core, as shown in Figure 3.14b. Interrogative pronouns, such as *khui* 'which', appear in the NPIP (Figure 3.14c), while adjuncts, such as *na hmaiih* 'in front of you' appear in the periphery (Figure 3.14d).

As argued in §2.2.1.2, relational NPs take the place of adpositional phrases in Falam Chin. Their syntactic structure is identical to that of other NPs, as illustrated in the relational NP *na hmaiih* 'in front of you' in Figure 3.14d. Their placement in the clause, on the other hand, is dependent on their function. Some relational NPs are non-predicative (Bresnan 1982), functioning simply to mark an argument licensed by the main predicate. A prototypical example of this type is *hnen* 'to', as used with a verb of transfer like *cawih* 'lend' (3.3).

(3.3) Thangte in Parte **hnen=ah** paisa a cawih.
Thante ERG Parte to=LOC money 3SG.NOM lend
'Thangte lent some money **to** Parte.'

Such *argument-marking* relational nouns appear within the clause, and do not have a layered structure, as shown in Figure 3.15.[73]

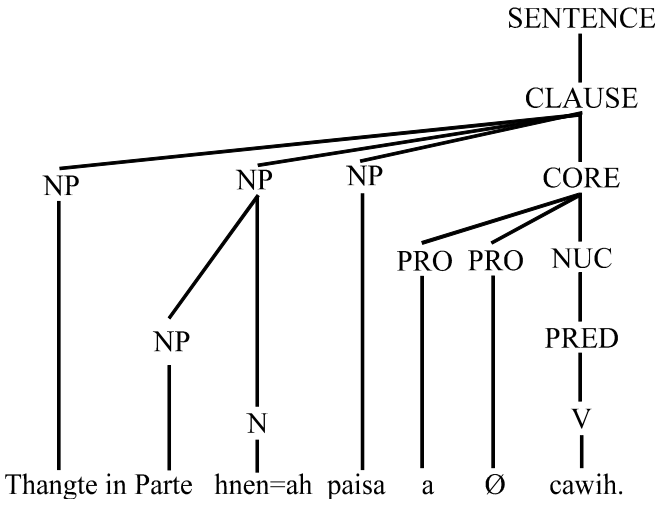


Figure 3.15: Non-predicative relational NP

Relational NPs can also be predicative, contributing semantic information to the clause. Some predicative NPs are not specified by the predicate, but rather modify it;

[73] Or within the core, in a dependent-marking language.

these serve as peripheral adjuncts (as in Figure 3.8). A distinct type of predicative relational NP falls somewhere inbetween the first two types. Like the argument-marking type, they mark an argument licensed by the predicate, although indirectly. Like adjuncts, however, they serve a predicative function, adding semantic information which the main predicate alone cannot convey. These are termed *argument-adjuncts* (AAJ). An example is the relational noun *hnen* 'to' with a verb of removal, such as *la* 'take' (3.4).

(3.4) Parte in **ka** **hnen=in** cabu a la.
Parte ERG 1SG to=ABL book 3SG.NOM take.1
'Parte took a book **from me**.'

Because the relational noun is predicative in this case, it does have a layered structure, as seen in Figure 3.16.

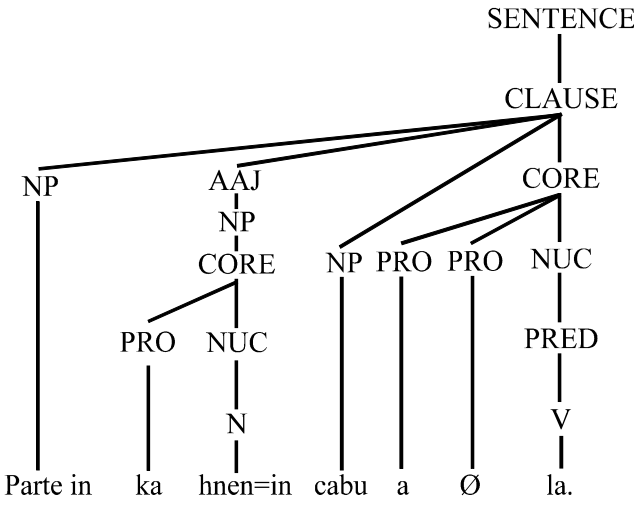


Figure 3.16: Argument-adjunct relational noun

Thus, while the clausal constituent projection includes both core arguments and clausal NPs, the NP constituent projection has only core arguments. Determiners are located in the NPIP. With the exception of argument-marking relational nouns, which

lack a layered structure, the representation of relational NPs is identical to other NP projections.

3.1.2 The operator projection

Operators, grammatical categories such as tense and aspect, have a projection distinct from that of constituents. While constituents show great diversity in ordering cross-linguistically, the ordering of operators is strongly correlated with how much of the clause or NP falls within their scope. Thus, operators which modify only the nucleus appear closer to the nucleus than those which modify the core as well, and those which modify only the core fall closer to the nucleus than those which modify the whole clause or NP (Van Valin & LaPolla 1997). This section briefly discusses the clausal and NP operator projections.

3.1.2.1 The clausal operator projection

The clausal operator projection represents those operators which modify the various levels of the clause. Those which modify the nucleus include aspect and derivational negation, as well as directionals when they modify the verb directly without affecting its arguments. In many cases, however, directionals do indicate the motion of an argument, in which case they are better classified as core operators, as in the case of *va* 'go' in Figure 3.17. Modality operators like *thei* 'can' modify the core when used as root modals (ability, permission, obligation). Internal or narrow negation, which negates a single constituent of the core, is also a core operator.

Status operators include epistemic modals (possibility, necessity) and external or propositional negation, both of which modify the clause as a whole. Tense operators,

such as future tense *ding* ‘FUT’, evidentials, and illocutionary force operators like the yes-no question word *maw* ‘INTG’ are all clause-level operators as well (Figure 3.17.)

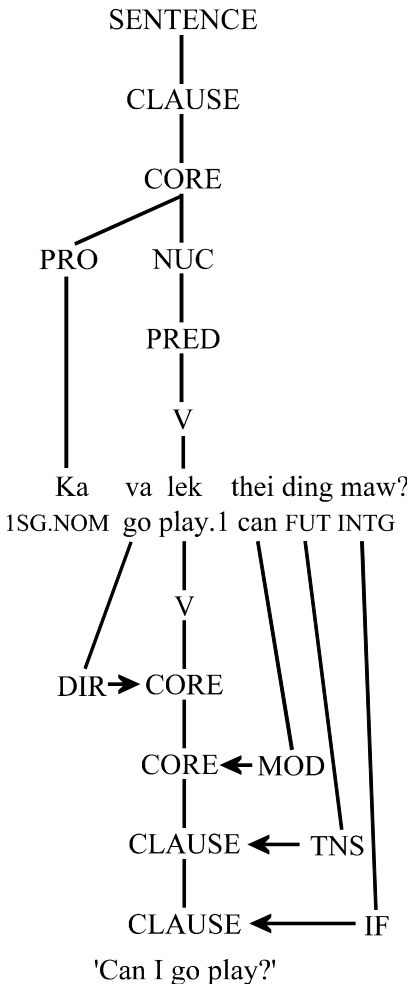


Figure 3.17: Clausal operators

3.1.2.2 The NP operator projection

Fewer operators exist for the NP. Numeral classifiers are nuclear operators; number, quantification, and negation are core operators; and definiteness and deixis are NP operators.

In summary, in RRG, operators are represented on a distinct projection from constituents of the clause or NP. However, the operator projection will not be displayed for the remainder of this dissertation, as it has limited relevance for the primary topic of the remaining chapters.

3.2 *Aktionsart,* logical structures, and semantic macroroles

While the syntactic representation discussed in the previous section is the final output of the linking algorithm, the semantic representation is its starting point. This section discusses several key aspects of the semantic representation as conceived in RRG. First, §3.2.1 examines various verb classes differentiated by lexical aspect (*Aktionsart* classes) and how they differ in argument structure. Second, §3.2.2 shows how these differences are encoded in the lexical representation (or *logical structure* (LS)) of predicates by means of a system of lexical decomposition (based on Dowty 1979). Finally, §3.2.3 argues that the assignment of two semantic *macroroles* is syntactically more significant than the specific semantic roles which may fill individual argument slots of each LS.

*3.2.1 Verb classes (*Aktionsart *classes)*

The LS representations which are foundational in RRG are differentiated according to six verb classes that typify various types of lexical aspect, or *Aktionsart.* These classes, discussed in this section, are as follows: *state, achievement,*

accomplishment, activity, semelfactive, and *active accomplishment*.[74] Examples of each type are given in (3.5).

(3.5) a. States: *be thin, be happy, see, know, love*
b. Achievements: *break, pop, snap* (intransitive forms)
c. Accomplishments: *dissolve, burn, unravel* (intransitive forms)
d. Activities: *run* (-goal), *dance, eat* (-referential NP), *build* (-referential NP), *watch*
e. Semelfactives: *cough, bounce, blink*
f. Active Accomplishments: *run* (+goal), *eat* (+referential NP), *build* (+referential NP), *devour*

Note that many active accomplishment verbs are formed as regular derivations of activity verbs of motion, consumption, or creation. In addition, there is a corresponding causative form of each of the six verb classes, e.g., *Dana whitened her teeth* (causative state), *Amy popped the balloon* (causative achievement), etc.

Each verb class is distinguished by means of four lexical features: *static, dynamic, telic,* and *punctual,* as shown below in Table 3.1 (Van Valin 2005:33).

Table 3.1: Features of verb classes

Class	static	dynamic	telic	punctual
State	+	-	-	-
Achievement	-	-	+	+
Accomplishment	-	-	+	-
Semelfactive	-	+/-	-	+
Activity	-	+	-	-
Active Accomplishment	-	+	+	-

Appropriate tests can be used to determine whether a given verb displays these lexical features (Dowty 1979; Van Valin 2005).

[74] The first four of these were initially suggested by Vendler (1957), who grouped achievements and accomplishments together as achievements, and used the term *accomplishments* for what RRG now terms active accomplishments. The class of semelfactives was proposed by Smith (1997) and incorporated into the RRG framework by Van Valin (2005).

The first feature, *static*, separates state verbs from the rest. This feature signals that an unchanging situation, rather than an event, is in view. Verbs which are [+static] cannot normally occur with progressive aspect;[75] state verbs fail this test. While most [-static] verbs can occur with progressive aspect, note that the feature [+punctual] interferes with this test; thus, progressive aspect can only occur with achievements and semelfactives with an iterative interpretation, effectively turning them into activities.

(3.6)	a.	*Gwyneth is being tall.	(state)
	b.	*The branch is snapping.	(achievement)
	b.'	The branches are snapping.	
	c.	My sweater is unraveling.	(accomplishment)
	d.	Dan is running.	(activity)
	e.	*Candice is coughing once.	(semelfactive)
	e.'	Candice is coughing.	
	f.	Dan is running to the finish line.	(active accomplishment)

Activity verbs, active accomplishment verbs, and some semelfactive verbs manifest the feature *dynamic*, meaning they predicate an event involving action. Other semelfactives, as well as achievements and accomplishments, are more passive. Verbs which are [+dynamic] can occur with adverbs such as *vigorously* or *gently*.

(3.7)	a.	*Gwyneth is tall vigorously/gently.	(state)
	b.	*The branches snapped vigorously/gently.	(achievement)
	c.	*My sweater unraveled vigorously/gently.	(accomplishment)
	d.	Dan ran vigorously/?gently.	(activity)
	e.	Candice coughed once vigorously/gently.	(semelfactive)
	e.'	*Emily glimpsed Roger vigorously/gently.	(semelfactive)
	f.	Dan ran vigorously/?gently to the finish line.	(active accomplishment)

Note that some adverbs may not work well with certain verbs because of independent semantic constraints (e.g., (3.7d & f)).

[75] There are some exceptions to this rule, such as "interval statives" like *sit, stand,* and *lie* (Dowty 1979:180).

The third feature, *telic,* specifies there must be an intrinsic point of termination to the event. This feature is characteristic of achievements and accomplishments, but not of activities and semelfactives, which do not entail a change of state. When a goal or referential object is added to activity verbs of motion, consumption, or creation, a telic interpretation ensues in the resulting active accomplishment verb. Verbs which are [-telic] cannot occur with the phrase *in a (time period),* whereas [+telic] verbs can. On the other hand, telic verbs do not usually occur with the phrase *for a (time period),* whereas atelic verbs do easily.

(3.8)	a.	Gwyneth was happy *in an hour/for an hour.	(state)
	b.	The branches snapped in an instant/*for an instant.	(achievement)
	c.	The powder dissolved in a minute/*for a minute.	(accomplishment)
	d.	Dan ran *in an hour/for an hour.	(activity)
	e.	Candace coughed *in an hour/for an hour.	(semelfactive)
	e.'	Emily glimpsed Roger *in a minute/for a second.	(semelfactive)
	f.	Dan ran to the house in a minute/*for a minute.	(active accomplishment)

As with the progressive test, the feature [+punctual] (in achievement and semelfactive verbs) interferes with the *for a (time period)* test, requiring an iterative interpretation (3.8e), unless the time period in question is very brief (3.8e').

Finally, the feature *punctual* distinguishes verbs which are practically instantaneous (achievements and semelfactives) from those which require a measurable period of time to occur (accomplishments and activity verbs). Verbs which are [+punctual] cannot appear with adverbs like *quickly* and *slowly*. (Note that this test does not apply to state verbs.)

(3.9) a. *Gwyneth was happy quickly. (state)
b. The branches snapped ?quickly/*slowly. (achievement)
c. The powder dissolved quickly/slowly. (accomplishment)
d. Dan ran quickly/slowly. (activity)
e. Candace coughed once ?quickly/*slowly. (semelfactive)
e.' Emily glimpsed Roger ?quickly/*slowly. (semelfactive)
f. Dan ran to the house quickly/slowly. (active accomplishment)

In summary, verbs can be divided into at least six classes in terms of lexical aspect, as well as causative versions of each class. These classes are distinguished by four lexical features: *static, dynamic, telic,* and *punctual,* which can be identified by language-appropriate tests. Many languages exhibit regular morphological derivations changing one class of verbs into another. For Falam Chin, the most prominent example of this is the causative morpheme *-ter*, which is extremely productive. However, even when verb class distinctions are not morphologically marked, they may have important syntactic ramifications.

3.2.2 Logical structures

The verb classes described in the previous section have a formal representation in RRG called the logical structure (LS) (based on Dowty 1979), which this section describes in detail. State and activity verbs are considered the basic types; other classes are built off of one or the other of these. Every LS includes a predicate, represented as **pred'**, and one or more arguments, represented as variables (x), (x, y), etc. They may also include other operators, such as NOT, CAUSE, BECOME, & 'and then', or ^ 'and simultaneously'. The bolded and all caps elements of LSs should not be construed as lexical items from any given language, but rather as constants of the semantic

metalanguage which enables cross-linguistic comparison. The variables, on the other hand, are place-holders which are ultimately filled with language-specific lexical items.

The basic formulation for state verbs is as follows: **pred'** (x) or **pred'** (x, y). For example, the LS of *burned* (intransitive) is **burned'** (x), while the LS of *see* is **see'** (x, y). From each LS, utterance-specific semantic representations (SR) are formed which include the argument variable specifications, as well as any adjuncts, embedded or conjoined clauses, etc.

Because of the head-marking nature of Falam Chin clauses, each variable in the LS receives a two-part representation. The first element specifies the person and number cross-reference features of any arguments of the core predicate, while the second gives the lexical realization of that argument, if present (Van Valin 2005). Thus, in (3.10c), the SR for an intransitive state predicate, *kang* 'burned', includes both cross-reference specifications (3sg) and the corresponding NP, *sang* 'bread' in the single variable slot. In (3.11c), the SR for a transitive state predicate, *hmu ~ hmuh* 'see', includes cross-reference (3sg) and NP specifications (*Cinte, Thangte*) for both argument variables.

(3.10) a. Sang a kang.
bread 3SG.NOM burned
'The bread is burned.'

b. LS for *kang* 'burned' **burned'** (x)
c. SR for (3.10a) **burned'** (3sg[sang])

(3.11) a. Cinte in Thangte a Ø hmu.
Cinte ERG Thangte 3SG.NOM 3SG.ACC see.1
'Cinte saw Thangte.'

b. LS for *hmu* 'see' **see'** (x, y)
c. SR for (3.11a) **see'** (3sg[Cinte], 3sg[Thangte])

Activity verbs include an additional element, **do'**, which precedes the embedded predicate to show their non-static nature. The (x) variable appears as an argument of both **do'** and **pred'**, producing the representation **do'** (x, [**pred'** (x)]) or **do'** (x, [**pred'** (x, y)]). The LS for *laugh* would thus be **do'** (x, [**laugh'** (x)]), while for *eat* it would be **do'** (x, [**eat'** (x, (y))]). Falam Chin activity verbs with corresponding LSs and SRs are shown in (3.12) and (3.13).

(3.12) a. Cinte a hni.
Cinte 3SG.NOM laugh.1
'Cinte laughed.'

b. LS for *hni* 'laugh' **do'** (x, [**laugh'** (x)])
c. SR for (3.12a) **do'** (3sg[Cinte], [**laugh'** (3sg[Cinte])])

(3.13) a. Thangte cu rawl a ei.
Thangte TOP food 3SG.NOM eat
'Thangte ate (food).'

b. LS for *ei* 'eat' **do'** (x, [**eat'** (x, y)])
c. SR for (3.13a) **do'** (3sg[Thangte], [**eat'** (3sg[Thangte], 3sg[rawl])])

The LS for an achievement, accomplishment, semelfactive, or active accomplishment verb can be built on either a state or activity predicate LS. The LS for an achievement verb is derived by adding the form INGR (for *ingressive*) before a state or activity predicate, producing forms like INGR **broken'** (x) for the verb *break*. However, this semantic distinction is not generally coded morphosyntactically in Falam Chin. Thus, (3.14a) can have either a state or an achievement interpretation.

(3.14) a. Hri a cat.
rope 3SG.NOM break.1
'The rope is broken.' OR
'The rope broke.'

b. LS for *cat*$_1$ 'broken' **broken'** (x)
LS for *cat*$_2$ 'break' INGR **broken'** (x)
c. SR for (3.14a) **broken'** (3sg[hri]) OR
INGR **broken'** (3sg[hri])

Likewise, the LS for an accomplishment verb is derived by adding BECOME to any state or activity predicate (BECOME **burned'** (x) for *burn*). Again, the semantic distinction between result states and accomplishments is often not coded morphosyntactically in Falam. Thus, (3.15a) can have either a state or an accomplishment interpretation.

(3.15) a. Sang a kang.
bread 3SG.NOM burned
'The bread is burned.' OR
'The bread burned.'

b. LS for *kang*$_1$ 'burned' **burned'** (x)
LS for *kang*$_2$ 'burn' BECOME **burned'** (x)
c. SR for (3.15a) **burned'** (3sg[sang]) OR
BECOME **burned'** (3sg[sang])

Semelfactive verbs are derived by adding SEML to any state or activity predicate (SEML **see'** (x, y) for *glimpse*) (3.16).

(3.16) a. Cinte glimpsed Thangte.

b. LS for *glimpse* SEML **see'** (x, y)
c. SR for (3.16a) SEML **see'** (Cinte, Thangte)

The LS for active accomplishment verbs is created by adding a result state component to the base activity verb LS. An ampersand (&) joins the parts, indicating

'and then'. Thus, the LS for *eat* in its active accomplishment sense would be **do'** (x, [**eat'** (x, y)]) & BECOME **eaten'** (y). This is shown in (3.17).

(3.17) a. Thangte in hai a ei.
Thangte ERG mango 3SG.NOM eat
'Thangte ate a mango.'

b. LS for *ei* 'eat' **do'** (x, [**eat'** (x, y)]) & BECOME **eaten'** (y)
c. SR for (3.17a) **do'** (3sg[Thante], [**eat'** (3sg[Thangte], 3sg[hai])]) & BECOME **eaten'** (3sg[hai])

Finally, causative forms of all the other verb classes are derived using the formula α CAUSE β, where α and β stand for any LS. In many cases, the causing predication is an unspecified action and is represented as **do'** (x, Ø). Thus, *break* (as a causative) has a LS of [**do'** (x, Ø)] CAUSE [INGR **broken'** (x)] (3.18).

(3.18) a. Mang in hri a cat-ter.
Mang ERG rope 3SG.NOM break.1-CAUS
'Mang broke the rope.'

b. LS for *catter* 'break' [**do'** (x, Ø)] CAUSE [INGR **broken'** (x)]
c. SR for (3.18a) [**do'** (3sg[Mang], Ø)] CAUSE [INGR **broken'** (3sg[hri])]

The preceding discussion covers most basic types of verbs. There are, however, a few more important issues to consider. First, some activity verbs encode an intentional, agentive component (e.g., *murder*). For these verbs, the LS is prefixed with the form DO (x, … . This formalizes the intuition that while all agents are effectors, not all effectors are agents. Thus, in (3.19) and (3.20), both the stroke and Col. Mustard effect the death of Mr. Body, but only Col. Mustard is an agent.

(3.19) a. A stroke killed Mr. Body.

b. LS for *kill* [**do'** (x, Ø)] CAUSE [BECOME **dead'** (y)]
c. SR for (3.19a) [**do'** (stroke, Ø)] CAUSE [BECOME **dead'** (Mr. Body)]

(3.20) a. Col. Mustard murdered Mr. Body.

b. LS for *murder* DO (x, [**do'** (x, Ø)] CAUSE [BECOME **dead'** (y)])
c. SR for (3.20a) DO (Col. Mustard, [**do'** (Col. Mustard, Ø)] CAUSE [BECOME **dead'** (Mr. Body)])

A second issue is the treatment of predicative arguments. There are several types of state verbs which require a predicative argument in the LS: specifically, attributive and identificational verbs, which take the general LS **be'** (x, **[pred']**) and internal experience verbs, which take the general LS **feel'** (x, **[pred']**). A Falam Chin attributive predication is shown in (3.21) and an identificational predication in (3.22). Their LSs contrast with that of a result state predicate (e.g., (3.10)) in that they include the element **be'**. This suggests an inherent state of affairs rather than the end of a process. It does not, however, indicate that the resulting utterance must include a copula. Some languages do not require a copula with either of these constructions, while others require a copula only with predicate nominals, but not with predicate adjectives (Pustet 2003). The second situation occurs in Falam, where attributive predications do not include a copula (3.21a), but identificational predications do (3.22a).

(3.21) a. Lian a sang.
Lian 3SG.NOM tall
'Lian is tall.'

b. LS for *sang* 'tall' **be'** (x, [**tall'**])
c. SR for (3.21a) **be'** (3sg[Lian], [**tall'**])

(3.22) a. Cinte cu zirh-tu a si.
Cinte TOP teach-NMLZ 3SG.NOM be
'Cinte is a teacher.'

b. LS for *zirhtu* 'teacher' **be'** (x, [**teacher'**])
c. SR for (3.22a) **be'** (3sg[Cinte], [**teacher'**])

Internal experience verbs also include a predicative argument in their LS, but do not require a copula (3.23).

(3.23) a. Cinte a dai.
Cinte 3SG.NOM cold.1
'Cinte is cold.'

b. LS for *cold* **feel'** (x, [**cold'**])
c. SR for (3.23a) **feel'** (Cinte, [**cold'**])

Locational predications have unique LSs in a number of ways. First, they contain the predicate **be-LOC'** in which the element **LOC** must be replaced by the appropriate expression of location. Second, the argument variables are filled with the location first, followed by the theme. (See Van Valin (2005) for an explanation of this.) These points are illustrated in (3.24). The *x* variable is filled with the location, *kho* 'basket', while the *y* variable is filled with the theme, *hai* 'mango'.

(3.24) a. Hai cu kho sung=ah a um.
mango TOP basket in=LOC 3SG.NOM be
'The mango is in a basket.'

b. LS for *um* 'be (somewhere)' **be-LOC'** (x, y)
c. SR for (3.24a) **be-in'** (3sg[kho], 3sg[hai])

A third issue is the representation of adjuncts, such as relational NPs and adverbs. The pattern discussed for locational predicates also applies to oblique relational NPs, but the LS of the main predication is embedded as an argument of the adjunct predication. Thus, in (3.25), Thangte's action of roaming is predicated to **be-on'** the hills.

(3.25) a. Thangte cu tlang par=ah a vak-tawi rero.
Thangte TOP hill on=LOC 3SG.NOM roam-roam IPFV
'Thangte is roaming on the hills.'

b. LS for *vaktawi* 'roam' **do'** (x, [**roam'** (x)]
c. SR of (3.25a) **be-on'** (tlang, [**do'** (3sg[Thangte], [**roam'** (3sg[Thangte])])])

A similar representation is used for adverbs. In (3.26), Mang's planting a tree is the single argument of the predication **yesterday'.**

(3.26) a. Mang in mizan=ah thingkung a phun.
Mang ERG yesterday=LOC tree 3SG.NOM plant
'Mang planted a tree yesterday.'

b. LS for *phun* 'plant' **do'** (x, [**plant'** (x, y)]
c. SR for (3.26a) **yesterday'** (**do'** (3sg[Mang], [**plant'** (3sg[Mang], 3sg[thingkung])])

A final issue is the treatment of three-argument verbs. Those which lexicalize causative ideas, such as *pe(k)* 'give', utilize the operator CAUSE in their LS (3.27).

WSB 004
(3.27) a. Atit hmuahhmuah cu a fate=pawl a pek.
filet all TOP 3SG child=PL 3SG.NOM give
'She gave … her children all the filet meat.'

b. LS for *pek* 'give' [**do'** (x, Ø)] CAUSE [BECOME **have'** (y, z)]
c. SR for (3.27a) [**do'** (3sg, Ø)] CAUSE [BECOME **have'** (3pl[a fatepawl], 3sg[atit])]

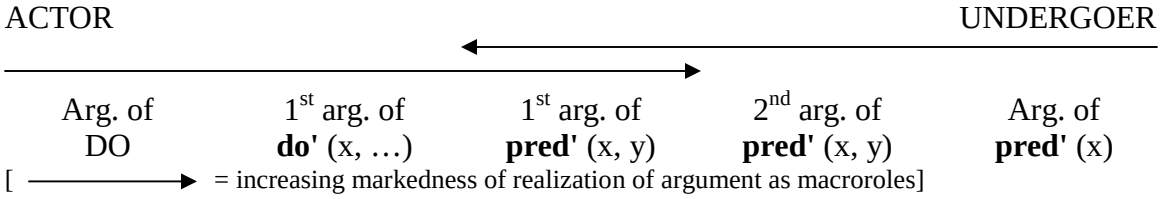
The LSs produced as a result of valence-altered morphology are more complex. Discussion of the LSs of these forms, however, will be reserved for their respective chapters.

To summarize this section, each verb class has its own LS representation, with state and activity verbs forming the base type upon which the others are formed. To

reflect the head-marking nature of Falam Chin, each LS variable is filled with both cross-reference and NP specifications.

3.2.3 Macroroles and M-transitivity

Although it is certainly possible to distinguish thematic roles like *agent, patient, theme, experiencer*, etc. for each of the variables in the LSs given above, RRG claims that such broad semantic distinctions are syntactically irrelevant. Instead, Van Valin and LaPolla (1997) posit the existence of two semantic macroroles, *actor* and *undergoer*, which subsume all of the possible semantic roles. These are linked to argument positions by means of the Actor-Undergoer Hierarchy (AUH), shown in Figure 3.18 (Van Valin 2005:61, 126).



Actor selection: highest-ranking argument in LS
Undergoer selection:
Principle A: lowest-ranking argument in LS (default)
Principle B: second-highest ranking argument in LS

Figure 3.18: The Actor-Undergoer Hierarchy

The hierarchy in Figure 3.18 shows the five logically possible LS argument slots arranged along a continuum from most instigating/least affected to least instigating/most affected. The actor macrorole is normally linked to the highest available argument position. In many languages, the undergoer is linked to the lowest available argument position (Principle A). In primary object languages, however (those languages which in a ditransitive construction choose a recipient or goal argument as syntactically primary to a

theme (Dryer 1986)), it is the second-highest ranking argument which is chosen as the undergoer (Principle B). In this dissertation, I argue that Falam Chin, a primary object language, takes Principle B as its default. As seen in (3.28c), the recipient (1sg) of the predicate *hmuh* 'show' is the second-highest ranking argument of the LS. Thus, the recipient is chosen as undergoer and cross-referenced on the verb as morphosyntactic evidence of its undergoer status (3.28a).

(3.28) a. Hniang in cabu **i** hmuh.
Hniang ERG book 1SG.ACC show
'Hniang showed **me** a book.'

b. LS for *hmuh* 'show' [**do'** (x, Ø)] CAUSE [BECOME **see'** (x, y)]
c. SR for (3.28a) [**do'** (3sg[Hniang], Ø)] CAUSE [BECOME **see'** (1sg, 3sg[cabu])]

Hniang, the highest-ranking argument, is assigned the actor macrorole in this case.

For unmarked constructions, the AUH unequivocally determines which argument will link to the actor macrorole and which to the undergoer macrorole. However, marked constructions can override the defaults of the AUH.

The number of macroroles which a given verb takes is known as the M-transitivity of the verb, a key theoretical concept in RRG. M-transitivity is derived from the LS of the verb via *default macrorole assignment principle* (a) in (3.29) (Van Valin 2005:63).

(3.29) *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 LS.
    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.

This principle explains that a verb will have the same number of macroroles as it has arguments, with the caveat that the number of macroroles can never be more than two (actor and undergoer). Thus, a predicate may be M-atransitive (zero macroroles),[76] M-intransitive (1 macrorole), or M-transitive (2 macroroles), but never M-ditransitive.[77] Principle (b) further notes that the single macrorole of a LS containing an activity predicate will be an actor, while the single macrorole of other LSs will be an undergoer.

The importance of M-transitivity can only be grasped in contrasting it with semantic and syntactic valence.[78] Semantic valence refers to the number of argument positions in a predicate's LS, which, unlike M-transitivity, is not limited to two arguments. Thus, the semantic valence of a verb such as *give,* which has three core argument positions, will be one greater than its M-transitivity, as there can be only two macroroles. More importantly, there are numerous categories which may fill argument positions in the LS which cannot support a macrorole, including predicative arguments, locative arguments, and non-referential arguments. Thus, attributive predicates (e.g., (3.22)), locative predicates (e.g., (3.24)), and many activity predicates, while semantically two-argument verbs, are M-intransitive (Van Valin 2005; Van Valin & LaPolla 1997). In Falam Chin, the ungrammaticality of ergative marking in these structures indicates their intransitivity, despite their having two semantic arguments.

Syntactic transitivity (S-transitivity) refers to the number of direct arguments which appear in the syntactic representation (Van Valin 2005). What has been said for

[76] As with weather verbs which have no semantic arguments, such as *rain:* **do'** (**[rain']**).
[77] See Van Valin (2005:64-66) for discussion of why there is no third macrorole.
[78] Cf. Næss's (2007) distinction between two semantically required participants and two syntactically privileged arguments.

semantic valence is also true for syntactic transitivity; a predicate such as *give* can be syntactically transitive or ditransitive, yet have only two macroroles in either case. Attributive and activity predicates may be syntactically transitive, but have only one macrorole. Syntactic transitivity may also be less than M-transitivity if, for example, a direct core argument is extracted from the core for questioning.

This section has described the nature and assignment of two macroroles, actor and undergoer. The number of macroroles which are assigned to a given predicate defines its M-transitivity. Although traditionally it has been the number of syntactic arguments which has been equated with transitivity, RRG claims that the M-transitivity of a verb is syntactically more significant than its S-transitivity. For example, only macrorole-bearing arguments can be the subjects of passive clauses in Italian (Van Valin & LaPolla 1997). In this dissertation, I show that ergative marking in Falam Chin is reflective of the M-transitivity of the clause, not its semantic or syntactic transitivity.

3.3 Information structure

The previous sections have examined syntactic and semantic representations within RRG; this section discusses a third representation, the pragmatic or information structure representation. As schematized in Figure 3.1, information structure is an important component in the surfacing of the syntactic structure. For example, information structure may influence the arrangement of NPs in the clause, or whether NPs may be pronominalized or deleted in certain contexts. RRG bases its theory of information structure on Lambrecht's (1994) work on the same subject.

Section 3.3.1 discusses the two types of pragmatic relations and the RRG theory of focus structure types, with a brief mention of how various languages mark focus structure. Section 3.3.2 describes the focus projection in RRG.

3.3.1 Pragmatic relations, focus structure types, and pragmatic marking

This section looks at the two key pragmatic relations, *topic* and *focus*, as well as several types of focus structure and how they are marked in various languages. A topic can be defined as "an entity … the speaker intends to increase the addressee's knowledge about, request information about, or otherwise get the addressee to act with respect to …" (Gundel 1988:210). It must be an element within that set of concepts the speaker believes the hearer to already know—the presupposition—but is not necessarily coequal with the presupposition. On the other hand, the element(s) in focus consist of new information, that is, the entire assertion minus the presupposition.

Lambrecht (1994) posits three main focus structure types, *sentence focus*, *predicate focus*, and *narrow focus.* Both sentence and predicate focus can be characterized as *broad focus* types, in which the focus is spread over multiple elements of the sentence. Narrow focus, on the other hand, centers on a single element. In RRG, the area of the sentence which a given language allows to be in focus is known as the *potential* focus domain, while the area which is actually in focus in a given sentence is known as the *actual* focus domain.

3.3.1.1 Sentence focus

The first type of broad focus, sentence focus, has also been called *event reporting* (Lambrecht 1994:126) because it is frequently used to present background information or

to introduce previously unmentioned participants. There is no topical subject in sentence focus constructions; the whole sentence is the focus domain. In Falam Chin, this means that a sentence focus sentence will often have no topic marking or fronting of elements. This is illustrated in (3.30) and (3.31), both drawn from the opening sentences of texts, setting the scene for the story.

LNM 003

(3.30)	Ar	vei	hnih	a	khuang	zo.
	rooster	time	two	3SG.NOM	crow.1	PRF
	'A rooster already crowed twice.'					

WSB 001

(3.31)	Hi	tik	hlan=ah,	nu	pa	pa=khat	le	an	fate
	this	time	before=LOC	woman	man	CLF=one	and	3PL	child

	pa=thum	an	rak	um.
	CLF=three	3PL.NOM	then	be

'Once upon a time, there were a father and mother and their three children.'

According to Lambrecht (2000), however, sentence focus constructions can still include non-subject topics, such as elements in the LDP (3.32).

(3.32)	**Lian**	**Lian**	**cu**	keimah	in	ka	dung	ka	tun	zo.
	Lian	Lian	TOP	1SG.STD	ERG	1SG	back	1SG.NOM	turn	PRF

'**As for Lian Lian,** I abandoned him.'
(lit., 'As for Lian Lian, I turned my back on him.')

3.3.1.2 Predicate focus

The second type of broad focus, predicate focus, is also known as *topic-comment*. This type takes the subject as topic, narrowing the actual focus domain to the predicate. This is considered the unmarked type of focus structure, as there is a strong cross-linguistic tendency for languages to choose the subject as topic. In Falam Chin, this may

be indicated by marking the subject as topical (3.33) or by simply deleting the subject NP altogether (3.34).

WSB 005
(3.33) **A** **ruh** **pa=khat** **cu** a dang sung=ah
3SG bone CLF=one TOP 3SG throat in=LOC

a lut pang.
3SG.NOM enter.1 accidentally
'**One of its bones** accidentally got stuck in her throat.'

KIF 003
(3.34) A ni ni=in, **an** duh-aw sinsin.
3SG day day=ABL 3PL.NOM love-RECP more.and.more
'Day by day, **they** loved each other more and more.'

This does not necessarily mean that every element of the predicate is new information, but rather that what it predicates with regard to the topic is new.

3.3.1.3 Narrow focus

Thirdly, narrow focus, also known as *identificational focus*, restricts the focus domain to one specific constituent of the sentence. Classic examples of narrow focus are WH questions and their responses, as in (3.35). This type of narrow focus, which fills in a missing piece of information, is known as *completive narrow focus*.

(3.35) a. Mang in **ziang** a at?
Mang ERG what 3SG.NOM cut.1
'**What** did Mang cut?'

b. Mang in **hrampi** a at.
Mang ERG grass 3SG.NOM cut.1
'Mang cut **the grass**.'

If narrow focus is used as a corrective response to another person's false statement, as in (3.36b), it is an example of *contrastive narrow focus*.

(3.36) a. **Thangte** in hrampi a at maw?
Thangte ERG grass 3SG.NOM cut.1 INTG
'Did **Thangte** cut the grass?'

b. ***Mang*** in hrampi a at.
Mang ERG grass 3SG.NOM cut.1
'***Mang*** cut the grass.'

Every language selects one syntactic position as unmarked for narrow focus. The unmarked focus position in Falam Chin is the position to the immediate left of the predicate complex, as is common for verb-final languages (Van Valin 2005). This claim is supported by the optional movement of WH question words to this position, as in (3.37b).

(3.37) a. **Zo in (so)** zunghruk a ru?
who ERG FOC ring 3SG.NOM steal.1
'**Who** stole the ring?'

b. Zunghruk **zo in (so)** a ru?

When narrow focus falls on other positions, it is considered marked narrow focus.

3.3.1.4 Focus structure marking

The marking of focus structure discussed above varies from language to language. In some languages, prosody (stress) may be the sole indicator of focus structure. Others may use overt morphological marking of topic or focus status, such as Falam's topic marker *cu*. Syntactic marking of focus may include rearrangement of NPs or the use of marked constructions like clefts. Thus, in Falam, NPs and adjuncts can be preposed to the LDP for an increased measure of pragmatic salience. Some languages (such as English) appear to have very flexible focus domains, allowing focus to fall on nearly any position

in the sentence (thus relying on non-syntactic means of focus marking). Others are more rigid, allowing focus to fall only in specific areas.

Another dimension of focus structure marking is in how the speaker codes a given referent, whether as a zero, a pronoun, or a definite or indefinite NP. There is a correlation between the pragmatic activation of a referent in the discourse context (active, accessible, inactive, brand-new anchored, or brand-new unanchored), the topic/focus status assigned to the referent in an utterance, and the coding of the referring expression which points to the referent in that utterance. The more accessible a referent is, the more available it is as a topic.[79] That is, most topics will be active or accessible in the discourse context; it would be extremely unusual for a brand-new unanchored referent to be chosen as topic.

Likewise, the more accessible a referent is, the less overt its coding must be in order for the hearer to correctly identify the referent. Figure 3.19 (Van Valin 2005:73) shows how the continuum of coding possibilities aligns with markedness as topic or focus.

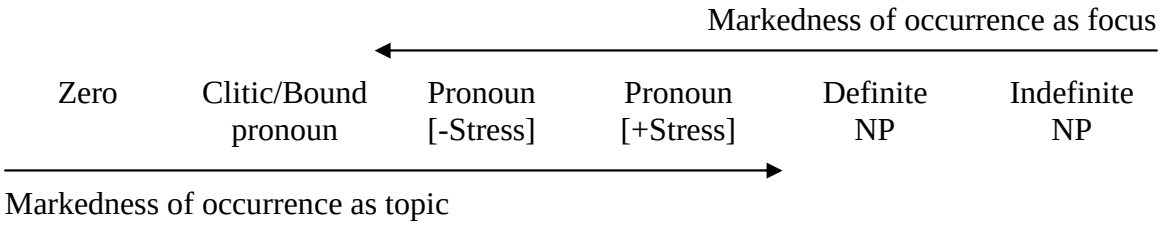


Figure 3.19: Coding of referents in terms of pragmatic markedness

[79] This is not to suggest that accessibility alone makes a referent topical. The intentions of the speaker dictate what is topical.

This section has examined the pragmatic relations topic and focus and their roles in three universal focus types: sentence focus, predicate focus, and narrow focus. In Falam Chin, topic status is marked either by explicit topic marking or by omission of the argument. Movement to the LDP indicates yet greater topicality. Focus, on the other hand, is represented by unmarked NPs placed in the unmarked focus position is to the left of the predicate complex.

3.3.2 The focus projection

In RRG, focus structure has its own projection that appears along with the syntactic constituent and operator projections. The two components of the focus projection are shown in Figure 3.20 (cf. (3.38b) for translation).

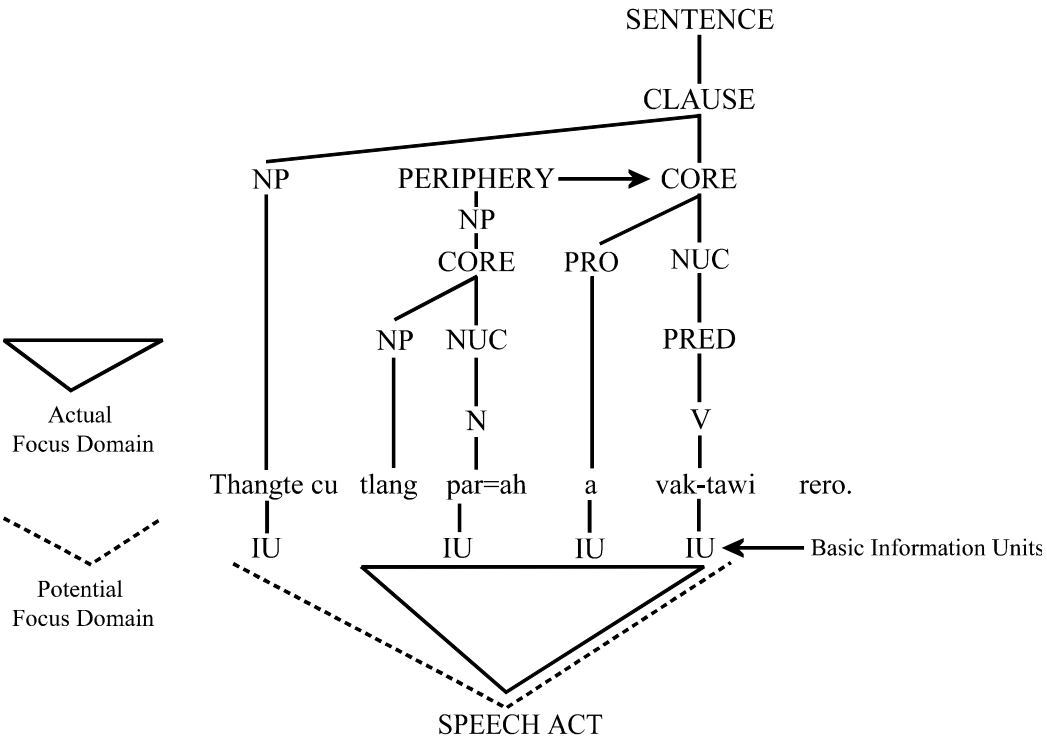


Figure 3.20: The focus projection

The first component, the *speech act node*, anchors the potential and actual focus domains. Second, the *information units* (IUs) represent the minimal pieces which focus structure deals with; Lambrecht (1994) shows that IUs must be phrasal units, not individual lexical items. In Figure 3.20, the potential and actual focus domains are shown encompassing the appropriate IUs. In Falam Chin, the potential focus domain is the clause, but as this is an example of predicate focus, the actual focus domain encompasses only the predicate and its adjunct.

NP activation levels (active, accessible, inactive, brand-new anchored, or brand-new unanchored) can be represented as a part of the LS, when pertinent to the discussion. They are indicated as subscripts on the NPs in the LS, as shown in (3.38d).

(3.38) a. Thangte cu ziang a tuah?
Thangte TOP what 3SG.NOM do
'What is Thangte doing?'

b. Tlang par=ah a vak-tawi rero.
hill on=LOC 3SG.NOM roam-roam IPFV
'He's roaming on the hills.'

c. LS for *vaktawi* 'roam' **do'** (x, [**roam'** (x)])
d. SR for (3.38b) **be-on'** (3pl[tlang]$_{BNU}$, [**do'** (3sg[Ø]$_{ACV}$, [**roam'** (3sg[Ø]$_{ACV}$)])])

In (3.38b), *Thangte* is active, having been mentioned in the question; the NP specification is thus zero. On the other hand, *tlang* 'hill' is brand-new unanchored, and receives a full NP representation in the SR.

This section has discussed the focus projection, which includes the speech act node, the actual and potential focus domains, and the information units which they encompass. In Falam Chin, the clause is the potential focus domain.

3.4 Grammatical relations

The preceding sections have examined the syntactic, semantic, and pragmatic representations in RRG; this section procedes to the RRG conception of grammatical relations. RRG makes two important claims about grammatical relations. First, it claims that grammatical relations are not universal; some languages have only semantic relations (as, for example, Acehnese; Van Valin 2005:90). Nevertheless, in most languages, numerous phenomena cannot be explained in terms of semantics alone, and most syntactic theories posit three grammatical relations to help account for these phenomena: *subject*, *direct object*, and *indirect object*. The second major claim of RRG is that only a single kind of grammatical relation, the privileged syntactic argument (PSA), is motivated, and that syntactic effects often attributed to objects can be explained by reference to the undergoer macrorole. Section 3.4.1 discusses the nature and role of the PSA, §3.4.2 proposes an alternate explanation for object relations and accounts for the assignment of case and agreement, and §3.4.3 explains the distinction between two broad types of grammatical relation changing operations, *lexical* and *syntactic*, in RRG.

3.4.1 The privileged syntactic argument

This section discusses the nature of the privileged syntactic argument (PSA), the single grammatical relation posited in RRG. Any language which has grammatical relations exhibits restricted semantic neutralizations such as those found in (3.39).

(3.39) a. **Cinte** a sang. UND of intrans. V
Cinte 3SG.NOM tall
'Cinte is tall.'

b. **Cinte** a hni. ACT of intrans. V
Cinte 3SG.NOM laugh.1
'Cinte is laughing.'

c. **Cinte in** ar=pawl a that. ACT of trans. V
Cinte ERG chicken=PL 3SG.NOM kill.1
'Cinte is killing some chickens.'

c.' *Cinte in **ar=pawl** an that. *UND of trans. V
Cinte ERG chicken=PL 3PL.NOM kill.1
*'Cinte are killing **some chickens**.'

d. **Ar=pawl cu** thah an si zo. UND of intrans. V
chicken=PL TOP kill.2 3SG.NOM be PRF
'Some chickens were killed [by Cinte].'

Taking cross-reference (Falam Chin)/agreement (English) as the critical syntactic test in (3.39), we can see that indexation does not correspond to macrorole status. In (3.39b) and (c), the verbal indexation corresponds to the actor, either of an intransitive or transitive verb; in (3.39a) and (d), it corresponds to the undergoer of an intransitive verb. However, (3.39c') is ungrammatical because the verbal indexation corresponds to the undergoer of a transitive verb. This shows that macrorole status is not the governing factor: semantics has been neutralized in favor of a grammatical relation which controls the verbal marking. RRG terms this grammatical relation the *privileged syntactic argument* (PSA).

There is an important reason for not labeling this grammatical relation *subject.* The concept of "subject" suggests a single role or fixed set of features which operates cross-linguistically, either as a linguistic primitive, or as a structurally-derived construct.

However, RRG argues that the features which define the PSA are not only language-specific, but also construction-specific.[80]

One way that PSAs vary among and within languages is in terms of the arguments they select for neutralization. Note that each of the bolded arguments in (3.39) falls into one of several categories: the actor macrorole of a transitive construction (A_T), the undergoer macrorole of a transitive construction (U_T), the single argument of an intransitive construction (S), or the single argument of a derived intransitive construction (d-S).[81] In Falam Chin and English declarative sentences, argument neutralization is restricted to the [S, A_T, d-S] set of arguments, while excluding [U_T]—an accusative pattern of neutralization. (Recall that Falam is morphologically ergative, yet syntactically accusative.)

This particular neutralization pattern, however, is typical only of some accusative languages. Other accusative languages such as Warlpiri may allow only [S, A_T] neutralization; Warlpiri lacks a passive (Van Valin & LaPolla 1997). Ergative languages such as Dyirbal allow [S, U_T, d-S], and others [S, U_T].[82] Even within a single language, we often find different argument neutralization patterns, depending on the construction. For example, causative and jussive verbs (such as *persuade*) universally require a semantic controller, an undergoer, regardless of the default pattern of the language (Van Valin & LaPolla 1997). Thus, (3.40a&b) are both grammatical; in each case *Hniang,* the

[80] Jakaltec is an extreme example of a language which has multiple PSAs (Van Valin & LaPolla 1997). See Van Valin (2005:99ff) for further discussion of the distinction between *subject* and *PSA.*
[81] An adaptation of the more traditional A, O, and S (Van Valin 2005).
[82] However, this last pattern is quite rare, and always found in conjunction with another pattern (Van Valin & LaPolla 1997:305).

undergoer, controls the embedded clause. On the other hand, (3.40c) is ungrammatical; it is not possible for *Parte,* the actor, to control the embedded clause.

(3.40) a. Parte persuaded **Hniang** $_i$ ____ $_i$ to visit Yangon. UND
b. **Hniang** $_i$ was persuaded by Parte ____ $_i$ to visit Yangon. UND
c. ***Parte** $_i$ persuaded Hniang ____ $_i$ to visit Yangon. *ACT

Despite construction-specific variations, most languages follow a default pattern for many or most of their constructions.[83] The two main patterns are *accusative* and *ergative.* Syntactically accusative languages, such as Falam, select the highest-ranking direct core argument for PSA in terms of the *privileged syntactic argument selection hierarchy,* shown in Figure 3.21. Ergative languages select the lowest-ranking direct core argument for PSA (Van Valin 2005).

Arg. of DO	>	1st arg. of **do'** (x, …)	>	1st arg. of **pred'** (x, y)	>	2nd arg. of **pred'** (x, y)	>	Arg. of **pred'** (x)

Figure 3.21: Privileged syntactic argument selection hierarchy

This is formalized in (3.41) (Van Valin 2005:100).

(3.41) *Privileged syntactic argument selection principles*
a. Accusative construction: highest-ranking direct core argument in terms of Figure 3.21 (default)
b. Ergative constructions: lowest-ranking direct core argument in terms of Figure 3.21 (default)
c. Restrictions on PSA in terms of macrorole status:
    1. Languages in which only macrorole arguments can be PSA: German, Italian, Dyirbal, Jakaltec, Sama, …
    2. Languages in which non-macrorole direct core arguments can be PSA: Icelandic, Georgian, Japanese, Korean, Kinyarwanda, …

Principle (3.41c) states that some languages allow only macrorole arguments to be PSA, whereas others allow a non-macrorole direct core argument to be PSA, as well.

[83] For this reason, Van Valin (2005:99) allows, "subject … is a generalized privileged syntactic argument in languages in which most or all of the major constructions have the same restricted neutralization."

A second way PSAs differ is in their syntactic function in the construction. PSAs have two subtypes, *controller* and *pivot* (Heath 1975). Controllers determine verbal indexation, as in (3.39), antecede reflexives, or supply the missing argument in control constructions (3.40). Pivots, on the other hand, instantiate a missing argument within a subordinate or coordinate clause. Some constructions have only a controller or a pivot; others have both. In (3.40a), *Parte* is the controller of verb agreement in the matrix clause, but *Hniang* is the controller of the missing argument in the control construction. In (3.40b), however, *Hniang* is the single controller of both. There is also a pivot for the control construction, which is the missing argument in the embedded clause.

The distinction between languages which have the [S, A_T, d-S] and [S, U_T, d-S] patterns, and those which have the [S, A_T] and [S, U_T] patterns is whether or not the language includes marked voice constructions such as passive and antipassive. If such a marked construction does exist in a given language, then the principles in (3.41a) and (b) are taken to be merely defaults, and an alternate argument can be chosen as PSA. If the language does not include a marked voice construction, then the principles in (3.41a) and (b) are absolutes. Languages which allow this kind of variation have what are termed *variable PSAs,* while those which do not have *invariable PSAs.* As seen in (3.39) above, both Falam Chin and English have variable PSAs in at least some constructions.

The motivation for PSA variation may be solely syntactic or it may be pragmatic. An example of a variable PSA which is syntactically motivated is the pivot of a relative clause. The noun modified by the clause determines which argument is the pivot, represented by the empty slots in the relative clauses in (3.42).

(3.42) a. **[___$_i$ Anṭam a cing=tu] lothlo-pa$_i$** in a ṭawt.
mustard 3SG.NOM plant.1=REL farmer-MASC ERG 3SG.NOM pick
'**The farmer$_i$ [who ___$_i$ planted the mustard]** picked it.'

b. **[Lothlo-pa ih ___$_i$ a cin=mi] anṭam$_i$** cu
farmer-MASC ERG 3SG.NOM plant.2=REL mustard TOP

a ṭhang rang zet.
3SG.NOM grow quick very
'**The mustard$_i$ [(which) the farmer planted ___$_i$]** grew quickly.'

A pragmatically-motivated variable PSA, on the other hand, places a pragmatically-salient NP in the unmarked topic position by means of a marked construction. Thus, in (3.43a&b), passives allow the subject of the first clause to be omitted in the second clause.

(3.43) a. Amy$_i$ witnessed a murder and ____$_i$ was frightened by it.
a.' *Amy$_i$ witnessed a murder and it frightened ____$_i$.
b. Chelsea$_i$ was kissed by Ethan, and ____$_i$ blushed rosily.
b.' *Ethan kissed Chelsea$_i$, and ____$_i$ blushed rosily.

Figure 3.22 shows the different types of PSAs based on the preceding discussion (Van Valin 2005:105; see Van Valin (2005) for examples from the languages mentioned).

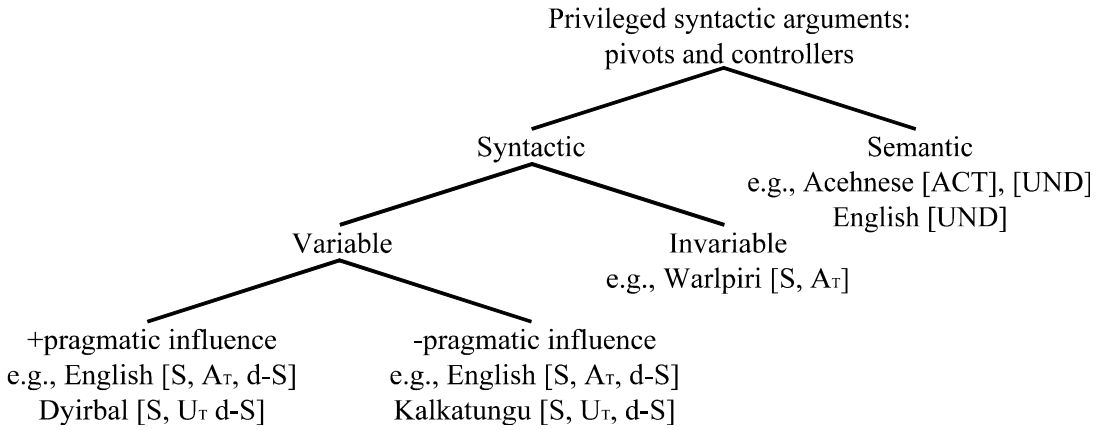


Figure 3.22: Types of privileged syntactic arguments

Van Valin and LaPolla (1997:294ff) divide voice oppositions such as active and passive into two subtypes: *PSA modulation voice* and *argument modulation voice*. PSA modulation voice allows a marked argument to be a syntactic controller or pivot, overruling the hierarchy of Figure 3.21. Argument modulation voice, on the other hand, deletes or demotes a core argument. While the two prototypically both occur in voice constructions, in many languages, certain constructions only manifest one or the other of these voice subtypes.

In summary, this section has examined the single grammatical relation posited by RRG, the PSA. PSAs may be semantic or syntactic, invariable or variable, and motivated by syntactic or pragmatic influences. In addition, they may perform the role of controller, pivot, or both, depending on the construction. As a language with accusative syntax and a variable syntactic pivot, Falam Chin follows a [S, A_T, d-S] pattern of PSA assignment.

3.4.2 Direct and indirect object relations

In the previous section, it was stated that only a single grammatical relation is posited in RRG: the PSA. This section argues that the syntactic effects of the grammatical relations *direct* and *indirect object* can be accounted for by reference to either the undergoer macrorole or to the broader notion of core argument (second-highest ranking or lowest-ranking). For example, in a marked voice construction, a non-default macrorole is chosen as PSA (undergoer in the case of a passive, actor in the case of an antipassive). Some languages allow a non-macrorole argument to be chosen as PSA. However, there is no need to reference a direct object in order to describe the operation.

Another operation which has often been seen to support the idea of object grammatical relations is dative shift. However, dative shift can easily be explained as marked undergoer choice. Rather than the lowest-ranking argument being chosen as undergoer, the second-highest ranking argument is chosen. The antidative, which appears in primary object languages (Dryer 1986), functions in the opposite direction. Whereas the second-highest ranking argument is chosen as undergoer by default, the antidative selects the lowest-ranking argument as undergoer.

The assignment of case and agreement are frequently attributed to these grammatical relations as well. In RRG, however, they are accounted for by macroroles and direct core arguments. For example, the agreement rule in English is as follows (Van Valin 2005:108):

(3.44) *English agreement rule:* The controller of finite verb agreement is the highest-ranking macrorole argument.

Similarly, Van Valin (2005:108) lists the following general *case assignment rules* based on macrorole status:

(3.45) *Case assignment rules for accusative constructions*
   a. Assign nominative case to the highest-ranking macrorole argument.
   b. Assign accusative case to the other macrorole argument.

(3.46) *Case assignment rules for ergative constructions*
   a. Assign absolutive case to the lowest-ranking macrorole argument.
   b. Assign ergative case to the other macrorole argument.

We find then, that grammatical relations serve in some ways a more limited role in RRG than in other theories of syntax, while the concept of macroroles plays a more prominent part.

3.4.3 Lexical versus syntactic operations

Having discussed semantic representations, macroroles, and grammatical relations, it is now possible in this section to contrast processes which have variously been termed morpholexical versus morphosyntactic (Sadler & Spencer 1998), event-changing versus function-changing (Haspelmath 2002), and meaning-changing versus meaning-preserving (Kroeger 2004). Levin and Rappaport Hovav (1998) characterize the two types as, on the one hand, derivations which involve verbs with related, but different, LSs (what they call the "lexical conceptual structure" (p. 249)) versus those, on the other hand, that have identical LSs, but distinct assignments of semantic arguments to grammatical relations.

Van Valin and LaPolla (1997) (who use the terms *lexical* and *syntactic*) also discuss the two types of processes, emending the definitions slightly. Lexical processes may alter the underlying LS, or they may simply alter the assignment of macroroles (for example, in variable-linking constructions such as dative shift). Syntactic processes, on the other hand, make non-canonical macrorole to grammatical relation assignments.

The distinction between lexical and syntactic processes highlights differences in voice and valence-altering operations which might superficially appear to be similar processes. While all of them modify the relationship between a predicate and its arguments, they do so at different stages of the linking process described in the following section. Specifically, lexical operations occur at the earliest stages of linking, affecting the SR. Others affect the assignment of macroroles. Syntactic operations, on the other hand, occur later in the linking, affecting the assignment of the PSA.

3.5 Linking semantics and syntax

This section presents the culmination of the preceding sections, the mapping of the semantic structure to the syntactic structure through the interface of a linking algorithm, as outlined in Figure 3.1.[84] The focus structure projection influences various aspects of the linking, such as choice of PSA in a variable-PSA construction. Many aspects of the linking algorithm are universal, while others are language-specific. The basic linking algorithm as given in Van Valin (2005:136) will first be presented below, and then it will be expanded and revised in the subsections that follow with application to Falam Chin.

(3.47) *Linking algorithm: semantics → syntax*

1. Construct the semantic representation of the sentence, based on the logical structure of the predicator.
2. Determine the actor and undergoer assignments, following the actor-undergoer hierarchy in Figure 3.18.
3. Determine the morphosyntactic coding of the arguments.
   a. Select the privileged syntactic argument, based on the privileged syntactic argument selection hierarchy in Figure 3.21 and principles in (3.41).
   b. Assign the arguments the appropriate case markers and/or adpositions.
   c. Assign the agreement marking to the main or auxiliary verb, as appropriate.
4. Select the syntactic template(s) for the sentence following the principles in (3.52) and (3.53).
5. Assign arguments to positions in the syntactic representation of the sentence.
   a. Assign the [-WH] argument(s) to the appropriate positions in the clause.
   b. If there is a [+WH] argument of a logical structure,
      1. assign it to the normal position of a [-WH] argument with the same function, or
      2. assign it to the precore or postcore slot, or
      3. assign it to a position within the potential focus domain of the clause (default = the unmarked focus position).
   c. A [-WH] argument may be assigned to the PrCS/PoCS slot, subject to focus structure restrictions (optional).

[84] Although the linking algorithm allows for both semantics to syntax (production) as well as syntax to semantics (comprehension), this discussion will focus only on the first of these.

d. Assign the [-WH] argument(s) of logical structure(s) other than that of the predicator in the nucleus to
   1. a periphery (default), or
   2. the precore or postcore slot, or
   3. the left- or right-detached position.

Each of the five steps of the linking algorithm is discussed in this section, as follows: §3.5.1 describes the population of the semantic representation, §3.5.2 discusses macrorole assignment, §3.5.3 explains the assignment of the PSA and morphosyntactic properties of the clause, §3.5.4 presents principles used in the choice of a syntactic template, and §0 formulates rules for assignment of arguments/NPs to the ultimate syntactic representation.

3.5.1 Semantic representation

In the first step of the linking algorithm, the speaker develops the semantic representation of the sentence, based on his communicative intent and built around the LS of the predicator he has chosen from the lexicon. The completed semantic representation includes information such as predicate and argument specifications for all variables, the activation status of such arguments, and their WH status. In addition, it specifies the LSs of any adjuncts or subordinate clauses and any necessary operators. A simplified SR for (3.28), reproduced here as (3.48), is shown below in Figure 3.23 (activation status, WH status, and operators are not shown).

(3.48) Hniang in cabu i hmuh.
Hniang ERG book 1SG.ACC show
'Hniang showed me a book.'

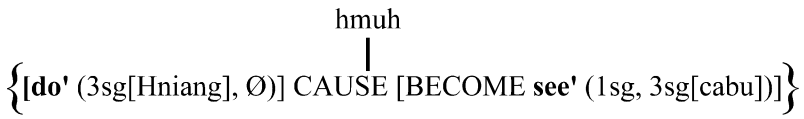


Figure 3.23: Results of the linking algorithm step 1

In this SR, the boundaries of the predicate specification *hmuh* is indicated by means of curly brackets. If (3.48) included any adjuncts or subordinate clauses, their LSs would fall outside of the curly brackets.[85]

An important language-specific aspect of this step for Falam Chin is the filling of the argument variables. It was noted in §3.2.2 that slots in the LS of head-marking languages must be filled with two independent but linked elements: the person/number features of the cross-reference pronominals and the NPs in apposition to them (Van Valin 2005). Thus, the arguments of the predicate's LS in Figure 3.23 have been assigned person and number features according to the speaker's intention (3sg, 1sg, 3sg). In addition, two of the three variables in the semantic representation have received an NP assignment (*Hniang, cabu*).[86]

Although there may be up to three cross-reference specifications in the LS, the Falam Chin syntactic representation allows for a maximum of two cross-reference forms. It is the role of the macrorole linking to determine which of the three will actually appear in the syntactic representation.

[85] While this element of the linking is not given in Van Valin (2005), I have added it as a feature useful for discussion of more complicated structures such as those considered in later chapters.
[86] NP assignments may be zero (Ø), for example, if the referent is active in the discourse context.

3.5.2 Macrorole assignment

Step two, macrorole assignment, follows the Actor-Undergoer Hierarchy (AUH) shown in Figure 3.18. Default principles of macrorole assignment apply unless the construction overrules them and results in marked linking. Recall that Falam Chin follows Principle B of Figure 3.18: *select the second highest-ranking argument in the LS as undergoer*. Therefore, in Figure 3.24, the first argument of **do'** has been chosen as actor, while the first argument of **see'** has been chosen as undergoer rather than the second argument of **see'**, which receives non-macrorole status.

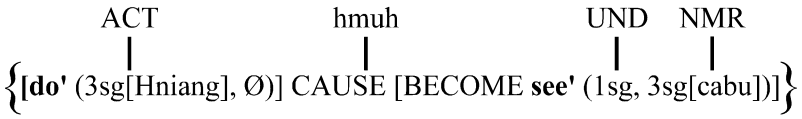


Figure 3.24: Results of the linking algorithm step 2

Rarely, Principle B conflicts with the need to cross-reference first or second person features (see Table 2.4). In such cases, either a) the speaker must find an alternate construction in which the two requirements do not conflict, or b) the construction is impossible to form.

3.5.3 Morphosyntactic coding: PSA, case, agreement

The third step of the linking algorithm involves the morphosyntactic coding of the core arguments. First, the PSA is assigned, after which case and agreement are marked as specified by the language.

3.5.3.1 PSA assignment

The PSA is selected according to the PSA selection hierarchy in Figure 3.21 and the principles laid out in (3.41), unless the construction specifies marked linking. As a

syntactically accusative language, Falam Chin normally takes the highest-ranking direct core argument as the default PSA, following the pattern [S, A_T, d-S]. In Figure 3.25, the actor macrorole has been chosen as PSA.

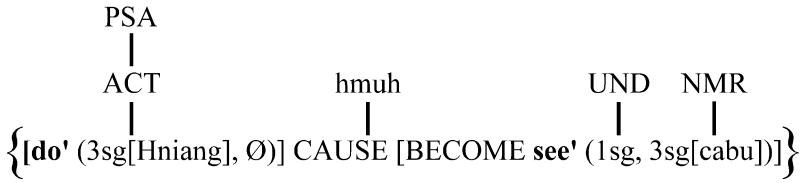


Figure 3.25: Results of the linking algorithm step 3a

This is the point in the linking algorithm at which marked constructions may choose a non-default argument as PSA, overriding the hierarchy.

3.5.3.2 Case marking and agreement

Next, case and agreement are assigned. As a head-marking language, Falam Chin assigns the grammatical case of the cross-reference pronominals and the clause-level NPs in apposition to them according to two independent sets of rules. The first set assigns case to the cross-reference specifications. These follow the accusative pattern given in (3.45), with the addition that, in the absence of a second macrorole argument, a non-macrorole argument can be assigned accusative case. (The application of this rule is demonstrated in Chapter 7.)

Two further rules are needed in order to assign the correct forms of the cross-reference pronominals. The first of these reflects the caveat that if the lower-ranking of two cross-referenced arguments is first person, the higher-ranking argument's cross-reference has zero realization. Elsewhere, the forms given in Table 2.2 and Table 2.3 are used. Revised rules are shown in (3.49).

(3.49) *Cross-reference case assignment rules for Falam Chin*
- a. Case assignment:
  - i. Assign nominative case to the highest-ranking macrorole argument.
  - ii. Assign accusative case to the other macrorole argument, if any, or to a non-macrorole argument iff there is a single macrorole argument.
- b. Form assignment:
  - i. If the lower-ranking of two cross-referenced arguments has the feature [+1st person], the higher-ranking argument will be realized as a zero morpheme (Ø).
  - ii. Elsewhere, assign nominative forms according to Table 2.2 {*ka(n), na(n), a(n)*} and accusative forms according to Table 2.3 {*i(n), lo, Ø*}.

As seen in Figure 3.26, the actor macrorole cross-reference specification has been assigned nominative case, while the undergoer macrorole cross-reference specification has been assigned accusative case. As the lower-ranking of the two is first person, rule (3.49bi) applies in this case.

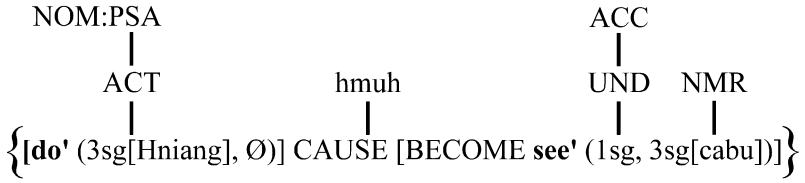


Figure 3.26: Results of the linking algorithm step 3b

The second set of rules assigns grammatical case to the NPs in apposition to the cross-reference pronominals. This set follows an ergative pattern. The *case assignment rules for ergative constructions* were given in (3.46) and are adjusted slightly to Falam Chin specifications in (3.50).

(3.50) *NP grammatical case assignment rules for Falam Chin*
- a. Assign ergative case (*in*) to the higher-ranking of two macrorole NPs, if any.
- b. Assign absolutive case (Ø) to any other core argument-associated NP which does not receive lexical case.

As expressed in (3.50b), both the lower-ranking of two macroroles and non-macrorole NPs receive absolutive case, unless independently assigned lexical case. (Lexical case assignment is based on the NP's position in the LS.)

Figure 3.27 shows the application of these rules. The actor macrorole NP has been assigned ergative case and the non-macrorole NP absolutive case. The undergoer macrorole has no NP specification, and so it is not assigned NP case.

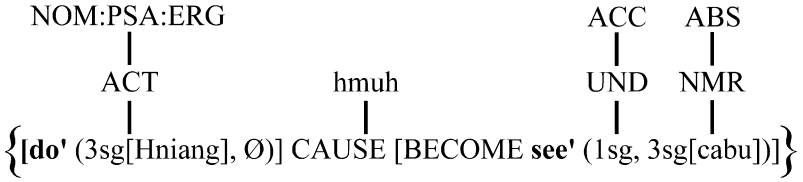


Figure 3.27: Results of the linking algorithm step 3c

3.5.4 Syntactic template assignment

In step four of the linking algorithm, the appropriate syntactic templates are selected and combined. The linking of the elements in the SR to the selected template follows the *Completeness constraint* (Van Valin 2005:129-30), given in (3.51).

(3.51) *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.

From this constraint flows the more specific *Syntactic template selection principle* (Van Valin 2005:130) (3.52).

(3.52) *Syntactic template selection principle*
The number of syntactic slots for arguments and argument-adjuncts within the core is equal to the number of *distinct specified* argument positions in the semantic representation of the core.

The terms *distinct* and *specified* are important to understanding the principle. The first allows for multiple coreferential instances of the same variable in a given LS without it being repeated multiple times in the syntactic structure. The second allows for deletion of an NP because it is topical, not specified in a given construction (e.g., imperatives), etc.

In addition to the above, Falam Chin has the following language-specific qualifications:

(3.53) *Falam Chin-specific qualifications for syntactic template selection*
   a. All cores in the language have a minimum syntactic valence of 1.
   b. No core may have more than 2 argument slots.

Qualification (a) allows for instances in which there is no referential argument in a given SR, such as weather predicates.

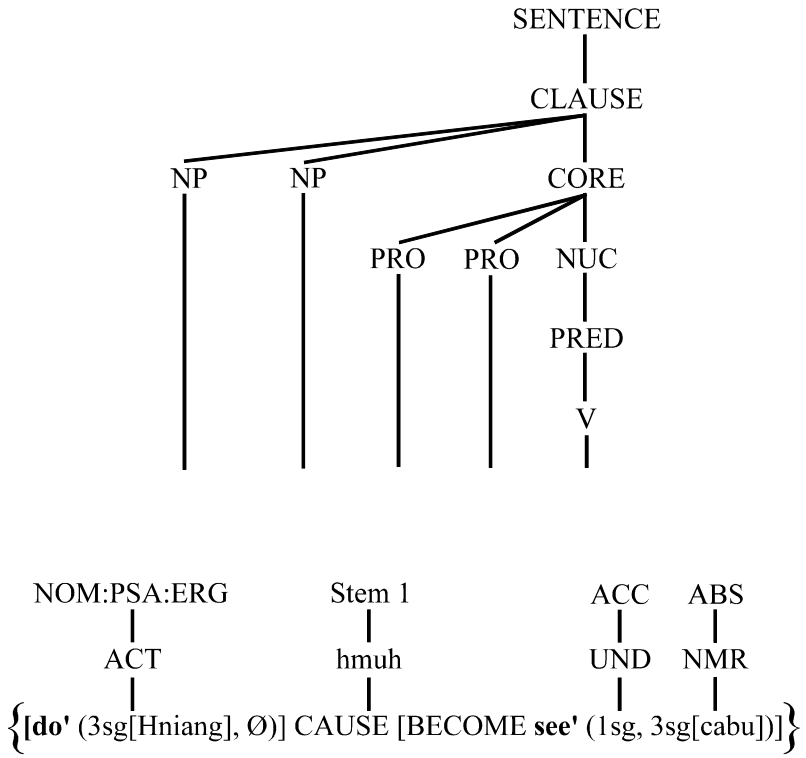


Figure 3.28: Results of the linking algorithm step 4

In such cases, third person singular nominative cross-reference is assigned to the single obligatory core argument slot. Qualification (b) filters some of the argument specifications shown in the SR. Only two argument slots are permitted in the core; if there are three core arguments, the non-macrorole set of specifications must be omitted. Following these principles, a syntactic representation including two core argument slots and two clause-level NP slots is chosen, as shown in Figure 3.28.

3.5.5 Argument and NP assignment

The final step in the linking process is to match the elements of the SR to the appropriate (language-specific) slots in the syntactic template. First, the predicate with appropriate morphology is assigned to the nucleus. Then core arguments (in Falam, cross-reference pronominals) are assigned. In the case of head-marking languages, clause-level NPs are assigned separately. Lastly, any adjuncts are assigned.

3.5.5.1 Core argument assignment

First, principle 5(a) of (3.47) assigns [-WH] arguments to the appropriate positions in the core. Falam Chin follows the principles in (3.54).

(3.54) *Falam Chin-specific argument assignment principles*
a. Assign a nominative argument to the left-most slot in the core.
b. Assign an accusative argument to the slot to the immediate left of the predicate.

Principles 5(b-d) of (3.47) are not applicable to core arguments in Falam Chin.

3.5.5.2 Clause-level NP assignment

Next, principle 5(a) of (3.47) also serves to assign [-WH] NPs to the appropriate positions in the clause. Falam Chin follows the default principles in (3.55).

(3.55) *Falam Chin-specific NP assignment principles*
   a. Assign an ergative NP (if present) to the left-most slot in the clause.
   b. Assign absolutive and/or oblique NPs (if present) to the remaining slots in the clause or to the LDP based on focus structure.

Principle 5(b) of (3.47) gives options for what to do with [+WH] NPs. Falam usually selects option (1): assign the [+WH] NP to the normal position of a [-WH] NP with the same function. However, option (3) is also a possibility: assign the [+WH] NP to the unmarked focus position of the clause to the immediate left of the verbal complex.

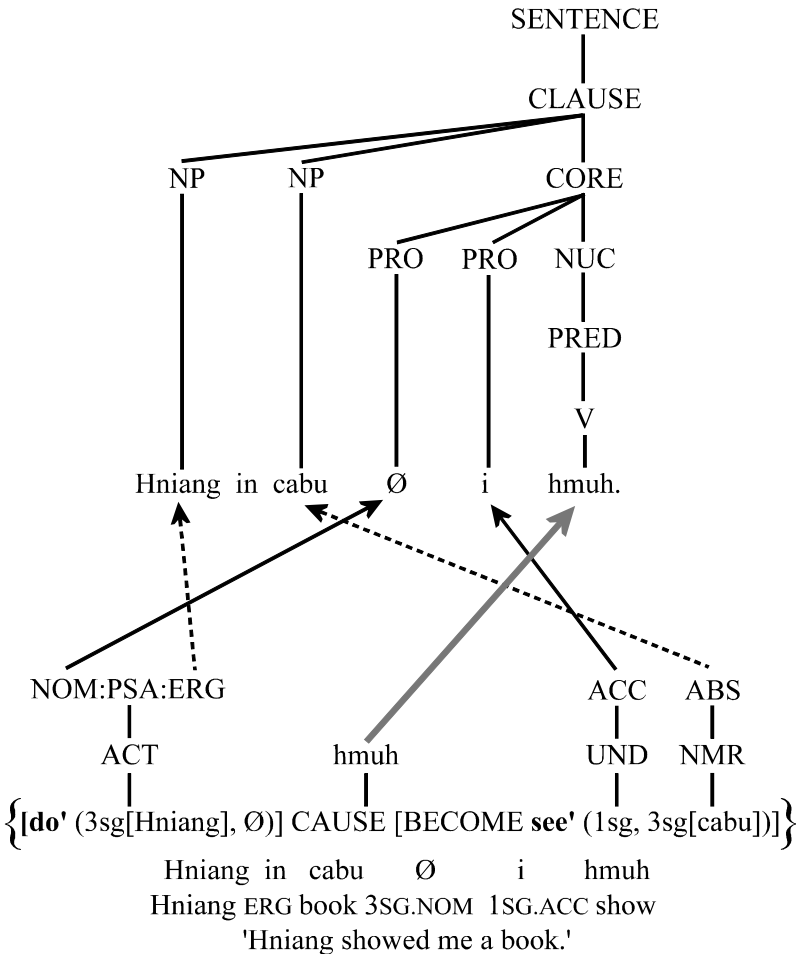


Figure 3.29: Results of the linking algorithm step 5

Principle 5(c) of (3.47) is not applicable to Falam Chin, which lacks a precore slot. Finally, principle 5(d) assigns adjunct NPs to a periphery or to the LDP. Following these principles results in the completed semantics to syntax linking shown in Figure 3.29.

In summary, the five steps of the linking algorithm are: 1) construct the SR, 2) assign macroroles, 3) assign PSA and case properties, 4) select a syntactic template, and 5) assign arguments and NPs to their appropriate slots. Much of the linking algorithm is universal; however, there are some parametric choices, as well. Thus, Falam follows Principle B of the AUH at step 2, chooses the highest-ranking argument as PSA at step 3, and places [+WH] words *in situ* at step 5. There are a few Falam-specific rules as well, including the form of case assignment at step 3, the restriction that there be no more than two core arguments at step 4, and the ordering of arguments/NPs at step 5.

3.6 Conclusion

The discussion of RRG in this chapter has been brief, basic, and in many ways incomplete. There is much more that can be said, especially in regard to its application to complex sentences and the constructions described in Chapters 4-7. The linking discussed in §3.5 followed Falam Chin defaults for a simple, unmarked, indicative sentence. Some of these defaults would be overridden in more complex constructions. These issues are taken up in the pertinent chapters.

CHAPTER 4

CAUSATIVES

Chapters 1-3 laid the foundation for discussion of valence-altering operations in Falam Chin. In this and the following three chapters, I address two types of valence-raising operations, causatives and applicatives, and two types of valence-lowering operations, reflexives/reciprocals/middles and antipassives, analyzing the Falam Chin data within the framework of Role and Reference Grammar (RRG). Within this framework, I argue that each operation discussed is distinct in several ways: 1) how it affects the underlying semantics of the predicate; 2) how it affects the assignment of macroroles and the corresponding M-transitivity of the predicate; and 3) how it affects the syntactic realization of arguments, both in terms of coding properties like case marking and cross-reference, and of behavioral properties such as their ability to antecede a reflexive/reciprocal argument or be relativized.

However, I also argue that the operations discussed in these chapters are unified in their nature as productive lexical operations. That is, they involve changes to the base LS and/or macrorole assignment, and leave untouched the assignment of the PSA grammatical relation. In fact, after the application of a lexical rule, the linking algorithm applies as usual (as described in §3.5). It appears that Falam includes an abundance of such lexical operations, but a dearth of the syntactic type. This tendency underscores Falam's head-marking nature, which Nichols (1986) claims downplays syntactic

motivations in favor of semantic/pragmatic ones. Furthermore, each operation discussed supplies additional evidence that Falam Chin's cross-reference pronominals perform the function of core arguments, while its NPs stand in semantic apposition to them, as is predicated of head-marking languages.

In this chapter, I describe the formal characteristics of Falam Chin morphological and periphrastic causatives in §4.1 and its lexical causatives in §4.2, analyzing the data in terms of RRG.

4.1 Falam Chin morphological causatives

Falam Chin includes two primary types of causatives, which may be distinguished as morphological versus lexical causatives. The lexical variety is not rule-governed; rather, they are both unproductive and unpredictable in form. They appear to be the fossilized remnants of one or more once-productive morphemes. This variety is discussed later, in §4.2. This section focuses on the more common of the two types, the rule-governed morphological causatives, which license a causee argument by the addition of a causative suffix to the base verb. Unlike lexical causatives, morphological causatives are extremely productive in Falam Chin, combining with any predicate which could feasibly be caused.

First, §4.1.1 discusses base intransitive causatives in Falam Chin, formulate a causative lexical rule for them in RRG, and illustrate the resulting linking. Second, §4.1.2 discusses base transitive causatives, demonstrating that Falam Chin is a partial double object (Baker 1988) or asymmetric (Bresnan & Moshi 1990) language, following Principle B of the AUH. Finally, §4.1.3 compares and contrasts the valence-raised

morphological causative with a periphrastic non-valence raised option for expressing the same information, arguing that whereas the first involves a fused LS, the second involves a complex, but unfused LS.

4.1.1 Base intransitive causatives

Morphological causatives in Falam Chin are formed using the causative morpheme *-ter*. This morpheme can be suffixed to base intransitive, transitive, or ditransitive verbs, depending on semantic restrictions. They can also express a range of meanings from permissive (let do) to facilitative (have do) to coercive (make do) (cf. Peterson 1998). Unlike causatives in Falam's close relatives Hakha Lai and Mizo (Peterson 2003; Chhangte 1993), Falam Chin causatives take a stem 1, rather than a stem 2, verb ((4.1b) and (4.2b)).[87]

(4.1) a. Ka kedam hri a cat.
1SG shoe STRING 3SG.NOM broken.1
'My shoelace is broken/broke.'[88]

b. Thangte **in** ka kedam hri a **cat-ter.**
Thangte ERG 1SG shoe STRING 3SG.NOM **broken.1-CAUS**
'Thangte **broke** my shoelace.'

(4.2) a. Cinte a hni.
Cinte 3SG.NOM laugh.1
'Cinte laughed.'

b. Parte **in** Cinte a **hni-ter.**
Parte ERG Cinte 3SG.NOM **laugh.1-CAUS**
'Parte made Cinte laugh.'

[87] Note, however, that Osburne (1975) claims that the Falam Chin dialect Zahau uses stem 2 for causatives, not stem 1, as in my data. As a number of my language consultants also identify as Zahau speakers, the reason for this discrepancy is unclear.

[88] Falam Chin does not morphologically distinguish result states from achievements/accomplishments; therefore, this verb can mean either 'be broken' or 'become broken'.

The valence-raising effects of causative morphology can be seen most clearly when joined with base intransitive verbs, which are altered by the causative operation in a number of ways. In terms of coding properties, there is ergative case marking on the causer argument (*Thangte, Parte*) in each of the preceding causative examples, which was not possible with the corresponding intransitive forms. In addition, causees receive nominative case cross-reference in the non-valence raised form (4.3a), but accusative cross-reference in the causative form (4.3b).

(4.3) a. **Ka** ṭap.
1SG.NOM cry.1
'**I** cried.'

b. Lian **in** **i** ṭap-**ter.**
Lian ERG 1SG.ACC **cry.1-**CAUS
'Lian made **me** cry.'

In terms of behavioral properties, the causative predicate can be reflexivized, an operation which is possible only when there are at least two core semantic arguments. The effect of the valence-lowering reflexive morphology is to cancel the valence-raising causative morphology, resulting in an intransitive verb which cannot take ergative marking (4.4).

(4.4) Thangte a **bal-aw-ter**.
Thangte 3SG.NOM dirty-REFL-CAUS
'Thangte **got himself dirty**.'

Another behavioral property which can demonstrate the presence of two core arguments is relativization. A causer can be relativized using the relativizer *tu*, the relativizer used for ergative relativizations (4.5).

(4.5) [___$_i$ Kawr a bal-ter=tu] **pa**$_i$ in a sawp.
shirt 3SG.NOM dirty-CAUS=REL man ERG 3SG.NOM wash
'The **man**$_i$ [who ___$_i$ got the shirt dirty] washed it.'

The causee can also be relativized, using the relativizer *mi*, the relativizer which is used for absolutive arguments (4.6).

(4.6) Cinte in [Thangte ih ___$_i$ a bal-ter=**mi**]
Cinte ERG Thangte ERG 3SG.NOM dirty-CAUS=REL

kawr$_i$ a sawp-sak.
shirt 3SG.NOM wash-BEN
'Cinte washed the **shirt**$_i$ **[which** Thangte got ___$_i$ dirty] for him (Thangte).'

In summary, the properties of ergative marking, cross-reference, reflexivization, and relativization demonstrate clearly that morphological causatives in Falam Chin are valence-raising operations. Not only do they raise the semantic transitivity of the predicate, but, when the base verb is intransitive, they raise the M-transitivity of the verb, as well.

Before examining the more complex case of causativized base transitive predicates, I will explicate the RRG analysis of the simpler case of base intransitive predicates. As explained in §3.4.3, RRG clearly distinguishes lexical operations from syntactic operations based on the stage(s) of linking which the operation affects. Whereas lexical operations affect formation of the LS and/or macrorole assignment, syntactic operations affect PSA assignment (Van Valin 2005).

In this chapter I claim that, according to these principles, Falam Chin causatives are lexical operations. This claim is distinct from the approach taken within formal frameworks such as Government and Binding (GB) (Aissen 1979; Marantz 1984; Baker 1988) and the Minimalist Program (MP) (Pylkkänen 2002, 2008), which claim that

causatives are the product of a syntactic process. Baker (1988), for example, argues that morphological causatives are formed by incorporation of one verb to another through syntactic head-to-head movement. The path this movement follows is dependent on which of three marked possibilities for case assignment a language chooses. In Pylkkänen's (2002, 2008) approach, causatives differ from language to language based the combination of two abstract syntactic properties: voice bundling and the type of complement selected by the Cause head: a root-selecting, verb-selecting, or phase-selecting cause.

While further discussion of GB and the MP approaches cannot be undertaken in detail here, the lexical approach for Falam Chin morphological causatives (indeed, for all morphological causatives) is compelling in several ways. First, the application of causative morphology (*-ter*) is inarguably meaning-altering, and is so at the word level, for *-ter* has no independent existence apart from its host predicate. Second, the lexical view motivates the syntactic changes to causatives described earlier in this section while preserving intact the basic principles of the linking algorithm as described in Chapter 3. In other words, the causative operation takes place through the application of a causative lexical rule to the base predicate, but once this lexical rule has applied, no further construction-specific rules are necessary; the linking algorithm applies as usual. Third, the resulting LS supplies a mechanism for making generalizations about the choice of undergoer in ditransitive, causative, and applicative structures. These strengths of the lexical approach will become clearer through further discussion.

A causative lexical rule is simple to formulate as an extension of the causative LSs described in §3.2.2. Following Van Valin and LaPolla (1997:179), I propose the lexical rule in (4.7) to account for Falam Chin morphological causatives.

(4.7) *Lexical rule for morphological causative verb:*
α + *-ter* → {[**do'** (x, Ø)] CAUSE α}

In simple terms, this rule states that any LS (α) plus the morpheme *-ter* will generate a new LS in which an unspecified action (Ø) is performed by *x*, the causer, bringing about (CAUSE) the base predicate (α).

The application of this lexical rule is illustrated in (4.8), beginning with a base achievement predicate, *cat ~ cah* 'break; become broken'. The output of the rule, the corresponding causative LS for *catter* '(make) break', is shown in (4.8b). The SR for (4.1b) is shown in (4.8c).

(4.8) a. LS for *cat ~ cah* 'break; become broken'
INGR **broken'** (y)

b. LS for *catter* '(make) break'
{[**do'** (x, Ø)] CAUSE [INGR **broken'** (y)]}

c. SR for (4.1b)
{[**do'** (3sg[Thangte], Ø)] CAUSE [INGR **broken'** (3sg[ka kedam hri])]}

Similarly, the LSs for an activity predicate, *hni* 'laugh', and corresponding causative predicate, *hniter* 'make laugh', are shown in (4.9), along with the SR for (4.2b).

(4.9) a. LS for *hni ~ hnih* 'laugh'
do' (y, [**laugh'** (y)])

b. LS for *hniter* 'make laugh'
{[**do'** (x, Ø)] CAUSE [**do'** (y, [**laugh'** (y)])]}

c. SR for (4.2b)
{[**do'** (3sg[Parte], Ø)] CAUSE [**do'** (3sg[Cinte], [**laugh'** (3sg[Cinte])])]}

Thus, the lexical rule can apply to a variety of types of base predicates.

As the literature on causatives affirms, causatives introduce a causer argument, and this is represented in the lexical rule in (4.7). In addition, I argue here that morphological causative operations result in fusion of the causative and base LSs, such that the single argument of **do'** (x, Ø) and the argument(s) of the base predicate are treated for the purposes of macrorole assignment as arguments of a single, fused predicate. The syntactic behavior of Falam Chin causatives, for example, the assignment of case and cross-reference in (4.3b), demonstrates that Falam Chin causatives undergo such fusion. (The behavior of complex, but unfused, clauses is examined in §4.1.3.) While fusion is not uniquely a property of morphological causatives, it does appear to be the case that all morphological causatives undergo fusion (see Song 1996).

This is by no means an unprecedented view of causatives. Within the framework of Relational Grammar (RG), Davies and Rosen (1988) argued that causatives should be treated as monoclausal at all strata—in other words, as a single predicate. Working within Lexical-Functional Grammar (LFG), Alsina (1992, 1996) argues that causatives have a complex argument structure in which the patient of a cause predicate is fused with one argument of the embedded predicate, either the causee or the theme. While his approach differs in a number of details from that presented here, it shares nevertheless the concept that two distinct predications have been melded into one ("predicate composition" (Alsina 1996:207). In the lexical rule in (4.7), and in the following causative LSs, I represent this fusion of LSs by means of curly brackets ({}).

Having applied the causative lexical rule and populated the argument variables of the resulting LS, as in (4.8) and (4.9), it only remains to complete the pertinent steps of

the linking algorithm. As shown in Chapter 3, step 2 is the assignment of macroroles based on the Actor-Undergoer Hierarchy (AUH) (reproduced here as Figure 4.1) and the default macrorole assignment principles (reproduced here as (4.10)) (Van Valin 2005).

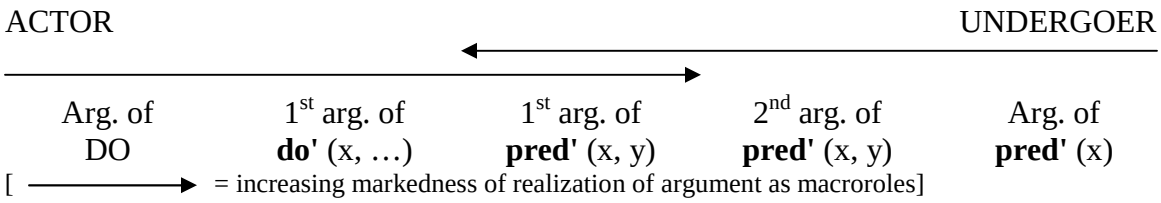


Figure 4.1: The Actor-Undergoer Hierarchy

(4.10) *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 LS.
  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.

If a LS has only one argument, it is not necessary to reference the AUH to determine the macrorole status of the single argument; it is necessary only to consult the rules given in (4.10b). Thus, in the case of the base verb *cat ~ cah* 'break; become broken', a single argument achievement predicate, its single argument is assigned undergoer status according to (4.10b2). In the valence-raised causative, however, there are two macrorole-eligible arguments. According to the AUH, the added argument, the causer (*Thangte*), is the highest-ranking argument and receives actor status. The remaining argument, the causee (*ka kedam hri* 'my shoelace'), corresponding to the

single argument of the base predicate, receives undergoer status. This is shown in Figure 4.2.

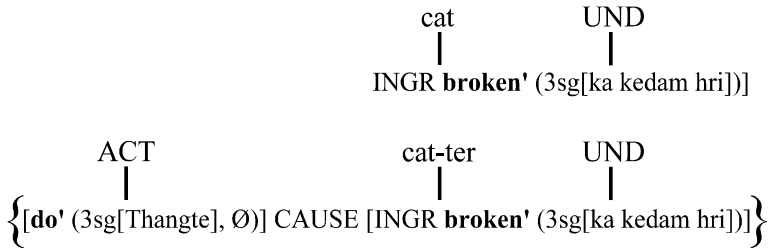


Figure 4.2: Comparison of MR linking in base intransitive achievement verb

With *hni ~ hnih* 'laugh', a single argument activity predicate, the sole argument initially receives actor status according to (4.10b1). However, following the causative operation, the causer (*Parte*) is assigned actor status as the new highest-ranking macrorole according to the AUH, while the causee (*Cinte*) receives undergoer status. This is shown in Figure 4.3.

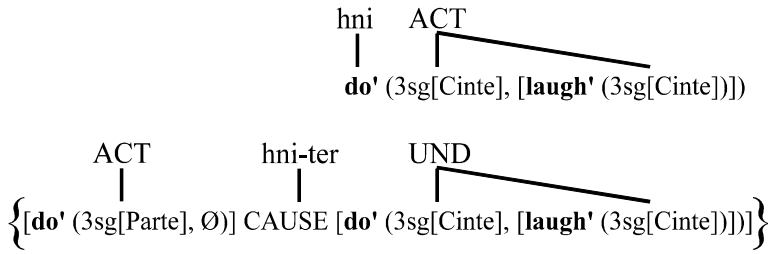


Figure 4.3: Comparison of MR linking in base intransitive activity verb

In both of the preceding cases, the M-transitivity of the predicate has been raised by the introduction of a new macrorole-eligible argument. Furthermore, in a manner reminiscent of RG's grammatical relation revaluations (e.g., Davies & Rosen 1988), the two options illustrate that macrorole assignment may be altered by the causative

operation—in the sense that a given argument receives a different macrorole assignment than it would have received for the corresponding non-causative predicate. Nevertheless, these cases demonstrate that causatives do not involve any kind of *marked* linking, either of the macroroles or of the PSA. That is, once the causative LS has been derived, the linking algorithm is applied to the new LS according to default rules. This is an important point, and one which concurs with much work on causatives which seeks to minimize construction-specific rules (e.g., Davies & Rosen 1988; Alsina 1992, 1996). It has a very satisfying and intuitive result: causatives require the introduction of no rule beyond the lexical rule given in (4.7).

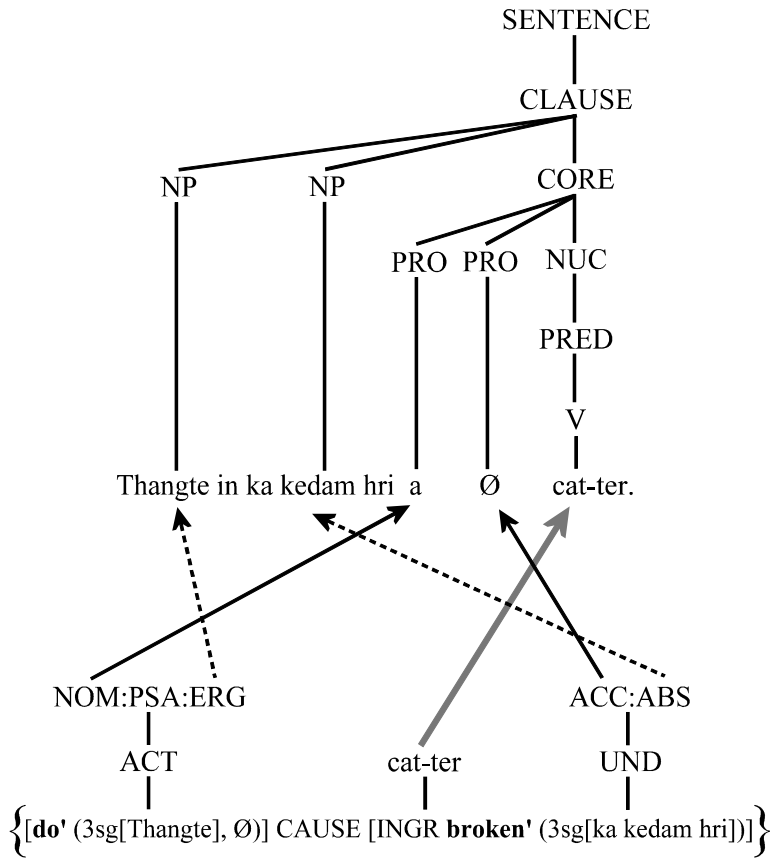


Figure 4.4: Causative (intransitive base)

The linking begun in Figure 4.2 is completed in Figure 4.4 to fully illustrate this point. As shown in this figure, at stage 3, PSA assignment is made and cross-reference and NP case are assigned to the macroroles according to the rules given in (3.49) and (3.50). The highest-ranking argument is the added causer, *Thangte,* and it receives actor status and ergative marking. Its associated cross-reference specifications receive nominative case. The second-highest ranking argument is the causee, *ka kedam hri* 'my shoelace'. It receives undergoer status and absolutive marking, while its associated cross-reference specifications receive absolutive case. An appropriate syntactic template is chosen, and the cross-reference forms, NPs, and predicate are assigned to the syntactic structure according to the rules given in (3.52)–(3.55).

To summarize this section, within the framework of RRG, I posit that Falam Chin morphological causatives are lexical operations involving the addition of an unspecified activity predicate (**do'** [x, Ø]) and CAUSE operator to the base predicate by means of a causative lexical rule (4.7). Furthermore, this lexical rule fuses the causative and base LSs such that their arguments are treated as arguments of a single predicate. When this lexical rule is applied to base intransitive predicates, the M-transitivity of the verb is raised, with corresponding adjustments to the coding and behavioral properties of the predicate. However, no new rules of linking need be specified; default rules apply to the new, fused LS.

4.1.2 Base transitive causatives

The previous section described base intransitive causatives in Falam Chin and their RRG analysis. This section expands that description and analysis to encompass base

transitive causatives as well. As discussed in Chapter 1, there are two major typological patterns governing which argument of a transitive base predicate will be realized as syntactically most "object-like" in a causative construction (cf. Comrie 1981; Baker 1988). Many languages (e.g., Turkish, Romance languages such as French and Italian) invest the theme with all the object properties in this situation, treating the causee as an oblique (e.g., (1.37)). Baker (1988) terms these *non-double object languages*. Other languages (e.g., Chamorro, Chichewa, and Kinyarwanda), however, favor the causee as more object-like, usually creating a double object construction (e.g., (1.42)). *Double object languages* can be further subdivided into *true double accusative* (or *symmetric*) languages, in which the causee and theme appear to share object properties equally, and *partial double object* (or *asymmetric*) languages, in which the causee has all the object properties, while the theme has few or none (Baker 1988; Bresnan & Moshi 1990).

To frame this typology in RRG terms, non-double object languages choose the theme as undergoer, while the causee is a non-macrorole argument. Double object languages, on the other hand, choose the causee as undergoer and the theme as a non-macrorole argument. If the language is symmetric, then the non-macrorole theme argument is treated nearly identically to the undergoer. If the language is asymmetric, the non-macrorole theme argument shares few to no properties with the undergoer.

Where does Falam Chin fall in this typology of causatives? Example (4.11) provides some initial evidence. In this example, both causee and theme are third person, and both are treated as direct (absolutive) arguments. Since the causee is not oblique,

Falam Chin appears to be a double object language, suggesting that the causee is the undergoer.

(4.11) Lothlo-pa in **a** **fa-pa** **anṭam** a cing-ter.
farmer-MASC ERG 3SG son-MASC mustard 3SG.NOM plant.1-CAUS
'The farmer had **his son** plant **the mustard**.'

In fact, this analysis concurs with data presented in §2.3.2.1, where it was shown that Falam Chin ditransitive verbs favor the double object construction as well (e.g., (2.112)). I argue in §2.1.1.2 that Falam Chin is a primary object language (Dryer 1986), choosing a recipient or goal argument as syntactically more privileged than the theme in three-argument predications. Interestingly, this parameter correlates highly with the choice of causee as syntactically more privileged than the theme (Baker 1988; Kroeger 2004; Van Valin 2005).

The LSs used in RRG provide an excellent way to frame this generalization. Recipients, goals, and causees all occupy the second-highest ranking position in the LS in terms of the AUH. Thus, Principle B of the AUH (choose the second-highest ranking argument of the LS as undergoer) captures the behavior of both ditransitives and causatives in double object languages. On the other hand, Principle A (choose the lowest-ranking argument of the LS as undergoer) captures the behavior of the first major pattern mentioned, non-double object languages. As is shown in Chapter 5, these principles also hold for applicative constructions. In this and the following chapters, I will sometimes

refer to languages of the two types as either Principle A (non-double object) or Principle B (double object) languages.[89]

While (4.11) identifies Falam Chin as a double object language, it does not distinguish whether it is symmetric or asymmetric. Cross-reference provides some crucial evidence. As shown in (4.12), first and second person causees are overtly cross-referenced.

(4.12) Parte in cabuai a **lo** hnawt-ter.
Parte ERG table 3SG.NOM 2.ACC wipe.off-CAUS
'Parte made **you** wipe off the table.'

However, cross-referencing of themes or recipients in causative constructions is not equally possible. For example, (4.13) and (4.14) are perfectly grammatical Falam Chin sentences whose default and preferred interpretations are as given in (a), situations in which the first person participant is also the causee.

(4.13) Parte in **Mang** **i** bawm-ter.
Parte ERG Mang 1SG.ACC help-CAUS
a. 'Parte had **me** help **Mang**.'
b. *?'Parte had **Mang** help **me**.'

(4.14) Mang in **Thangte** paisa **i** cawih-ter.
Mang ERG Thangte money 1SG.ACC lend-CAUS
a. 'Mang had **me** lend **Thangte** some money.'
b. *?'Mang had **Thangte** lend **me** some money.'

A theme or recipient interpretation for the cross-reference, as in the (b) interpretations, is ungrammatical or highly marginal. I say *marginal* because some of my consultants did allow that (4.13) and (4.14) might be ambiguous, having both (a) and (b) interpretations.

[89] Note, however, that even languages which pattern as primarily Principle A or Principle B languages may vary from this pattern in two ways. First, many languages allow marked linking which implicates subtle semantic variation. Second, most languages include some verbs or verb classes which require the non-default linking pattern (Guerrero & Van Valin 2004).

However, when asked to produce the (b) interpretations, my consultants sought an alternate, non-valence raised structure (see (4.25) and (4.26)).

The explanation for the ungrammaticality or high marginality of the (b) interpretations can be found in the application of Principle B of the AUH to the SRs for these sentences. This is illustrated in Figure 4.5. In Figure 4.5a, corresponding to (4.13a), Principle B applies, choosing the causee (1sg), the second-highest ranking argument of the LS, as undergoer. It receives accusative cross-reference, and the sentence is grammatical. In Figure 4.5b, corresponding to (4.13b), the theme is chosen as undergoer, receiving accusative cross-reference. However, this is marked linking, violating Principle B. Because the second-highest ranking argument is not the undergoer, the sentence is either ungrammatical, or marginal to some speakers.

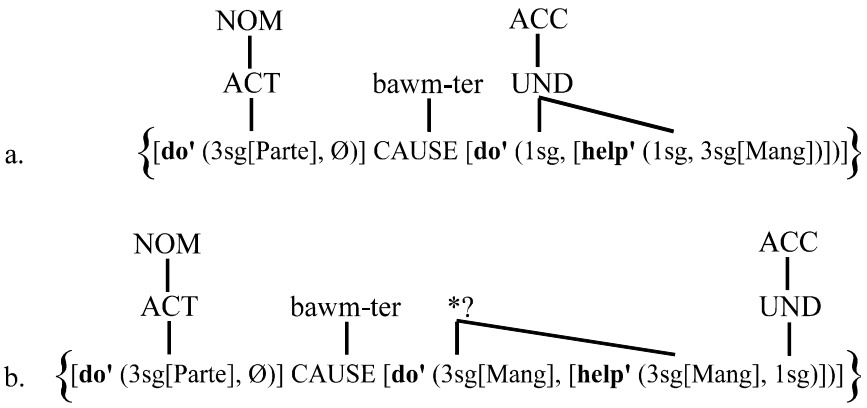


Figure 4.5: Macrorole assignment for (4.13a&b)

Thus, Falam Chin follows Principle B of the AUH, and marked linking in morphological causatives is ungrammatical or at least highly marginal.

There is a further twist to the cross-referencing situation in Falam Chin. Since the marginality of (4.13b) and (4.14b) are because of a violation of Principle B, we might

expect to find that (4.15) and (4.16) are the grammatical expressions of such sentences. We might reason that, if the causee (*Mang/Thangte*) is chosen as undergoer and receives null third person cross-reference, then the theme (1sg) must be left unmarked, since there can only be one type of accusative cross-reference. However, while grammatical, these sentences cannot have the desired meaning—they cannot indicate a first person theme.

(4.15) Parte in **Mang** a bawm-ter.
Parte ERG Mang 3SG.NOM help-CAUS
*'Parte had **Mang** help **me**.'
(okay as 'Parte had **Mang** help **him/her**.')

(4.16) Mang in **Thangte** paisa a cawih-ter.
Mang ERG Thangte money 3SG.NOM lend-CAUS
*' Mang had **Thangte** lend **me** some money.'
(okay as 'Mang had **Thangte** lend **him/her** some money.')

These data suggest that *two* requirements are salient and preferably both must be satisfied for a sentence to be fully grammatical. The first requirement, as I have already shown, is Principle B of the AUH. The second requirement has to do with person cross-reference: first and second person cross-reference features in the LS must be realized as cross-reference of their semantic predicate in the syntactic representation. We may formalize this as in (4.17a):

(4.17) *Falam Chin person requirement*
a. Any argument of the LS with first or second person features must be realized as cross-reference of its semantic predicate in the syntactic representation.
b. Person Requirement >> Principle B

In fact, it appears that this second requirement is somewhat more important than the first, as my consultants were at least willing to allow (4.13b) and (4.14b) as marginal, but did not allow (4.15) and (4.16) under any circumstances. This can be formalized as in (4.17b).

The behavior of cross-reference in causatives lends further weight to the arguments advanced in Chapter 3 of Falam Chin's being a head-marking language whose cross-reference pronominals are the core arguments and whose NPs are simply appositional enhancements of the cross-reference. If cross-reference is no more than an agreement mechanism, it seems much more difficult to account for the person requirement. That is, the examples advanced in (4.15) and (4.16) appear to "agree" appropriately with all NPs. However, if the cross-reference pronominals are the core arguments—if, in fact, they are necessary to fulfill the Completeness Constraint as given in (3.51), "All of the arguments explicitly specified in the semantic representation of a sentence must be realized syntactically in the sentence," then (4.15) and (4.16) clearly fail the test.

Figure 4.6 illustrates the application of both Principle B and the person requirement to (4.15). First, Principle B applies, choosing the second-highest ranking argument, the causee (*Mang*), as undergoer and assigning it accusative cross-reference. Because there are only two cross-reference slots in the core, the person requirement cannot be satisfied for the lowest-ranking argument (1sg), the Completeness Constraint is violated, and the sentence is ungrammatical for the intended meaning.

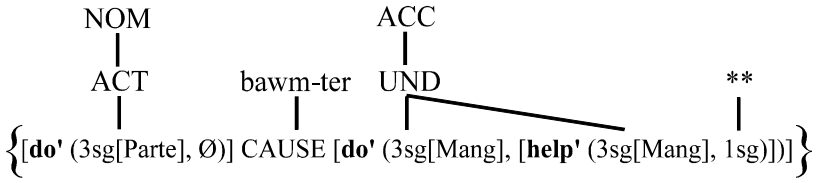


Figure 4.6: Macrorole assignment for (4.15)

Thus, both Principle B and the person requirement play a significant role in undergoer assignment. Nevertheless, it can be seen that in all but marginal cases, accusative cross-reference marks the causee as undergoer.

The data just considered suggest that Falam Chin is an asymmetric language, since causees are more syntactically privileged than themes or recipients in terms of cross-reference. This conclusion is further supported by the behavior of reflexive causatives. First, it must be established that for base transitive reflexive causatives, the theme is interpreted as coreferential with the causee. Thus, in both (4.18) and (4.19), the causee (*Cinte, nauhakpa* 'boy') is the antecedent of the reflexive, as in the (a) interpretations. It is not possible to interpret the causee as coreferential with the causer (*Mang, Thangte*), as in the (b) interpretations.

(4.18) Mang$_i$ in **Cinte**$_j$ a zoh-**aw**$_{*i/j}$-ter.
Mang ERG Cinte 3SG.NOM look.at-REFL-CAUS
a. 'Mang had **Cinte**$_j$ look at **herself**$_j$.'
b. *'**Mang**$_i$ had **himself**$_i$ look at Cinte.'

(4.19) Thangte in **nauhak-pa**$_j$ a khawlh-**aw**$_{*i/j}$ -ter.
Thangte$_i$ ERG boy-MASC 3SG.NOM wash-REFL-CAUS
a. 'Thangte made **the boy**$_j$ take a bath/shower.' (lit. 'wash **himself**$_j$**'**)
b. *'**Thangte**$_i$ made **himself**$_i$ wash the boy.'

In fact, even switching the order of the causative and reflexive morphemes cannot result in such an interpretation (4.20b). Rather, to express the idea that someone forced themselves to do an action, an adverbial expression meaning 'unwillingly' would normally be used (4.20a).

(4.20) a. Thangte in anṭam **paih lo cing=in** a cing.
Thangte ERG mustard willing NEG plant.1=AJT 3SG.NOM plant.1
‘Thangte planted the mustard **unwillingly**.’

b. Thangte in anṭam a **cing-aw-ter/cing-ter-aw**.
*‘Thangte **made himself plant** the mustard.’ (intended)

As discussed further in Chapter 6, two arguments which are coreferential within the same core in Falam Chin cannot take a distinct macrorole assignment. As a result, reflexive sentences usually have a single macrorole and are, therefore, intransitive (e.g., (4.4)). However, (4.18) and (4.19) both include ergative marking, indicating that both an actor and an undergoer have been assigned. Since the causer and causee are not coreferential in these sentences, it must be concluded that the causer and the causee bear the two possible macrorole assignments for these constructions: actor and undergoer, respectively.

To summarize the discussion so far, evidence from direct status of the argument, cross-reference, and reflexivization indicates that Falam Chin chooses the causee argument as undergoer, assigning it a greater share of syntactic properties than a theme or recipient argument. Falam Chin can thus be categorized as an asymmetric double object language, following Principle B of the AUH.

However, although the theme is not the undergoer, it still shares some argument properties with the causee. For example, as shown in (4.11), both the theme and the causee are direct, not oblique, arguments. In addition, both causees and themes can be topic marked and left-dislocated. Thus, both the causee of (4.21), *a fapa* ‘his son’, and the theme, *anṭam* ‘mustard’, can be topic marked, while in (4.22) both can be left-dislocated.

(4.21) a. Lothlo-pa in **a fa-pa** **cu** anṭam a cing-ter.
farmer-MASC ERG 3SG child-MASC TOP mustard 3SG.NOM plant.1-CAUS
'The farmer made **his son** plant mustard.'

b. Lothlo-pa in **anṭam** **cu** a fa-pa a cing-ter.
farmer-MASC ERG mustard TOP 3SG child-MASC 3SG.NOM plant.1-CAUS
'The farmer made his son plant **the mustard**.'

(4.22) a. **A fa-pa** **cu** lothlo-pa in anṭam a cing-ter.
3SG child-MASC TOP farmer-MASC ERG mustard 3SG.NOM plant.1-CAUS
'As for **his son**, the farmer made him plant mustard.'

b. **Anṭam** **cu** lothlo-pa in a fa-pa a cing-ter.
mustard TOP farmer-MASC ERG 3SG child-MASC 3SG.NOM plant.1-CAUS
'As for **the mustard**, the farmer made his son plant it.'

Furthermore, both a causee (4.23a) and a theme (4.23b) can be extracted for relativization using the relativizer *mi*, which has been shown to be used only with absolutive core arguments (see §2.4.1.3).

(4.23) a. **[Lothlo-pa** **ih** **___$_i$** **anṭam** **a** **cin-ter=mi]** **a**
farmer-MASC ERG mustard 3SG.NOM plant.2-CAUS=REL 3SG

fa-pa$_i$ **cu** tuan-te=n a cing ṭheh.
child-MASC TOP early-DIM=AJT 3SG.NOM plant.1 finish
'**His son$_i$** [**whom the farmer had ___$_i$ plant the mustard]** finished early.'

b. **[Lothlo-pa** **ih** **a** **fa-pa** **___$_i$** **a** **cin-ter=mi]**
farmer-MASC ERG 3SG child-MASC 3SG.NOM plant.2-CAUS=REL

anṭam$_i$ **cu** a ṭhang cak zet.
mustard TOP 3SG.NOM grow.1 strong.1 very
'**The mustard$_i$** [**which the farmer had his son plant ___$_i$**] grew quickly.'

These properties indicate that, although not as syntactically-privileged as the causee, the theme is still a core argument; it has not been demoted to non-core. In RRG terms, it is a non-macrorole core argument.

In summary, cross-reference and reflexive data provide support for the undergoer status of the causee, while absolutive marking, topic marking, left dislocation, and relativization demonstrate the non-macrorole, yet core, status of the theme in Falam Chin causative constructions. Thus, Falam Chin can be categorized as an asymmetric double object language. In RRG terms, Principle B of the AUH accounts for Falam's double object behavior. Furthermore, far from being causative-specific, Principle B has ramifications for all ditransitive verbs in the language, including applicatives (see Chapter 5). Thus, the LSs which are the output of the lexical rules posited in this chapter and in Chapter 5 become the medium through which Principle B can generalize the syntactic behavior of ditransitives, causatives, and applicatives.

I conclude this section by illustrating the complete linking process for a base transitive causative. For this purpose, the LSs for the activity verb *bawm* 'help' and its causative counterpart *bawmter* 'make help' are given in (4.24), along with the SR for (4.13a).

(4.24) a. LS for *bawm* 'help' **do'** (y, [**help'** (y, z)])

b. LS for *bawmter* 'make help' {[**do'** (x, Ø)] CAUSE [**do'** (y, [**help'** (y, z)])]}

c. SR for (4.13a) {[**do'** (3sg[Parte], Ø)] CAUSE [**do'** (1sg, [**help'** (1sg, 3sg[Mang])])]}

The linking for (4.13a) is shown in Figure 4.7, where the causer (*Parte*), the highest-ranking argument, has been chosen as actor and has been assigned ergative case, while its corresponding cross-reference receives nominative case. The causee (1sg), the second-highest ranking argument, has been chosen as undergoer, and receives accusative case cross-reference. The third core argument, *Mang*, remains a non-macrorole argument,

and receives absolutive case and is not cross-referenced. Note that absolutive is the default case for non-macrorole arguments which do not otherwise receive lexical case, according to (3.50). However, non-macrorole arguments can receive lexical case based on LS position—an example of this is given in the following section.

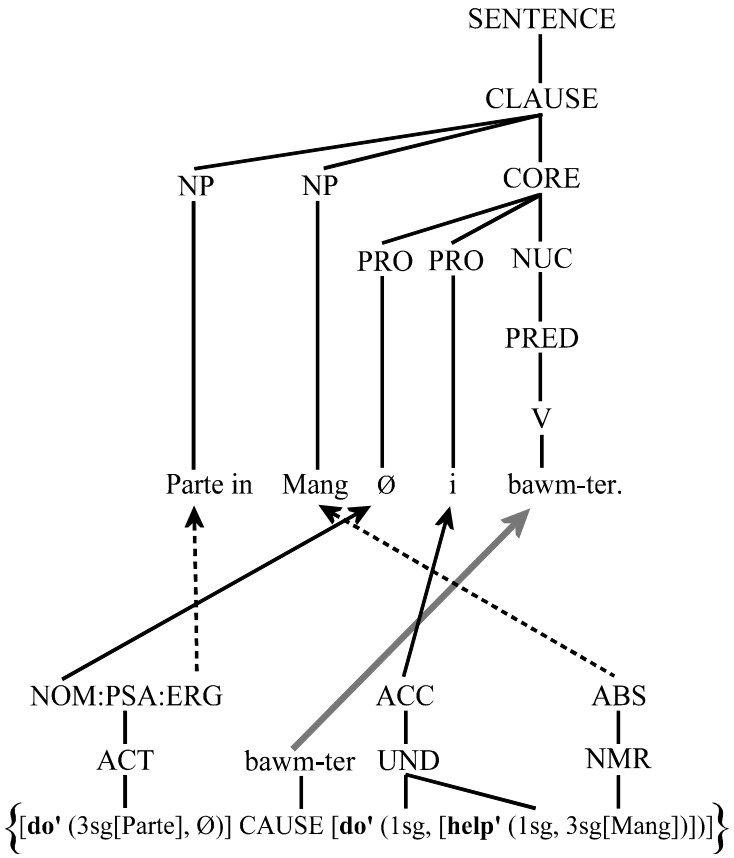


Figure 4.7: Causative (transitive base)

The preceding discussion of Falam Chin morphological causatives can be summarized as in Table 4.1, which shows an example of a *constructional schema*. Constructional schemata are used to delimit the unique features of a given construction in terms of its syntax, morphology, semantics, and pragmatics. Thus, the heading SYNTAX specifies that the syntactic template and PSA choice for Falam Chin causatives are

according to default principles. Macrorole linking also follows the language default: Principle B of the AUH. MORPHOLOGY specifies that a stem 1 verb + *-ter* forms the causative predicate, and SEMANTICS supplies the lexical rule for a causative. Finally, PRAGMATICS shows that a causative construction is compatible with any type of illocutionary force or focus structure.

Table 4.1: Constructional schema for Falam Chin morphological causative

CONSTRUCTION
    Falam Chin causative construction
SYNTAX
    Template: Default
    PSA: Default
    Linking: Default: Principle B of AUH
MORPHOLOGY
    Causative verb: Stem 1 V + *-ter*
SEMANTICS
    Causative verb: α + *-ter* → {[**do'** (x, Ø)] CAUSE α}
PRAGMATICS
    Illocutionary force: Unspecified
    Focus structure: Unspecified

4.1.3 Periphrastic causative alternative

In this section, I return to my claim that the lexical causative rule in Falam Chin creates a fused causative predication by joining a cause LS to a base LS. The arguments of these two LSs are consequently treated as the arguments of a single LS, as seen in the syntactic behavior of morphological causatives. Such fusion is further supported by contrasting morphological causatives with an alternate strategy employed for encoding causatives, a type of periphrastic causative which, although it instantiates nearly identical semantics, lacks such fusion.

It was shown in §4.1.2 that sentences such as ‘Parte had Mang help me’ are only marginally possible with morphological causatives in Falam Chin because of the conflict between Principle B and the person requirement (see Figure 4.5b and Figure 4.6). The preferred way of resolving this issue is to use an alternate structure, a jussive verb plus a *dingah*/*dingin* clause—a type of periphrastic, rather than morphological, causative. Examples (4.25) and (4.26) show such alternate structures.

(4.25) Parte in **[___$_i$ i** bawm ding=ah] **Mang$_i$** a fial.
Parte ERG 1SG.ACC help FUT=AJT Mang 3SG.NOM tell
‘Parte told **Mang$_i$** [___$_i$to help **me]**.’

(4.26) [___$_i$ Paisa **i** cawih ding=ah] Mang in **Thangte$_i$** a fial.
money 1SG.ACC lend FUT=AJT Mang ERG Thangte 3SG.NOM tell
‘Mang told **Thangte$_i$** [___$_i$ to lend **me** some money].’

The LSs for these constructions are nearly identical to those of morphological causatives, with two differences. First, there is the specification of a jussive verb, such as *fial* ‘tell’, in place of the previously unspecified causative action. Since jussive verbs are control verbs, the *y* and *z* variables are consequently coindexed. Second, unlike the LSs of the morphological causatives examined so far, the two LSs in this case remain unfused. The LSs for *bawm* ‘help’ and *fial* ‘tell [to do]’ and the SR for (4.25), shown in (4.27), illustrate these points.

(4.27) a. LS for *bawm* ‘help’ **do'** (z, [**help'** (z, w)])
b. LS for *fial x* ‘tell [to do]’ {[**do'** (x, [**tell'** (x, y_i)])]} CAUSE {[**do'** (z_i, [**pred'** (z_i, (w))])]}
c. SR for (4.25) {[**do'** (3sg[Parte], [**tell'** (3sg[Parte], 3sg[Mang$_i$])])]} CAUSE {[**do'** (z_i, [**help'** (z_i, 1sg)])]}

Because the two predicates are unfused in the SR, they are also treated as distinct predicates in the linking and ultimate syntactic representation. Figure 4.8 illustrates this

with the linking for (4.25). Each predicate is assigned its own macroroles individually by the AUH. As a result, both lower-ranking arguments (*Mang*, 1sg) can receive undergoer status and accusative cross-reference in their respective cores. This segregated linking allows the demands of both Principle B and of the person requirement to be satisfied. The Completeness Constraint is not violated since all arguments in the SR are represented in the syntactic structure.

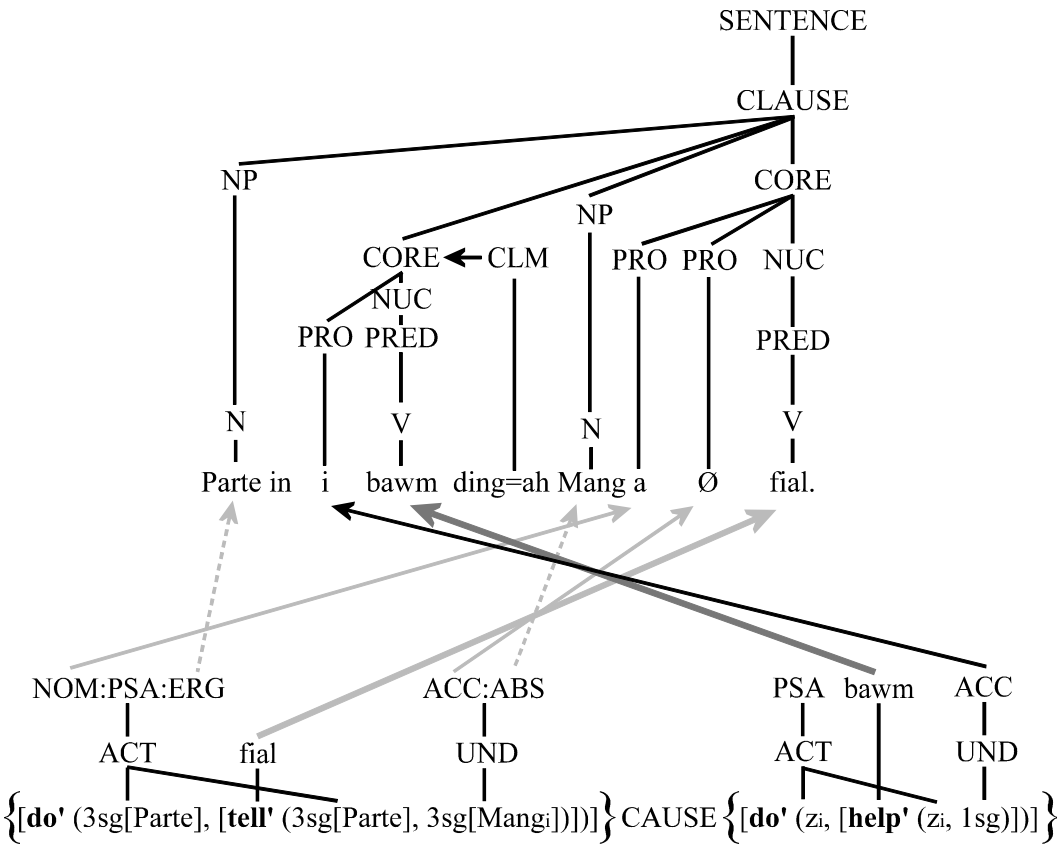


Figure 4.8: Periphrastic causative alternative

The concept of fusion has perhaps been taken for granted because of a tendency to focus on morphological causatives and/or analytic causatives which do have fused argument structures (e.g., French and English), overlooking the type of unfused

construction presented in this section. (See Song 1996 for further examples of this type of causative.) One somewhat similar proposal is Alsina's (1992, 1996) theory of causative fusion which argues that causatives have a complex argument structure in which the patient of a cause predicate is fused with one argument of the embedded predicate, either the agent/causee or the patient. However, Alsina views argument fusion as having primarily semantic repercussions. Thus, if the agent of the base predicate is fused to the patient of the cause predicate, the event will be seen as affecting the agent directly such that the agent has little choice in the matter. On the other hand, if the patient of the base predicate is fused to the patient of the cause predicate, the event will be seen to affect the patient with the cooperation of the agent. For Alsina then, fusion represents affectedness of the argument, rather than syntactic privilege, and does not predict the grammatical relation or macrorole status of the argument.

By contrast, the theory of fusion presented here argues that fusion is the joining of two LSs such that the AUH assigns them macroroles as a single LS. This has clear syntactic repercussions, as discussed in this chapter, affecting both coding and behavioral properties of the predication. Therefore, I argue that a valence-raising operation by definition involves fusion. However, it is possible to express causative semantics without valence-raising or fusion taking place. In Falam Chin, it is necessary to do so at times in order to allow all core arguments to be represented in the syntactic structure so that the Completeness Constraint can be satisfied. Thus, the unfused structure has an important syntactic role to play.

In conclusion, the periphrastic causative serves to demonstrate the important distinction between fused and complex-but-unfused LSs. In both cases, the macrorole assignment follows default principles of the language. Only in the fused structure is the person requirement of Falam Chin a potential problem; therefore, the unfused structure provides the speaker a loophole when confronted with a conflict of requirements. The marginality of examples like (4.13b) and (4.14b) demonstrates that marked linking of morphological causatives (violations of Principle B) is highly dispreferred in Falam Chin. As shown in this section, the availability of a non-valence raised causative structure which does not violate Principle B renders marked linking at once superfluous and an inferior option.

4.2 Falam Chin lexical causatives

In addition to the productive morphological causatives and the periphrastic causatives discussed above, Falam Chin includes a finite set of lexicalized causative forms, derived from once-productive causative morphemes. Some of the phonological alternations involved are identical to the stem 2 formation patterns discussed in §1.1.2.3 and §2.1.2. The first, and most common, type appends a glottal stop (spelled *-h*) to the end of the word ((4.28) and (4.29)).

(4.28) a. Hmeh a **al**.
curry 3SG.NOM salty
'The curry is **salty**.'

b. Thangte in hmeh=ah cite a **alh**.
Thangte ERG curry=LOC salt 3SG.NOM salt
'Thangte **salts** the curry.'

(4.29) a. Cinte in Chin ca a **zir**.
Cinte ERG Chin grammar 3SG.NOM learn
'Cinte **learns** Chin.'

b. Parte in Cinte cu Chin ca a **zirh**.
Parte ERG Cinte TOP Chin grammar 3SG.NOM teach
'Parte **teaches** Cinte Chin.'

A second type adds aspiration to the first phoneme of the word ((4.30) and (4.31)).

(4.30) a. Ka kawr a **tlek**.
1SG shirt 3SG.NOM torn
'My shirt is/got **torn**.'

b. Thangte in ka kawr a **thlek**.
Thangte ERG 1SG shirt 3SG.NOM tear
'Thangte **tore** my shirt.'

(4.31) a. Parte in muthla a **ṭih**.
Parte ERG ghost 3SG.NOM fear
'Parte **fears** ghosts.'

b. Muthla in Parte a **ṭhih**.
ghost ERG Parte 3SG.NOM frighten
'The ghost **frightened** Parte.'

A few lexical causatives follow an alternate pattern, such as /ŋ/ ~ /n/ (4.32).

(4.32) a. Parte ih inn a **thiang**.
Parte GEN house 3SG.NOM clean
'Parte's house is **clean**.'

b. Parte in a inn a **thian**.
Parte ERG 3SG house 3SG.NOM clean
'Parte **cleans** her house.'

Despite the difference in their formation, lexical causatives are in many ways similar to morphological causatives. Like morphological causatives, most lexical causatives add a causer participant to the underlying LS, creating a new, fused LS. In

some cases, this changes an intransitive verb (e.g., *tlek* 'torn'; *thiang* 'clean') into a transitive verb (*thlek* 'tear'; *thian* '(make) clean') ((4.30) and (4.32)). In others, it changes a transitive verb (*zir* 'learn') into a ditransitive one (*zirh* 'teach') (4.29). Consequently, most lexical causatives appear to follow the causative lexical rule, adding the string [**do'** (x, Ø)] CAUSE … to the LS of the base predicate. For example, the LSs for *thiang* '(be) clean' and *thian* '(make) clean', shown in (4.33), follow this pattern.

(4.33) a. LS for *thiang* '(be) clean' **clean'** (**y**)
b. LS for *thian* '(make) clean' {[**do'** (x, Ø)] CAUSE [BECOME **clean'** (y)]}

Nevertheless, it seems clear that these are older forms which have fossilized as independent lexical items. This is even more apparent in certain lexical causatives which alter the LS in unpredictable and idiosyncratic ways. The LSs for *ṭih* 'fear' and *ṭhih* 'frighten', although clearly related concepts, do not follow the regular causitivizing pattern. As seen in (4.31), both include two core arguments; however, their rankings in the LS are reversed (4.34).

(4.34) a. LS for *ṭih* 'fear' **fear'** (x, y)
b. LS for *ṭhih* 'frighten' [**do'** (y, Ø)] CAUSE [BECOME **feel'** (x, **[afraid']**)][90]

The same is true of *al* 'salty' and *alh* 'salt', 'make salty' (4.28). In this case, the argument which initially served as the single macrorole of the intransitive predicate, *hmeh* 'curry', becomes an oblique non-macrorole argument in the causative LS, while a

[90] Or, alternatively, [**do'** (y, Ø)] CAUSE [BECOME **fear'** (x, Ø/y)] (p.c. Van Valin). This more closely follows the regular causativizing pattern, but requires that the second argument of **fear'** either be left unspecified or else be covariable with the causer.

new, obligatory argument, *cite* ‘salt’, is added to the causative LS (4.35). (Recall that the first argument of a **be-LOC'** predicate is not eligible for a macrorole.)

(4.35) a. LS for *al* ‘salty’ **be'** (y, **[salty']**)
b. LS for *alh* ‘salt’ [**do'** (x, Ø)] CAUSE [BECOME **be-in'** (y, 3sg[cite])]

Another significant way in which lexical causatives in Falam Chin differ from morphological ones is that some of them allow both default and marked linking, whereas morphological causatives exclusively follow Principle B. Thus, in (4.36a) and (4.37a), Principle B is followed and the causee is chosen as undergoer, while in (4.36b) and (4.37b), marked linking occurs and the theme is undergoer, as shown by the use of oblique marking with the causee.[91]

(4.36) a. Parte in **Cinte** **cu** zuk a hmuh.
Parte ERG Cinte TOP picture 3SG.NOM show
‘Parte showed **Cinte** a picture.’

b. Parte in Cinte hnen=ah **zuk** a hmuh.
Parte ERG Cinte to=LOC picture 3SG.NOM show
‘Parte showed **a picture** to Cinte.’

(4.37) a. Parte in **Cinte** **cu** Chin ca a zirh.
Parte ERG Cinte TOP Chin grammar 3SG.NOM teach
‘Parte teaches **Cinte** Chin.’

b. Parte in Cinte hnen=ah **Chin** **ca** a zirh.
Parte ERG Cinte to=LOC Chin grammar 3SG.NOM teach
‘Parte teaches **Chin** to Cinte.’

Unlike the unmarked linking (a) versions, in which the non-macrorole arguments *zuk* ‘picture’ and *Chin ca* ‘Chin grammar’ receive the default absolutive case, in the marked linking (b) versions, the non-macrorole argument *Cinte* receives locative case.

[91] One of my language consultants disagreed with this analysis, arguing that *hnen=ah* ‘to=LOC’ was not possible with these verbs. I suggest a dialectal difference to account for this discrepancy: one language consultant allows marked linking, while the other does not. Note that some languages, such as Chichewa, allow marked linking for morphological causatives as well. See Alsina (1992).

This can be accounted for by a lexical case assignment rule for locative case, as formulated in (4.38) (cf. Van Valin & LaPolla 1997). (This is not intended to cover all uses of locative case; at least one other rule will be added in the following chapter.)

(4.38) *NP lexical case assignment rules for Falam Chin: locative case*
a. Assign locative case (*ah*) and the relational noun *hnen* 'to' to the non-macrorole NP of the *y* argument in LS segment: … CAUSE [BECOME/INGR **pred'** (y, z)].

As the phrasing of this rule makes clear, it applies specifically to arguments which are non-macrorole; thus, it does not apply to *Cinte* in (4.36a) and (4.37a). Even though the LS variable for this argument is correct, *Cinte* is an undergoer in these examples and lexical case rules apply only in the absence of a macrorole assignment. It also does not apply to *zuk* 'picture' or *Chin ca* 'Chin grammar' in (4.36a) and (4.37a). Even though they are non-macrorole arguments, they do not fill the correct LS variable.

Finally, it is possible to combine lexical and morphological causatives in some cases (4.39).

(4.39) Parte in Thangte cu kawr a **thlek-ter**.
Parte ERG Thangte TOP shirt 3SG.NOM tear.up-CAUS
'Parte **had** Thangte **tear up** a shirt.'

In summary, although lexical causatives share many features with morphological causatives, in some ways they also differ. That is, the LSs of some lexical causatives have diverged from a regular causativizing pattern, lexical causatives can undergo marked linking, and they can combine with morphological causatives. This suggests that lexical causatives exist in the lexicon as permanently fused items which have no non-valence raised option, and are thus more similar to other lexical ditransitives in allowing marked linking. Morphological causatives, on the other hand, are created by a regular and

productive lexical rule and allow only unmarked linking according to Principle B of the AUH.

4.3 Conclusion

In conclusion, in this chapter I argue within the framework of RRG that Falam Chin causatives are lexical operations which effect an alteration to the LS of the predicate by means of a lexical rule. With the addition of a causer argument, they raise the semantic and syntactic valence of the base verb. If the base verb is intransitive, they raise M-transitivity as well, as evidenced by ergative marking on the causer, cross-referencing of the causee, reflexivization, and relativization of the arguments. Although the linking process ultimately differs from that of the base verb, this is not the result of marked linking rules which reference causatives only. Rather, the differences flow naturally from the application of the default linking algorithm to the new fused LS. A simple distinction between Principles A and B of the AUH accounts for the differences seen in non-double object and double object languages. The differences between symmetric and asymmetric languages can be attributed to language-specific rules regarding undergoer and non-macrorole argument properties.

Furthermore, I argue in this chapter for fusion as an integral part of the morphological causative operation in Falam Chin. This is supported not only by the changes to argument properties described above, but also by the potential violation of the person requirement created by first and second person themes. Periphrastic causatives provide an alternate way to communicate identical semantics without violating either Principle B or the person requirement, precisely because they are unfused.

In addition, the necessity of the unfused structure in Falam Chin to avoid violating the person requirement highlights the importance of the cross-reference pronominals to the syntax of the language. Far more than agreement, cross-reference pronominals are shown to be core arguments which directly fulfill the Completeness Constraint. Thus, if a trivalent structure will not allow them to be represented, an alternate structure must be sought.

Lastly, lexical causatives, while similar to morphological causatives in many ways, are shown to also have commonalities with non-causative ditransitive verbs. In particular, they can sometimes undergo marked linking and can combine with morphological causatives. While morphological causatives appear to be the product of a productive lexical rule, lexical causatives are fossilized forms in the lexicon.

CHAPTER 5

APPLICATIVES

The previous chapter examined causatives in Falam Chin. This chapter continues the discussion of Falam Chin voice and valence-altering operations with a second type of valence-raising operation: *applicatives*. Within the framework of RRG, I show how applicatives are distinct from other valence-altering operations in several ways: 1) how they affect the underlying semantics of the predicate; 2) how they affect the assignment of macroroles and the corresponding M-transitivity of the predicate; and 3) how they affect the syntactic realization of arguments, both in terms of coding properties like case marking and cross-reference, and of behavioral properties such as their ability to antecede a reflexive/reciprocal argument or be relativized.

Nevertheless, while causatives and applicatives are distinct in a number of ways, they are also similar in that both can be described in terms of a simple lexical rule, which, once applied, allows the universal and language-specific aspects of the linking algorithm to apply without alteration (as described in §3.5). In addition, both causatives and applicatives demonstrate the head-marking character of Falam Chin as they supply further evidence for the core argument status of the cross-reference pronominals.

In this chapter, I discuss the formal characteristics of Falam Chin morphological applicatives in §5.1 and of lexical applicatives in §5.2, analyzing the data in terms of RRG. In §5.3, I discuss the intersection of causative and applicative operations.

5.1 Falam Chin morphological applicatives

Falam Chin includes two types of applicatives, morphological and lexical. The lexical applicatives, which are primarily benefactives, are neither productive nor predictable in form; these are discussed in §5.2. In this section, I present an analysis of Falam Chin morphological applicatives, those applicatives which license an applied argument by the addition of derivational morphology to the base verb. There are several subtypes of morphological applicatives in Falam Chin, including *benefactive*, *malefactive, comitative,* and *relinquitive,* all of which require the use of a stem 2 verb.[92] However, each applicative subtype differs in its morphology and corresponding semantics. It was claimed in Chapter 4 that morphological causatives are extremely productive. Most of the Falam Chin applicatives are also quite productive; however, they are limited by semantic constraints as to which base verbs they may combine with.

In §5.1.1, I discuss base intransitive applicatives, formulate lexical rules for each type, and illustrate the resulting linking. In §5.1.2, I argue that when combined with transitive base verbs, applicatives illustrate Falam's nature as an asymmetric double object language, following Principle B of the AUH. Finally, in §5.1.3, I compare and contrast the valence-raised applicative with its corresponding non-valence raised alternative, arguing that, like morphological causatives, morphological applicatives fuse two LSs into one. The non-valence raised alternatives, on the other hand, have complex, but unfused LSs.

[92] Falam does not include *prioritive* and *instrumental* applicatives, found in related Hakha Lai (Peterson 1998).

5.1.1 Base intransitive applicatives

Morphological applicatives include four subtypes, *benefactive, malefactive, comitative,* and *relinquitive.*[93] One of the most common types of applicatives (both cross-linguistically and in Falam Chin) is the benefactive applicative. A benefactive applicative introduces a participant who is benefited in some way by the predicate: the *beneficiary*. A malefactive applicative, on the other hand, introduces a *maleficiary,* one negatively affected by the predicate. Both Falam Chin benefactives and malefactives are formed using the suffix *-sak* in combination with a stem 2 verb. Example (5.1) shows the base verb *tuar* 'suffer' combined with the benefactive morpheme.

(5.1) Cinte **in** **i** **tuar-sak**.
Cinte ERG 1SG.ACC suffer-BEN
'Cinte **suffered for me**.'

The interpretation of the construction as benefactive or malefactive is based on the semantics of the base verb and the plausibility of the affected participant being positively or negatively affected by the action.

A third type of applicative is the comitative. The comitative applicative uses the suffix *-pi* plus a stem 2 verb to introduce a *co-participant:* a participant who performs the action along with the actor ((5.2b) and (5.3b)).

(5.2) a. Ka ṭap.
1SG.NOM cry
'I am crying.'

b. Cinte **in** i **ṭah-pi**.
Cinte ERG 1SG.NOM cry.2-COM
'Cinte **is crying with** me.'

[93] The term *relinquitive* is used by Peterson (1998).

(5.3) a. Mang a **feh**.
Mang 3SG.NOM **go**
'Mang is walking.'

b. Mang **in** **Thangte** a **feh-pi**.
Mang ERG Thangtge 3SG.NOM **go-COM**
'Mang is walking with **Thangte**.'

The final subtype of applicative is the relinquitive. The relinquitive applicative uses the morpheme *-san* with a stem 2 verb to indicate motion of one participant, the *relinquisher,* away from another, the *relinquee* ((5.4b) and (5.5b)).

(5.4) a. Mang cu Thangte hnen=in a feh-hlo.
Mang TOP Thangte from=ABL 3SG.NOM go-flee
'Mang ran away from Thangte.'

b. Mang in Thangte a **feh-san**.
Mang ERG Thangte 3SG.NOM **go-RELQ**
'Mang left Thangte.'

(5.5) a. Mang tlang par=ah a kai.
Mang mountain on=LOC 3SG.NOM climb
'Mang climbed up the mountain.'

b. Mang in tlang par=ah i **kai-san**.
Mang ERG mountain on=LOC 1SG.ACC **climb-RELQ**
'Mang climbed off/away from me up the mountain.'

Like causatives, applicatives are clearly valence-raising operations. This can be seen in coding properties such as the ergative case marking on the actor argument in each of the preceding applicative examples. In addition, (5.1), (5.2b), and (5.5b) show that the applied argument receives accusative cross-reference, a feature which was not possible in the corresponding intransitive base predicate ((5.2a) and (5.5a)).

Behavioral properties also demonstrate the transitivity of the applicative construction. For example, reciprocal morphology can combine with base intransitive

applicative predicates. As reciprocals can only apply to predicates with two core semantic arguments, they cannot normally combine with intransitive predicates. However, it is possible in this case because the applicative construction has raised the valence of the base predicate ((5.6) and (5.7)).

(5.6) Cinte le Parte an **ṭah-pi-aw**.
Cinte and Parte 3PL.NOM cry.2-COM-RECP
'Cinte and Parte cry with each other.'

(5.7) Cinte le Parte an **feh-san-aw**.
Cinte and Parte 3PL.NOM go-RELQ-RECP
'Cinte and Parte left one another.'

The possibility of relativization of both the base argument and the applied argument also indicates that the applicative predicate is valence-raised. In (5.8), the A argument, *falanu* 'girl', is relativized using *tu*, while in (5.9), the co-participant (the O argument) is relativized using *mi*.

(5.8) [___$_i$ Cinte (a) ṭah-pi=tu] **fala-nu$_i$** cu a riah
Cinte 3SG.NOM cry.2-COM=REL girl-FEM TOP 3SG feeling

a sia.
3SG.NOM bad.1
'The **girl$_i$** [who ___$_i$ cried with Cinte] was sad.'

(5.9) [Cinte ih ___$_i$ a ṭah-pi=mi] **fala-nu$_i$** cu
Cinte ERG 3SG.NOM cry.2-COM=REL girl-FEM TOP

a riah a sia.
3SG feeling 3SG.NOM bad.1
'The **girl$_i$** [who Cinte cried with ___$_i$] was sad.'

In summary, both coding and behavioral properties of morphological applicatives indicate that they are valence-raising operations in Falam Chin, raising the semantic

valence of the predicate. In the case of base intransitive predicates, they raise the M-transitivity of the predicate as well.

Unlike Falam Chin's highly productive morphological causatives, morphological applicatives, while productive, are somewhat more constrained as to which base predicates they can combine with. The key distinguishing factor is semantics. For example, according to Van Valin and LaPolla (1997), there are three semantic subtypes of benefactives: *recipient* (action performed in order for the beneficiary to have something), *plain* (action performed for the beneficiary to notice or enjoy), and *deputative* (action performed on the beneficiary's behalf). Similarly, Pylkkänen (2002, 2008) distinguishes low applicatives from high applicatives. Low applicatives relate the applied argument to the object of the base predicate, whereas high applicatives relate the applied argument to an event (the base predicate). Thus, if the base predicate is intransitive, only a high applicative is possible. In Falam Chin, benefactives combine with intransitive base verbs only with a plain or deputative meaning (high applicatives); all three meanings can combine with transitive base verbs.

Comitatives, which relate the applied argument to a co-performed event, can also combine with either intransitive or transitive base verbs. However, the reliquitive applicatives relate the applied argument to either a movement event, which is typically an intransitive base predicate, or else to one of a small set of other intransitive predicates.

The remainder of this section will examine the RRG analysis of base intransitive applicatives, using comitative and relinquitive applicatives as examples. Just as I argued in Chapter 4 that morphological causatives in Falam Chin are lexical operations, I also

take a lexical view of morphological applicatives in Falam Chin. Within the RRG framework, I claim that applicatives are the result of a lexical rule which fuses the base LS with an applied LS. Consequently, the arguments of the two predications are viewed for the purposes of macrorole assignment as arguments of a single predicate.

Once again, this claim can be contrasted with the syntactic approach taken within GB (Baker 1988) and the MP (Anagnostopoulou 2003; McGinnis 2001; Pylkkänen 2002, 2008; Jeong 2007). For example, Baker (1988) argues that applicatives are preposition incorporation in which a verb and preposition are combined through a syntactic process of head-to-head movement (cf. Marantz 1984). The paths of movement followed are distinct from those proposed for causatives, and language differences are explained in terms of different types of marked case assignment. Anagnostopoulou (2003) describes the difference between asymmetric and symmetric applicatives as governed by whether or not a language includes an extra specifier position. Pylkkänen (2002, 2008) argues that high and low applicative heads are introduced to the syntactic representation at different locations. McGinnis (2001), expanding on Pylkkänen's proposal, claims that high applicatives include an extra specifier based on the supposition that high applicatives are phases, whereas low applicatives are not. Her approach predicts that high applicatives will universally be symmetric, while low applicatives will be asymmetric. Finally, Jeong (2007) proposes that four different parameters are necessary to account for applicative types: configuration, category, case, and scrambling.

The details of each of these researcher's proposals cannot be critiqued in this dissertation.[94] Rather, the arguments in favor of a lexical account advanced in Chapter 4 are reiterated here. First, each applicative morpheme has a clearly meaning-altering function, which it contributes at the word level. This intuition is captured nicely by the formulation of lexical rules for each type. Second, the changes to the base LS made by the applicative operation motivate all the syntactic effects seen in the preceding examples without altering the linking algorithm, which applies as usual. No construction-specific rules are necessary. Third, the choice of undergoer in ditransitive, causative, and applicative constructions can be generalized in terms of Principle B of the AUH. Without LS representations, this generalization is more difficult to frame.

In the following paragraphs, the lexical rules for comitatives and relinquitives are formulated and the linking for each type is demonstrated. First, comitatives indicate that the same action is performed simultaneously by two distinct participants. Following Van Valin and LaPolla's (1997:379) representation of comitative action, a lexical rule is proposed which specifies that a predicate of any LS type (α) plus *-pi* will generate two identical predicates, yet with distinct variables, joined by the ^ 'and simultaneously' operator (5.10).[95]

(5.10) *Lexical rule for morphological comitative verb:*
α + *-pi* → $\{\alpha_1 \wedge \alpha_2\}$

As with the causative operation, the valence-raising applicative fuses the two LSs together (as represented by the curly brackets) in such a way that their arguments are

[94] See Jeong (2007) for a detailed discussion of the previous three researchers' proposals including a number of difficulties with their analyses.
[95] See Farrell (2009) for an alternate LS proposal. The difference does not alter the assignment of macroroles.

treated by the linking algorithm as joint arguments of a single LS. This view is supported by the syntactic behavior of the applicatives discussed in the preceding paragraphs.

The application of the comitative lexical rule is shown in (5.11). In (5.11a), the LS for *ṭap ~ ṭah* 'cry' is shown, while in (5.11b) the output of the comitative lexical rule for the corresponding comitative verb *ṭahpi* 'cry with' is given. Finally, the SR for (5.2b) is shown in (5.11c). The base and applied LSs have been fused so that their individual arguments are now coarguments of the new valence-raised predicate.

(5.11) a. LS for *ṭap ~ ṭah* 'cry' — **do'** (x, [**cry'** (x)])
↓
b. LS for *ṭahpi* 'cry with' — **{do'** (x, [**cry'** (x)]) ^ **do'** (y, [**cry'** (y)])}
c. SR for (5.2b) — **{do'** (3sg[Cinte], [**cry'** (3sg[Cinte])]) ^ **do'** (1sg, [**cry'** (1sg)])}

The second type of applicative discussed here, the relinquitive, indicates that one participant departs from another. Such a departure may be expressed by fusing the applied LS … & BECOME NOT **be-with'** (y, x) to the base LS (α), where the *x* variable (the relinquisher) is shared with the base predicate (5.12) (cf. Van Valin & LaPolla 1997:377).

(5.12) *Lexical rule for morphological relinquitive verbs:*
α + *-san* → {α & BECOME NOT **be-with'** (y, x)}

Example (5.13) illustrates the application of this lexical rule using the activity verb *feh* 'go', 'walk'. The output of the lexical rule for the relinquitive verb *fehsan* 'go away from' is shown in (5.13b), while the SR for (5.4b) is shown in (5.13c). Once again, the base and applied LSs have been fused by the lexical rule.

(5.13) a. LS for *feh* ‘go’ **do'** (x, [**go'** (x)])

b. LS for *fehsan* ‘go away from’ {**do'** (x, [**go'** (x)]) & BECOME NOT **be-with'** (y, x)}

c. SR for (5.4b) {**do'** (3sg[Mang], [**go'** (3sg[Mang])]) & BECOME NOT **be-with'** (3sg[Thangte], 3sg[Mang])}

The two lexical rules which have been formulated here, shown in (5.10) and (5.12), demonstrate that, unlike the causative lexical rule, applicative lexical rules add an element to the LS which follows, rather than precedes, the base LS. They also show that, while each one differs in their semantic details, in each case the highest-ranking argument of the base predicate remains the highest-ranking argument, while the applied argument becomes the second-highest ranking argument of the new fused LS. As the linking process for each of the three types demonstrates, this means that the applied argument is assigned the undergoer macrorole in each case.

The linking for the comitative applicative shown in (5.2b) is illustrated in Figure 5.1. As I have argued previously, once the lexical rule applies, fusing the LSs, all normal linking rules, both universal and language-specific (as described in §3.5), apply as usual. Thus, *Cinte*, the highest-ranking argument, is assigned the actor macrorole (see Figure 4.1) and receives ergative case (see (3.49)). Its cross-reference specifications receive nominative case (see (3.50)). The second-highest ranking argument, the co-participant (1sg), is assigned the undergoer macrorole and accusative cross-reference. The final step is to assign cross-reference forms, NPs, and the predicate to the syntactic structure according to the rules given in (3.52)–(3.55).

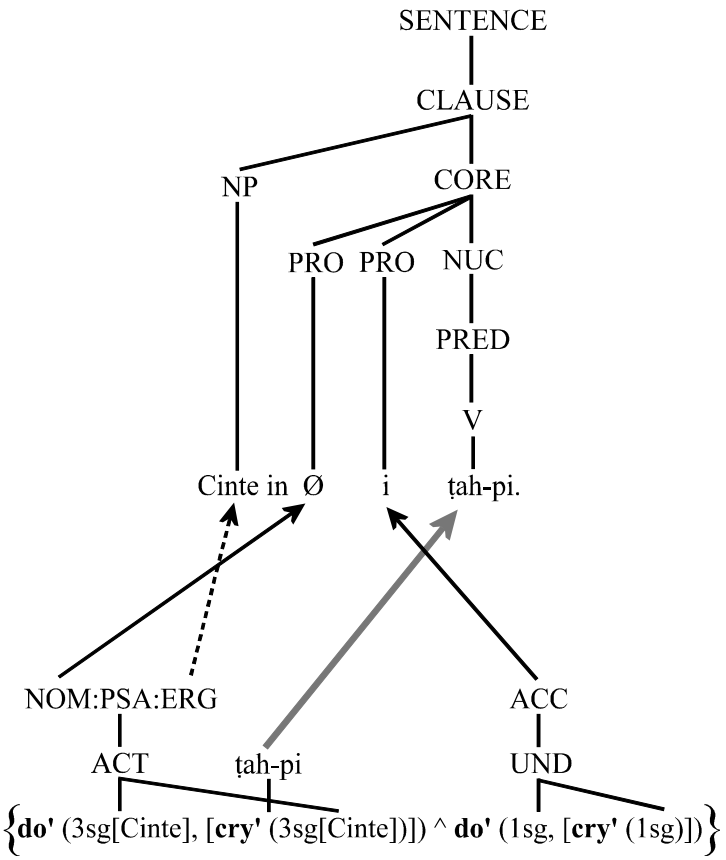


Figure 5.1: Comitative applicative

The relinquitive applicative follows an identical pattern of linking to the comitative. After the lexical rule takes place, the linking algorithm applies as usual. Figure 5.2 shows the linking for (5.4b). In this case, the highest-ranking argument is *Mang,* the relinquisher and also the argument which is shared between the base and applied LSs. It receives the actor macrorole and ergative case. Its corresponding cross-reference receives nominative case. The second-highest ranking argument is *Thangte,* the relinquee, which receives absolutive case and accusative cross-reference.

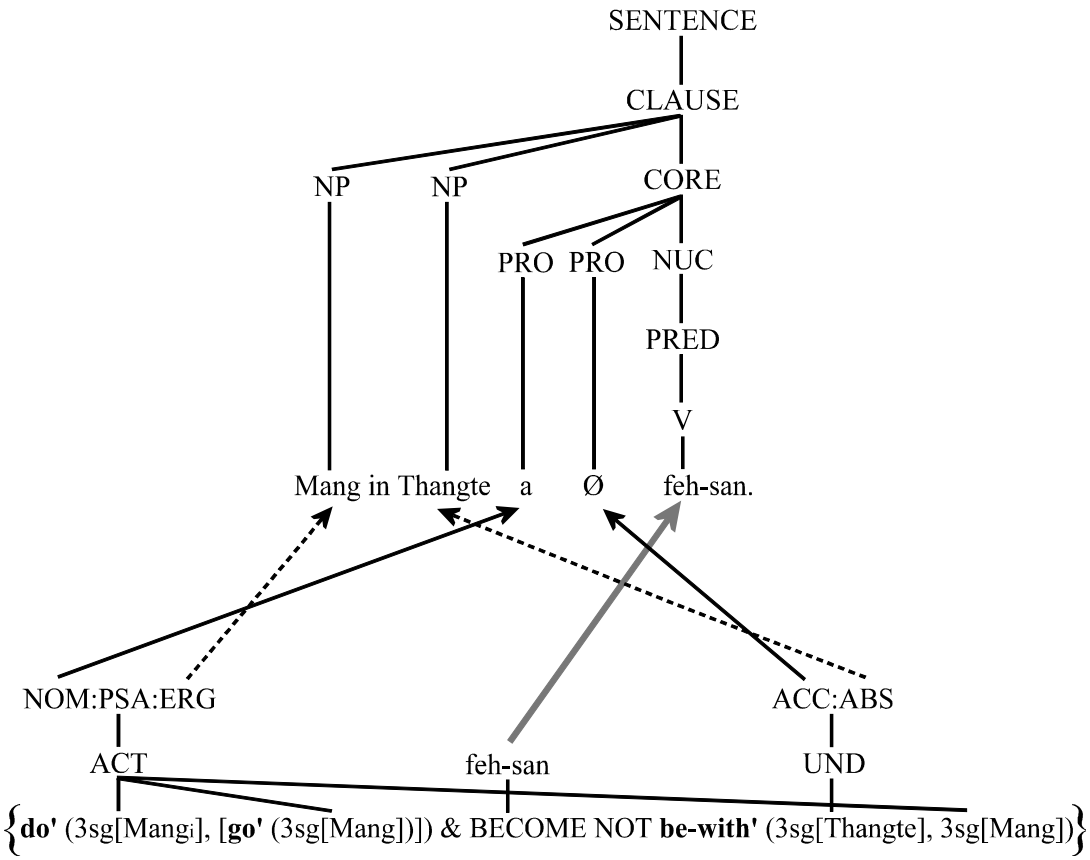


Figure 5.2: Relinquitive applicative

In summary, this section has argued that applicatives are lexical operations which fuse an applied LS to a base LS by means of a lexical rule. While the details of the semantics vary for each applicative, the applied argument in every case is the new second-highest ranking argument of the construction. With base intransitive predicates, the M-transitivity of the predicate is raised, as demonstrated by coding and behavioral properties of the applied clause. Nevertheless, no special rules of applicatives need be posited in order to account for these changes; they result from the application of the linking algorithm to the new, fused LS.

5.1.2 ***Base transitive applicatives***

In this section, the focus is on base transitive applicatives, using examples of benefactives and malefactives to illustrate the discussion. The two major cross-linguistic patterns for applicatives, as presented in Chapter 1, are the non-double object languages and the double object languages, or Principle A and Principle B languages, respectively. These are distinguished by which of two possible arguments is treated as more "object-like"—in RRG terms, which argument is the undergoer. As Baker (1988) points out, languages of the first type appear to categorically lack morphological applicatives. For this reason, much of the literature on applicatives has focused on double object languages and on the distinction between their two subtypes: true double accusative (or symmetric) and partial double object (or asymmetric) languages/constructions (e.g., Baker 1988; Alsina & Mchombo 1990; Bresnan & Moshi 1990; Anagnostopoulou 2003; McGinnis 2001; Pylkkänen 2002, 2008; Jeong 2007). Whereas in the first type the applied argument and the theme appear to share object properties equally, in the second type the applied argument has all object properties, while the theme has few or none.

Before examining the argument properties of Falam Chin base transitive applicatives, I first discuss the lexical rules for benefactives and malefactives. As argued previously, the benefactive morpheme in Falam is capable of expressing *recipient*, *plain*, or *deputative* meaning, although the deputative meaning is perhaps the most common interpretation. While only the second two are possible with base intransitive predicates, all three meanings are possible with base transitive predicates. These types are illustrated,

respectively, in (5.14), (5.15), and (5.16). For each example, (a) shows a non-valence-raised alternative, while (b) shows the corresponding applicative construction.

(5.14) a. Parte in (Thangte hrang=ah) hmeh a suang.
Parte ERG Thangte for=LOC curry 3SG.NOM cook.1
'Parte cooked some curry (for Thangte).'

b. Parte in Thangte hmeh a **suan-sak**.
Parte ERG Thangte curry 3SG.NOM **cook.2-BEN**
'Parte cooked Thangte some curry.'

(5.15) a. Parte in (na hrang=ah) hla a sak.
Parte ERG 2SG for=LOC song 3SG.NOM sing
'Parte sang a song (for you).'

b. Parte in hla a lo **sak-sak**.
Parte ERG song 3SG.NOM 2SG.ACC **sing.2-BEN**
'Parte sang you a song.'

(5.16) a. Mang in (Thangte hrang=ah) khur a lai.
Mang ERG Thangte for=LOC hole 3SG.NOM dig.1
'Mang dug a hole (for Thangte).'

b. Mang in Thangte khur a **laih-sak**.
Mang ERG Thangte hole 3SG.NOM **dig.2-BEN**
'Mang dug a hole for Thangte.'

The LS for each type of benefactive, as proposed by Jolly (1991), is slightly different. Recipient benefactives fuse the LS … PURP [BECOME **have'** (z, y)] to the base LS, while plain benefactives fuse the LS … PURP [BECOME **experience'** (z, y)] to the base LS. In both cases, an applied argument (*z*) is predicated to either have or experience the *y* variable, which is equal to the theme of the base LS. Deputative benefactives fuse the LS … PURP [NOT **do'** (y, [**pred'** (z, y]), where **pred'** is equal to the base predicate (Jolly 1991; Van Valin & LaPolla 1997). In this case, the applied

argument (*z*) has a task done in his behalf. In all three rules, an element of the fused LS is shared with the base LS. The resulting lexical rules are shown in (5.17).

(5.17) *Lexical rules for morphological benefactive verbs:*
a. recipient benefactive: α + *-sak* → {α PURP [BECOME **have'** (z, y)]}
b. plain benefactive: α + *-sak* → {α PURP [BECOME **experience'** (z, y)]}
c. deputative benefactive: α + *-sak* → {α PURP [NOT **do'** (z, [**pred'** (z, y)])}

Malefactives are similar to benefactives in that the applied argument is affected by the base predicate. However, the added participant in a malefactive construction is negatively affected. In (5.18), the maleficiary has a possession taken away, whereas in (5.19), the maleficiary has a possession damaged.

(5.18) Thangte in ka kawr **i** **ruk-sak**.
Thangte ERG 1SG shirt 1SG.ACC **steal.2-MAL**
'Thangte stole my shirt from **me**.'

(5.19) Mang in ka kawr **i** **thlek-sak**.
Mang ERG 1SG shirt 1SG.ACC **tear-MAL**
'Mang tore my shirt on **me**.'

Based on this semantic information, it appears that the lexical rules for malefactives are similar to those of recipient and plain benefactives, with the addition of a NOT operator to the predicate. Furthermore, the PURP operator must be replaced by a CAUSE operator, since the action of the malefactor may or may not be purposefully intended to cause harm. These lexical rules are shown in (5.20).

(5.20) *Lexical rules for morphological malefactive verbs:*
a. removal malefactive: α + *-sak* → {α CAUSE [BECOME NOT **have'** (z, y)]}
b. plain malefactive: α + *-sak* → {α CAUSE [BECOME NOT **experience'** (z, y)]}

Having formulated lexical rules for both benefactives and malefactives, I turn now to discussion of the properties of Falam Chin base transitive applicatives. It was argued in Chapters 3 and 4 that Falam Chin is a double object language for both

ditransitives and causatives. Examples (5.14b) and (5.16b) supply some initial evidence that this is also true of Falam Chin applicatives. Each of these examples includes an applied and a theme argument, both of which are direct (absolutive case); thus, it is a double object construction. The applied argument is not oblique as would be expected in a non-double object language. Since double object languages appear to be the exclusive domain of morphological applicatives (Baker 1988) (and since Falam Chin clearly includes morphological applicatives), this result is typologically expected.

At this point, no evidence has yet been presented for the undergoer status of the applied object. However, it seems to be a universal characteristic of applicatives that the applied object is more syntactically privileged than the theme (*Marantz's Generalization;* Baker 1988:246; cf. Marantz 1982, 1984). This is also predicted by the RRG account. The LSs in (5.17) and (5.20) each result in the same configuration of arguments such that the *z* variable, the applied argument, is the second-highest ranking argument of the new LS. If, as I have argued in Chapter 4, Falam Chin follows Principle B of the AUH (choose the second-highest ranking argument as undergoer), this predicts that applied objects, as well as recipients and causees, should be the undergoer. Thus, on both typological and theoretical grounds, I take this as an initial hypothesis.

The double object construction is also possible with maleficiaries, as well as beneficiaries (5.21).

(5.21) Cinte in **Parte** **paisa** a lak-sak.
Cinte ERG Parte money 3SG.NOM take.2-MAL
'Cinte took **money** from **Parte**.'

However, if a third person maleficiary is specifically said to possess the thing which is taken or negatively affected, it must be recovered from a possessive phrase (5.22b) or from an argument of an embedded clause (5.23).

(5.22) a. *Thangte in **Mang** a kawr a ruk-sak.
Thangte ERG Mang 3SG shirt 3SG.NOM steal.2-MAL
'Thangte stole Mang's shirt from him.'

b. Thangte in **Mang ih kawr** a ruk-sak.
Thangte ERG Mang GEN shirt 3SG.NOM steal.2-MAL
'Thangte stole **Mang's shirt** from him.'

(5.23) Mang in **[Cinte$_j$** ih ___$_i$ cin=mi] anṭam$_i$ a **phawi-sak$_j$**.
Mang ERG Cinte GEN plant.2=REL mustard 3SG.NOM **pull.out-MAL**
'Mang pulled out the mustard$_i$ [which **Cinte$_j$** planted ___$_i$] against her$_j$.'

It may seem unusual at first that the maleficiary is embedded in another phrase or clause, considering the claim just made that the maleficiary is the undergoer of the clause. How can the undergoer be a possessor or an argument within an embedded clause? However, these examples simply reinforces the claim that Falam Chin is a head-marking language. As argued previously, the actor and undergoer core arguments are represented by cross-reference. In the case of (5.22b) and (5.23), the accusative cross-reference takes a zero form, while in (5.18) and (5.19), the accusative cross-reference is overt. The semantic phrases at the clause level provide us with further information about these core arguments, but there is no strict agreement relationship between them. It is possible to have a possessor or an embedded argument enhancing our knowledge of who the affected participant actually is.

As argued in Chapter 4, a crucial test of undergoer status is cross-reference. Example (5.15b), for example, shows that while the applied argument cannot be cross-

referenced in the corresponding non-applicative variant (5.15a), it must be cross-referenced in the applicative. Similarly, the benefactives in (5.24) and (5.25) show that the first person beneficiary (1sg) must be cross-referenced, supporting the status of the applied argument as the undergoer.

(5.24) Parte in **Mang** **hnen=ah** cabu **i** hei **ken-sak**.
Parte ERG Mang to=LOC book 1SG.ACC at bring.2-BEN
'Parte brought a book **to Mang** for **me**.'

(5.25) Thangte in **Parte** paisa **i** **rulh-sak.**
Thangte ERG Parte money 1SG.ACC repay.2-BEN
'Thangte repaid **Parte** for **me**.'

Cross-referencing of a recipient, however, does not seem to be equally possible in the applicative construction, as seen in the ungrammaticality of (5.26) and (5.27).

(5.26) *Parte in **Mang** **hrang=ah** cabu **i** rak **ken-sak**.
Parte ERG Mang for=LOC book 1SG.ACC come bring.2-BEN
'Parte brought **me** a book **for Mang**.'

(5.27) *Thangte in **Parte** **hrang=ah** paisa **i** **rulh-sak.**
Thangte ERG Parte for=LOC money 1SG.ACC repay.2-BEN
'Thangte repaid **me for Parte**.'

The reason for the grammaticality of (5.24) and (5.25) versus the ungrammaticality of (5.26) and (5.27) can be shown by examining the macrorole linking for (5.24) and (5.26), as shown in Figure 5.3 (for the sake of brevity, a duplicate section of the SR has been omitted in each case). In Figure 5.3a (corresponding to (5.24)), the second-highest ranking argument (1sg) is chosen as the undergoer macrorole, satisfying Principle B of the AUH. Thus, the sentence is grammatical. In Figure 5.3b (corresponding to (5.26)), on the other hand, a lower-ranking argument, the recipient

(1sg), is chosen as undergoer, violating Principle B. The sentence is therefore ungrammatical.

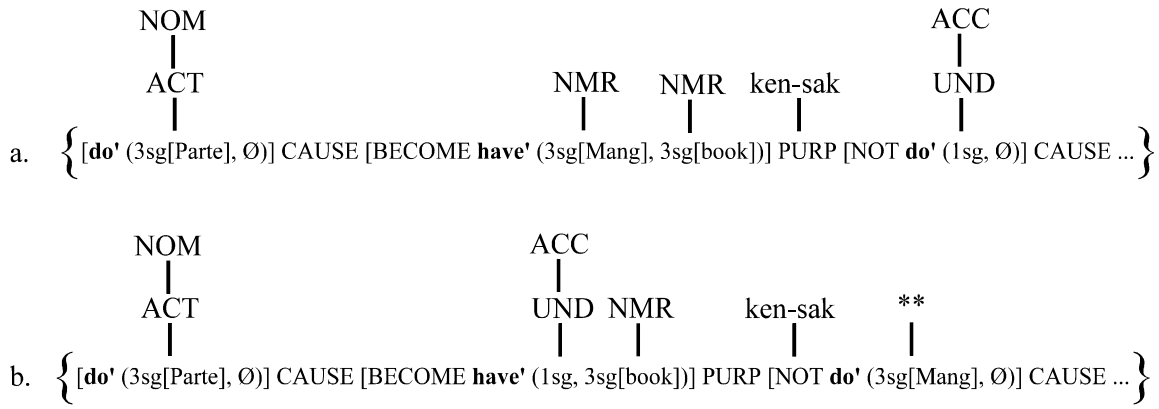


Figure 5.3: Macrorole assignment for (5.24) and (5.26)

This data further confirms what has been already shown with causative data: the applied argument, or more generally, the second-highest ranking argument, is the default undergoer. Marked linking in morphological applicatives is ungrammatical.

What then is the grammatical expression of a SR such as that found in Figure 5.3b? One possibility is to leave the first person semantics unexpressed in the cross-reference, as in (5.28a) and (5.29a). However, even with overt first person NPs in the clause, these sentences are ungrammatical. This is because these sentences violate the person requirement, formulated in (4.17): Any argument of the LS with first or second person features must be realized as cross-reference *of its semantic predicate* in the syntactic representation. It may be questioned why the relational noun cross-reference in (5.28a) does not fufill the person requirement. The reason is that the recipient is an argument of the higher predicate, *kensak* ‘bring for’, rather than simply an argument of

the relational noun. The cross-reference must mark this predicate in order to fulfill the person requirement.

(5.28) a. *Parte in **ka hnen=ah Mang hrang=ah** cabu **a** rak **ken-sak**.
Parte ERG 1SG to=LOC Mang for=LOC book 3SG.NOM come bring.2- BEN
'Parte brought a book **to me for Mang**.'

b. Parte in **Mang hrang=ah** cabu **i** rak **ken**.
Parte ERG Mang for=LOC book 1SG.ACC come bring.to
'Parte brought **me** a book **for Mang**.'

(5.29) a. *Thangte in **Parte hrang=ah (keimah)** paisa **a** **rulh-sak.**
Thangte ERG Parte for=LOC 1sg.STD money 3SG.NOM repay.2-BEN
'Thangte repaid **me for Parte**.'

b. Thangte in **Parte hrang=ah** paisa **i** **rul.**
Thangte ERG Parte for=LOC money 1SG.ACC repay.1
'Thangte repaid **me for Parte**.'

By contrast, (5.28b) and (5.29b) show grammatical expressions of the desired meaning. These, however, are non-valence raised alternative expressions of the applied constructions.

The two macrorole linking possibilities for (5.28a&b) are shown in Figure 5.4a&b. In the first option, Figure 5.4a, the second-highest ranking argument, the beneficiary (*Mang*), is chosen as undergoer, fulfilling Principle B. However, this leaves first person specifications without cross-reference, violating the person requirement. The second option, however, shown in Figure 5.4b, represents a non-valence raised alternative with an unfused SR. In this case, the second-highest ranking argument is the recipient (1sg), since the elements outside the curved brackets can be ignored by the AUH. In this scenario, both requirements are satisfied in a single argument.

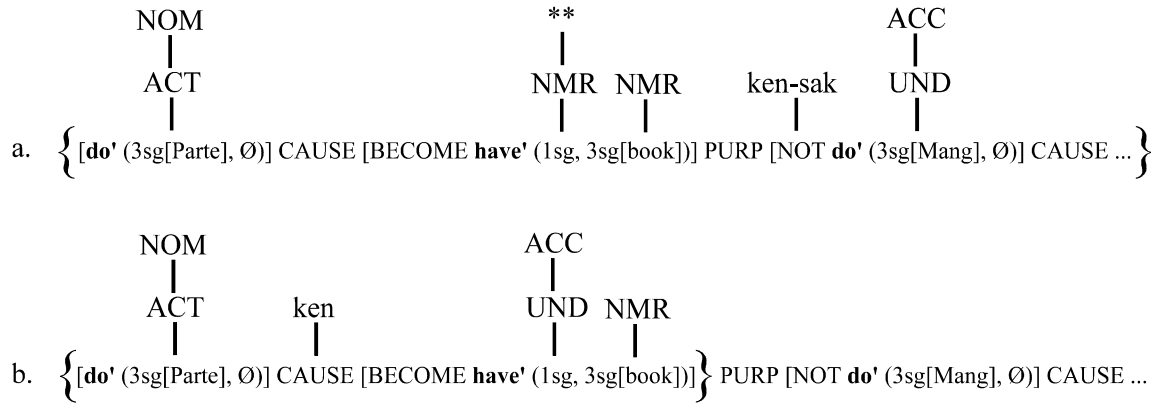


Figure 5.4: Macrorole assignment for (5.28a&b)

Thus, in cases where there is a conflict between Principle B and the person requirement, a non-valence raised construction must be used in order for both to be satisfied.

As I have argued in Chapter 4, the person requirement lends further weight to the identification of Falam Chin cross-reference as more than a simple agreement mechanism. Cross-reference is, in fact, necessary to fulfill the Completeness Constraint (3.51), which states, "All of the arguments explicitly specified in the semantic representation of a sentence must be realized syntactically in the sentence." The ungrammaticality of (5.28a) and (5.29a) confirms that cross-reference fills the role of a core argument; it must be present in order to satisfy the Completeness Constraint.

In addition to the behavior of cross-reference in applicatives, further evidence for the undergoer status of the applied argument can be found in reciprocal applicatives. In reciprocal applicatives, the actor and the applied argument are coreferential, as seen in (5.30) and (5.31).

(5.30) Cinte le Parte$_i$ pangpar an **lei-sak-aw$_i$**.
Cinte and Parte flower 3PL.NOM buy-BEN-RECP
'Cinte and Parte$_i$ **buy** flowers **for each other$_i$**.'

(5.31) Cinte le Parte$_i$ paisa an **ruk-sak-aw$_i$**.
Cinte and Parte money 3PL.NOM steal.2-MAL-RECP
'Cinte and Parte$_i$ **steal** money **from each other$_i$**.'

Supposing Principle B to be in effect, the reciprocal applied argument would receive undergoer status. However, as discussed further in Chapter 6, a coreferential actor and undergoer within the same core share a single macrorole in Falam Chin. This makes the correct prediction for (5.30) and (5.31), whose actors, *Cinte and Parte,* lack the expected ergative marking, despite the fact that *leisak* 'buy for' and *ruksak* 'steal from' are ostensibly three argument predications. This is because the applied arguments share a single macrorole with their antecedents. Thus, the clause is intransitive. If, however, the undergoer macrorole were assigned to the theme in such cases, the clause would be expected to be transitive, since the actor is not coreferential with the theme.

To summarize, the direct status of the argument, the behavior of cross-reference, and the behavior of reciprocal constructions indicates that an applied argument is the undergoer in applicative constructions in Falam Chin, having a greater share of syntactic properties than the theme. Nevertheless, like the theme of the causative construction, the theme of an applicative shares some core argument properties with the applied argument. Both are direct, rather than oblique (5.14b) and (5.16b), and both can take topic marking (5.32) and be left-dislocated (5.33).

(5.32) a. Parte in **Thangte cu** hmeh a **suan-sak**.
Parte ERG Thangte TOP curry 3SG.NOM **cook.2-BEN**
'Parte cooked **Thangte** some curry.'

b. Parte in **hmeh cu** Thangte a **suan-sak**.
Parte ERG curry TOP Thangte 3SG.NOM **cook.2-BEN**
'Parte cooked Thangte **the curry**.'

(5.33) a. **Thangte cu** Parte in hmeh a **suan-sak**.
Thangte TOP Parte ERG curry 3SG.NOM **cook.2-BEN**
'As for **Thangte**, Parte cooked him some curry.'

b. **Hmeh cu** Parte in Thangte a **suan-sak**.
curry TOP Parte ERG Thangte 3SG.NOM **cook.2-BEN**
'As for **the curry**, Parte cooked it for Thangte.'

The property of relativization provides uncertain evidence in this case. The theme argument can be extracted for relativization, as in (5.34).

(5.34) **[Cinte ih ___$_i$ a suan-sak=mi] hmeh$_i$ cu**
Cinte ERG 3SG.NOM cook.2-BEN=REL curry TOP

nauhak-pa in rang zet=in a ei.
boy-MASC ERG quick very=AJT 3SG.NOM eat
'The boy quickly ate **the curry$_i$ [which Cinte cooked ___$_i$ for him]**.'

However, my language consultants did not seem comfortable with extraction of applied arguments when accompanied by a theme, and sought to encode the desired meaning in an alternate way. They accepted my constructed examples only after much discussion (5.35). This suggests that Falam disfavors extraction of applied arguments when a theme is available for extraction.[96]

(5.35) **?[Cinte ih ___$_i$ hmeh a suan-sak=mi] nauhak-pa$_i$** in
Cinte ERG curry 3SG.NOM cook.2-BEN=REL boy-MASC ERG

rang zet=in a ei.
quick very=AJT 3SG.NOM eat
'**The boy$_i$ [for whom Cinte cooked the curry$_i$**] ate it quickly.'

In conclusion, direct argument status, cross-reference and reciprocals show that the applied argument is the undergoer of a Falam Chin morphological applicative

[96] I do not attempt to explain this asymmetry of undergoer extraction behavior here. However, it has been documented in other languages of the world that oftentimes benefactives and recipients resist extraction, even when they are clearly undergoers according to other properties (Baker 1998; Alsina & Mchombo 1990).

construction. On the other hand, topic marking and left-dislocation suggest that the theme is still a core, but non-macrorole, argument. While the extraction facts are not clear, the applied object is still in many ways more syntactically privileged than the theme. As has been shown from both ditransitive and causative data as well, Falam Chin is a double object language of the asymmetric type, following Principle B of the AUH. Moreover, Principle B is the key generalization which captures the behavior of ditransitive, causative, and applicative constructions both in Falam Chin and in all double object languages—a generalization which is made by reference to underlying LS representations produced as the output of lexical rules.

As was true for intransitive base verbs, transitive base applicatives require no construction-specific rules beyond the application of the lexical rule for each type. This can be demonstrated by comparing the linking process for benefactive and malefactive applicatives. First, the LSs for *hla sak* 'sing' and the corresponding benefactive *hla saksak* 'sing for' are shown in (5.36), following the lexical rule for plain benefactives given in (5.17b). In addition, the SR for (5.15b) is shown.

(5.36)

a.	LS for *hla sak* 'sing'	**do'** (x, [**sing'** (x, y)])
		⬇
b.	LS for *hla saksak* 'sing for'	{[**do'** (x, [**sing'** (x, y)])] PURP [BECOME **experience'** (z, y)]}
c.	SR for (5.15b)	{[**do'** (3sg[Parte], [**sing'** (3sg[Parte], 3sg[hla])])] PURP [BECOME **experience'** (2sg, 3sg[hla])]}

Likewise, the LSs for *ru ~ ruk* 'steal' and the corresponding malefactive *ruksak* 'steal from' are given in (5.37), following the lexical rule given in (5.20). The SR for (5.18) is also provided. In both cases the *z* variable, the applied argument, is the second-

highest ranking argument of the fused predicate, and is, thus, the default choice for undergoer.

(5.37) a. LS for *ru* ~ *ruk* 'steal' **do'** (x, [**steal'** (x, y)]) & BECOME **have'** (x, y)

b. LS for *ruksak* 'steal (from)' {[**do'** (x, [**steal'** (x, y)]) & BECOME **have'** (x, y)] CAUSE [BECOME NOT **have'** (z, y)]}

c. SR for (5.18) {[**do'** (3sg[Thangte], [**steal'** (3sg[Thangte], 3sg[ka kawr])]) & BECOME **have'** (3sg[Thangte], 3sg[ka kawr)] CAUSE [BECOME NOT **have'** (1sg, 3sg[ka kawr])]}

In Figure 5.5, the linking for (5.15b) is shown.

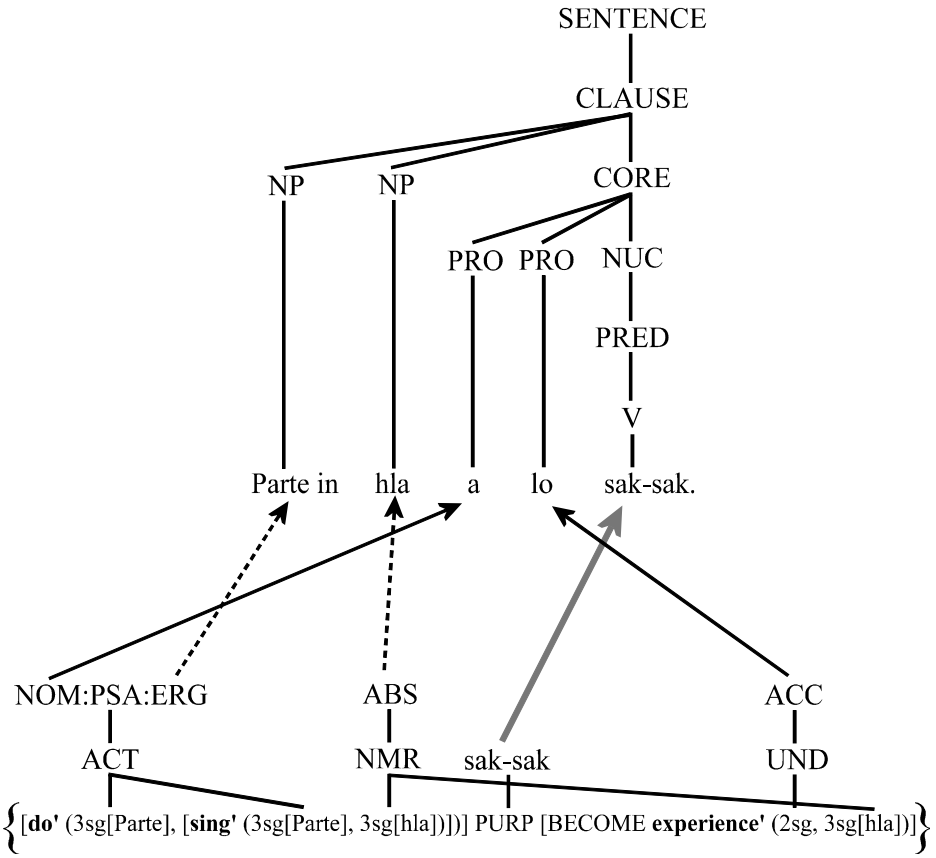


Figure 5.5: Benefactive applicative

Since the highest-ranking NP is *Parte*, it receives actor status and ergative marking. Its cross-reference specifications take accusative case. The beneficiary (2sg) is the second-highest ranking argument; thus, it receives undergoer status and its cross-reference specifications receive accusative case. The remaining argument, *hla* 'song', is still a core argument, but a non-macrorole argument, and receives absolutive case as a default. Finally, the cross-reference forms, NPs, and predicate are assigned to the syntactic structure according to default rules.

There is some dialectal difference regarding the use of relational nouns, e.g., *hrang* 'for', with the beneficiary in a benefactive applicative. Some language consultants felt that even with the valence-raised form the relational noun should be used, stating it would be "more complete." Others felt that the relational noun should not be used with the valence-raised form (5.38).

(5.38) Parte in Cinte **?hrang=ah** hla a sak-**sak**.
Parte ERG Cinte for=LOC song 3SG.NOM sing-BEN
'Parte sang a song for Cinte/sang Cinte a song.'

The reason for this discrepancy may be dialectal. If Principle B has chosen the beneficiary as undergoer, we would expect it to receive absolutive case per the case assignment rules for NPs (3.50). This supposition would accord with the intuitions of those language consultants who preferred not to use the relational noun. But what of those consultants who favored using it? One possibility is that, despite the valence-raising morphology, these speakers have chosen the theme, not the beneficiary, as undergoer. However, such marked linking was not a possibility with morphological causatives, nor is

it possible with other types of applicatives. In addition, the non-valence raised option makes marked linking superfluous. Therefore, this explanation seems unlikely.

A second possibility is that the NP can be assigned lexical case, even though its corresponding cross-reference has undergoer status. In Chapter 4, one lexical rule for locative case was given as in (5.39a) to account for recipient or goal uses of locative case (see (4.38)). A second rule is proposed in (5.39b) to account for benefactive uses of locative case.

(5.39) *NP lexical case assignment rules for Falam Chin: locative case*
   a. Assign locative case (*ah*) and the relational noun *hnen* 'to' to the (non-macrorole) NP of the *y* argument in LS segment: … CAUSE [BECOME/INGR **pred'** (y, z)].
   b. Assign locative case (*ah*) and the relational noun *hrang* 'for' to the (non-macrorole) NP of the *y* argument in LS segments:
      i. … PURP [BECOME/INGR **pred'** (y, z)] or
      ii. … PURP [NOT **do'** (z, [**pred'** (z, y)]).

The key term in this rule is *non-macrorole*. For speakers who include the phrase "non-macrorole" in their rule, locative case would become ungrammatical once the argument had been assigned undergoer status. However, if some speakers omit the phrase "non-macrorole" from the rule, then its application would be based on position in the LS of the predicate only, and not on macrorole status. Thus, for some speakers, locative case is necessary with the beneficiary even when it has been assigned undergoer macrorole status.

This treatment of beneficiary NPs is in some ways similar to the treatment of non-direct maleficiary NPs described earlier in this chapter. In both cases, it appears that, despite the undergoer status of the applied argument, its NPs are not direct. Once again, this is of interest for the claim that Falam is a head-marking language whose cross-

reference pronominals are the core arguments. If indeed the relationship between the cross-reference and the NPs is one of apposition, rather than strict agreement, it does not seem so remarkable to find that the corresponding NP can take locative marking. If, however, the benefactive NP itself is the undergoer core argument, it is difficult to explain how it can at the same time be oblique.

Identical linking takes place with the malefactive in (5.18), as shown in Figure 5.6. The highest-ranking argument, *Thangte,* receives the actor macrorole, ergative case and nominative cross-reference.

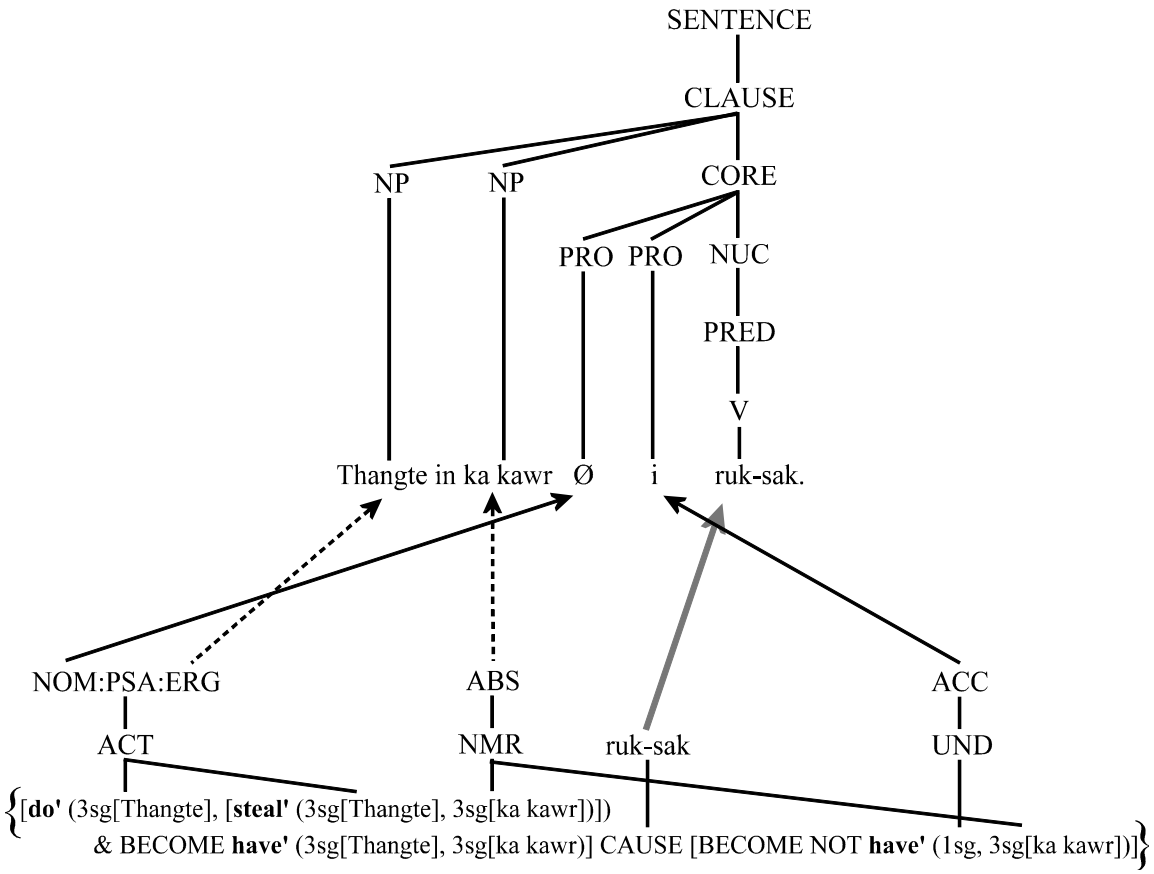


Figure 5.6: Malefactive applicative

The second-highest-ranking argument (1sg) receives the undergoer macrorole and accusative cross-reference. Finally, the remaining argument, *ka kawr* 'my shirt', is a non-macrorole argument and receives absolutive case as a default. Cross-reference, NPs, and the predicate are assigned to the syntax as usual.

The constructional schema in Table 5.1 summarizes the features of Falam Chin morphological applicatives, as described in the preceding sections. Its similarity to the morphological causative constructional schema underscores the similarity of the two constructions.

Table 5.1: Constructional schema for Falam Chin morphological applicatives

CONSTRUCTION
Falam Chin applicative constructions
SYNTAX
Template: Default
PSA: Default
Linking: Default: Principle B of AUH
MORPHOLOGY
Benefactive/malefactive verb: Stem 2 V + *-sak*
Comitative verb: Stem 2 V + *-pi*
Relinquitive verb: Stem 2 V + *-san*
SEMANTICS
Recipient benefactive: α + *-sak* → {α PURP [BECOME **have'** (z, y)]}
Plain benefactive: α + *-sak* → {α PURP [BECOME **experience'** (z, y)]}
Deputative benefactive: α + *-sak* → {α PURP [NOT **do'** (z, [**pred'** (z, y)])}
Removal malefactive: α + *-sak* → {α CAUSE [BECOME NOT **have'** (z, y)]}
Plain malefactive: α + *-sak* → {α CAUSE [BECOME NOT **experience'** (z, y)]}
Comitative: α + *-pi* → {α_1 ^ α_2}
Relinquitive: α + *-san* → {α & BECOME NOT **be-with'** (y, x)}
PRAGMATICS
Illocutionary force: Unspecified
Focus structure: Unspecified

As with causatives, the syntax follows default rules of template, PSA, and macrorole selection. The differences between causative and applicative constructions are found in

their distinct morphology and distinct lexical rules, as described in the MORPHOLOGY and SEMANTICS sections. PRAGMATICS shows that an applicative construction is compatible with any type of illocutionary force or focus structure.

5.1.3 Non-valence raised applicative alternatives

I have argued in the previous sections that valence-raising lexical rules for both causatives and applicatives fuse two LS elements into one. As a result, the arguments of the two LSs are treated as coarguments of a single LS, a claim supported by the syntactic behavior of morphological causatives and applicatives. On the other hand, it is also supported by the existence of alternate structures which, although they communicate identical semantics, lack the syntactic properties of a valence-raised construction. As briefly discussed in §5.1.2, such non-valence raised structures become obligatory when Principle B and the person requirement would otherwise be in conflict. In this section I further demonstrate that, although the LS representation for each type is identical, they differ in that the valence-raised applicative is fused, whereas the non-valence raised alternate is complex, but unfused. The four applicative types are discussed here: benefactives, malefactives, comitatives, and reliquitives.

Two non-valence raised benefactive alternatives, originally given as (5.28b) and (5.29b), are repeated here as (5.40) and (5.41).

(5.40) Parte in **Mang** **hrang=ah** cabu **i** rak **ken**.
Parte ERG Mang for=LOC book 1SG.ACC come bring.to
'Parte brought **me** a book **for Mang**.'

(5.41) Thangte in **Parte** **hrang=ah** paisa **i** **rul.**
Thangte ERG Parte for=LOC money 1SG.ACC repay.1
'Thangte repaid **me for Parte**.'

In each case, the recipient argument is first person. In a fused LS, such a configuration results in a conflict between Principle B of the AUH and the person requirement (as shown in Figure 5.3b and Figure 5.4a). However, if the LSs are not fused, they are treated separately by the linking algorithm and in the ultimate syntactic representation. As a result, neither principle is violated (Figure 5.4b), and the Completeness Constraint is fulfilled—all arguments in the SR are portrayed in the syntactic structure.

As a contrast to the linking shown in Figure 5.5 for the valence-raised benefactive applicative, the complete linking process for a non-valence raised benefactive alternative ((5.15a), repeated here as (5.42)) is shown in Figure 5.7.

(5.42) Parte in (na hrang=ah) hla a sak.
Parte ERG 2SG for=LOC song 3SG.NOM sing
'Parte sang a song (for you).'

As may be seen by comparision with Figure 5.5, the SR for the applicative and the non-valence raised construction are identical. However, the curly brackets in the SR in Figure 5.7 distinguish the LS representing the main predicate *hla sak* 'sing' from the LS representing the relational noun *hrang* 'for'. In unfused constructions like (5.42), only the arguments within the brackets are eligible for macrorole status. Thus, the highest-ranking NP, *Parte,* is chosen as actor and receives ergative marking and nominative case cross-reference. Unlike the valence-raised applicative, the second-highest ranking NP is *hla* 'song'. This NP is chosen as undergoer, receives absolutive case and accusative cross-reference. The single variable of the SR outside of the brackets which has not already

been accounted for (2sg) is not eligible for macrorole status, but is assigned to the clause as an argument-adjunct (Van Valin & LaPolla 1997) and follows the rule of lexical case proposed in (5.39b). Because the second LS is not fused with the first LS, the fact that second person features are not cross-referenced on the verb does not violate the person requirement.

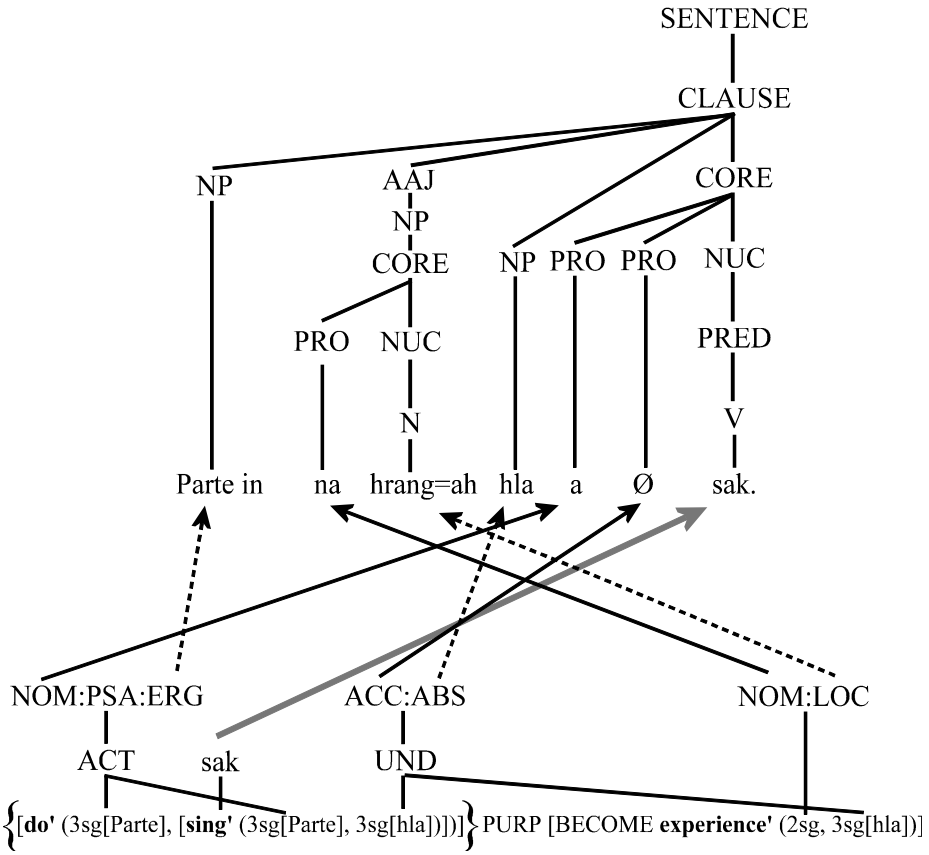


Figure 5.7: Benefactive alternative

Benefactives can nearly always be expressed by either the benefactive applicative or the corresponding non-valence raised form. By contrast, a non-valence raised form of the malefactive is available only when a physical removal of the theme argument is intended (5.43a). The malefactive counterpart implicates a negative sense for the

maleficiary, indicating that the removal was unwanted or had a negative effect on the maleficiary (5.43b).

(5.43) a. Parte in **ka** **hnen=in** cabu a la.
Parte ERG 1SG to=ABL book 3SG.NOM take.1
'Parte took a book **from me**.'

b. Parte in ka cabu **i** lak-sak.
Parte ERG 1SG book 1SG.ACC take.2-MAL
'Parte took my book from **me**.'

The predicate used in this example, *la ~ lak* 'take', is of interest, as it is often considered to be intrinsically a three argument verb. However, the data in (5.43a) indicates that, although its LS is complex, it is unfused. If (5.43a) were based on a fused LS, it would require first person cross-reference to fulfill the person requirement. However, (5.43a) is perfectly grammatical. Fusion through a malefactive lexical rule is necessary in order for the AUH to recognize the first person specifications as eligible for macrorole status, as in (5.43b).

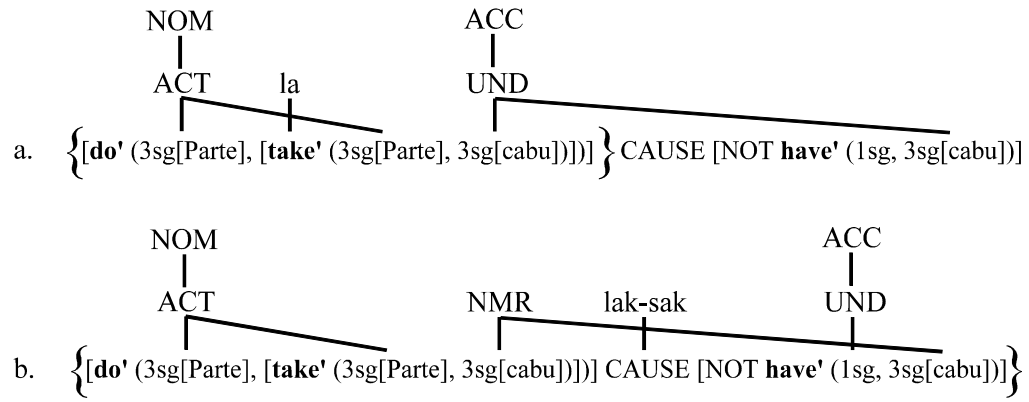


Figure 5.8: Macrorole assignment for (5.43a&b)

The two corresponding macrorole linking options are represented in Figure 5.8a&b, respectively. In Figure 5.8a, corresponding to (5.43a), the first person

specifications are not licensed for macrorole status. In Figure 5.8b, on the other hand (5.43b), the lexical rule has fused the two LSs, with the result that the first person specifications must be chosen for undergoer status.

Similar to the locative case assignment previously discussed, the assignment of ablative case in (5.43a) follows a rule of lexical case assignment for non-macrorole arguments, as formulated in (5.44) (cf. Van Valin & LaPolla 1997).[97]

(5.44) *NP lexical case assignment rules for Falam Chin: ablative case*
a. Assign ablative case (*in*) and relational noun *hnen* 'to' to the non-macrorole NP of the *z* argument in LS segment: … BECOME NOT **have'** (z, y)

Note that this is not intended to cover all uses of ablative case in Falam Chin. Discussion of comitative and relinquitive applicatives will add at least two more rules to this description.

There are two possible non-valence raised options for expressing comitative action. The first option simply compounds the two participants and may also append a suffix such as *-tlang* 'together' to the verb ((5.45a) and (5.46a)). The second option treats the co-participant as an argument-adjunct, using the relational noun *thaw* 'with', yet still cross-references both participants ((5.45b) and (5.46b)).

(5.45) a. **Cinte le kei** kan ṭap-**tlang**.
Cinte and 1SG.CTR 1PL.NOM cry.1-together
'**Cinte and I** cried **together**.'

b. **Cinte thaw=n kan** ṭap-tlang.
Cinte with=ABL 1PL.NOM cry.1-together
'**I** cried **with Cinte**.'[98]

[97] See Van Valin & LaPolla (1997) for a more general rule formulation which covers uses of 'from' and another which covers all uses of 'with', both of which are conveyed using ablative case in Falam Chin.
[98] The roles of the participants have been switched in this example for independent reasons.

(5.46) a. **Thangte le Mang** in anṭam an cing-**tlang**.
Thangte and Mang ERG mustard 3PL.NOM plant.1-together
‘**Thangte and Mang** planted the mustard **together**.’

b. Thangte cu **Mang thaw=n** anṭam **an** cing-tlang.
Thangte TOP Mang with=ABL mustard 3PL.NOM plant.1-together
‘Thangte planted the mustard **with Mang**.’

While these sentences share identical SRs with their comitative counterparts, they differ in that the predicates are not fused. Thus, the co-participant in these structures cannot be chosen as the undergoer macrorole, whereas in the fused structure, it must be.

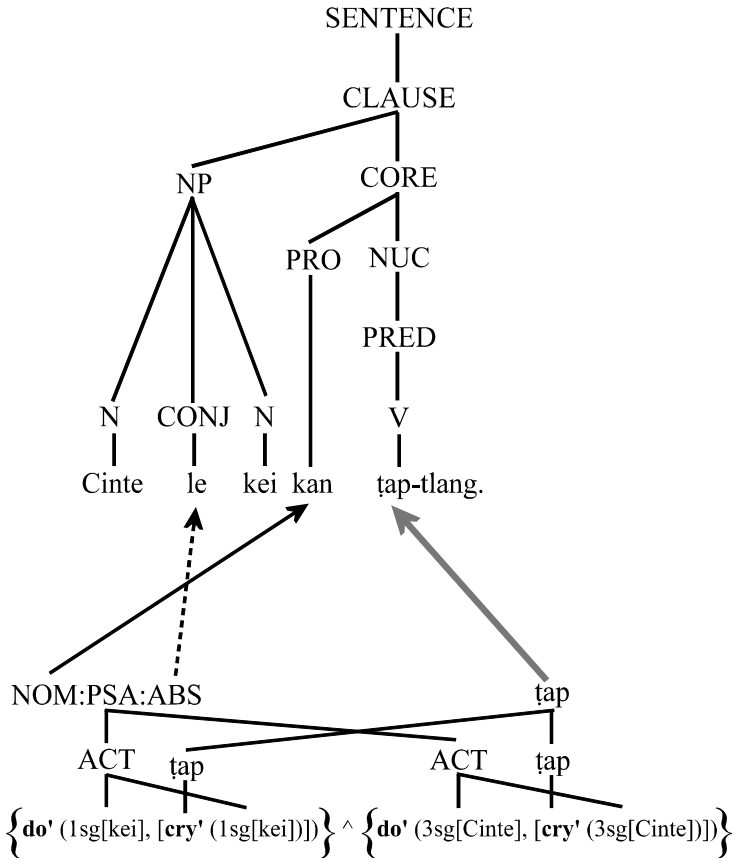


Figure 5.9: Comitative alternative a

The linking for the non-valence raised comitative type shown in (5.45a) is given in Figure 5.9. (Compare with Figure 5.1.) The highest-ranking arguments of each

individual predicate (*kei* '1SG.STD' and *Cinte*) are each assigned the actor macrorole of their predicate. However, because they share the same predicate, *ṭap* ~ *ṭah* 'cry', the actors can be collapsed into a single actor in a manner rather like factoring in mathematics, whereby 3x+3y=3(x+y). Thus, the predicate is extracted, leaving the variables to be combined (**do'** (x, [**cry'** (x)]) + **do'** (y, [**cry'** (y)]) = **do'** (x+y, [**cry'** (x+y)])).[99] As a result, the arguments are conjoined in the syntactic representation and jointly assigned absolutive case and nominative cross-reference.

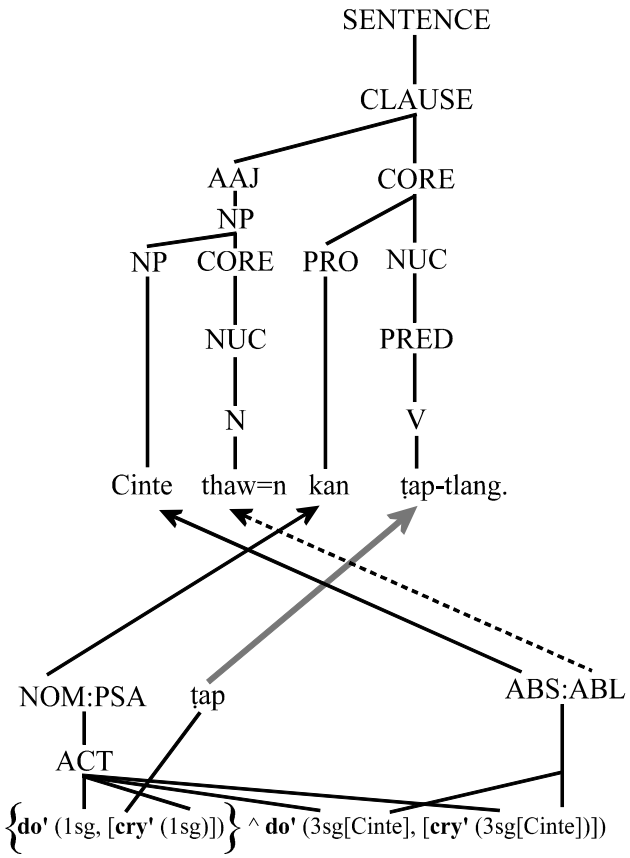


Figure 5.10: Comitative alternative b

[99] This will be found to be the case with reciprocal constructions as well.

Figure 5.10, on the other hand, represents the linking for (5.45b). In this case, only the highest-ranking argument of the first predicate is chosen as actor; the LS outside the brackets is not scanned by the AUH. Nevertheless, as noted previously, the cross-reference specifications for this construction are the sum of all the participants involved (*Cinte* + 1sg = 1pl). (This can be seen even more clearly in examples such as (5.46b): *Thangte* + *Mang* = 3pl.) Here we see yet another example of the loose linking between cross-reference and NPs, and evidence for the head-marking nature of Falam Chin. Thus, while the cross-reference indicates all the core semantic participants involved in the action, it is realized at the clause level partially as an oblique NP.

In Figure 5.10, the composite cross-reference specifications receive nominative case assignment. On the other hand, the single NP outside of the curly brackets, *Cinte*, is treated as an argument-adjunct and assigned the relational noun *thaw* 'with' plus ablative case. Ablative case is assigned based on a new rule of ablative case assignment formulated as in (5.47b).

(5.47) *NP lexical case assignment rules for Falam Chin: ablative case*
   a. Assign ablative case (*in*) and relational noun *hnen* 'to' to the non-macrorole NP of the *z* argument in LS segment: CAUSE [BECOME NOT **have'** (z, y)]
   b. Assign ablative case (*in*) and relational noun *thaw* 'with' to the non-macrorole NP of the highest-ranking argument in LS segment: … ^ α_2.

Finally, relinquitives with a literal motion meaning allow a non-valence raised option, as in (5.4a), repeated here as (5.48).

(5.48) Mang cu Thangte hnen=in a feh-hlo.
Mang TOP Thangte from=ABL 3SG.NOM go-flee
'Mang ran away from Thangte.'

The linking for (5.48) is shown in Figure 5.11. (Compare with Figure 5.2.)

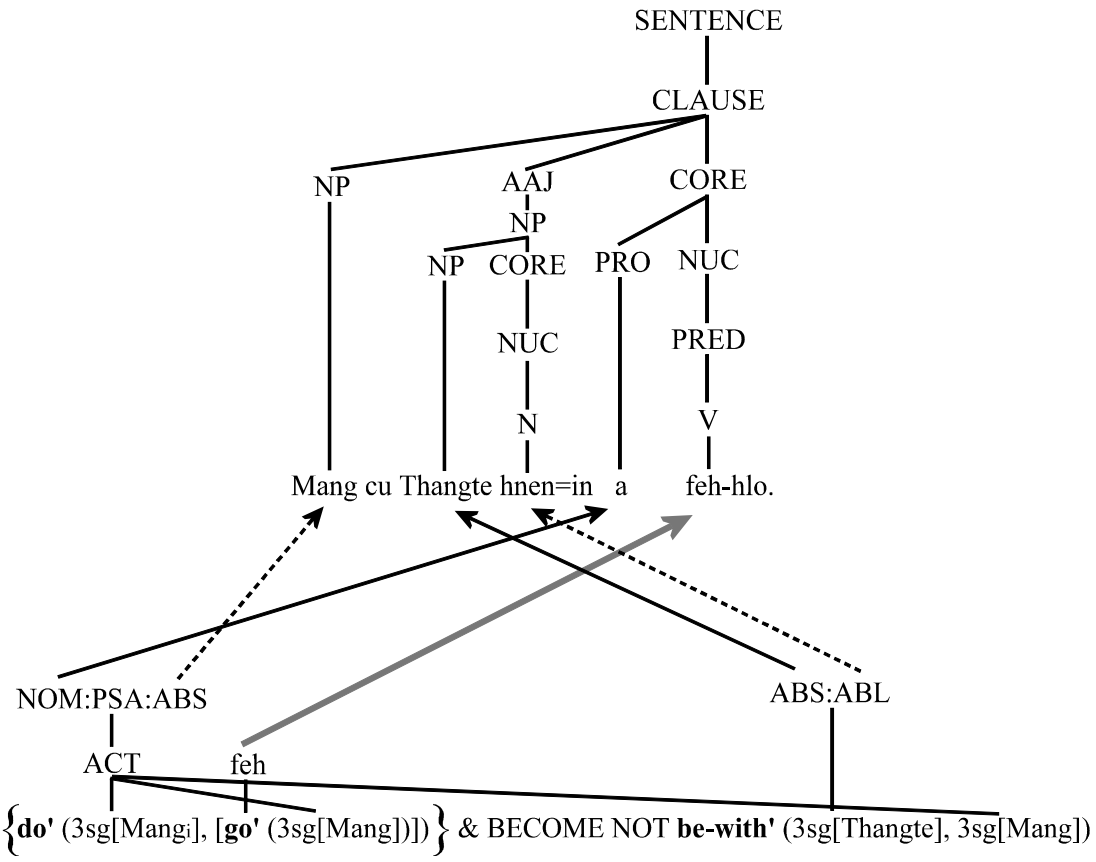


Figure 5.11: Relinquitive alternative

Although the SR is identical to that of the relinquitive applicative, the curly brackets delineate only the single argument of *feh* 'go' as available for a macrorole. Thus, the single argument of *feh* 'go', *Mang,* receives actor status and absolutive marking, and its corresponding cross-reference is nominative. The elements outside the curly brackets are treated as an argument-adjunct, and assigned ablative case, according to a rule of lexical case assignment.

The ablative case assignment rules for Falam Chin are revised in (5.49). Rule (5.49a) has been altered to include the relinquitive LS.

(5.49) *NP lexical case assignment rules for Falam Chin: ablative case*

a. Assign ablative case (*in*) and relational noun *hnen* 'to' to the non-macrorole NP of the *z* argument in LS segments:
   i. … CAUSE [BECOME NOT **have'** (z, y)] or
   ii. … & BECOME NOT **be-with'** (z, x).

b. Assign ablative case (*in*) and relational noun *thaw* 'with' to the non-macrorole NP of the highest-ranking argument in LS segment: … ^ α_2.

While theories of applicatives have generally ignored non-valence raised forms, it is clear from this discussion that they have an important role to play. In Principle A languages, they are the only available semantic equivalents of morphological applicatives, since these languages choose the lowest-ranking argument, the theme, as undergoer, leaving the applied argument an oblique. The fusion brought about by an applicative morpheme would be superfluous in such a language, as it would not alter the syntactic realization of the arguments, unless the applicative also forced marked linking. In a Principle B, or double object, language, on the other hand, fusion makes the difference between two possible realizations of arguments. In order to avoid violations of either Principle B or the person requirement, Falam Chin allows for both possibilities.

In conclusion, the clear distinction in coding and behavioral properties found in Falam Chin morphological applicatives as compared with their non-valence raised alternatives demonstrates the importance of distinguishing fused from complex, but unfused structures. In each case, the semantics of each type are identical, although the implicature of the construction may differ. Nevertheless, fusion results in a significantly different set of properties from unfused SRs. Morphological applicatives in Falam Chin appear to categorically block marked linking, opting instead for a non-valence raised

structure in order to satisfy both Principle B and the person requirement. Indeed, the availability of the non-valence raised option makes marked linking unnecessary.[100]

5.2 Falam Chin lexical applicatives

In addition to the morphological applicatives discussed above, Falam has a limited set of lexical applicatives. The most common subtype is benefactive, but there are a few lexical applicatives of other types as well. Lexical applicatives are usually formed by the addition of a no-longer productive morpheme, a glottal stop (spelled *-h*), to the base verb, although a few are formed following other stem 2 patterns.

When examining benefactive lexical applicatives, in many cases there exist three different ways of expressing the same concept: the non-valence raised construction ((5.50a) and (5.51a)), the valence-raised construction with benefactive morphology (*-sak*), and the lexical benefactive applicative ((5.50b) and (5.51b)).

(5.50) a. Parte in a nu=i **hrang=ah** pangpar a **lei**.
Parte ERG 3SG mother=GEN for=LOC flower 3SG.NOM buy
'Parte bought flowers for her mother.'

b. Parte in a nu pangpar a **lei-sak/leih**.
Parte ERG 3SG mother flower 3SG.NOM buy-BEN/buy.for
'Parte bought her mother some flowers.'

(5.51) a. Mang in a pi **hrang=ah** ti a **khai**.
Mang ERG 3SG grandmother for=LOC water 3SG.NOM draw
'Mang drew water for his grandmother.'

b. Mang in a pi ti a **khai-sak/khaih**.
Mang ERG 3SG grandmother water 3SG.NOM draw-BEN/draw.for
'Mang drew his grandmother some water.'

[100] See Conti (2009) for a rather different take on applicatives.

In such situations, it appears that the lexical benefactives are very similar to morphological benefactives, following one of the three lexical rules for morphological benefactives to add a beneficiary to the SR. To illustrate this, the LS for *lei* 'buy' is shown in (5.52a). The LS shown in (5.52b) could stand for either *leih* 'buy for' or *leisak* 'buy for'.

(5.52) a. LS for *lei* 'buy': **do'** (x, [**buy'** (x, y)]) & BECOME **have'** (x, y)
↓
b. LS for *leih* 'buy for': {[**do'** (x, [**buy'** (x, y)]) & BECOME **have'** (x, y)] PURP [BECOME **have'** (z, y)]}
c. SR for (5.50): {[**do'** (3sg[Parte], [**buy'** (3sg[Parte], 3pl[pangpar])]) & BECOME **have'** (3sg[Parte], 3pl[pangpar])] PURP [BECOME **have'** (3sg[a nu], 3pl[pangpar])]}

However, the lexical benefactives appear to have fossilized as independent lexical items. This is most apparent when examining the few lexical benefactives which have specialized meaning. For example, *ṭah* 'cry for' does not mean 'cry in beneficiary's stead' or 'cry for beneficiary to experience' but rather 'cry because beneficiary has left/died'. For benefactives like this, only the lexical applicative form is possible (5.53).

(5.53) a. Parte in Mang a ṭah.
Parte ERG Mang 3SG.NOM cry.for
'Parte is crying for Mang.'

b. *Parte in Mang a ṭap-sak.
c. *Parte in Mang hrang=ah a ṭap.

I propose the LS for *ṭah* 'cry for' as shown in (5.54), where it can be seen that the lexical applicative departs from the standard benefactive patterns. Only the lexical form is possible for this benefactive because the lexical benefactive rule associated with the benefactive morpheme *-sak* would produce a LS with a different meaning.

(5.54) a. LS for *ṭap ~ ṭah* ‘cry’ **do'** (x, [**cry'** (x)])
b. LS for *ṭah* ‘cry for’ {[**do'** (x, [**cry'** (x)])] PURP [**do'** (x, [**mourn'** (x, y)])]}
c. SR for (5.53a) {[**do'** (3sg[Parte], [**cry'** (3sg[Parte])])] PURP [**do'** (3sg[Parte], [**mourn'** (3sg[Parte], 3sg[Mang])])]}

Some lexical applicatives are difficult to categorize as to type. A general characterization is that they have to do with direction or goal of the action ((5.55)–(5.58)).

(5.55) a. Ruah a **sur**.
rain 3SG.NOM fall
‘It’s raining.’

b. Ruah in i **surh**.
rain ERG 1SG.ACC fall.on
‘It’s raining on me.’

(5.56) a. Cinte in a kawr sawp=mi a **sawr**.
Cinte ERG 3SG shirt wash=REL 3SG.NOM wring
‘Cinte wrings out her shirt which she washed.’

b. Cinte in mit-na-sii i **sawrh**.
Cinte ERG eye-sick-medicine 1SG.ACC drop.in
‘Cinte put the eyedrop into my eye.’

(5.57) a. Mero a **kiang**.
cloud 3SG.NOM roll.away
‘The cloud is rolling away.’

b. Parte in zin i **kian**.
Parte ERG way 1SG.ACC move.aside.for
‘Parte got out of my way/moved aside for me.’

(5.58) a. Parte in Mang hnen=ah cabu a hei **keng**.
Parte ERG Mang to=LOC book 3SG.NOM at bring
‘Parte brought a book to Mang.’

b. Parte in cabu i rak **ken**.
Parte ERG book 1SG.ACC come bring.to
‘Parte brought me a book.’

The LS for each of these lexical applicatives is specific to the predicate; it does not follow a regular pattern.

Lexical applicatives in Falam Chin do not allow marked linking, unlike the few lexical causatives which do. A reason for this may be that the "marked linking" can easily be expressed by the non-valence raised counterpart, as in (5.50a) and (5.51a), making marked linking superfluous. However, in the cases where specialized meaning is attached to the lexical applicative, no non-valence raised counterpart is possible.

5.3 Causatives and applicatives

This section examines the interaction of the two types of valence-raising operations in Falam Chin: causatives and applicatives. As causatives and applicatives are both valence-raising operations, combining the two may result in the same kind of violations of either Principle B of the AUH or of the person requirement which have been discussed previously. In addition, there seems to be a caution, if not a prohibition, against combining two types of valence-raising morphology in Falam Chin, although some speakers allow it to be possible. This may be in deference to an upper limit on the number of possible core semantic arguments in a LS. Falam appears to easily allow three and to tolerate four core semantic arguments (provided the person requirement is not violated). There are no examples in the dataset in which five core arguments were deemed acceptable.

Two examples of such double-valence raising constructions are given in (5.59) and (5.60). The (a) interpretations are the default, or preferred, interpretations for these sentences, whereas the (b) interpretations are only marginally grammatical.

(5.59) a. Cinte in **Parte** cu hla **i** sak-pi-ter.
Cinte ERG Parte TOP song 1SG.ACC sing-COM-CAUS
'Cinte had **me** sing a song with **Parte**.' OR
b. ?*'Cinte had **Parte** sing a song with **me**.'

(5.60) a. Thangte in **Mang** **i** feh-san-ter.
Thangte ERG Mang 1SG.ACC go-RELQ-CAUS
'Thangte made **me** leave **Mang**.' OR
b. ?*'Thangte made **Mang** leave **me**.'

The reason the (a) interpretations are preferred can be ascribed to Principle B of the AUH; the (a) interpretations follow the AUH default, whereas the (b) interpretations can only be arrived at through marked undergoer linking in deference to the person requirement.

Example (5.61) illustrates this more clearly, showing the LS for the base verb *feh* 'go' and the LS for *fehsanter* 'make go away from'. It can be seen from this LS that the causee, the *y* variable, takes precedence over the applied participant, the *z* variable, as the second-highest ranking argument. Thus, the sentences in (5.59) and (5.60) favor the (a) interpretations, in which the causee is first person.

(5.61) a. LS for *feh* 'go' **do'** (y, [**go'** (y)])
b. LS for *fehsanter* 'make go away from' {[**do'** (x, Ø)] CAUSE [**do'** (y, [**go'** (y)]) & BECOME NOT **be-with'** (z, y)]}
c. SR for (5.60a) **[do'** (3sg[Thangte], Ø)] CAUSE [**do'** (1sg, [**go'** (1sg)]) & BECOME NOT **be-with'** (3sg[Mang], 1sg)]
d. SR for (5.60b) **[do'** (3sg[Thangte], Ø)] CAUSE [**do'** (3sg[Mang], [**go'** (3sg[Mang])]) & BECOME NOT **be-with'** (1sg, 3sg[Mang])]

Figure 5.12a&b shows the unmarked linking for (5.60a) and the marked linking for (5.60b). In Figure 5.12a, the causee (1sg), which is the second-highest ranking

argument, is chosen as the undergoer macrorole, satisfying both Principle B and the person requirement. In Figure 5.12b, however, the applied argument is chosen as the undergoer in order to satisfy the person requirement. Because Principle B is violated, the sentence is only marginally grammatical.

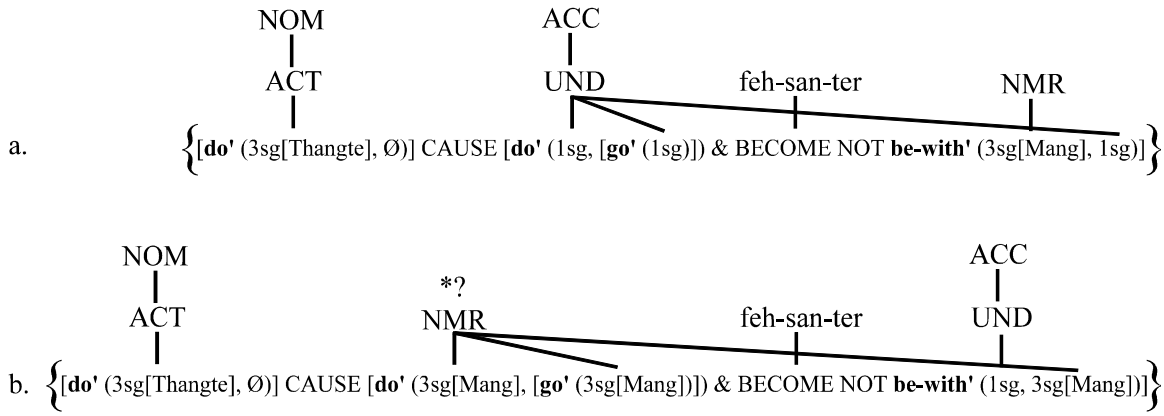


Figure 5.12: Macrorole linking for (5.60a&b)

While my language consultants would accept sentences such as (5.59a) and (5.60a) as grammatical, they preferred using alternate constructions to express the same idea, arguing that the causative plus applicative structure was ambiguous or potentially confusing. When the applicative involved has a non-valence raised alternative, it is preferred to use the relational noun, as in (5.62) and (5.63), rather than have both causative and applicative morphemes on one verb, as in (5.59).

(5.62) Cinte in **(keimah cu) Parte thaw=n** hla **in**[101] sak-ter.
Cinte ERG 1SG.STD TOP Parte with=ABL song 1PL.ACC sing-CAUS
'Cinte had **me** sing a song **with Parte**.'

[101] The cross-reference form *in* '1PL' is used here as a result of the requirement that the cross-reference specifications for this construction must be the sum of all the participants involved in the base verb (*Parte* + 1sg = 1pl).

(5.63) Cinte in **Parte** cu **keimah** **thaw=n** hla in sak-ter.
Cinte ERG Parte TOP 1SG.STD with=ABL song 1PL.ACC sing-CAUS
'Cinte had **Parte** sing a song **with me**.'

It is also possible to use a jussive matrix verb and to place the applicative within a *dingin* clause ((5.64) and (5.65)).

(5.64) Thangte in **[___$_i$** **Mang** feh-san ding=in] **i_i** sim.
Thangte ERG Mang go-RELQ FUT=AJT 1SG.ACC tell
'Thangte told **me$_i$** [___$_i$ to leave **Mang]**.'

(5.65) Thangte in **Mang$_i$** cu **[___$_i$** **i** feh-san ding=in] a sim.
Thangte ERG Mang TOP 1SG.ACC go-RELQ FUT=AJT 3SG.NOM tell
'Thangte told **Mang$_i$** [___$_i$ to leave **me]**.'

Figure 5.13 demonstrates how these sentences resolve the potential conflict of requirements. In Figure 5.13a, representing (5.63), the range of possible MR assignment is limited to the fused causative predicate, excluding the comitative LS. Thus, the person requirement is not violated by leaving the first person specifications without verbal cross-reference.

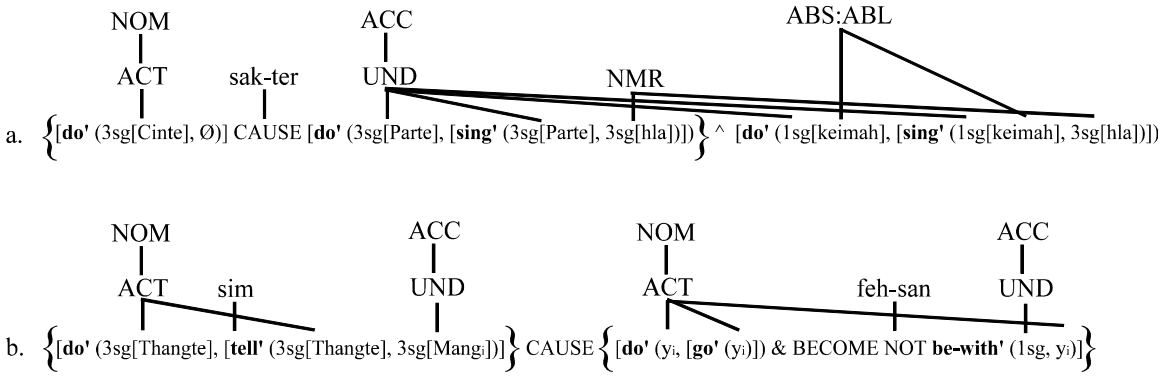


Figure 5.13: Macrorole linking for (5.63) and (5.65)

In Figure 5.13b, representing (5.65), the conflict is resolved by dividing the participants between two clauses, allowing the first person argument to be chosen as undergoer as the second-highest ranking argument of its clause.

In summary, causative and applicative morphemes are not usually combined, primarily because the demands of the two valence-raising morphemes frequently come into conflict. In addition, combining two valence-raising morphemes may result in an unwieldy number of core semantic arguments. If they are combined, however, the causative morphology takes precedence over the applicative morphology. Nevertheless, alternate constructions are preferred in order to avoid violating either Principle B of the AUH or the person requirement, as well as to avoid ambiguity.

5.4 Conclusion

In conclusion, within the framework of RRG, I claim that the applicative subtypes, while differing in their semantics, are all lexical operations which fuse an applied LS to the LS of the base predicate by means of a lexical rule. Applicatives raise semantic valence by the addition of an applied participant. Like causatives, applicatives also raise M-transitivity if the base verb is intransitive, as shown by both coding and behavioral properties of the clause, including ergative marking, cross-referencing of the applied argument, reciprocalization, and relativization of the arguments. These changes are not the result of marked linking, but rather follow from the application of the universal and language-specific aspects of the linking algorithm (as described in Chapter 3) to the fused applicative LS. Principles A and B of the AUH distinguish non-double object from double object languages, while the distinction between undergoer and non-

macrorole arguments accounts for differences in the properties of symmetric languages and asymmetric languages. Furthermore, a language's choice of Principle A or B generalizes the behavior of ditransitives, causatives, and applicatives in that language. For Falam Chin, Principle B correctly predicts that recipients, causees, and applied objects (all second-highest ranking arguments) will be chosen as undergoer in these constructions.

The notion of fusion receives support in Falam Chin not only from the syntactic changes seen in morphological applicatives, but also from the possibility of violating the person requirement in some cases. The alternate, non-valence raised structures demonstrate that identical semantics can be communicated with an unfused structure; in fact, it is sometimes syntactically necessary to do so. Furthermore, the use of the non-valence raised structure emphasizes the importance of cross-reference in Falam Chin syntax. Since cross-reference fills the role of core argument in Falam Chin, violations of the person requirement are, quite simply, violations of the Completeness Constraint. A non-valence raised option provides a way to fulfill both Principle B and the person requirement.

Although morphological causatives and applicatives are similar in that they are both lexical operations which fuse two distinct LS into one new predicate, they also differ in some ways. Causatives license a new highest-ranking argument (the new actor), while applicatives license a new second-highest ranking argument (the new undergoer). For this reason, the causee takes syntactic priority over an applied argument in those rare cases when the two are combined.

CHAPTER 6

REFLEXIVES, RECIPROCALS, AND MIDDLES

The previous two chapters examined valence-raising operations in Falam Chin, analyzing them as lexical operations which license new arguments by fusing two underlying LSs. This and the following chapter look at two contrasting types of valence-lowering operations, reflexives/reciprocals/middles and antipassives, each of which affects the clause in somewhat different ways. Within the framework of RRG, I illustrate the distinctness of each operation at three levels: 1) how it affects the underlying semantics of the predicate; 2) how it affects the assignment of macroroles and the corresponding M-transitivity of the predicate; and 3) how it affects the syntactic realization of arguments, both in terms of coding and behavioral properties. Yet, like valence-raising operations, both types of valence-lowering operations are fundamentally lexical in nature, involving changes to the LS and/or macrorole assignment, while leaving PSA assignment unaffected. Subsequent to the lexical operation, the linking algorithm applies as usual. In addition, each of these operations augments the evidence for viewing Falam Chin as a head-marking language whose cross-reference pronominals are the core arguments, while its NPs simply add additional semantic information.

In this chapter, I examine Falam Chin reflexives and reciprocals in §6.1 and Falam Chin middles in §0, analyzing the data in the RRG framework. Finally, §6.3

discusses the interaction of valence-raising operations with reflexives, reciprocals, and middles.

6.1 Falam Chin reflexives and reciprocals

Reflexives, reciprocals, and middles all share the broad semantics of "subject-affectedness" (Kemmer 1993:3). As a result, in many languages, including Falam Chin, they also share very similar morphological and syntactic characteristics. This section examines Falam Chin reflexives and reciprocals, beginning with base transitive reflexives and reciprocals in §6.1.1 and continuing with base ditransitive reflexives and reciprocals in §6.1.2. In each case, I discuss the properties of the construction, formulate a lexical rule, and illustrate the resulting linking.

6.1.1 Base transitive reflexives and reciprocals

In Falam Chin, both reflexives and reciprocals are formed using the obligatory verbal suffix *-aw* ((6.1) and (6.2)).

(6.1) Mang cu (amah le amah) a at-**aw** pang.
Mang TOP 3SG.STD and 3SG.STD 3SG.NOM cut.1-REF accidentally
'Mang cut **himself** accidentally.'

KIF 001
(6.2) Fala-nu le tlangval-pa hi an
young.woman-FEM and young.man-MASC TOP 3PL.NOM

duh-**aw** ngaingai.
love-RECP extremely
'A young woman and a young man loved **each other** very much.'

In grammatical environments where stem 2 is required, this morpheme has the allomorph *-awk* (6.3).

(6.3) An duh-**awk** ngaingai ruang=ah, ni tin=in
3PL.NOM love-RECP extremely because=AJT day every=AJT

hna an ṭuan-tlang.
work 3PL.NOM work-together
'Because they loved **each other** so much, they worked together every day.'

In addition to the reflexive/reciprocal morphology, reflexives and reciprocals each optionally allow an overt pronominal expression of the anaphor. For reflexives, this takes the form of two standard pronouns joined with the conjunction *le*, e.g., *amah le amah* 'himself' (6.1). The reciprocal phrase is similar; it is formed from two occurrences of the numeral *pakhat* 'one' joined by *le: pakhat le pakhat* 'one another', 'each other' (6.4).

(6.4) Cinte le Thangte cu **(pa=khat le pa=khat)** an duh-**aw**.
Cinte and Thangte TOP CLF=one and CLF=one 3PL.NOM love-RECP
'Cinte and Thangte love **each other**.'

Coding properties, such as NP case marking, demonstrate that reflexives and reciprocals in Falam Chin are valence-lowering. For example, two-argument predicates such as *at ~ ah* 'cut' or *bawm* 'help' would normally take ergative marking ((6.5a) and (6.6a)). However, ergative marking on the subject of a reflexive construction is ungrammatical, even when a reflexive phrase is used (6.5b). The same is true for reciprocals (6.6b).

(6.5) a. Mang **in** Thangte a at pang.
Mang ERG Thangte 3SG.NOM cut.1 accidentally
'Mang cut Thangte accidentally.'

b. Mang ***in**/cu (amah le amah) a at-aw pang.
Mang ERG/TOP 3SG.STD and 3SG.STD 3SG.NOM cut.1-REF accidentally
'Mang cut himself accidentally.'

(6.6) a. Cinte le Thangte **in** Parte an bawm.
Cinte and Thangte ERG Parte 3PL.NOM help
'Cinte and Thangte help Parte.'

b. Cinte le Thangte ***in**/cu **(pa=khat le pa=khat)** an bawm-aw.
Cinte and Thangte ERG/TOP CLF=one and CLF=one 3PL.NOM help-RECP
'Cinte and Thangte help each other.'

Evidence from cross-referencing also indicates that the reflexive/reciprocal clause has been detransitivized in Falam Chin. Normally, accusative cross-refererence is required in transitive constructions with first or second person themes ((6.7a) and (6.8a)). However, two coreferential arguments cannot be represented by both nominative and accusative cross-reference in reflexive/reciprocal constructions, whether or not there is an overt pronoun phrase. In such cases, cross-reference marks only the actor ((6.7b) and (6.8b)).

(6.7) a. Thangte in **a** **lo** at pang.
Thangte ERG 3SG.NOM 2SG.ACC cut.1 accidentally
'Thangte cut **you** accidentally.'

b. (Nangmah le nangmah) na ***lo** at-aw pang.
2SG.STD and 2SG.STD 2SG.NOM 2SG.ACC cut.1-REF accidentally
'You cut **yourself** accidentally.'

(6.8) a. Thangte in **in** bawm.
Thangte ERG 1PL.ACC help
'Thangte helps **us**.'

b. **(Pa=khat le pa=khat) kan/*in** bawm-aw.
CLF=one and CLF=one 1PL.NOM/1PL.ACC help-RECP
'**We** help **each other**.'

While ergative case and cross-reference data clearly indicate that reflexive and reciprocal voice lower the valence of the predicate in Falam Chin, it is not immediately clear in what sense this valence-lowering has taken place. The optional presence of the reflexive or reciprocal phrase shows that syntactic valence is not necessarily lowered. In addition, evidence from relative clauses indicates that it is not the semantic valence of the

predicate which has been altered. In (6.9), the noun *nauhakpate* 'boy' is relativized using the relativizer *tu*, used for ergative arguments. (A separate relativizer, *mi*, is used for absolutive arguments.)

(6.9) [___$_i$ Amah le amah$_i$ at-aw=**tu**] nauhak-pa-te$_i$ cu a ṭap.
3SG.STD and 3SG.STD cut.1-REFL=REL boy-MASC-DIM TOP 3SG.NOM cry.1
'The boy$_i$ [**who** ___$_i$ cut himself$_i$] cried.'

The fact that *tu* is used in the relativization of the reflexive clause indicates that there still exist two semantic arguments, an A and an O. Thus, the predicate retains its semantic transitivity.

In examining a similar construction in Kannada which optionally includes a reflexive or reciprocal phrase, Mohanan and Mohanan (1998) argue that the reflexive or reciprocal only optionally detransitivizes the predicate. In Falam Chin, however, this explanation is not satisfactory, since the case and cross-reference data indicate detransitivization has occurred, whether or not there is a reflexive or reciprocal phrase. However, since clearly neither syntactic nor semantic valence has been lowered by the reflexive/reciprocal operation, a third option is needed. In RRG, this third option is M-transitivity, or the number of macroroles assigned to a clause. RRG claims it is the M-transitivity of a predicate which is ultimately of most syntactic significance (Van Valin & LaPolla 1997). If, indeed, the M-transitivity of Falam Chin reflexives and reciprocals were lowered, it would predict the case and cross-reference behavior which has been described (as these are assigned based on macroroles; see §3.5.3.2) without prohibiting the presence of two syntactic arguments. This analysis is assumed in what follows.

In Chapter 1, three typological types of reflexive and reciprocal clauses were described (Faltz 1985; Dixon & Aikhenvald 2000; Van Valin & LaPolla 1997). First, *coreference* or *NP* reflexives/reciprocals are characterized by the use of an anaphoric pronoun in the normal undergoer position. This type is not generally considered valence-lowering (Dixon & Aikhenvald 2000). Thus, this type has a coreferential but syntactically distinct actor and undergoer. By contrast, *clitic* reflexives/reciprocals, although they include a clitic pronominal, are valence-lowering, suppressing the actor (Alsina 1996; Van Valin 1990). A large proportion of the theoretical literature on reflexives focuses on one or both of these two types (e.g., Everaert 1986; Rosen 1988; Grimshaw 1990; Dalrymple 1993; Reinhart & Reuland 1993; Alsina 1996; Fischer 2005). Finally, *lexical* or *verbal* reflexives/reciprocals have special verbal affixation and are also valence-lowering. According to Van Valin & LaPolla (1997), however, they differ from clitic reflexives in that their single syntactic argument is simultaneously agent and patient.

Although at first glance Falam Chin reflexives/reciprocals seem to have characteristics of both the NP and lexical types (both pronoun phrase and affixation), at least two factors suggest that they are essentially lexical. First, the pronominal form is optional, while the verbal affix is obligatory. Second, case and cross-reference clearly indicate a type of detransitivization has occurred, a feature of lexical reflexives but not of NP reflexives. Thus, just as Falam Chin causatives and applicatives are lexical operations which fundamentally alter the LS of the base predicate through fusion of two LS segments, Falam Chin reflexives and reciprocals are also lexical operations which affect formation of the LS, although in a rather different way from causatives and applicatives.

First, the reflexive, rather than adding or deleting a semantic argument or LS segment, instead assigns coreferentiality to two arguments of the base predicate. This can be formulated as the lexical rule in (6.10), which states, simply, that any predicate (**PRED'**) with two variables, *x* and *y*, plus reflexive *-aw* generates a LS in which the arguments of that predicate are coindexed.

(6.10) *Lexical rule for reflexive verb: (initial)*
{PRED' (x … y…)} + *-aw* → {**PRED'** (x_i … y_i…)}

While this rule accounts well for base transitive reflexives, it will need to be modified slightly in §6.1.2 to account for reflexives with three argument variables.

The application of the reflexive lexical rule is shown in (6.11), where the LS of *at ~ ah* 'cut' plus reflexive morphology produces the corresponding reflexive form *ataw* 'cut self' and coindexes the arguments of the LS. The SR for (6.5b) is also shown.

(6.11) a. LS for *at ~ ah* 'cut' **{do'** (x, Ø) CAUSE [INGR **cut'** (y)]}
↓
b. LS for *ataw* 'cut self' **{do'** (x_i, Ø) CAUSE [INGR **cut'** (y_i)]}
c. SR for (6.5b) **accidentally' {(do'** (3sg[$Mang_i$], Ø) CAUSE [INGR **cut'** (3sg[amah le $amah_i$])])}

While the lexical rule given in (6.10) supplies the intended semantics for the reflexive predicate, it does not necessarily entail detransitivization of the clause. As mentioned previously, NP reflexives do not lower the valence of the predicate, so coreferentiality alone cannot be considered sufficient motivation for detransitivization. Van Valin and LaPolla (1997) argue that lexical reflexives, as distinct from the other types, link the two coindexed arguments to a single actor-undergoer macrorole, resulting

in an M-intransitive clause.[102] This can be formulated as a linking principle which distinguishes lexical reflexives from the NP and clitic types, analogous to the way Principles A and B of the AUH distinguish non-double object from double object languages. Based on Van Valin and LaPolla's (1997) characterization, the linking principle for coreferentiality in lexical reflexives (and reciprocals and middles) can be framed as in (6.12):

(6.12) *Coreferentiality principle for lexical reflexives*
Iff two coreferential arguments are ACT and UND arguments of the same predicate, they are linked as a single ACT=UND macrorole, resulting in an M-intransitive clause.

This principle does not override the AUH, but rather applies to the macroroles as assigned by the default principle of macrorole assignment in that language.

As was the case for causatives and applicatives, once the lexical rule has applied, the linking algorithm introduced in Chapter 3 takes place as usual. Figure 6.1 shows the application of the linking algorithm for (6.5b). First, *Mang*, the highest-ranking argument, is assigned the actor macrorole, while *amah le amah* 'himself', the second-highest ranking argument, is assigned the undergoer macrorole. Since Falam Chin is a language with lexical reflexives, and since these two arguments are coreferential, the coreferentiality principle in (6.12) applies, linking the actor and undergoer macroroles as a single macrorole.

[102] By contrast, clitic reflexives are detransitivized by a suppression of the A argument (Van Valin & LaPolla 1997).

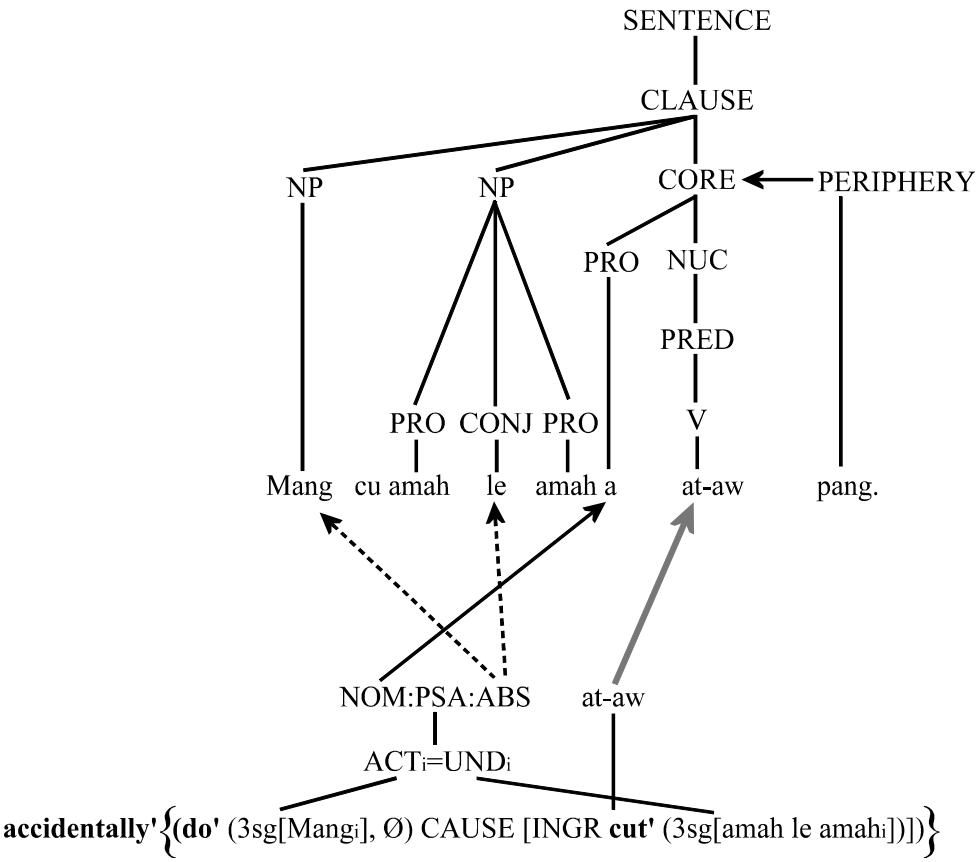


Figure 6.1: Base transitive reflexive

The result of this joint linking is the coding behavior discussed previously. Since the two arguments are coreferential, share cross-reference features (3sg), and are joined as a single macrorole, a single nominative cross-reference form (which simultaneously references both) is sufficient to satisfy the Completeness Constraint (3.51). However, there are still two corresponding NP specifications in the SR, and both must be represented at the syntactic level. Nevertheless, since there is only one macrorole, each of the NPs is assigned absolutive case according to (3.50); ergative case is not possible.

This linking of the reflexive construction highlights once again the associative nature of cross-reference and NPs in a head-marking language like Falam Chin. The

discrepancy between the number of cross-reference pronominals and the number of corresponding NPs in a reflexive clause might be problematic if we insisted on strict one-to-one agreement between the NPs and cross-reference. However, if the cross-reference is viewed as the core argument, it is possible to posit two appositional NPs which together explain the semantics of that argument.

Likewise, the coreferentiality principle for lexical reflexives explains why the person requirement (4.17) discussed in Chapters 4 and 5 is not violated in reflexives such as (6.7b), in which both actor and undergoer have second person specifications but only nominative cross-reference is used. If the coreferentiality principle is not the correct generalization, then either actor and undergoer are assigned individually, or else the reflexive argument must be a non-macrorole argument. However, both of these analyses would entail a violation of the person requirement by leaving second person features uncrossreferenced. On the other hand, by means of joint macrorole assignment, joint cross-reference is possible, fulfilling the person requirement.

In summary, reflexives are lexical operations which assign coreferentiality to two arguments of the base LS. The coreferentiality principle then joins a coreferential actor and undergoer as a single macrorole. Because the actor and undergoer macroroles are linked as one, the clause is viewed as M-intransitive, with corresponding syntactic effects.

Having examined the lexical rule and linking for reflexives, I turn now to reciprocals. While reciprocals are formally similar to reflexives, they are rather different at the semantic level. The reciprocal lexical rule must show that the same predication

takes place reciprocally between two or more participants. To represent this, the lexical rule in (6.13) may be formulated.

(6.13) *Lexical rule for reciprocal verb: (initial)*
{PRED' (x … y…)} + *-aw* → {**PRED'** (x_i … y_j…)} ^ {**PRED'** (z_j … y_i…)}

Simply, the rule states that any predicate (**PRED'**) with two variables, *x* and *y*, plus reciprocal *-aw* generates a LS in which the base predicate is duplicated and the two resulting predicates are joined with a ^ 'and simultaneously' operator. While similar to the reflexive rule, this rule involves coindexation among the arguments of two identical predicates, rather than between two arguments of the same predicate.

The application of the reciprocal lexical rule is shown in (6.14). Example (6.14a) shows the LS of the predicate *duh* 'love', while (6.14b) shows the output of the rule with the corresponding reflexive predicate *duhaw* 'love each other'. Finally, (6.14c) shows the the SR for (6.2).

(6.14)

a.	LS for *duh* 'love'	**{love'** (x, y)}
b.	LS for *duhaw* 'love each other'	**{love'** (x_i, y_j)} ^ {**love'** (z_j, y_i)}
c.	SR for (6.2)	**{love'** (3sg[falanu$_i$], 3sg$_j$)} ^ {**love'** (3sg[tlangvalpa$_j$], 3sg$_i$)}

It may be noted that this LS shares similarities with a comitative applicative. However, the two differ in that the reciprocal arguments are coindexed. In addition, the reciprocal construction is not valence-raising like the comitative; it does not fuse the two LSs into one. In this sense, it is more similar to the non-valence raised comitative alternative (a) (see Figure 5.9).

In fact, far from being valence-raising, reciprocals are valence-lowering operations, just like reflexives. As with reflexives, their valence-lowering property is not a necessary outcome of the reciprocalization rule. It follows, rather, from a loose reading of the coreferentiality principle given in (6.12). Since the two predicates in the reciprocal SR are identical, the coreferential arguments fit the description ‘semantic arguments of the same predicate’.

The linking for (6.2) is shown in Figure 6.2.

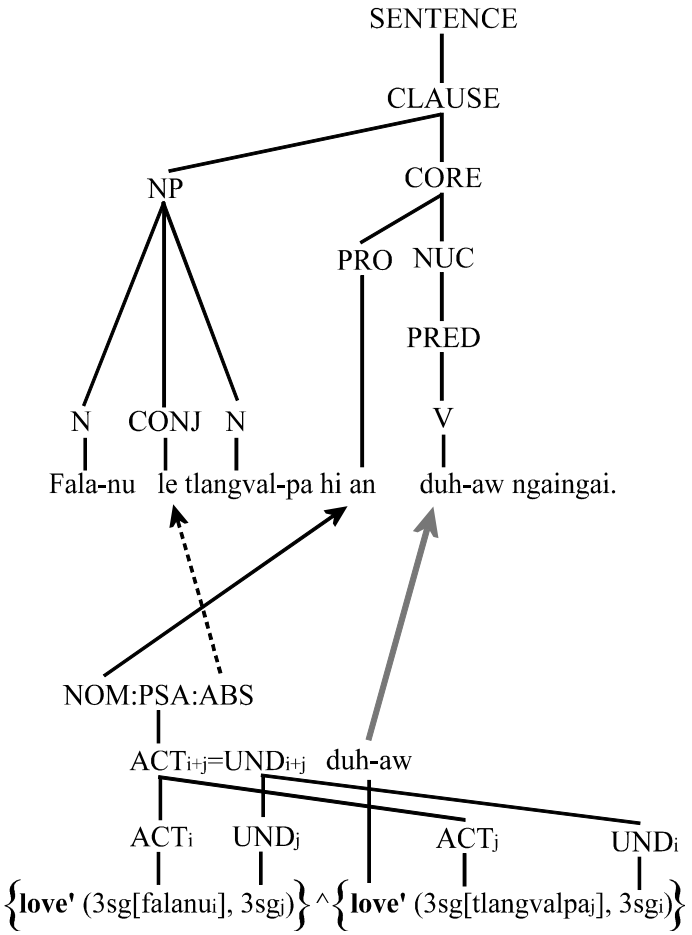


Figure 6.2: Reciprocal

First, actor and undergoer macroroles are assigned individually for each LS. Since they are not coindexed, the coreferentiality principle does not yet apply. However, since the predicates are identical, the actors are collapsed into one actor role, and the undergoers into one undergoer role. The process is comparable to factoring in mathematics, e.g. 3x+3y = 3(x+y). In other words, the common factor, the predicate, is extracted, leaving the variables behind (**love'** (i, j) + **love'** (j, i) = **love'** (i+j, j+i)). (See Figure 5.9 for a similar process.)

At this point, the indexation of the actor (i+j) is equal to that of the undergoer (j+i). Thus, according to the coreferentiality principle, they are joined as a single actor-undergoer macrorole, resulting in an M-intransitive clause. The NPs *falanu* 'young woman' and *tlangvalpa* 'young man' are conjoined (per the factoring process) and assigned absolutive case, and their cross-reference specification receives nominative case.

In summary, this section has argued that Falam Chin reflexives and reciprocals are of the lexical (verbal) type, and are the product of a lexical rule. While these lexical rules determine the appropriate coindexation, they do not necessitate the resulting intransitivity found in Falam Chin reflexives and reciprocals. Rather, this results from the coreferentiality principle for lexical reflexives and reciprocals, which distinguishes lexical from NP and clitic reflexives/reciprocals. The coreferential actor and undergoer arguments are joined as a single macrorole, resulting in an M-intransitive clause.

6.1.2 Base ditransitive reflexives and reciprocals

The previous section examined base transitive reflexives and reciprocals in Falam Chin, analyzing the data within the RRG framework. In this section, I apply that analysis to base ditransitive reflexives and reciprocals as well, dealing with some complexities which arise when three arguments are involved in the operation. Such complexities relate primarily to two syntactic dimensions in which reflexives and reciprocals may differ from language to language: domain and antecedence.

The first of these, domain, refers to the syntactic boundaries in which reflexivization is possible, optional, or obligatory. Much has been written regarding local versus long-distance reflexives, those which are bound in the domain of the clause versus those which can extend beyond the clause (e.g., Grimshaw 1990; Dalrymple 1993; Reuland & Reinhart 1993; Bresnan 2001; Fischer 2005). However, there is linguistic variation within reflexives of the local type, as well. Thus, Faltz (1985) proposes the strict clause (SC) condition to account for languages such as German in which any coreferential argument within a syntactic clause must be reflexivized. Faltz (1985) claims that lexical reflexives do *not* follow the strict clause condition (SC), meaning their domain of obligatory reflexivization is actually *smaller* than the clause. He leaves open, however, what the correct domain of verbal reflexives is.

A more restricted domain would be the semantic arguments of the predicate which are also syntactic arguments of the clause. For example, Van Valin & LaPolla (1997:405) describe the domain of obligatory reflexivization for English as in (6.15).

(6.15) *Domain of obligatory reflexivization constraint (for English)*
   a. One of two coreferring semantic co-arguments within a simple clause **must** be realized as a reflexive,
   b. while one of two coreferring syntactic arguments (which are not semantic co-arguments) within a simple clause **may** be realized as a reflexive.

A similar concept is advanced by Bresnan et al. (1985; see also Dalrymple 1993; Bresnan 2001), using the feature [±NUCLEAR]. A [+NUCLEAR] pronominal must be realized within the domain of the minimal complete nucleus (a predicate plus its arguments, including a subject). A [-NUCLEAR] pronominal, on the other hand, must be realized outside of the nucleus (a predicate plus its arguments). For example, in English, two coindexed arguments of the same predicate are obligatorily reflexivized, fulfilling (6.15a) (6.16).

(6.16) John$_i$ cut ***him**$_i$/**himself**$_i$.

In Bresnan et al.'s terminology, *himself* is a [+NUCLEAR] pronominal, whereas *him* is [-NUCLEAR] and cannot be used in (6.16).

However, in English, syntactic arguments of the clause which are not semantic coarguments of the predicate are only optionally reflexivized, fulfilling (6.15b). Thus in (6.17), the object of the preposition *on* is not a semantic argument of the predicate *spill.* However, it is a syntactic argument of the clause; therefore, it can optionally be reflexivized.

(6.17) John$_i$ spilled soup on **him**$_i$/**himself**$_i$.

Bresnan et al. explain the dual possibility by arguing that the preposition has no subject, therefore it is not a complete nucleus. Thus, the reflexive pronoun's minimal complete

nucleus is the verb, in this case *spill.* The pronoun *him* is also acceptable because it is realized outside the minimal nucleus; it is not a semantic argument of *spill.*

Which, if any, of these schemas accurately describes the domain of reflexivization and reciprocalization in Falam Chin? The Falam Chin domain is even more restricted than that of English. As seen in (6.18), an argument which is not a semantic co-argument of the main verb cannot undergo reflexivization, even when it is within the syntactic clause. Rather, it must be represented by a standard pronoun and the predicate cannot have reflexive morphology.

(6.18) **Cinte$_i$** in **ama=i$_i$** hrang=ah hmeh a suang(*-aw$_i$).
Cinte ERG 3SG.STD=GEN for=LOC curry 3SG.NOM cook.1(-REFL)
'**Cinte$_i$** cooked curry for **herself$_i$**.'

It is possible to reflexivize a benefactive argument only when the valence-raised predicate *suansak* 'cook for' is used so that the LSs are fused and the benefactive becomes a semantic argument of the predicate (6.19).

(6.19) **Cinte$_i$** cu (**amah le amah$_i$**) hmeh a suan-sak-**aw$_i$**.
Cinte TOP 3SG.STD and 3SG.STD curry 3SG.NOM cook.2-BEN-REFL
'**Cinte$_i$** cooked curry for **herself$_i$**.'

A second example is given in (6.20), with a locative argument-adjunct. In this case, there is no applicative version to allow verbal reflexivization of the argument-adjunct. Unlike English, only a standard pronoun can be used. Reflexive morphology is not possible on the predicate.

(6.20) **Thangte$_i$** in **ama=i$_i$** par=ah tihang a ti-bung(*-aw$_i$).
Thangte ERG 3SG.STD=GEN on=LOC soup 3SG.NOM liquid-spill(-REFL)
'**Thangte$_i$** spilled soup on **himself$_i$**.'

Thus, Falam is more restricted in domain than either German or English. In Faltz's terms, it is a non-SC language, as predicted for lexical reflexives. Furthermore, while (6.15a) applies, (6.15b) does not. The domain of obligatory reflexivization in Falam Chin encompasses only the semantic co-arguments of a predicate within the clause, while reflexivization outside this domain is prohibited. For Bresnan et al.'s feature system, this poses a problem. Falam Chin's reflexives are clearly [+NUCLEAR], yet they behave differently from English reflexives, also posited to be [+NUCLEAR]. This feature characterization could perhaps be reformulated to account for the Falam Chin data, a possibility I do not further pursue here.

Note also that reflexive phrases in Falam Chin cannot be left-dislocated, as regular object NPs can be (6.21).

(6.21) ***Amah le amah** cu Mang a at-**aw** pang.
3SG.STD and 3SG.STD TOP MANG 3SG.NOM cut.1-REF accidentally
*'As for **himself**, Mang cut **himself** accidentally.'

As described in Chapter 3, left-dislocation places an argument in the LDP, removing it from the clause (see §3.1.1.1). Since this would violate (6.15a), the clause is ungrammatical. In summary, reflexive arguments must be semantic co-arguments of their antecedent, but they must also be within the clause (Van Valin & LaPolla 1997).

In addition to domain, reflexives and reciprocals can also vary in terms of which argument(s) can be an antecedent of the reflexive. There do appear to be universal constraints on antecedence, usually formulated in terms of a semantic or syntactic hierarchy. In the generative tradition, this has been framed in terms of c-command, such that an antecedent must c-command its reflexive (Chomsky 1981). In LFG, a hierarchy is

proposed to account for antecedence based on prominence of the grammatical relation (Bresnan 2001). However, both of these proposals are unable to account for data from syntactically ergative languages in which it can be shown that the actor consistently antecedes other arguments, even when an undergoer argument is more syntactically prominent (Van Valin 2005).

In RRG, a slightly different explanation is proposed to account for antecedence. Adapting Jackendoff's (1972, 1992) semantic hierarchy, Van Valin & LaPolla (1997:398) propose the Role Hierarchy Condition in (6.22).

(6.22) *Role Hierarchy Condition on reflexivization*
The reflexive argument must not be higher on the PSA selection hierarchy (Figure 3.21) than its antecedent.

In other words, an actor can antecede either an undergoer or other core argument, whereas an undergoer can antecede only another core argument, not an actor.[103]

The Role Hierarchy Condition is proposed to be universal. However, languages do differ as to whether or not the antecedent of the reflexive must be the highest-ranking argument on the hierarchy or whether a lower-ranking argument could also serve as antecedent, provided it is higher on the hierarchy than the reflexive or reciprocal argument. Thus, Bresnan (2001) proposes that some anaphors are [+SUBECT], meaning they must have a subject antecedent, whereas others are [-SUBECT] and can find their antecedent in any higher-ranking argument. Similarly, Faltz (1985) proposes the subject antecedence (SA) condition to account for languages in which reflexives must be coindexed with a subject, claiming that verbal reflexives follow the SA condition.

[103] Languages which allow non-macrorole PSAs also allow non-macrorole antecedents.

However, as previously mentioned, a grammatical relations hierarchy encounters difficulties with syntactically ergative languages such as Sama, in which an undergoer (the syntactic "subject") cannot antecede an actor (Van Valin 2005). Thus, the hierarchy used in RRG is based on argument ranking, not grammatical relations. Reframing the question in these terms, languages may differ as to whether they allow only the highest-ranking argument to antecede the reflexive/reciprocal, or whether the second-highest ranking argument may be an antecedent as well.

Falam Chin has already been shown to be limited in domain to the semantic arguments of the predicate. This means that, in most cases, there are only two semantic arguments and the possible antecedents for the reflexive are limited to the highest-ranking argument, the actor. It seems that ditransitive verbs such as *pe ~ pek* 'give' might provide an environment in which to test whether a lower-ranking argument, an undergoer, could ever be the antecedent of a reflexive in Falam Chin. However, the semantic interpretation of such coindexation is in most cases highly unusual, as seen in (6.23b).

(6.23) **Cinte$_{i}$** cu **amah** **le** **amah$_{i/*j}$** **laksawng$_{j}$** a pe-**aw$_{i/*j}$.**
Cinte TOP 3SG.STD and 3SG.STD present 3SG.NOM give.1-REFL
a. '**Cinte$_{i}$** gave **herself$_{i}$** a present.'
b. *'Cinte gave the **present$_{j}$** **itself$_{j}$**.'

Even if the theme is replaced with an animate argument, undergoer-theme coindexation is considered ungrammatical (6.24b).

(6.24) a. **Mang$_{i}$** cu **Cinte** hnen=ah a pe-**aw$_{i}$.**
Mang TOP Cinte to=LOC 3SG.NOM give.1-REFL
'**Mang$_{i}$** gave **himself$_{i}$** to Cinte.'

b. **Mang** cu **Cinte$_{j}$** a pe-**aw$_{*j}$.**
Mang TOP Cinte 3SG.NOM give.1-REFL
*‘Mang gave **Cinte$_{j}$ herself$_{j}$**.’

This suggests that Falam Chin antecedents must be the highest-ranking argument, the actor, while the reflexive must be the second-highest ranking argument, the undergoer. An undergoer antecedent, on the other hand, is judged questionable or ungrammatical.

Benefactives and malefactives (either lexical or morphological) potentially provide a better environment in which to test whether Falam ever allows undergoers to be antecedents. However, applicatives are often nonsensical with undergoer antecedents (6.25).

(6.25) **Cinte$_{i}$** cu hmeh$_{j}$ (**amah le amah$_{i/*j}$**) a suan-sak-**aw$_{i/*j}$.**
Cinte TOP curry 3SG.STD and 3SG.STD 3SG.NOM cook.2-BEN-REFL
‘**Cinte$_{i}$** cooked curry$_{j}$ for **herself$_{i}$/*itself$_{j}$.**’

In other cases, the applicative-reflexive combination is simply redundant. For example, (6.26) could potentially mean “Thangte gave Mang a book for Mang to have.” However, the verb *pe ~ pek* ‘give’ already contains this meaning.

(6.26) ***Thangte$_{i}$** cu **Mang$_{j}$** cabu a pek-sak-**aw$_{i/*j}$.**
Thangte TOP Mang book 3SG.NOM give.2-MAL-REFL
‘**Thangte$_{i}$** gave **Mang$_{j}$** a book for **himself$_{i/j}$**.’

Similarly, (6.27) could have the meaning “Thangte beat Mang so that Mang would be negatively affected.” However, *vua ~ vuak* ‘beat’ intrinsically has a negative effect.

(6.27) ***Thangte$_{i}$** cu **Mang$_{j}$** a vuak-sak-**aw$_{i/*j}$.**
Thangte TOP Mang 3SG.NOM beat.2-MAL-REFL
‘**Thangte$_{i}$** beat **Mang$_{j}$** on **himself$_{i/j}$**.’

In both cases the sentences were judged ungrammatical.

In summary, Falam Chin reflexives and reciprocals have the smallest possible domain of reflexivization: coreferential arguments of the same predicate which are also arguments of the same clause. They are also quite limited in terms of which argument can antecede the reflexive: the highest-ranking argument must be the antecedent for the second-highest ranking argument. The lowest-ranking of three arguments cannot be coindexed by the reflexive or reciprocal rules.

At this point, the reflexive lexical rule given in (6.10) must be reexamined to see if it adequately captures these features of Falam Chin reflexives. The domain requirements of Falam are captured by the curly brackets which surround the predicate, showing that the coindexed arguments must be semantic co-arguments of a single predicate. They cannot be semantic arguments of another LS, such as an argument-adjunct. A slight modification to the rule must be made in order to assure that the highest-ranking argument will be the antecedent and the second highest ranking argument will be the reflexive argument. This can be framed as two requirements for the identification of the *x* and *y* variables as shown in (6.28).

(6.28) *Lexical rule for reflexive verb: (revised)*
{PRED' (x … y…)} + *-aw* → {**PRED'** (x_i … y_i…)}
x=highest-ranking argument of the LS
y=second-highest ranking argument of the LS

The reciprocal rule can be similarly revised, as in (6.29).

(6.29) *Lexical rule for reciprocal verb: (revised)*
{PRED' (x … y…)} + *-aw* → {**PRED'** (x_i … y_j…)} ^ {**PRED'** (z_j … y_i…)}
x, z=highest-ranking argument of the LS
y=second-highest ranking argument of the LS

These revised lexical rules ensure that base ditransitive reflexives, as well as base transitive ones, are coindexed correctly. To illustrate this, the LS for a ditransitive verb, *pe ~ pek* 'give', is shown in (6.30a) and the corresponding output of the reflexive rule is shown in (6.30b). In addition, the SR for (6.23) is shown in (6.30c).

(6.30) a. LS for *pe ~ pek* 'give' {[**do'** (x, Ø)] CAUSE [BECOME **have'** (z, y)]}

b. LS for *peaw* 'give self' {[**do'** (x_i, Ø)] CAUSE [BECOME **have'** (z_i, y)]}

c. SR for (6.23) {[**do'** (3sg[Cinte$_i$], Ø)])] CAUSE [BECOME **have'** (3sg[amah le amah$_i$], 3sg[laksawng])]}

The linking for (6.23) is shown in Figure 6.3.

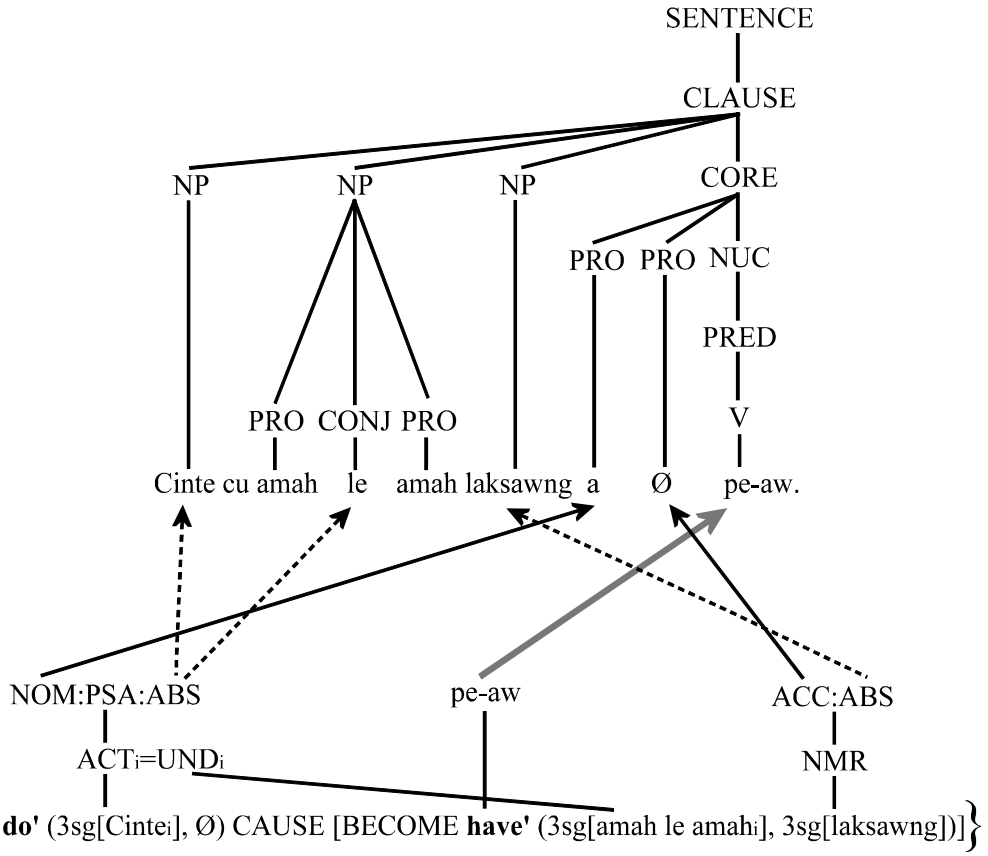


Figure 6.3: Base ditransitive reflexive

First, the highest-ranking argument, *Cinte,* is assigned the actor macrorole, while the second-highest ranking argument, *amah le amah* 'herself', is assigned the undergoer macrorole. Since these two arguments are coindexed, their macroroles have been joined, resulting in an M-intransitive clause. A single nominative cross-reference form is assigned for the single macrorole, while the two corresponding NPs receive absolutive case. The remaining argument, *laksawng* 'present', is a non-macrorole argument and receives absolutive case, while its cross-reference specifications receive accusative case (cf. rule (3.49aii)).

Table 6.1: Constructional schema for Falam Chin reflexives and reciprocals

CONSTRUCTION
Falam Chin reflexivization and reciprocalization
SYNTAX
Template: Default
PSA: Default
Linking: Default: Principle B of AUH + Coreferentiality principle for lexical reflexives and reciprocals
Domain: Coreferring semantic co-arguments within a simple clause
MORPHOLOGY
Reflexive/reciprocal verb: Stem 1 V + *-aw(aw) ~ -awk(awk)*
Reflexive pronoun phrase: standard pronoun + *le* + standard pronoun (optional)
Reciprocal pronoun phrase: *pakhat le pakhat* (optional)
SEMANTICS
Reflexive: **{PRED'** (x … y…)} + *-aw* → {**PRED'** (x_i … y_i…)}
x=highest-ranking argument of the LS
y=second-highest ranking argument of the LS
Reciprocal: **{PRED'** (x … y…)} + *-aw* → {**PRED'** (x_i … y_j…)} ^ {**PRED'** (z_j … y_i…)}
x, z=highest-ranking argument of the LS
y=second-highest ranking argument of the LS
PRAGMATICS
Illocutionary force: Unspecified
Focus structure: Unspecified

The features of reflexives and reciprocals in Falam Chin are summarized in the constructional schema shown in Table 6.1. Similar to the valence-raising constructions, they follow default rules of template, PSA, and macrorole selection, as seen under the SYNTAX heading. However, the coreferentiality principle for lexical reflexives and reciprocals also applies, linking coreferential macrorole arguments as joint actor-undergoer macroroles. Reflexives and reciprocals are distinct from other constructions, and, to a certain extent, from each other, in their morphology and lexical rules, as shown in the MORPHOLOGY and SEMANTICS sections. Finally, in PRAGMATICS we see that reflexives and reciprocals can occur with any type of illocutionary force or focus structure.

6.2 Falam Chin middles

While the previous section focused on Falam Chin reflexives and reciprocals, this section examines a variety of predicates in Falam Chin with middle semantics. The semantics of middles can be broadly characterized as "subject affectedness," including meaning subtypes such as *grooming/body care, change in body posture, self-benefactive, naturally reciprocal, translational motion, emotion, cognition, spontaneous events,* and *logophoric* (Kemmer 1993:3, 16-20). Of these semantic types, some do not carry middle morphology at all in Falam Chin. Others have middle marking which is formally indistinguishable from reflexives or reciprocals. Finally, there are some which are similar to reflexives and reciprocals in marking, but have some unique characteristics, as well.

Changes in body posture and body part motion predicates fall into the first category—although they have semantics which Kemmer classifies as middle, they lack any special middle morphological marking ((6.31) and (6.32)).

(6.31) Cinte$_i$ a$_i$ khuk a bilh.
Cinte 3SG knee 3SG.NOM bend
'Cinte knelt down.'

(6.32) Cinte$_i$ a$_i$ mit a meng.
Cinte 3SG eye 3SG.NOM open
'Cinte opened her eyes.'

However, these clauses do display two key feature of reflexive, reciprocal, and middle syntax in Falam Chin. First, despite having two NPs, they are intransitive, as shown by their lack of ergative marking. In fact, these verbs can never be ergative marked. Second, their two NPs are coindexed, an animate argument on the one hand with a part of its own body on the other. As I demonstrate with further examples later in this section, the coindexation of a body part possessor is viewed in Falam Chin as applying to the body part NP as a whole.

In light of the fact that these predicates have no valence-lowering morphology and do not alter between transitive and intransitive, it seems that no lexical rule is involved. If middles, they are middles by means of coindexation in the lexicon, rather than by means of a valence-altering operation. That being so, the lack of ergative marking indicates that the coreferentiality principle, distinct from any lexical rule, still applies. As there are two coindexed nominals, they are assigned a single actor-undergoer macrorole according to the coreferentiality principle and the clause is M-intransitive.

The second type of middle is those that are formally indistinguishable from reflexives or reciprocals. Some predicates of cognition fit this category. The verb *thei* 'to know', 'to understand' combines with *-aw* to mean 'to have self-revelation', 'to be self-aware', 'be introspective', 'realize' ((6.33) and (6.34)).

KIF 016
(6.33) Amah le amah khal a **thei-aw**.
3SG.STD and 3SG.STD also 3SG.NOM know.1-REF
'She also was self-aware [that she had become a tiger].'

LNM 009
(6.34) A lungthin cu rit zet=in a **thei-aw**.
3SG mind TOP heavy very=AJT 3SG.NOM know.1-REF
'He was doing some soul-searching.'
(lit., 'His mind knew itself very heavily.')

Ruat 'think' with *-aw* means 'be concerned about' or 'consider' ((6.35) and (6.36)).

(6.35) Ngunte cu (amah le amah) a **ruat-aw**.
Ngunte TOP 3SG.STD and 3SG.STD 3SG.NOM think-REFL
'Ngunte is concerned about herself.'

(6.36) Cinte cu mi-mawi-bik=ah a **ruat-aw**.
Cinte TOP NMLZ-beautiful-SUPR=LOC 3SG.NOM think-REFL
'Cinte considers herself to be the most beautiful one.'

Similarly, naturally reciprocal events, such as *ham* 'be engaged' or *bang* 'be similar', are formally indistinguishable from reciprocals ((6.37) and (6.38)).

(6.37) Cinte le Mang cu an **ham-aw**.
Cinte and Mang TOP 3PL.NOM engaged-RECP
'Cinte and Mang are engaged (to each other).'

(6.38) Cinte le Ngunte cu an **bang-aw** zet.
Cinte and Ngunte TOP 3PL.NOM same-RECP very
'Cinte and Ngunte are very similar (to each other).'

Although Kemmer does not list them, anticausatives are a third possible use of the middle morphology which falls into this category. When joined with a causative accomplishment or achievement verb, the middle morpheme can indicate the result of a causative event ((6.39)–(6.41)). As Falam has few lexical causative verbs that are not derived from a non-causative base verb, this is fairly rare.

(6.39) Sangka a **awng-aw**.
door 3SG.NOM open.1-REFL
'The door is open.'

(6.40) Sangka a **hren-aw**.
door 3SG.NOM lock-REFL
'The door is locked.'

(6.41) Kawr a **bang-aw**.
shirt 3SG.NOM hang.up-REFL
'The shirt is hung up.'

The third and last category of middles is those which share the reflexive/reciprocal morpheme, yet have some unique characteristics as well. This is true of grooming/body care middles. While this type takes the same morphology as reflexives and reciprocals, *-aw ~ -awk*, it is optional, rather than obligatory. If the middle morphology is not present, the construction may be ambiguous regarding who is being affected. Thus, (6.42) with middle morphology must mean that Cinte painted Cinte's fingernails, whereas without middle morphology it may mean she painted her own or someone else's fingernails.

(6.42) Cinte_i $a_{i/j}$ kuttin a sen-**(aw)**.
Cinte 3SG fingernail 3SG.NOM paint-MID
'Cinte_i painted **her**$_{i/j}$ **(own)** fingernails.'

Body care/grooming middles are also distinct from reflexives and reciprocals in that they substitute an obligatory body part of the actor in place of a reflexive or reciprocal phrase (6.43).

(6.43) Cinte$_i$ *****in/cu **a**$_i$ **sam** a hriat-aw.
Cinte ERG/TOP 3SG hair 3SG.NOM comb-MID
'Cinte$_i$ combed **her$_i$ hair**.'

Although the body part nominal is obligatory, these middles are also valence-lowered, just like reflexives, reciprocals, and the body motion middles. As shown in (6.43), in conjunction with middle morphology, the actor cannot take ergative marking.

Furthermore, first or second person accusative marking is ungrammatical in grooming middles (6.44).

(6.44) Ka khahmul **ka/*i** ziat(-aw).
1SG beard 1SG.NOM/1SG.ACC shave(-MID)
'**I** shaved (my beard).'

This might not seem remarkable, considering that the O argument is technically third person, until one considers that accusative marking *is* grammatical in a sentence such as (6.45).

(6.45) Thangte in **ka** khahmul **i** ziat.
Thangte ERG 1SG beard 1SG.ACC shave
'Thangte shaved **my** beard/**me**.'

In this example, the cross-reference (1sg) points to the whole of which the NP (*ka khahmul* 'my beard') is only a part, a phenomenon Bickel describes as external possessor indexation (see (2.42)). The lack of external possessor indexing cross-reference in the analogous clause in (6.44) demonstrates that the clause is intransitive. However, as was

the case with reflexives and reciprocals, the intransitivity is not semantic or syntactic, but rather M-intransitivity.

Middle constructions of this type appear to be limited to verbs which effect a change to the actor's person, such as *at* 'cut', *ziat* 'shave', *met* 'cut (hair)', *kheuh* 'scratch', *sen* 'paint (fingernails)', and *hriat* 'comb (hair)'. Verbs which do not alter the actor do not allow the middle construction ((6.46) and (6.47)).

(6.46) Ka_i ban ka_i tham-***aw**.
1SG arm 1SG.NOM touch-MID
'I_i touched my_i arm.'

(6.47) $Cinte_i$ a_i mit a nuai-***aw**.
Cinte 3SG eye 3SG.NOM rub-MID
'$Cinte_i$ rubbed her_i eyes.'

Note, however, that these sentences still lack ergative marking. Once again, the coreferentiality principle, which is logically distinct from a middle lexical rule, renders these clauses M-intransitive, just as was true in (6.31) and (6.32).

Falam Chin middles which include middle morphology are lexical operations, just like its reflexives and reciprocals. Middles of the cognition, naturally reciprocal, and anticausative types may be assumed to follow the lexical rules formulated in (6.28) and (6.29). However, body care/grooming middles require a slightly emended lexical rule, as shown in (6.48).

(6.48) *Lexical rule for body care/grooming middle verb:*
{PRED' (x … y…)} + *-aw* → {**PRED'** (x_i … [**have.as.part'** (z_i, y)]…)}
x=highest-ranking argument of the LS
y=second-highest ranking argument of the LS

As represented in this rule, middle morphology alters the base verb by introducing an obligatory **have.as.part'** predicate whose possessor argument (*z*) is coreferential with the highest-ranking argument of the main predicate (*x*).

The application of the rule is seen in (6.49), which shows the LSs for *ziat* 'shave' and the corresponding middle form *ziataw* 'shave self', along with the SR for (6.44).

(6.49) a. LS for *ziat* 'shave' **{do'** (x, Ø) CAUSE [BECOME **shaved'** (y)]}

b. LS for *ziataw* 'shave self' **{do'** (x_i, Ø) CAUSE [BECOME **shaved'** ([**have.as.part'** (z_i, [khahmul])])]}

c. SR for (6.44) **{do'** (1sg, Ø) CAUSE [BECOME **shaved'** ([**have.as.part'** ($1sg_i$, [khahmul])])]}

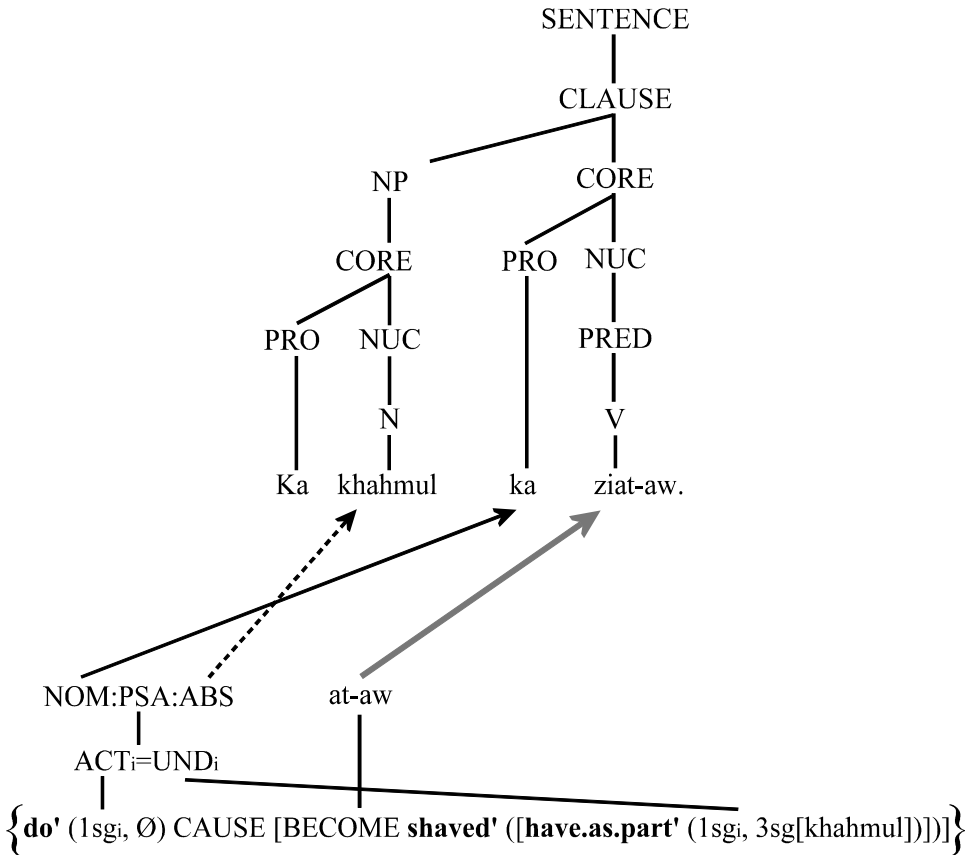


Figure 6.4: Middle

The linking for (6.44), shown in Figure 6.4, is identical to that of a reflexive. First, the highest-ranking argument (1sg) and second-highest ranking argument (*ka khahmul* 'my beard') have been assigned the actor and undergoer macroroles, respectively. Since the highest-ranking argument is coindexed with the possessor of the second-highest ranking argument, the two NPs qualify as coreferential. As a result, their macroroles are joined per the coreferentiality principle, and the clause is M-intransitive. A single nominative cross-reference specification accounts for both argument slots. In this case, there is also a single absolutive NP, since the actor has only cross-reference specifications.

Table 6.2: Constructional schema for Falam Chin middles

CONSTRUCTION
Falam Chin middle
SYNTAX
Template: Default
PSA: Default
Linking: Default: Principle B of AUH + Coreferentiality principle for lexical reflexives, reciprocals, and middles
Domain: Coreferring semantic co-arguments within a simple clause
MORPHOLOGY
Middle verb: Stem 1 V + *-aw ~ -awk*
SEMANTICS
Middle verb: **PRED'** (x … y…) + *-aw* → **PRED'** (x_i … [**have.as.part'** (z_i, y)]…)
x=highest-ranking argument of the LS
y=second-highest ranking argument of the LS
PRAGMATICS
Illocutionary force: Unspecified
Focus structure: Unspecified

A constructional schema summarizing middles is shown in Table 6.2. In terms of SYNTAX, they are identical to reflexives and reciprocals, following defaults of template assignment, PSA assignment, and linking. They also follow the coreferentiality principle

for lexical reflexives, reciprocals, and middles, linking two arguments to a single macrorole. In MORPHOLOGY, we see that they are identical to reflexives and reciprocals. However, in SEMANTICS we see that their lexical rule differs from those of reflexives and reciprocals, in that they lack a reflexive or reciprocal phrase, but substitute a coreferential body part NP. Finally, in PRAGMATICS we see that middles can occur with any type of illocutionary force or focus structure.

6.3 Valence-raising operations and reflexives, reciprocals, and middles

In this section, I discuss the interaction of valence-raising operations with reflexives, reciprocals, and middles, beginning with applicatives. Example (6.50) shows a clause in which both applicative and reflexive or reciprocal operations have applied to a base intransitive predicate.

(6.50) Mang a **hnih-san-aw**.
Mang 3SG.NOM laugh.2-RELQ-REFL
'Mang **laughed at himself**.'

The ordering of the applicative and reflexive or reciprocal morphology in (6.50) supports an analysis in which the applicative operation precedes the reflexive or reciprocal operation. Presumably, the applicative lexical rule applies as in Chapter 5, fusing an applied LS to the base LS. Next, the two arguments are assigned coindexation by the reflexive or reciprocal rule. According to the coreferentiality principle, a single joint macrorole is assigned, and the clause is M-intransitive, as the lack of ergative marking demonstrates. The valence-raising effects of the first operation are nullified by the valence-lowering effects of the second operation.

With base transitive predicates, such as those in (6.51) and (6.52), the applicative operation results in three core arguments.

(6.51) Cinte le Parte pangpar an **lei-sak-aw**.
Cinte and Parte flower 3PL.NOM buy-BEN-RECP
'Cinte and Parte **buy** flowers **for each other**.'

(6.52) Cinte le Parte paisa an **ruk-sak-aw**.
Cinte and Parte money 3PL.NOM steal.2-MAL-RECP
'Cinte and Parte **steal** money **from each other**.'

As shown in §6.1.2, reflexive/reciprocal coindexation applies between the highest and second-highest ranking of these three arguments. Then, Principle B of the AUH chooses these same two arguments as actor and undergoer. Since the actor and undergoer are coindexed, they are joined as a single macrorole, and base transitive applicative reflexive/reciprocals are always M-intransitive as well.

We might initially hypothesize that the same will be true of base transitive causative verbs. However, as seen in (6.53) and (6.54), base transitive causatives coindex the causee and the theme arguments, not the causer and causee, as we might have predicted. In addition, they are M-transitive, as indicated by the ergative marking.

(6.53) **Thangte$_{i}$** in **nauhak-pa$_{i}$** a khawlh-**aw$_{i/*j}$**-ter.
Thangte ERG boy-MASC 3SG.NOM wash-REFL-CAUS
a. 'Thangte made **the boy$_{i}$** take a bath/shower.' (lit. 'wash **himself$_{i}$'**)
b. *'**Thangte$_{j}$** made **himself$_{j}$** wash the boy.'

(6.54) **Mang$_{i}$** in **Cinte$_{i}$** a zoh-**aw$_{i/*j}$**-ter.
Mang ERG Cinte 3SG.NOM look.at-REFL-CAUS
a. 'Mang had **Cinte$_{i}$** look at **herself$_{i}$**.'
b. *'**Mang$_{j}$** had **himself$_{j}$** look at Cinte.'

Comparing causative reflexive/reciprocals with applicative reflexive/reciprocals reveals that the order of the morphemes is reversed. This suggests that, whereas the

applicative operation precedes the reflexive/reciprocal operation, the causative operation follows it. Thus, in the case of causatives, the reflexive or reciprocal lexical rule applies first, coindexing the two arguments of the base verb, after which the causative applies without altering the coindexation. Principle B of the AUH chooses the causer and causee as actor and undergoer, respectively. Since the coreferential arguments do not align with the actor and undergoer, they are not linked per the coreferentiality principle. The result is that base transitive causative reflexives remain M-transitive, as shown by the ergative marking in (6.53) and (6.54).

This progression is shown in (6.55).

(6.55)
a. LS for *khawlh* 'wash' — **{**[**do'** (y, Ø)] CAUSE [BECOME **clean'** (z)]}
↓
b. LS for *khawlhaw* 'wash self' — **{**[**do'** (y_i, Ø)] CAUSE [BECOME **clean'** (z_i)]}
↓
c. LS for *khawlhawter* 'make wash self' — **{[do'** (x, Ø)] CAUSE [**do'** (y_i, Ø)] CAUSE [BECOME **clean'** (z_i)]}
d. SR for (6.53) — **{**[**do'** (3sg[Thangte], Ø)] CAUSE [**do'** (3sg[nauhakpa$_i$], Ø)] CAUSE [BECOME **clean'** ($3sg_i$)]}

First the reflexive applies, coindexing the arguments (6.55b). Then the causative fuses a cause LS to the base LS, as shown in (6.55c). The SR for (6.53) is shown in (6.55d).

The linking for (6.53) is represented in Figure 6.5. First, the actor and undergoer macroroles are assigned to the highest-ranking and second-highest ranking arguments, *Thangte* and *nauhakpa* 'boy', respectively. The lowest-ranking argument, in this case unexpressed, receives a non-macrorole assignment. Because the actor and undergoer arguments are *not* coindexed, the coreferentiality principle cannot apply. Instead, the actor and undergoer arguments remain distinct and the clause is M-transitive. Finally, the

actor, *Thangte,* is marked with ergative case and nominative cross-reference. The causee, *nauhakpa* 'boy', on the other hand, takes absolutive case and accusative cross-reference.

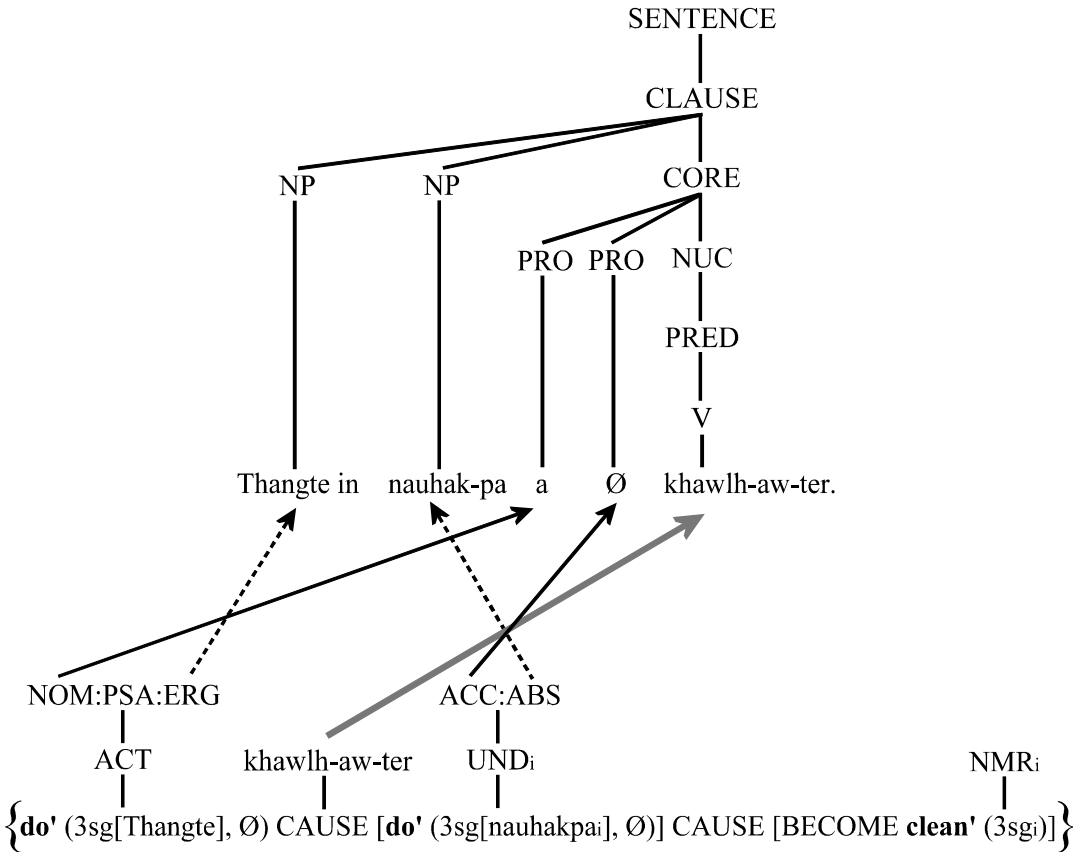


Figure 6.5: Causative reflexive

In summary, this section shows that while applicatives apply previous to reflexives or reciprocals, causatives apply after the reflexive or reciprocal operation. This claim is substantiated by the ordering of reflexive/reciprocal and valence-raising morphemes, as well as by the lack or presence of ergative marking in such clauses.

While this explanation accounts for all the data considered so far, base intransitive predicates in conjunction with causative reflexives/reciprocals raise a difficulty. If the predicate is intransitive, the reflexive lexical rule cannot apply first, as there are not two

arguments to be coindexed. Rather, the causative operation must of necessity apply first. However, the ordering of the morphemes remains the same, as seen in (6.56).

(6.56) Thangte$_i$ a bal-**aw$_i$-ter**.
Thangte 3SG.NOM dirty-REFL-CAUS
'Thangte$_i$ got himself$_i$ dirty.'

Furthermore, as shown in (6.53) and (6.54), it is not usually possible to coindex a causer and causee. However, with a base intransitive predicate, the causer and the causee must be coindexed—there are no other available arguments. Nevertheless, it appears that in such cases the morphemes retain their prototypical ordering. This must be treated as the grammaticalization of a semantic tendency.

While applicatives do not usually occur with middles, causatives can. Causative middles have ergative marking, just as causative reflexives and reciprocals do (6.57).

(6.57) Parte **in** Cinte$_i$ a$_i$ kuttin a sen-aw$_i$-ter.
Parte ERG Cinte 3SG fingernail 3SG.NOM paint-MID-CAUS
'Parte had Cinte$_i$ paint her$_i$ (own) fingernails.' (Cinte's fingernails)

As seen previously, this concurs with the ordering of morphemes, which suggests that the middle lexical rule applies first, determining the coindexation of the causee and the possessor argument, after which the causative rule applies. Since the causative operation cannot affect coindexation, it also does not affect the M-transitivity of the clause.

To summarize, valence-raising and valence-lowering operations can and do co-occur. When the base verb is intransitive, the result is a cancellation of the valence-altering effects, producing a final M-intransitive verb. However, when the base verb is transitive, the results depend on which arguments are coindexed by the reflexive operation. For applicatives, the actor and undergoer are coindexed, resulting in valence-

lowering. For causatives, the undergoer and a non-macrorole argument are coindexed, leaving the actor and undergoer macroroles distinct; thus, the clause remains M-transitive.

6.4 Conclusion

In conclusion, this chapter demonstrates that reflexives, reciprocals, and middles in Falam Chin are lexical operations, but unlike causatives and applicatives, they do not add (or delete) a segment of the LS, nor do they affect the semantic valence of the predicate. They also frequently leave the syntactic valence unchanged, with optional reflexive/reciprocal phrases and obligatory middle body parts. Rather than changing syntactic or semantic valence, they assign coindexation to the highest and second-highest ranking arguments of the predicate. If the coindexed arguments are also assigned the actor and undergoer macroroles, the coreferentiality principle joins them as a single macrorole, lowering the M-transitivity of the predicate in the process. This is demonstrated by the ungrammaticality of ergative case and of accusative cross-reference in these clauses. The coreferentiality principle for lexical reflexives, reciprocals, and middles distinguishes the lexical from NP and clitic types.

Reflexives, reciprocals, and middles differ primarily in terms of which arguments are marked as coreferential. For reflexives, it is the highest and second-highest ranking arguments of the LS. For reciprocals, it is the highest and second-highest ranking arguments of identical and simultaneously-occurring LS. For middles, it is a possessor argument. In each case, however, the coreferentiality principle applies to join the actor and undergoer arguments, lowering M-transitivity. In fact, it was shown that the

coreferentiality principle has application even to predicates which do not undergo a lexical operation but which are coindexed in their lexical form.

In Chapters 4 and 5, it was shown that the person requirement was capable of rendering a clause ungrammatical if a first or second person theme argument was not realized in the syntactic representation. In this chapter, an inverse effect was seen—two cross-reference specifications can be satisfied by one cross-reference form if and only if they are colinked to a single macrorole assignment. In such cases, the single cross-reference argument may have two corresponding NPs. This fact argues against a dependent-marking/strict agreement analysis of Falam Chin, and supports a head-marking/loose NP apposition analysis.

Finally, applicatives and causatives interact with reflexives, reciprocals, and middles in various ways. In most cases, it appears that the valence-lowering operation cancels the valence-raising operation. However, when the reflexive lexical rule precedes the causative lexical rule, the causee and theme are coindexed, while the causer and causee are assigned actor and undergoer macroroles. Since the actor and undergoer do not coincide with the coindexed arguments, the construction remains M-transitive.

CHAPTER 7

ANTIPASSIVES

The constructions discussed in the previous chapter, reflexives, reciprocals, and middles, were claimed to be lexical operations which assign coindexation to variables of the base LS. In addition, it was argued that they are valence-lowered based on the coreferentiality principle, which states that a coindexed actor and undergoer should be treated as a single macrorole. This chapter examines another type of valence-lowering operation, the antipassive. As in each of the previous chapters, I have shown within the framework of RRG that this operation is distinct in several ways: 1) how it affects (or, in this case, leaves unaffected) the underlying semantics of the predicate; 2) how it affects the assignment of macroroles and the corresponding M-transitivity of the predicate; and 3) how it affects the syntactic realization of arguments, both in terms of coding and behavioral properties. One way in which the antipassive differs significantly from the other operations is that, while lexical in nature, it primarily affects macrorole assignment, leaving the underlying LS unchanged. As is characteristic of lexical operations, PSA assignment and the remainder of the linking algorithm is left unaltered.

This chapter discusses the antipassive in Falam Chin in §7.1. Next, §7.2 examines a related structure which appears to be permanently or at least prototypically

detransitivized, termed captive verbs (Osburne 1975). Finally, §7.3 looks at the interaction of valence-raising operations and antipassives.

7.1 Falam Chin antipassives

This section discusses the properties of Falam Chin antipassives and illustrates their linking. Unlike the three operations examined so far, theoretical depictions of antipassives do not generally acknowledge a wide range of typological variation in form. For example, Dixon and Aikhenvald (2000) describe the prototypical antipassive as an operation in which a transitive verb is combined with antipassive morphology and consequently becomes syntactically intransitive, the O argument being omitted or else marked in some way as non-core. Cooreman (1994) gives a similar description, although acknowledging that there may not be overt antipassive marking (as, for example, in Nez Perce (Rude 1988)). When individual descriptions of antipassive constructions are examined, however, a broader range of variation can be seen.

The phenomenon of antipassive voice has been hypothesized for Chin languages (Peterson 1998; Kathol & VanBik 2001), but has also been disputed (Mang 2006). This uncertainty arises because structures found in related Chin languages, as well as the clause type discussed here as antipassive voice in Falam Chin, fulfill prototypical antipassive criteria in some ways, yet fail to in others. Example (7.1a) shows a regular ergative clause, while (7.1b) shows the corresponding valence-lowered clause. It can be seen that (7.1b) is unlike the antipassive prototype in that there is no antipassive

morphology on the verb,[104] and the O NP *bezai* ‘poem’, is neither deleted nor marked as oblique.

(7.1) a. Cinte in **bezai** Ø a Ø **phuah**.
Cinte ERG poem ABS 3SG.NOM 3.ACC compose
‘Cinte composed/is **composing a poem**.’

b. Cinte Ø cu **bezai** a **phuah**.
Cinte ABS TOP poem 3SG.NOM compose
‘Cinte composed/is **composing a poem**.’

On the other hand, the Falam Chin structure fulfills the antipassive criteria of detransitivizing a clause. The only overt differences between (7.1a) and (7.1b) are the deletion of the ergative marker *in* and the addition of the topic marker *cu.* As argued in previous chapters, this lack of ergative marking indicates lowered transitivity. Nevertheless, it is clear that neither the semantic nor syntactic valence of the structure has been lowered, since the O NP, *bezai* ‘poem’, remains a part of the clause. As argued for reflexives, reciprocals, and middles in Chapter 5, the antipassive clause has been lowered not in semantic or syntactic valence, but in M-transitivity, the number of macroroles assigned to the clause. However, the motivation for this change is somewhat different from that for reflexives, reciprocals, and middles, as the subsequent discussion shows.

In addition to detransitivization, another key aspect of antipassives is a syntactic downplaying of the O argument—prototypically shown through deletion or oblique status of the O. In Falam Chin, the antipassive does not overtly alter the O argument; it takes absolutive case in both ergative and antipassive clauses and is only rarely deleted. However, behavioral evidence demonstrates that the O argument has in fact been altered.

[104] Some Chin languages (e.g., Lai) use a stem 2 verb in the ergative clause and a stem 1 verb in the antipassive clause (Kathol & VanBik 2001). This could be considered a type of antipassive morphology.

First, the O argument of an antipassive clause cannot be relativized. As shown in (7.2), the head noun, *bezai* 'poem', can only be extracted when the A argument of the relative clause, *Cinte*, has ergative marking—that is, when the clause is not antipassive.

(7.2) **[Cinte ih/*Ø cu ___$_i$ (a) phuah=mi] bezai$_i$ cu** Burma
Cinte ERG/ABS TOP 3SG.NOM compose=REL poem TOP Burma

thu a si.
word 3SG.NOM be
'**The poem$_i$ [which Cinte composed ___$_i$]** is about Burma.'

Second, the O NP of an antipassive clause cannot be marked as topical (7.3b) or be left-dislocated (7.4b), although both are perfectly acceptable when the clause is not antipassive ((7.3a) and (7.4a)).

(7.3) a. Cinte in **bezai cu** a Ø phuah.
Cinte ERG poem TOP 3SG.NOM 3.ACC compose
'Cinte composed **the poem**.'

b. *Cinte Ø cu **bezai cu** a phuah.
Cinte ABS TOP poem TOP 3SG.NOM compose
'Cinte composed **the poem**.'

(7.4) a. **Bezai cu** Cinte in a Ø phuah.
poem TOP Cinte ERG 3SG.NOM 3.ACC compose
'**As for the poem,** Cinte composed it.'

b. ***Bezai cu** Cinte Ø cu a phuah.
poem TOP Cinte ABS TOP 3SG.NOM compose
'**As for the poem,** Cinte composed it.'

Finally, if an O argument is shared between two clauses, both clauses must be ergative. This is true only when the argument shares reference, not simply lexical form (see (7.9) for an example of the latter). Thus, in (7.5), the O argument, *bezai* 'poem', is mentioned in the first clause, but deleted from the second clause as a shared referent.

Since the shared argument refers in both clauses to the same object, an antipassive is ungrammatical in either clause.

(7.5) Cinte **in/*Ø cu** **bezai$_i$** a phuah ih,
Cinte ERG/ABS TOP poem 3SG.NOM compose and

Ngunte **in/*Ø cu** ___$_i$ a siar.
Ngunte ERG/ABS TOP 3SG.NOM read
'Cinte composed a **poem$_i$**, and Ngunte read **it$_i$**.'

As these examples show, the O argument of an antipassive clause is unable to serve as a topic. Framing this in terms of focus structure types, antipassive clauses in Falam Chin must have a predicate focus structure.

This does not mean that ergative and antipassive clauses in Falam Chin are in complementary distribution in terms of focus structure. Rather, ergative clauses have a wider distribution than antipassive clauses, and are free to convey all focus types, including predicate focus. Thus, in (7.6), the A arguments, *Cinte* and *Ngunte,* are both topic marked and ergative marked, while the O arguments, *bezai* 'poem' and *cakuat* 'letter', are unmarked. These ergative clauses are in predicate focus.

(7.6) Cinte cu=n bezai a phuah nan,
Cinte TOP=ERG poem 3SG.NOM compose but

Ngunte cu=n cakuat a ngan.
Ngunte TOP=ERG letter 3SG.NOM write
'Cinte composed a poem, but Ngunte wrote a letter.'

However, in ergative clauses (unlike antipassives), it is possible to have the O argument, or even both arguments, topic-marked (7.7). (See §3.3.1 for examples of ergative clauses in other focus types.)

(7.7) Cinte **cu=n** bezai **cu** a phuah nan,
Cinte **TOP=ERG** poem **TOP** 3SG.NOM compose but

tlawngta dang=pawl cu=n an phuah lo.
student other=PL TOP=ERG 3PL.NOM compose NEG
'Cinte composed the poem, but the other students did not.'

It seems then that the antipassive prescribes predicate focus, whereas the ergative construction simply allows for it.

That being the case, one might ask in what way the antipassive is distinct from the ergative construction. Quantitative studies of texts examining the discourse pragmatics of voice in various languages provide some clues (Cooreman 1982, 1987, 1988; Rude 1985, 1988; Thompson 1989; Givón 1990, 1994; Zavala 1997). These studies consistently indicate that voice types signify *degrees* of topicality of the participants of a clause. In active/ergative clauses, A and O are both topical, but the A has (at least potentially) a higher level of topicality than the O. By contrast, in antipassives, the A is maximally topical and the O is not topical at all.

This appears to be what we find in Falam Chin as well. As my language consultants explained, the antipassive clause in (7.1b) implies a strong contrast between the behavior of Cinte and that of unspecified others, a contrast which is not present in the ergative clause in (7.1a). Such contrast is created by the high topicality of the A argument and the non-topicality of the O argument. Some further examples of antipassives show this contrast more overtly. In (7.8), two participants, *Cinte* and *Mang,* engage in unrelated actions simultaneously. The actors are topical, while the O argument and the verb present new information about them. As a result, a contrast between their behavior is indicated.

(7.8) Cinte cu hmeh a suang nan, Mang cu cabu a siar.
Cinte TOP curry 3SG.NOM cook.1 but Mang TOP book 3SG.NOM read
'*Cinte* is cooking curry, but *Mang* is reading a book.'

In (7.9), the actions of two participants are once again contrasted. In this case both act upon the same category of thing, *kawr* 'shirt'. However, it is not predicated to be the same real world referent, as would be suggested by the ergative variant (see (7.5)). Rather, it referes to a non-referential concept.

(7.9) Ngunte cu kawr a phiar ih Parte cu a ṭhi.
Ngunte TOP shirt 3SG.NOM knit and Parte TOP 3SG.NOM sew.1
'*Ngunte* is knitting a shirt and *Parte* is sewing one.'

It can be seen that the distinction between an antipassive clause and its ergative counterpart is subtle, representing degrees of pragmatic salience.

In summary, the Falam Chin antipassive is like a prototypical antipassive in that it detransitivizes the clause (as shown by case marking). In addition, it downplays the O argument by suppressing its topic potential, limiting the clause to predicate focus—a cross-linguistic feature of antipassives, as shown in multiple textual studies. On the other hand, the Falam Chin antipassive lacks two features which have been claimed to be a part of prototypical antipassives: antipassive morphology and an overt change to the O argument, either deletion or becoming oblique. Nevertheless, Falam Chin antipassives are certainly not alone in this respect. For example, Nez Perce also lacks overt antipassive morphology, instead relying on case marking to indicate detransitivization (Rude 1988). In addition, quite a few languages include a type of antipasssive (sometimes one of several antipassive types in the language) which leaves the O argument undeleted and unchanged in terms of case. This is termed the *incorporative antipassive* (Smith-Stark

1978; England 1988; Kozinsky, et al. 1988). (See also Tsunoda's (1988) overview of some non-prototypical antipassives.)

The pragmatic aspect of antipassives which has been described for Falam Chin is frequently claimed to have semantic correlates. These may include lowering the identifiability or affectedness of the O argument, adjusting verbal aspect to be iterative, habitual, or otherwise incomplete, or lowering the volitionality of the A argument (Cooreman 1987, 1994). The first and last of these uses are found in Falam Chin. For example, in (7.8) and (7.9), the referential identity of a particular curry, book, or shirt is not in view, but rather the qualities of such items.

However, this type of semantic change does not stem from an alteration to the basic semantics of the LS, either by fusing a LS to the base predicate or by coindexing arguments, unlike the other voice and valence-altering operations examined to this point. In fact, it may be better termed a pragmatic, rather than semantic, change, as it is formed through implicature. This is supported by the fact that it can be defeased. For example, the ergative and antipassive forms of (7.10) both mean 'Thangte cut Mang'.

(7.10) Thangte in/cu Mang a at.
Thangte ERG/TOP Mang 3SG.NOM cut.1
'Thangte cut Mang.'

My language consultants explained the distinction between the two forms by suggesting that, in the ergative version, the action was intentional, whereas in the antipassive, it was unintended. However, as shown in (7.11), this implicature can be defeased by the addition to the antipassive of the adverb *hrim* 'intentionally'.

(7.11) Thangte cu Mang a at **hrim**.
Thangte TOP Mang 3SG.NOM cut.1 intentionally
'Thangte cut Mang **intentionally**.'

Similarly, (7.8) and (7.9) implicate indefiniteness or low identifiability for the O arguments. As seen in (7.11), however, this implicature can be defeased by the inclusion of an intrinsically definite or identifiable O argument, such as proper name. Likewise, the inclusion of a first or second person O argument (7.12) or a referent modified by a determiner (7.13) defeases such implicature.

(7.12) Thangte cu **i** hmu.
Thangte TOP 1SG.ACC see.1
'Thangte saw **me**.'

(7.13) Thangte cu **khi** pa a tham.
Thangte TOP that man 3SG.NOM touch
'Thangte touched **that** man.'

Kalmár (1979) and Bittner (1987), writing about antipassives in Inuktitut and West Greenlandic, respectively, show that indefiniteness of the O argument cannot account for all antipassive forms, as in these languages also they can occur with proper names, pronouns, or nouns plus determiners.[105] By Kalmár's account, pragmatic newness of the O argument is able to satisfactorally explain all instances of antipassive use. For example, in textual data, antipassives are used only when the O is new both in terms of the textual context as well as the wider cultural context.[106] Johnson (1980) presents a

[105] This has been acknowledged for other languages as well. For example, Cooreman (1988:573) states that "*In the majority of cases* the overt Objects in the Chamorro Indefinite Antipassive are generic and non-referential" (sic, italics added), leaving open the possibility that at least some objects are not "generic and non-referential."

[106] Bittner (1987) disagrees with Kalmár's analysis of the issue, claiming the ideas of *given* and *new* are vague and untestable. However, Bittner's scope analysis does not appear to resolve the issue of definite O arguments in antipassives. See Manning (1996) for a discussion of some of the shortfallings of Bittner's approach.

similar analysis, arguing that the O of an antipassive is pragmatically backgrounded. It is interesting that this pragmatic account has been supported in multiple languages by means of quantitative studies of topicality, but never previously by means of overt information structure marking. Falam Chin provides an example of a language in which the pragmatic account is supported through restrictions on overt information marking.

In summary, the overarching characteristic of the antipassive in Falam is maximal topicality for the A argument and lack of it for the O argument, as evidenced by various behavioral properties. In given situations, this may implicate either lowered affectedness or identifiability of the O argument or lowered volitionality of the A argument. However, as shown in this section, this meaning is created by implicature (since it can be defeased), and not by alteration to the base LS.

Before discussing the particular characteristics of antipassive linking in Falam Chin, it must be noted that, in addition to the semantic/pragmatic function, many languages also have a syntactic use for the antipassive. In a syntactically ergative language, the default PSA is the O argument. The antipassive forces marked linking of the PSA to the A argument. In such languages, the antipassive is a syntactic, or PSA-altering, operation. However, Falam Chin, while morphologically ergative, is syntactically accusative, and the A argument is its default PSA. Thus, the antipassive cannot have the syntactic function in Falam Chin because it does not affect PSA assignment.

Manning (1996) suggests these very reasons to support his claim that there are no syntactically accusative languages which have antipassives. Falam is at least arguably a

counter-example to this claim. (See Tsunoda 1988 for other counter-examples.) In Manning's view, mechanisms such as unspecified object deletion are used in accusative languages in place of antipassives. However, unspecified object deletion is not an option in Falam Chin. As discussed above, the O argument of a Falam Chin antipassive is rarely deleted—and only in a context such as (7.9) where it has recently been named. However, it does seem likely that antipassives of the prototypical PSA-altering type do not occur in syntactically accusative languages—since the A argument is already the default PSA.

The preceding paragraphs have shown that the Falam Chin antipassive is neither semantic (in the sense of altering the underlying LS) nor syntactic. (This may explain its lack of morphology, either derivational or inflectional.) By contrast, it is fundamentally pragmatic in nature. Thus, unlike the operations discussed in Chapters 4-6, no lexical rule is needed. Nevertheless, as shown by its lack of ergative marking, the antipassive is detransitivized, not by semantic or syntactic detransitivization, but rather by a change in M-transitivity. Thus, antipassives in Falam Chin are lexical operations which affect macrorole assignment directly, rather than through the medium of a lexical rule.

A formal statement which encapsulates the features of the Falam Chin antipassive operation is desirable. Ideally, such a statement would represent the integral connection of focus structure and macrorole assignment. I propose that the unique focus structure is the essence of the Falam Chin antipassive; the marked macrorole assignment flows from it. This can be formulated as in (7.14).

(7.14) *Antipassive lexical operation:*

a. Focus structure:
   i. The highest-ranking argument of an antipassive has maximum topic potential.
   ii. All other arguments of an antipassive have zero topic potential.
b. Macrorole assignment: Arguments with zero topic potential cannot be assigned a macrorole.

According to this formulation, the zero topicality of the O argument makes it, in a sense, invisible to the AUH, similar to predicative arguments.

The linking of the antipassive in (7.1b) is shown in Figure 7.1, beginning with the LS for the activity verb *phuah* 'compose' and the corresponding SR. Unlike the other constructions examined so far, the speech act node (the pale gray triangle in Figure 7.1) plays a key role in the antipassive by marking the O argument as within the actual focus domain (non-topical), while the A argument is outside it (see §3.3.2). Next, the highest-ranking argument, *Cinte,* is chosen as actor as usual. However, following (7.14b), the second-highest ranking argument, *bezai* 'poem', is blocked from receiving undergoer status. Instead, it has been assigned as a non-macrorole argument.

From this point, the remainer of the linking algorithm applies as usual. Since only a single macrorole has been assigned, *Cinte* receives absolutive case, rather than ergative. Its cross-reference is assigned nominative case. The non-macrorole argument is assigned the default case, absolutive. Although non-macrorole arguments do not usually receive a cross-reference assignment, in this case there remains an available slot for a core argument in the syntactic structure, with no higher-ranking argument to fill it. Therefore, it is assigned accusative case (cf. rule (3.49aii)).[107]

[107] This appears a rather theoretical claim, as no overt cross-reference supports it. However, examples such as (7.12), which, although antipassive, include accusative cross-reference, suggest this must be so.

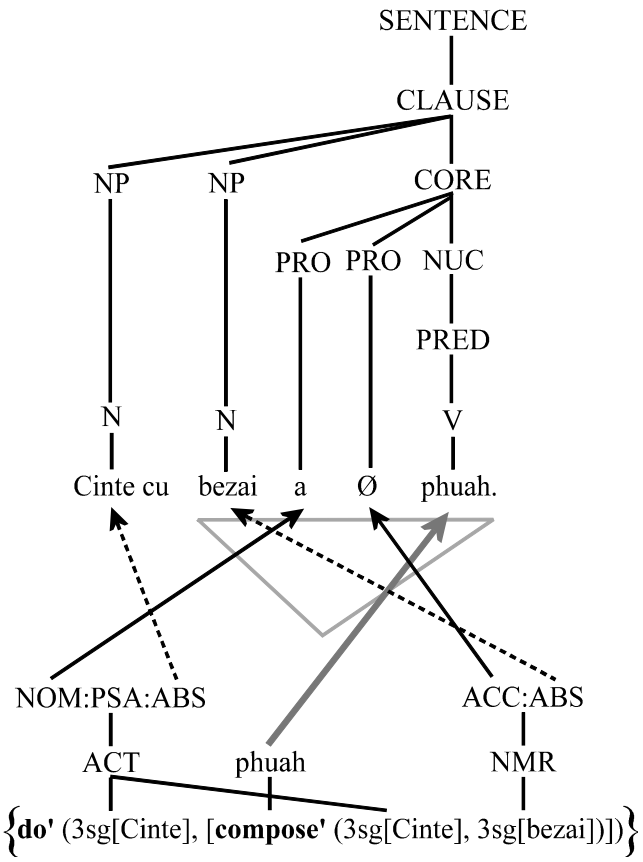


Figure 7.1: Antipassive

Table 7.1 shows a constructional schema summarizing the features of Falam Chin antipassives. SYNTAX shows that both the template and PSA assignment follow default specifications. However, macrorole linking specifies that a single actor macrorole be assigned, while other core arguments remain non-macrorole. MORPHOLOGY shows that, unlike previous lexical operations surveyed, antipassives involve no overt morphology. Also unlike previous operations, the SEMANTICS category does not include a lexical rule. Instead, the PRAGMATICS category provides information regarding focus structure: the clause must be in predicate focus with maximum topic potential for the highest-ranking

argument and zero topic potential for other arguments. In addition, this category describes possible implicatures of the marked macrorole linking.

Table 7.1: Constructional schema for Falam Chin antipassives

CONSTRUCTION
Falam Chin antipassive
SYNTAX
Template: Default
PSA: Default
Linking: Highest-ranking argument = actor; other argument(s) = non-macrorole
MORPHOLOGY
Antipassive verb: Stem 1 V + Ø
SEMANTICS
Default
PRAGMATICS
Illocutionary force: Unspecified
Focus structure: Predicate focus: higest-ranking argument has maximum topic potential; other arguments have zero topic potential
Implicature: O has lowered affectedness or identifiability; A has lowered volitionality

7.2 Activity captive verbs

In this section, I examine activity captive verbs, a type of predicate which, although they cannot be claimed to be valence-lowering, yet share some important characteristics with the antipassive in Falam Chin. This group is a subtype of what Osburne (1975:188) terms *captive verbs:* "verbs which are obligatorily accompanied by a noun in every instance in which they occur." Captive verbs could be described as complex predicates composed of both a noun and a verb. Often, one or both parts of the predication lack meaning independent of the construction (or the meaning has been lost over time). Even in those cases where they do have meaning apart from the construction, the meaning of the whole is usually idiomatic, or more than the sum of its parts.

Osburne divides captive verbs into “state” and “non-state” captive verbs (p. 188). In keeping with RRG terminology, the second type might be better termed *activity* captive verbs; this section looks at this type only. Although they have no non-valence lowered counterpart, their similarities with the antipassive voice shed light on the issue of transitivity in Falam Chin.

Activity captive verbs appear formally similar to the antipassive in that they include two NPs, but lack ergative marking. Unlike true antipassives, however, no ergative marked variant is possible for these verbs.[108] In this category can be grouped certain verbs which were discussed in Chapter 6 as having a type of middle semantics (although no middle morphology): change in body posture or body part movement verbs ((7.15) and (7.16)).

(7.15) Cinte ***in** a khuk a bilh.
Cinte ERG 3SG knee 3SG.NOM kneel
‘Cinte kneels down.’

(7.16) Ka mit ka meng.
1SG eye 1SG.NOM open
‘I opened my eyes.’

It was argued in Chapter 6 that the lack of ergative marking in these verbs results from the coreferentiality principle; because the actor is coindexed with the possessor of the body part undergoer, their macroroles are joined as a single macrorole and the clause is M-intranstive. Thus, their linking is just like that of body care/grooming middles (see Figure 6.4).

[108] Many of the verbs which Osburne (1975) categorizes as non-state captive verbs correspond to what in some languages appear as ambitransitive verbs: *rawl ei* ‘eat’, *rawl suang* ‘cook’, etc. As these can appear both with and without ergative marking and the noun in each case can be replaced by more specific items, they are better viewed as regular transitive verbs that frequently undergo antipassivization.

However, there are a number of other activity captive verbs which do not involve mention of the participant's body, and thus are not governed by the coreferentiality principle. Some examples are given in (7.17)–(7.19). In their English translation, these verbs are all intransitive, yet the Falam Chin sentences each include two distinct NPs.

(7.17) Cinte *in/(cu) **lam** a **leng**.
Cinte ERG/TOP distance 3SG.NOM walk
'Cinte **is walking**.'

(7.18) Liante *in/(cu) ni tin=in **thla** a **cam**.
Liante ERG/TOP day every=AJT spirit 3SG.NOM curse
'Liante **prays** every day.'

(7.19) **Hna** ka **ṭuan** ding.
work 1SG.NOM work FUT
'I will **work**.'

Nevertheless, ergative marking is impossible in these clauses. This suggests that, like antipassives, they are M-intransitive, assigning a single macrorole to the clause.

Activity captive verbs share some further similarities with antipassives. For example, the O argument in these clauses cannot be topic marked (7.20) or left-dislocated (7.21).

(7.20) *Cinte cu **lam** **cu** a leng.
Cinte TOP distance TOP 3SG.NOM walk
'Cinte is walking.'

(7.21) ***Lam** **cu** Cinte a leng.
distance TOP Cinte 3SG.NOM walk
'Cinte is walking.'

Similarly, the O argument can be deleted only if it is a shared concept between two clauses (7.22). As with antipassives, it is only a concept which is shared, not an actual referent (cf. (7.9)).

(7.22) Thangte cu peng hnih **lam** a **leng** nan,
Thangte TOP mile two distance 3SG.NOM walk but

Lian cu peng thum a **leng**.
Lian TOP mile three 3SG.NOM walk
'Thangte **walked** two miles, but Lian **walked** three (miles).'

It appears then that activity captive verbs share with antipassive verbs their predicate focus structure.

Since activity captive verbs have no ergative version, I propose that the M-intransitivity of these verbs is not the result of a lexical operation, but rather is marked in the lexical entry. In other words, they could be viewed as a type of lexical antipassive, similar to the lexical causative and applicative forms discussed in Chapters 4 and 5. A proposed LS for *lam leng* 'walk' and the SR of (7.17) are given in (7.23).

(7.23) a. LS for *lam lang* 'walk' **do'** (x, **[walk'** (x, [lam])**]**) [MR1]
b. SR for (7.17) **do'** (3sg[Cinte], **[walk'** (3sg[Cinte, [lam])**]**)

In this LS, there are two important features to notice. First, although in English *walk* is a single argument verb, in Falam Chin, it has two arguments. However, one of the arguments, *lam*, is lexically supplied. Furthermore, as represented by the brackets surrounding this argument, it is predicative, rather than referential. This prevents it from bearing a macrorole assignment, and the clause is M-intransitive.

The linking for (7.17) is shown in Figure 7.2. The single referential argument, *Cinte*, receives actor status. The predicative NP *lam* 'distance', on the other hand, cannot bear a macrorole assignment. Because there is only a single macrorole, the actor NP takes absolutive case, while its cross-reference receives nominative case. The predicative argument, however, is assigned directly to the clause.

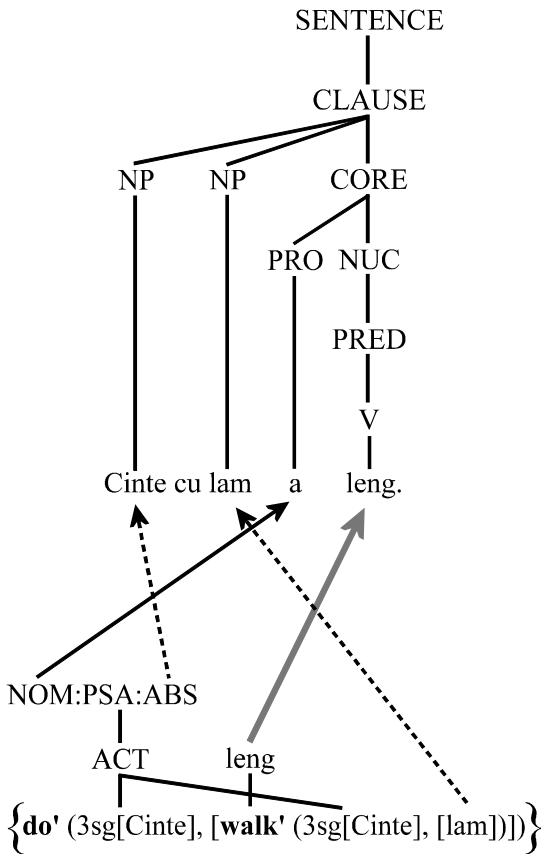


Figure 7.2: Activity captive verb

A few activity captive verbs can be M-transitive because they include three arguments in their LSs. Many verbs of speech including the noun *thu* 'word' fit this category: *thuphan per* 'tell a lie', *thu sim* 'tell (a story)', *thu ngai* 'listen to', *thu tiam* 'promise', *thu sut* 'ask', and *thu cah* 'leave a message' (7.24). Another example is *mal sawm* 'bless' (7.25).

(7.24) Ka pa in **thu** i **cah**.
1SG father ERG word 1SG.ACC leave
'My father **left** me **a message**.'

(7.25) Pathian in **mal** a lo **sawm** ding.
God ERG blessing 3SG.NOM 2.ACC give FUT
'God will **bless** you.'

In summary, antipassives and activity captive verbs are different, yet related phenomena. In antipassives, M-intransitivity results from a lexical operation which marks the second-highest ranking argument as having zero topic potential, blocking the assignment of a macrorole. On the other hand, M-intransitivity in activity captive verbs results from the inclusion of a predicative argument in the LS.

Antipassives and activity captive verbs also share many similarities. Like antipassives, activity captive verbs appear semantically and syntactically bivalent, yet they are M-intransitive. This is seen in the ungrammaticality of ergative marking for these verbs. (The only exceptions are trivalent predicates with one predicative argument and two macrorole-eligible arguments.) In addition, activity captive verbs, like antipassives, require predicate focus, such that only the A argument can be topical. Perhaps most importantly, both constructions reiterate that the number of direct NPs in a clause does not determine its transitivity.

7.3 Valence-raising operations with antipassives and activity captive verbs

This section examines the interaction of valence-raising operations with antipassives and with activity captive verbs. First, causatives are questionable in combination with the antipassive (7.26).

(7.26) Lothlo-pa in/**?cu** a fa-pa anṭam a cing-ter.
farmer-MASC ERG/TOP 3SG son-MASC mustard 3SG.NOM plant.1-CAUS
'The farmer had his son plant the mustard.'

On the other hand, it is quite possible to have an applicative in combination with an antipassive (7.27).

(7.27) Parte cu Thangte hmeh a suan-sak/sawn.
Parte TOP Thangte curry 3SG.NOM cook.2-BEN/cook.for
'Parte cooked some curry for Thangte.'

This difference is reminiscent of the discussion in Chapter 6 of the combination of valence-raising operations with reflexives, reciprocals, and middles, where it was seen that causatives retain their transitivity, while antipassives do not. We may conjecture that antipassives apply previous to the causative, leaving the causee macrorole-eligible, whereas they apply post-applicative operation, draining both lower-ranking arguments of their topic potential. While, this is somewhat conjectural in the absence of overt morphology, it does fit with what was found in Chapter 6.

Unlike antipassives, activity captive verbs co-occur with both causatives and applicatives. In effect, they behave exactly like other intransitive verbs when they are valence-raised. With causatives, the causer takes ergative marking and the causee is cross-referenced if first or second person (7.28).

(7.28) Parte **in** hna **a** **lo** ṭuan-ter.
Parte ERG work 3SG.NOM 2.ACC work-CAUS
'Parte made you work.'

Applicatives can also occur with activity captive verbs with similar effects (7.29).

(7.29) Thangte **in** Cinte cu nazi pa=khat sung lam a len-pi.
Thangte ERG Cinte TOP hour CLF=one in lam 3SG.NOM walk.2-COM
'Thangte walked with Cinte for an hour.'

In summary, valence-raising operations and antipassives mimic the behavior of valence-raising operations with reflexives, reciprocals, and middles. That is, causatives

cannot be detransitivized by the antipassive, whereas applicatives can be. By contrast, in combination with activity captive verbs, causative and applicatives behave just as with any intransitive verb, demonstrating once again that captive verbs are M-intransitive at the lexical level.

7.4 Conclusion

This chapter argues that Falam Chin antipassives, like the operations in the previous three chapters, are lexical operations. However, unlike those operations, they do not affect the underlying LS of the predicate, but rather affect its focus structure. When the lower-ranking argument(s) are leeched of topic potential, they can no longer be assigned a macrorole, thereby lowering the M-transitivity of the predicate. This change in M-transitivity often implicates a lowered affectedness or individuality of the O argument or lowered volitionality of the A argument. However, this implicature can be defeased.

Unlike the prototypical antipassive, Falam Chin antipassives have no morphology and do not overtly affect the O argument (either by making it oblique or by deletion). Falam also lacks the syntactic function of antipassives. These three features can each be explained by noting that Falam is a syntactically accusative language. Since the A argument in Falam is the default PSA, the antipassive cannot function to make it so, as it might in a syntactically ergative language. Furthermore, since the O argument is not removed from the core by a syntactic operation, there is no reason in Falam Chin to assign an oblique case to it; oblique cases are assigned based on LS position in Falam Chin (as argued in Chapters 4-6). Rather, the O argument becomes a non-macrorole argument and receives default absolutive case. In regard to morphology, Falam

antipassives do not effect a marked assignment of PSA; therefore, they have no inflectional morphology. On the other hand, they do not alter the LS of the base predicate; thus, they have no derivational morphology.

Like reflexives, reciprocals, and middles, antipassives allow two or more overt NPs in an intransitive clause. While in reflexives, reciprocals, and middles this results from the linking of two LS positions to a joint macrorole, in antipassives it results from suppression of the undergoer macrorole. In both cases, the number of NPs at the clause level does not dictate the transitivity of the clause. Rather, the number of macroroles assigned determines the transitivity of the clause.

The discussion of activity captive verbs demonstrates that there is a lexical version of antipassives, similar to lexical causatives and applicatives. Some predicates lexically specify a predicative argument which cannot take a macrorole. Unlike antipassives, they have no non-valence lowered counterpart, and they combine with causatives and applicatives just like intransitive verbs. Antipassives, on the other hand, cannot combine with causatives, whereas they are able to combine with and lower the M-transitivity of applicatives.

CHAPTER 8

CONCLUSION

In this dissertation, I have described four types of voice and valence-altering operations in Falam Chin, analyzing them within the framework of Role and Reference Grammar. The treatment of these operations can be summarized in three points. First, it provides a more thorough description of voice and valence-altering operations than has been previously given for any Kuki-Chin language, opening a window into the character of argument relations and transitivity in this language subfamily of Tibeto-Burman. Second, it links certain syntactic effects found in the voice and valence-altering operations of Falam Chin to its head-marking nature; this linkage can be considered a natural extension of Nichols' (1986) characterization of head-marking languages. Third, it demonstrates the analytical potential of RRG's linking algorithm by showing the importance of LSs for generalizing the behavior of trivalent predicates (ditransitives, causatives, and applicatives) and by showing how crucial macrorole assignment is to ultimate syntactic coding and behavior.

Little needs to be said here regarding Chapters 1-3; as a description of the key literature, the major grammatical constructions of the language, and the theoretical foundations of RRG, this material speaks for itself. Rather, the goal of this chapter is to reiterate and evaluate the arguments and claims made in Chapters 4-7. First, §8.1 summarizes pertinent material presented in Chapters 4-7. Next, §8.2 discusses the

typological connections between Falam as a head-marking language and the features of its voice and valence-altering operations. Third, §8.3 shows how the work presented here supports and expands on certain aspects of the theory of RRG. To conclude, §8.4 explores some limitations of the study and avenues for further research.

8.1 The character of voice and valence-altering operations in Falam Chin

This section draws together the information presented in Chapters 4-7 regarding voice and valence-altering operations in Falam Chin. The first two of these chapters were devoted to valence-raising operations, causatives and applicatives, while the second two were treatments of valence-lowering operations, reflexives/reciprocals/middles and antipassives. All of these operations are lexical operations (as RRG defines the term), involving changes either to the LS or to macrorole assignment.

However, the constructions also differ in a number of ways: in form, in function, and in their interaction with the linking algorithm. In terms of form, three types of operations add derivational morphology to the base predicate. These are causatives, applicatives, and reflexives/reciprocals/middles. It is not coincidental that these are also the three operations which alter the LS of the base predicate, since in each case, the derivational morpheme bears added semantic information.

In addition, each operation involves a change in case marking. (I focus here on the alternation between one and two argument verbs, ignoring the exceptions engendered by the alternation between two and three argument verbs.) For valence-raising operations, the added argument (a causer or applied argument) licenses ergative marking for the clause. For valence-lowering operations, an argument loses its distinct macrorole

eligibility and ergative marking becomes ungrammatical. Cross-reference may also be changed by the valence-altering operation. For causatives and applicatives, accusative cross-reference becomes possible in clauses with first and second person undergoers. For reflexives/reciprocals/middles, accusative marking becomes ungrammatical because of joint macrorole assignment of the actor and undergoer. Antipassives, however, still allow accusative marking, since the single actor macrorole takes only one of the core argument slots.

Lastly, the various operations display different behavioral properties. Valence-raising operations render intransitive base verbs capable of being reflexivized or relativized on the undergoer, demonstrating that the added argument is a core arguement. Valence-lowering operations, on the other hand, can only be relativized on the actor argument. While there is usually an overt O NP (such as a reflexive phrase, body part, etc.), it lacks the ability to be topicalized or left-detached.

The functions of the various operations considered were found to be either semantic, pragmatic, or both. Those three which alter the LS have a primarily semantic function. Nevertheless, most causatives and applicatives also have non-valence raising alternatives. The choice of valence-raised or non-valence raised affects which argument is the undergoer, implicating greater affectedness for that argument—a pragmatic distinction. On the other hand, the antipassive was shown to be fundamentally pragmatic in nature, investing the actor with maximum topicality and stripping the lower-ranking argument of topic potential. This alternation also can implicate a lowered degree of affectedness or volitionality.

Finally, the various voice and valence-altering operations discussed in this dissertation differ in their interaction with the linking algorithm. Both types of valence-raising operations undergo lexical rules which fuse two LSs into a single LS. Causatives fuse a cause LS *preceding* the base LS, whereas applicatives fuse an applied LS *after* the base LS. Like ditransitives, both structures follow Principle B of the AUH, consistently choosing the causee or applied argument (the second-highest ranking argument) as the undergoer.

By contrast, reflexives, reciprocals, and middles alter the LS by assigning coindexation to the highest and second-highest ranking arguments. If the two coindexed arguments are also the actor and undergoer, then the coreferentiality principle applies, joining them as a single macrorole and lowering the M-transitivity of the clause. Antipassives do not alter the LS at all. Rather, they strip the O argument of topic potential, at which point it is no longer eligible for macrorole assignment. Table 8.1 summarizes the preceding discussion.

Table 8.1: Falam Chin voice and valence-altering operations

Construction	**Form**	**Function**	**Interaction with linking**
Causative	*-ter* ergative case (*in*)	semantic, pragmatic	LS alteration, Principle B of AUH
Applicatives: benefactive, malefactive, comitative, relinquitive	*-sak, -pi, -san* ergative case (*in*)	semantic, pragmatic	LS alteration, Principle B of AUH
Reflexive/ reciprocal/ middle	*-aw ~ -awk* absolutive case	semantic	LS alteration, Principle B of AUH, coreferentiality principle
Antipassive	* absolutive case	pragmatic	marked macrorole linking

What is noteworthy in examining this table is the preeminence of lexical operations in Falam Chin—lexical operations with semantic and/or pragmatic functions. There is, in fact, a glaring absence of operations which are syntactic, either in terms of altering PSA linking or of having a syntactic function. Is Falam, in fact, entirely devoid of such structures?

The answer is "no," not entirely. There is a passive construction in Falam in which the undergoer of a two argument verb is linked to the PSA, while the actor is suppressed. It is formed using the auxiliary *si* 'be' in conjunction with a stem 2 complement ((8.1) and (8.2)).

(8.1) Zunghruk cu **ruk** zo a **si**.
ring TOP steal.2 PERF 3SG.NOM be
'The ring **was stolen**.'

(8.2) Mang cu ral=ah **thah** a **si**.
Mang TOP battle=LOC kill.2 3SG.NOM be
'Mang **was killed** in battle.'

However, it is significant that this one PSA-altering operation is limited in a number of ways. Although PSA-altering, it has a primarily semantic purpose—to signal that the actor is unknown. In addition, it was only accepted by my language consultants with simple predicates—it was deemed ungrammatical when combined with causatives and applicatives. Furthermore, I did not encounter this structure in any of the (admittedly few) folktales/stories I examined for this work. However, it did appear in the Falam Bible translation, suggesting this structure may have entered the language only recently through borrowing.

Falam Chin also includes a non-valence altering method for achieving a syntactic function which in other languages is often achieved through either passive or antipassive voice. This is the *verbal stem alternations* discussed in Chapter 2, used to identify the pivotal element in relative clauses, WH-questions, and nominalizations (see also King 2009). Although these serve a syntactic function, they are neither PSA-altering, nor valence-altering, as shown by the fact that they do not affect either case or cross-reference assignment.

To conclude this section, the character of voice and valence-altering operations in Falam Chin appears to have a decidedly semantic/pragmatic bent. Increases in valence arise from the addition of semantic information. Decreases in valence flow from the semantic identification of two arguments as a single individual, or from a pragmatic lowering of topic potential. Even in those situations where case clearly shows that M-transitivity has been lowered, the number of NP arguments generally remains intact, demonstrating an emphasis on communicating semantic information, regardless of whether it "conflicts" with case.

8.2 Voice and valence-altering operations in head-marking languages

This section reviews a number of features of Falam Chin voice and valence-altering operations, which, although unusual, can be seen as typologically natural aspects of Falam as a head-marking language. Nichols (1986) describes two facets of head-marking languages which have bearing on this point. First, Nichols claims that head-marking languages downplay the importance of grammatical relations in favor of semantic/pragmatic ones (p. 114). As discussed in the previous section, Falam Chin voice

and valence-altering operations are primarily lexical in nature, with semantic/pragmatic functions. Only rarely does marked PSA assignment occur, and syntactic functions are performed through non-valence altering means.

Even antipassives, which in many languages are syntactic operations with a syntactic function, are lexical operations and have a pragmatic function in Falam Chin. As argued in Chapter 7, Falam Chin is a syntactically accusative language in which the A argument is the default PSA, therefore the antipassive does not alter PSA assignment. Furthermore, the "demoted" argument is not assigned oblique case. This is because, in Falam Chin, oblique case serves a purely lexical function, and is assigned on the basis of LS position. It is *not* assigned to indicate that an argument has been placed outside the core as the result of a syntactic operation. This semantic/pragmatic bent to Falam Chin voice and valence-altering operations stems from its nature as a head-marking language.

Second, Nichols argues that in head-marking languages the cross-reference pronominals are the obligatory core arguments, while the NPs are optional appositional elements that add extra semantic information. There is evidence for this in Falam Chin even in basic clauses. For example, in §2.1.1.2, it was shown that Falam cross-reference pronominals can differ in person, number, and case from the NPs which they index. In external possessor indexation, cross-reference indexes an embedded possessor, rather than the possessed item (usually a body part). Similarly, in partitional indexation, the cross-reference stands for a group of which the indexed NP is a part. Finally, the NPs which stand in apposition to the cross-reference are not necessarily direct. Thus, a coparticipant in an action shares in the core cross-reference when marked with the

oblique *thawn* ‘with’ to indicate that two or more participants perform the same action simultaneously.

The principle governing the assignment of appositional NPs to cross-reference seems to be that *semantic specificity explains grammatical generality*. Thus, a specific third person NP can explain the referent of a first or second person cross-reference pronominal. A specific part of the body NP can explain the cross-reference for the whole person. A specific lexical-case-bearing NP can explain a grammatical case cross-reference form.

Naturally, this aspect of head-marking languages is also displayed in Falam Chin’s voice and valence-altering operations. For example, possessor agreement is found in middle verbs, as well as in some captive verbs (lexical antipassives). Likewise, cross-reference of a non-direct argument is found in some dialects’ treatment of benefactives and malefactives. In these dialects, an argument which is demonstrably the undergoer of the construction may have an oblique NP, a possessor, or an embedded argument of a relative clause as its only overt realization.

Perhaps the most striking support for the identification of the cross-reference with the core arguments, however, comes from the person requirement identified in Chapter 4 (4.17), which says that first and second person features must be realized as cross-reference. In some valence-raising operations, three arguments are available for cross-referencing, but there are only two cross-reference slots to be filled. As long as the undergoer coincides with any first or second person features, the person requirement is satisfied in tandem with Principle B of the AUH. However, when a theme argument has

first or second person features, the sentence cannot be grammatically composed because its indices cannot be realized as cross-reference—the actor and undergoer have already saturated the cross-reference slots. The fact that it is not sufficient to represent the first or second person semantics through a pronoun demonstrates the grammatical primacy of cross-reference over NPs. In short, the person requirement is simply a more specific statement of the Completeness Constraint (3.51): "All of the arguments explicitly specified in the semantic representation of a sentence must be realized syntactically in the sentence."

The person requirement also reveals the nature of cross-reference in reflexives, reciprocals, and middles. In these clauses, two semantic arguments are coindexed. Since they corefer to one distinct participant, they are cross-referenced only once per clause, yet each semantic argument slot may have its own representative NP (one of which is the reflexive/reciprocal phrase or middle body part). The fact that only a single cross-reference form is used for two argument slots would appear to be a violation of the person requirement. However, as the two arguments are coindexed, indicating a single participant, both can be realized syntactically through a single cross-reference assignment. In other words, although there are two argument slots in the LS, there is only one distinct core argument, represented by the one cross-reference form. It is possible, then, to have two NPs in apposition to this single cross-reference pronominal—a situation impossible in an agreement relationship.

In summary, Falam Chin displays its head-marking nature both through an emphasis on semantic/pragmatic factors and through its treatment of its cross-reference

pronominals as core arguments. The second aspect is seen in external possessor indexation, apposition of oblique NPs to core cross-reference, and especially in the priority given to cross-reference for fulfilling the person requirement. As has been demonstrated throughout this dissertation, cross-reference is not "in agreement" with the lexical NPs it indexes. Rather, cross-reference features are specified in the SR, and realized in accordance with rules of macrorole assignment and cross-reference assignment. Lexical NPs are optionally assigned in apposition to these cross-reference specifications according to the principle: *Semantic specificity explains grammatical generality*.

At this point, it may be instructive to contrast the apposition of NPs to cross-reference in Falam Chin, a head-marking language, with apposition of NPs to other NPs in English and Spanish, two dependent-marking languages. Apposition of this type is found in dependent-marking languages, as seen in (8.3). In these two examples, the appositive NP in both cases differs in person from the NP it is in apposition to.

(8.3) a. **I, the teacher, have/*has** the final say.
b. **You, my friend, are/*is** hiding something.

However, apposition in English does not occur to the same extent as it does in Falam Chin. Thus, neither partitional apposition (8.4), external possessor apposition (8.5), nor apposition in which the appositive NP differs in case from the core argument NP ((8.6) and (8.7)) can occur in English.

(8.4) a. **One of them eats** ground beef.
b. ***They, one, eat** ground beef.

(8.5) a. I stubbed **my toe/myself**.
b. *I stubbed **myself, my toe**.

(8.6) a. **Celine and Fergus grow** asparagus.
b. **Celine grows** asparagus with Fergus.
c. ***Celine and he, with Fergus, grow** asparagus.

(8.7) a. I loaned Basil an aquarium.
b. I loaned an aquarium to Basil.
c. *I loaned **him, to Basil,** an aquarium.

However, types of apposition which are not possible in English can sometimes occur in different dependent-marking languages. Thus, in Spanish, we find examples such as (8.8). This grammatical Spanish example is analogous to the ungrammatical English example in (8.7c). It seems that in Spanish the dative NP *a Maria* 'to Maria' can be appositive to the pronominal clitic *le* 'her', similar to what we find in Falam Chin.

(8.8) José **le** dió un café (**a Maria**).
Jose her give a coffee to Maria
'José gave **her** a coffee (**to Maria**).

Nevertheless, even Spanish does not allow the range of indexation types (or apposition types) found in Falam Chin and other head-marking languages. As Van Valin and LaPolla (1997) argue, the distinction between head-marking and dependent-marking languages is one of degree, rather than of discreteness. English is highly dependent-marking, Spanish less unequivocally so. Falam Chin is basically head-marking, but not as unmixed as some languages, such as Lakhota, which lack the dependent-marking feature of NP case.

8.3 Key Role and Reference Grammar concepts

In this section, I reiterate some features of the RRG framework that prove of great analytical value in describing Falam Chin valence-altering data, as well as discuss some

predictions of the theory of fusion presented in Chapters 4 and 5. First, in the previous section, I have discussed the head-marking nature of Falam. RRG provides a mechanism for capturing this feature of Falam syntax in a way which is typologically insightful, by placing the NPs in the clause and the cross-reference in the core.

In addition, it has been emphasized throughout this work that the LS representation is key to predicting final syntactic output. This is seen strikingly in ditransitives, causatives, and applicatives. Relying on semantic roles alone, it might not be immediately apparent that recipients, goals, causees, and the several types of applied objects share any semantic commonalities. However, placed within the LS representation, it becomes clear that they share a common position in the LS—the second-highest ranking argument. As a result, Principle B of the AUH is able to predict the behavior of Falam Chin ditransitives, causatives, and applicatives in treating recipients, goals, causees, and applied objects as undergoers.

The interaction of reflexives, reciprocals, and middles with valence-raising operations further demonstrates how LSs and Principle B are critical to explaining the Falam Chin data. In the case of applicatives, the lexical rule applies first, after which the reflexive assigns coindexation according to Principle B. As a result, coindexation coincides with actor and undergoer assignment, producing an intransitive clause. However, the reflexive operation precedes the causative, coindexing the causee and the theme. After the causative lexical rule applies, Principle B picks out the causer and causee as the actor and undergoer, respectively. As these do not coincide with the coindexed arguments, the construction remains transitive. The contrasting behavior of

these doubly valence-altered operations is explained through the medium of LSs and the AUH.

A second feature of RRG which is crucial to describing Falam Chin voice and valence-altering operations is that of macroroles and M-transitivity. Both types of valence-lowering operations involve a change to M-transitivity. In the case of reflexives, reciprocals, and middles, it results from coindexation, which joins two macroroles into one. Antipassives, on the other hand, lower M-transitivity as a result of lowered topic potential. In both cases, neither semantic nor syntactic transitivity is altered. Without the concept of M-transitivity, it is difficult to explain the accompanying change to case marking and, in the case of reflexives, reciprocals, and middles, to cross-reference. In summary, the framework of RRG, including its syntactic representation, LS representations, macroroles, and linking algorithm, supply key concepts for explaining the unique features of Falam Chin syntax.

In this dissertation, I have also suggested one potentially useful addition to the theory, the concept of fusion of two or more LSs into one, using curly brackets to represent such fusion. As seen in the discussion of valence-raised constructions versus non-valence raised alternatives, the distinction has important ramifications for the coding and behavioral properties of arguments. Two unfused LSs are treated separately by the AUH, whereas two fused LSs are treated as one. This allows the default undergoer assignment principle of the language (either A or B) to apply to non-valence-raised clauses as well as valence-raised clauses without invoking marked linking.

An alternate explanation could be that causatives and applicatives simply represent different linking patterns of arguments. However, this explanation is less satisfactory in two ways. First, as I have noted, it disrupts the normal linking pattern, whereas LS fusion allows unmarked linking to apply in both cases. Second, it does not clearly account for the Falam Chin data which demonstrates that the person requirement blocks first and second person themes in the valence-raised options. On the other hand, the person requirement seems oblivious to first and second person oblique arguments in the non-valence raised options. This imbalance cannot be explained under a marked linking analysis. However, a fusion analysis suggests that in the first instance, all three arguments are within the scope of the AUH and can therefore block the realization of a clause, whereas in the second instance, the oblique arguments are outside the scope of the AUH because they belong to a distinct predication.

In addition, the concept of fusion suggests certain predictions both within Falam Chin and for other languages. For example, in Falam Chin, fusion could be applied to other types of derivational morphology, such as non-valence raising or syntactic-category changing types. Since these types of morphology would not entail an alternation to the argument structure of the lexeme, other tests must be developed to show that fusion has taken place. Such tests might include the possible scope of modifiers applied to the base and altered lexeme, or syntactic changes in behavior of arguments of a predicate versus arguments of its corresponding nominalized form. On the other hand, lack of fusion would predict the behavior of less closely joined clause types, such as control clauses.

Furthermore, fusion is predicted to apply universally in languages having morphological causatives and applicatives. This could certainly be refuted if a language were found in which causative or applicative morphology was agglutinative without altering the syntactic behavior of the arguments involved. Fusion may also be found to apply in languages which include periphrastic causative and applicative operations. In other words, fusion predicts valence-raising behavior, not morphological expression.

Finally, fusion may also have interesting applications to cross-linguistic comparison of predicate argument structure. That is, two semantically similar predicates may differ in their treatment of arguments from language to language. The distinction between the argument structures may be not a distinction in the basic LS formulation, but in the fusion or lack thereof of the arguments involved.

8.4 Limitation and further study

This section concludes this dissertation with a brief discussion of a limitation encountered and a corresponding avenue of further study to pursue. The preceding chapters examine four constructions, each with a unique set of properties. However, the discussion primarily references elicited examples, although these are supplemented with textual examples where possible. This has the unfortunate consequence that discussion of the four operation types is not entirely balanced. Those operations whose function is primarily semantic are well suited to be examined using elicited examples, as speakers are, on the whole, consciously aware of semantic information and able to communicate it to the researcher. However, those operations whose function is pragmatic, in particular antipassives, cannot adequately be examined through elicitation alone, because elicited

examples can only imperfectly provide the *context* which is the basis of all pragmatic distinctions. As a result, the description of the function of antipassives is admittedly less complete than that of the other operations.

The decision to use elicited data as a primary source of information for this dissertaton was a practical one. Although elicitation has limitations, it also has many advantages, such as the ability to quickly contrast a variety of "minimal pair" type situations, differing only in one or two small details. By contrast, texts only rarely supply this type of contrastive data. Furthermore, the gathering, glossing, translation, and analysis of texts is an extremely time-consuming process, with relatively meager reward, each text supplying only a handful of examples of the constructions of interest. In addition, textual examples are frequently not ideal, as—in the flow of the text—they may omit one or more NPs. As a result, it becomes impossible to see the all-important ergative marking that signals transitivity in Falam Chin. Finally, texts cannot distinguish between what is ungrammatical and what is simply textually infrequent. It would require a far greater number of texts to supply the examples necessary for a thorough study of the pragmatic functions of Falam Chin voice and valence-altering operations.

Nevertheless, despite these difficulties, a text-based study of the voice and valence-altering operations of Falam Chin would certainly shed greater light on the functions of the operations presented here. Knowledge of their forms and nature (such as this dissertation presents) are certainly a necessary foundation for such a future study.

REFERENCES

Aikhenvald, Alexandra Y. 2008. Semi-direct speech: Manambu and beyond. *Language Sciences* 30.383–422.

Aissen, Judith. 1979. *The syntax of causative constructions*. New York, NY: Garland Publishing.

Alsina, Alex. 1992. On the argument structure of causatives. *Linguistic Inquiry* 23.517–55.

Alsina, Alex. 1996. *The role of argument structure in grammar: Evidence from Romance*. Stanford, CA: CSLI Publications.

Alsina, Alex and Sam Mchombo. 1990. The syntax of applicatives in Chichewa: Problems for a Theta Theoretic Asymmetry. *Natural Language and Linguistic Theory* 8.493–506.

Anagnostopoulou, Elena. 2003. *The syntax of ditransitives.* Berlin: Mouton/de Gruyter.

Austin, Peter and Joan Bresnan. 1996. Non-configurationality in Australian Aboriginal languages. *Natural Language and Linguistic Theory* 14.215–68.

Baker, Mark. 1988. *Incorporation: A theory of grammatical function changing.* Chicago, IL: The University of Chicago Press.

Benedict, Paul. 1972. *Sino-Tibetan: A conspectus.* Cambridge, MA: Cambridge University Press.

Bickel, Balthasar. 2000. On the syntax of agreement in Tibeto-Burman. *Studies in Language* 24.583–609.

Bittner, Maria. 1987. On the semantics of the Greenlandic antipassive and related constructions. *International Journal of American Linguistics* 53.194–231.

Blake, Barry. 1994. *Case*. New York, NY: Cambridge University Press.

Bloomfield, Leonard. 1933. *Language*. New York, NY: Henry Holt.

Boas, Franz (ed.) 1911. *Handbook of American Indian languages,* I. (Bureau of American Ethnology, Bulletin 40.1.) Washington, DC: Smithsonian Institution.

Bresnan, Joan. 1982. Control and complementation. *The mental representation of grammatical relations,* ed. by Joan Bresnan, 282–390. Cambridge, MA: MIT Press.

Bresnan, Joan. 2001. *Lexical-functional syntax.* Malden, MA: Blackwell Publishers.

Bresnan, Joan, Per-Kristian Halvorsen, and Joan Maling. 1985. Logophoricity and bound anaphors. Stanford University ms.

Bresnan, Joan and Lioba Moshi. 1990. Object asymmetries in comparative Bantu syntax. *Linguistic Inquiry* 21.147–85.

Campbell, Lyle. 2000. Valency-changing derivations in K'iche'. *Changing valency,* ed. by R.M.W. Dixon and Alexandra Y. Aikhenvald, 236–81. Cambridge, MA: Cambridge University Press.

Carson, Laura Hardin. 1927. *Pioneer trails, trials and triumphs.* New York, NY: Baptist Board of Education.

Champeon, Connie (ed.) 2008. *Chin writer's handbook.* Yangon, Myanmar: Bibles International.

Chhangte, Lalnunthangi. 1986. *A preliminary grammar of the Mizo language.* Arlington, TX: University of Texas at Arlington thesis.

Chhangte, Lalnunthangi. 1993. *Mizo syntax.* Eugene, OR: University of Oregon dissertation.

Chomsky, Noam. 1981. *Lectures on government and binding.* Dordrecht: Foris Publications.

Chomsky, Noam. 1982. *Some concepts and consequences of the theory of Government and Binding,* Linguistic Inquiry Monograph Six. Cambridge, MA: MIT Press.

Comrie, Bernard. 1976. The syntax of causative constructions: Cross-language similarities and divergences. *Syntax and semantics,* vol. 6: *The grammar of causative constructions,* ed. by Masayoshi Shibatani, 261–312. New York: Academic Press.

Comrie, Bernard. 1978. Ergativity. *Syntactic typology: Studies in the phenomenology of language,* ed. by W. P. Lehmann, 329–94. Austin, TX: University of Texas Press.

Comrie, Bernard. 1981. *Language universals and linguistic typology*. Chicago, IL: University of Chicago Press.

Conti, Carmen. 2009. Applicatives and Role and Reference Grammar. *Studies in Role and Reference Grammar,* ed. by Lilián Guerrero, Sergio Ibáñez Cerda, and Valeria A. Belloro, 231–46. Mexico: Universidad Nacional Autónoma de Mexico.

Cooreman, Ann. 1982. Topicality, ergativity, and transitivity in narrative discourse: evidence from Chamorro. *Studies in Language* 6.343–74.

Cooreman, Ann. 1987. *Transitivity and discourse continuity in Chamorro narratives.* Berlin: Mouton de Gruyter.

Cooreman, Ann. 1988. The antipassive in Chamorro: Variations on the theme of transitivity. *Passive and voice,* ed. by Masayoshi Shibatani, 561–93. Amsterdam: John Benjamins.

Cooreman, Ann. 1994. A functional typology of antipassives. *Voice: Form and function,* ed. by Barbara Fox and Paul Hopper, 49–88. Philadelphia, PA: John Benjamins.

Croft, William. 1993. Voice: Beyond control and affectedness. *Voice: Form and function,* ed. by Barbara Fox and Paul Hopper, 89–118. Philadelphia, PA: John Benjamins.

Croft, William. 2003. *Typology and universals*. Cambridge, MA: Cambridge University Press.

Dalrymple, Mary. 1993. *The syntax of anaphoric binding.* Stanford, CA: CSLI.

Davies, William and Carol Rosen. 1988. Unions as multi-predicate clauses. *Language* 64.52–88.

Dixon, R. M. W. 1994. *Ergativity*. Cambridge, MA: Cambridge University Press.

Dixon, R. M. W. 2000. A typology of causatives: Form, syntax and meaning. *Changing valency,* ed. by R.M.W. Dixon and Alexandra Y. Aikhenvald, 30–40. Cambridge, MA: Cambridge University Press.

Dixon, R. M. W., and Alexandra Y. Aikhenvald. 2000. Introduction. *Changing valency,* ed. by R.M.W. Dixon and Alexandra Y. Aikhenvald, 1–29. Cambridge, MA: Cambridge University Press.

Dowty, David. 1979. *Word meaning and Montague grammar: The semantics of verbs and times in generative semantics and in Montague's PTQ.* Dordrecht: Reidel.

Dryer, Matthew S. 1986. Primary objects, secondary objects, and antidative. *Language* 62.808–45.

Dryer, Matthew S. 1992. The Greenbergian word order correlations. *Language* 68.81–138.

England, Nora C. 1988. Mam voice. *Passive and voice,* ed. by Masayoshi Shibatani, 525–45. Philadelphia, PA: John Benjamins.

Everaert, Martin. 1986. *The syntax of reflexivization.* Dordrecht: Foris Publications.

Everaert, Martin. 2000. Types of anaphoric expressions. *Reciprocals: Forms and functions,* ed. by Zygmunt Frajzyngier and Traci S. Curl., 61–83. Philadelphia, PA: John Benjamins.

Faltz, Leonard M. 1985. *Reflexivization: A study in Universal Syntax.* New York, NY: Garland Publishing, Inc.

Farrell, Patrick. 2009. The preposition *with* in Role and Reference Grammar. *Studies in Role and Reference Grammar,* ed. by Lilián Guerrero, Sergio Ibáñez Cerda, and Valeria A. Belloro, 179–202. Mexico: Universidad Nacional Autónoma de Mexico.

Fillmore, Charles. 1968. The case for case. *Universals in linguistic theory,* ed. by Emmon Bach and Robert T. Harms, 1–88. New York, NY: Holt, Rinehart, and Winston.

Fischer, Silke. 2005. *Towards an optimal theory of reflexivization.* Tübingen: Tübingen University dissertation.

Geniušienė, Emma. 1987. *The typology of reflexives.* Berlin: Mouton de Gruyter.

Guerrero, Lilián and Robert D. Van Valin, Jr. 2004. Yaqui and the analysis of primary object languages. *International Journal of American Linguistics*. 70.290–319.

Gibson, Jeanne. 1980. *Clause union in Chamorro and in Universal Grammar*. San Diego, CA: University of California dissertation.

Givón, Talmy. 1990. *Syntax: A functional-typological introduction, Vol. 2.* Amsterdam: John Benjamins.

Givón, Talmy. 1994. The pragmatics of de-transitive voice: Functional and typological aspects of inversion. *Voice and inversion,* ed. by T. Givón, 3–44. Philadelphia, PA: John Benjamins.

Greenberg, Joseph H. 1963. Some universals of grammar with particular reference to the order of meaningful elements. *Universals of language,* ed. by J.H. Greenberg, 73–113. Cambridge, MS: MIT Press.

Grimshaw, Jane. 1990. *Argument structure.* Cambridge, MA: The MIT Press.

Gundel, Jeannette K. 1988. Universals of topic-comment structure. *Studies in linguistic typology,* ed. by M. Hammond, E. Moravcsik, and J. Wirth, 209–39. Amsterdam and Philadelphia, PA: John Benjamins.

Hale, Kenneth. 1983. Warlpiri and the grammar of non-configurational languages, *Natural Language and Linguistic Theory* 1.5–47.

Hartmann-So, Helga. 2002. Verb stem alternation in Daai Chin. *Linguistics of the Tibeto-Burman Area.* 25.81–98.

Hartmann-So, Helga. 2009. *A descriptive grammar of Daai Chin*. STEDT Monograph Series, vol. 7. Berkeley, CA: University of California Center for Southeast Asia Studies.

Haspelmath, Martin. 2002. *Understanding morphology*. New York, NY: Oxford University Press.

Heath, Jeffrey. 1975. Some functional relationships in grammar. *Language* 51.89–104.

Henderson, Eugenie J. A. 1965. *Tiddim Chin: A descriptive analysis of two texts.* London Oriental Series 15. London: Oxford University Press.

Hill, Harriet. 1995. Pronouns and reported speech in Adioukrou. *The Journal of West African Languages* 25.87–106.

Hopper, Paul J., and Sandra A. Thompson. 1980. Transitivity in grammar and discourse. *Language* 56.251–99.

Huang, Yan. 2006. Anaphora, cataphora, exophora, logophoricity. *The encyclopedia of language and linguistics,* vol. 1, ed. by K. Brown, 231–38. New York, NY: Elsevier.

Hyman, Larry M. 2003. The rise and fall of contour tones. Paper presented at the Symposium on Phonology and Phonetics (in the 21st century), Freudenthal, June 4-7, 2003.

Jackendoff, Ray S. 1972. *Semantic interpretation and generative grammar*. Cambridge, MA: MIT Press.

Jackendoff, Ray S. 1992. Madame Tussaud meets the Binding Theory. *Natural Language and Linguistic Theory* 10.1–31.

Jelinek, Eloise. 1984. Categories, case, and configurationality. *Natural Language and Linguistic Theory* 2.39–76.

Jeong, Youngmi. 2007. *Applicatives: Structure and interpretation from a Minimalist perspective.* Philadelphia, PA: John Benjamins.

Johnson, M. R. 1980. *Ergativity in Inuktitut (Eskimo), in Montague Grammar and in Relational Grammar.* Bloomington, IN: Indiana University Linguistics Club.

Jolly, Julia. 1991. *Prepositional analysis within the framework of Role and Reference Grammar*. New York, NY: Peter Lang.

Kalmár, I. 1979. The antipassive and grammatical relations in Eskimo. *Ergativity: Towards a theory of grammatical relations*, ed. by Frans Plank, 117–44. New York, NY: Academic Press.

Kaplan, Ronald M. and Joan Bresnan 1982. Lexical-Functional Grammar: A formal system for grammatical representation. *The mental representation of grammatical relations,* ed. by Joan Bresnan, Ch. 4. Cambridge, MA: MIT Press.

Kathol, Andreas, and Kenneth VanBik. 2001. The syntax of verbal stem alternations in Lai. Berkeley, CA: University of California, Berkeley, ms.

Keenan, Edward L. 1976. Towards a universal definition of 'subject.' *Subject and topic,* ed. by Charles N. Li, 305–33. New York, NY: Academic Press.

Kemmer, Suzanne. 1993. *The middle voice.* Amsterdam and Philadelphia, PA: John Benjamins.

Khar Thuan. n.d. Thoughts and suggestions for the use of the two vowel symbols, *o* and *aw*. Unpublished ms.

Khar Thuan. 2008. *A phonological description of Falam (Chin).* Chiang Mai, Thailand: Payap University thesis.

Kimenyi, A. 1980. *A Relational Grammar of Kinyarwanda*. Berkeley, CA: University of California Press.

King, Deborah. 2009. Structural and pragmatic functions of Kuki-Chin verbal stem alternations. *Journal of the Southeast Asian Linguistics Society* 1.141–57.

Klaiman, M.H. 1991. *Grammatical voice.* Cambridge, MA: Cambridge University Press.

Kozinsky, I.S., V.P. Nedjalkov, and M.S. Polinskaya. 1988. Antipassive in Chukchee: oblique object, object incorporation, zero object. *Passive and voice,* ed. by Masayoshi Shibatani, 651–706. Amsterdam: John Benjamins.

Kroeger, Paul. 2004. *Analyzing syntax: A lexical-functional approach*. New York, NY: Cambridge University Press.

Kroeger, Paul. 2005. *Analyzing grammar: An introduction.* New York, NY: Cambridge University Press.

Kuno, Susumu. 1987. *Functional syntax: Anaphora, discourse, and empathy.* University of Chicago Press.

Lambrecht, Knud. 1994. *Information structure and sentence form: Topic, focus, and the mental representations of discourse referents.* New York, NY: Cambridge University Press.

Lambrecht, Knud. 2000. When subjects behave like objects: A markedness analysis of sentence focus constructions across languages. *Studies in Language* 24.611–82.

LaPolla, Randy J. 1996. Middle voice marking in Tibeto-Burman. *Proceedings of the fourth international symposium on languages and linguistics: Pan-Asiatic linguistics 5.*

Lehman, F.K., and VanBik, Kenneth. 1997. Notes on Lai Chin personal pronouns and overt case marking. *Studies in the Linguistic Sciences* 27.81–86.

Levin, Beth, and Malka Rappaport Hovav. 1998. Morphology and lexical semantics. *The handbook of morphology,* ed. by Arold Zwicky and Andrew Spencer, 248–71. Oxford: Blackwell.

Lewis, M. Paul (ed.). 2009. *Ethnologue: Languages of the world.* 16th ed. Dallas, TX: SIL International.

Lichtenberk, Frantisek. 1994. Reflexives and reciprocals. *The encyclopedia of language and linguistics,* vol. 7, ed. by R. E. Asher and J.M.Y. Simpson, 3504–9. Oxford: Pergamon Press.

Löffler, Lorenz G. 2002. The tonal system of Chin final stops. *Linguistics of the Tibeto-Burman Area* 25.123–54.

Lorrain, J. H. 1940. *Dictionary of the Lushai language.* Biblioteca Indica. Calcutta: Royal Asiatic Society of Bengal.

Mang, Kee Shein. 2006. A syntactic and pragmatic description of verb stem alternation in K'Chò, a Chin language. Chiang Mai, Thailand: Payap University thesis.

Manning, Christopher. 1996. *Ergativity: Argument structure and grammatical relations.* Stanford, CA: CSLI Publications.

Marantz, Alec. 1982. Affixation and the syntax of applied verb constructions. *Proceedings of the first West Coast Conference on Formal Linguistics.* Stanford, CA: Stanford University.

Marantz, Alec. 1984. *On the nature of grammatical relations.* Cambridge, MA: MIT Press.

Matisoff, James. 1986. Hearts and minds in South-East Asian languages and English: An essay in the comparative lexical semantics of psycho-collocations. *Cahiers de Linguistique Asie Orientale* 15.5–57.

Matisoff, James A. 1996. *Languages and dialects of Tibeto-Burman,* with Stephen P. Baron and John B. Lowe. STEDT Monograph Series, Vol. 2. Berkeley, CA: University of California Center for Southeast Asia Studies.

Matisoff, James A. 2003. *Handbook of Proto-Tibeto Burman.* Berkeley, CA: University of California Press.

McGinnis, M. 2001. Variation in the syntax of applicatives. *Linguistics Variation Yearbook* 1.105–146.

Milewski, Tadeusz. 1967. La structure de la phrase dans les langues indigenes de l'Amerique du nord. *Etudes typologiques sur les langues indigenes de l'Amerique* (Prace Komisji Orientalistycznej 7), 70–101. Krakow: PAN.

Mohanan, K.P. and Tara Mohanan. 1998. Strong and weak projection: Lexical reflexives and reciprocals. *The projection of arguments: Lexical and compositional factors,* ed. by Miriam Butt and Wilhelm Gueder, 165–94. Stanford, CA: CSLI Publications.

Næss, Ashild. 2007. *Prototypical transitivity.* Amsterdam and Philadelphia, PA: John Benjamins.

Nichols, Johanna. 1986. Head-marking and dependent-marking grammar. *Language* 62.56–119.

Nichols, Johanna, and Balthasar Bickel. 2008. Locus of marking in the clause. *The world atlas of language structures online,* ed. by Martin Haspelmath, Matthew S. Dryer, David Gil, and Bernard Comrie. Munich: Max Planck Digital Library, chapter 23. Available online at http://wals.info/feature/23. Accessed on February 18, 2010.

Ohori, Toshio. 1996. Case markers and clause linkage: Toward a semantic typology. Cognitive linguistics in the Redwoods: The expansion of a new paradigm in linguistics. ed. by Eugene H. Casad, 693–712. New York: Mouton de Gruyter.

Osburne, Andrea Gail. 1975. *A transformational analysis of tone in the verb system of Zahao (Laizo) Chin.* Ithaca, NY: Cornell University dissertation.

Patent, Jason D. 1998. A willy-nilly look at Lai ideophones. *Linguistics of the Tibeto-Burman Area* 21.155–200.

Peterson, David A. 1998. The morphosyntax of transitivization in Lai (Haka Chin). *Linguistics of the Tibeto-Burman Area* 21.87–153.

Peterson, David A. 1999. *Discourse-functional, historical, and typological aspects of applicative constructions.* Berkeley, CA: University of California, Berkeley dissertation.

Peterson, David A. 2003. Hakha Lai. *The Sino-Tibetan languages,* ed. by Graham Thurgood and Randy J. LaPolla, 409–26. London: Routledge.

Peterson, David. 2007. *Applicative constructions*. New York, NY: Oxford University Press.

Polinsky, Maria. 2008. Antipassive constructions. *The world atlas of language structures online,* ed. by Martin Haspelmath, Matthew S. Dryer, David Gil, and Bernard Comrie. Munich: Max Planck Digital Library, chapter 108. Available online at http://wals.info/feature/108. Accessed on February 18, 2010.

Postal, Paul. 1971. *Cross-over phenomena.* New York, NY: Holt, Rinehart and Winston.

Pustet, Regina. 2003. *Copulas: Universals in the categorization of the lexicon*. Oxford: Oxford University Press.

Pylkkänen, Liina. 2002. *Introducing arguments*. Cambridge, MA: MIT PhD dissertation.

Pylkkänen, Liina. 2008. *Introducing arguments*. Cambridge, MA: MIT Press.

Reinhart, Tanya and Eric Reuland. 1993. Reflexivity. *Linguistic Inquiry* 24.657–720.

Romero-Figeroa, Andres. 1997. *A reference grammar of Warao.* Newcastle: Lincom Europa.

Rosen, Carol. 1988. *The relational structure of reflexive clauses: Evidence from Italian.* New York, NY: Garland Publishing.

Rude, Noel. 1985. *Studies in Nez Perce grammar and discourse.* Eugene, OR: University of Oregon, Eugene dissertation.

Rude, Noel. 1988. Ergative, passive, and antipassive in Nez Perce. *Passive and voice,* ed. by Masayoshi Shibatani, 547–60. Philadelphia, PA: John Benjamins.

Sadler, Louisa, and Andrew Spencer. 1998. Morphology and argument structure. *The handbook of morphology,* ed. by Arold Zwicky and Andrew Spencer, 206–36. Oxford: Blackwell.

Salai Ram Ling Hmung. 2004. Lahka suah ni mitthli (Payday tears). *Vankau arsi (Vankau star),* Vol.7, ed. by Run Cung Mang, 82–86. Yangon: Falam Baptist Church.

Smith, Carlotta. 1997. *The parameter of aspect (2nd edition).* Dordrecht: Reidel.

Smith, Tomoko Yamashita. 1998. The middle voice in Lai. *Linguistics of the Tibeto-Burman Area* 21.1–52.

Smith-Stark, Thom. 1978. The Mayan antipassive: Some facts and fictions. *Papers in Mayan linguistics,* ed. by Nora C. England, 169–87. Columbia, MO: University of Missouri.

Song, Jae Jung. 1996. *Causatives and causation: A universal-typological perspective.* New York, NY: Longman.

Stern, Theodore. 1963. A provisional sketch of Sizang Chin. *Asia Minor* 10.222–78.

Thompson, Chad. 1989. *Voice and obviation in Athabaskan and other languages.* Eugene, OR: University of Oregon, Eugene dissertation.

Trithart, M. 1977. *Relational Grammar and Chichewa subjectivization*. Cambridge, MA: MIT dissertation.

Tsunoda, Tasaku. 1988. Warrungu and other Australian languages. *Passive and voice,* ed. by Masayoshi Shibatani, 595–650. Philadelphia, PA: John Benjamins.

Ujlakyova, Eva. 2007. Language Map of Falam. SIL.

VanBik, Kenneth. 1998. Lai psycho-collocation. *Linguistics of the Tibeto-Burman Area* 21.201–33.

VanBik, Kenneth. 2001. Causatives in Lai. *Papers from the eighth annual meeting of the Southeast Asian Linguistic Society (SEALS VIII),* ed. by Graham Thurgood, 161–70. Tempe, AZ: Department for Southeast Asian Studies, Arizona State University.

VanBik, Kenneth. 2002. Three types of causative constructions in Hakha Lai. *Linguistics of the Tibeto-Burman Area* 25.99–122.

VanBik, Kenneth. 2006. *Proto-Kuki-Chin*. Berkeley, CA: University of California, Berkeley dissertation.

Van Valin, Robert D., Jr. 1977. Aspects of Lakhota syntax. Berkeley, CA: University of California, Berkeley dissertation.

Van Valin, Robert D., Jr. 1985. Case marking and the structure of the Lakhota clause. *Grammar inside and outside the clause,* ed. by Johanna Nichols and Anthony Woodbury, 365–413. Cambridge, MA: Cambridge University Press.

Van Valin, Robert D., Jr. 1987. The role of government in the grammar of head-marking languages. *International Journal of American Linguistics* 53.371–97.

Van Valin, Robert D., Jr. 1990. Semantic parameters of split intransitivity. *Language* 66.221–60.

Van Valin, Robert D., Jr. 1993. A synopsis of Role and Reference Grammar. *Advances in Role and Reference Grammar*, ed. by Robert D. Van Valin, Jr., 1-164. Amsterdam and Philadelphia, PA: John Benjamins.

Van Valin, Robert D., Jr. 2005. *Exploring the syntax-semantics interface.* Cambridge, MA: Cambridge University Press.

Van Valin, Robert D., Jr. 2008. An overview of Role and Reference Grammar. Unpublished ms.

Van Valin, Robert D., Jr. 2009. On the analysis of head-marking languages in RRG. Talk given at the 2009 International Conference on Role and Reference Grammar. August 7, 2009.

Van Valin, Robert D., Jr., and Randy J. LaPolla. 1997. *Syntax: Structure, meaning and function.* Cambridge, MA: Cambridge University Press.

Vendler, Zeno. 1957. Verbs and times. *Linguistics in philosophy*, ed. by Zeno Vendler, 97–121. Ithaca, NY: Cornell University Press.

Yip, Moira. 2004. Phonological markedness and allomorph selection in Zahao. *Language and Linguistics* 5.969–1001.

Yu, Dominic. 2007. Tense, aspect, mode, and evidentiality in Falam. Berkeley, CA: University of California, Berkeley ms.

Zavala, Roberto. 1997. Functional analysis of Akatek voice constructions. *International Journal of American Linguistics* 63.439–74.

BIOGRAPHICAL INFORMATION

Deborah King grew up in Northern Virginia. She completed a B.A. in Studio Art (2000), an M.S. in Counseling (2003), and an M.A. in Bible Translation (2005) at Bob Jones University in Greenville, SC. In 2005, Deborah traveled to Burma to assist in a language development project for a minority language group, the Falam Chin. This trip sparked an interest in linguistics which led her to apply to the University of Texas at Arlington's PhD. program in linguistics. While at UTA, Deborah has been involved in Lingua, the student-led linguistics organization, both as treasurer and president, and has also taught *Introduction to the Study of Human Language* for three semesters. In both summer 2007 and fall 2009, she returned to Burma to continue fieldwork with the Falam Chin, helping to produce the *Falam Chin Writer's Handbook* (Champeon 2008). The fieldwork conducted on these trips supplied the data for this dissertation. Deborah hopes to continue study of minority languages and to be involved in translation and language development projects in the future.