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THE VERBAL CATEGORY SYSTEM OF CAKCHIQUEL MAYAN

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Roberta Anne Hendrick Krueger

A Dissertation Submitted
to the
Faculty of the Division of the Humanities
in Candidacy for the Degree of

Doctor of Philosophy

Department of Linguistics
June 1986

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THE VERBAL CATEGORY SYSTEM OF CAKCHIQUEL MAYAN

A DISSERTATION SUBMITTED TO
THE FACULTY OF THE DIVISION OF THE HUMANITIES
IN CANDIDACY FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY
DEPARTMENT OF LINGUISTICS

BY
ROBERTA ANNE HENDRICK KRUEGER

CHICAGO, ILLINOIS
JUNE, 1986

ACKNOWLEDGEMENTS

I would like to thank the members of my committee, Bill Hanks, Howard Aronson, Paul Friedrich, and Jerry Sadock, and honorary member Norman McQuown, for their guidance and assistance on this project, as well as for all they have taught me about linguistics over the years. I am grateful to Flavio Mucía Patal, Marcos Calí Semeyá, and Adrián Yool Gómez for many hours of patient work and instruction in Cakchiquel. The aforementioned bear no responsibility for my errors in the dissertation.

Many people have aided me in various ways, and I would especially like to thank Narciso Cojtí, Serapio Coyote Tum, Elaine Elliott, Martha King, Margarita López Raquéc, Jo Ann Munson, Martina Muxtay Cotonón, and John Robertson.

My fieldwork was made possible by a University of Chicago Overseas Fellowship and a Tinker Travel Grant from the Center for Latin American Studies, for which I am grateful. I would like to thank Grace Place and Norman McQuown for providing pleasant working environments, and David Baird for printing the dissertation.

Finally, I thank my family and friends for their support and confidence, and especially my husband Dave, without whose firm encouragement I would undoubtedly still be writing.

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ABBREVIATIONS

A	absolutive person marker
abs	absolutive
AC	abstract-to-concrete
adj	adjective
act	active
adv	adverb
ap	antipassive
art	article
Atr	atransitive
C	consonant
CA	concrete-to-abstract
cau	causative
comp	complementizer
der	derivational suffix
E	ergative person marker
emph	emphatic
ep	epenthetic
erg	ergative
F	feminine
FMP	Flavio Mucía Patal
foc	focus
hon	honorific

int	intensifier
iter	iterative
IVb	intransitive verb
IVb-C	consonant-initial intransitive verb
IVb-V	vowel-initial intransitive verb
LAMP	Latin American Missionary Project
loc	locative
M	masculine
MAC	Marcos Armando Calí
md	mood
mov	movement
n	noun
nd	no date
neg	negator
nom	nominalizer
NP	noun phrase
p	positional
ps	passive
pf	perfect
pl	plural
PLFM	Proyecto Lingüístico Francisco Marroquín
PP	prepositional phrase
prep	preposition
prof	profession
prt	particle
quest	question

rp	resultative passive
SCT	Serapio Coyote Tum
sg	singular
SIL	Summer Institute of Linguistics
t	time
TAM	tense-aspect-mood
TVb	transitive verb
TVb-C	consonant-initial transitive verb
TVb-V	vowel-initial transitive verb
Vb	verb
V	vowel

In memory of my parents,
Bob and Mary Lee,
who shared their love for Guatemala with me

CHAPTER I

INTRODUCTION

1.1 Focus

This dissertation consists of a thorough description of the verbal category system in contemporary Cakchiquel Mayan. There are about 30 Mayan languages¹ spoken in Mexico and Guatemala. Cakchiquel, the fourth largest of these, is spoken by about 271,000 people² (Kaufman, 1970: 60, 1964 census) in the central highlands of Guatemala. It is a member of the Quichean subgroup, its closest relatives being Quiché, Tzutujil, Sacapultec, and Sipacapa. These languages in turn comprise the Quichean branch of Eastern Mayan (see fig. 1).

The Cakchiquel area of Guatemala is easily accessible (see fig. 2). It contains two communities which are major tourist attractions, and which consequently have sizeable North American populations, Panajachel Atitlán and Antigua. Nevertheless, there exists a surprisingly small amount of descriptive-analytic literature on Cakchiquel, considering its prominence, both linguistically and geographically. Terrence Kaufman, in explaining the recent "discovery" of Teco, which was previously thought to be a dialect of either Cakchiquel or Mam, says, "El teco no había sido documentado antes, porque el

¹ Suarez (1983: xvii) says there are 29 Mayan languages, while Kaufman (1974: 85), 31. They differ in the classification of Motozintlec and Tuzantec on the one hand, and Pokomchi and Pocomchi on the other, as separate languages.

² Although this is the most recent population statistic I can find, it is only a suggestion of the true number. Since 1964 many Indians have died in a devastating earthquake and waves of political violence. A severe depression has driven many Indians to Guatemala City in search of jobs, where they often become "ladino-ized" and speak only Spanish. On the other hand, the population of the country as a whole is growing steadily, and Cakchiquel is still spoken by a large number of people.

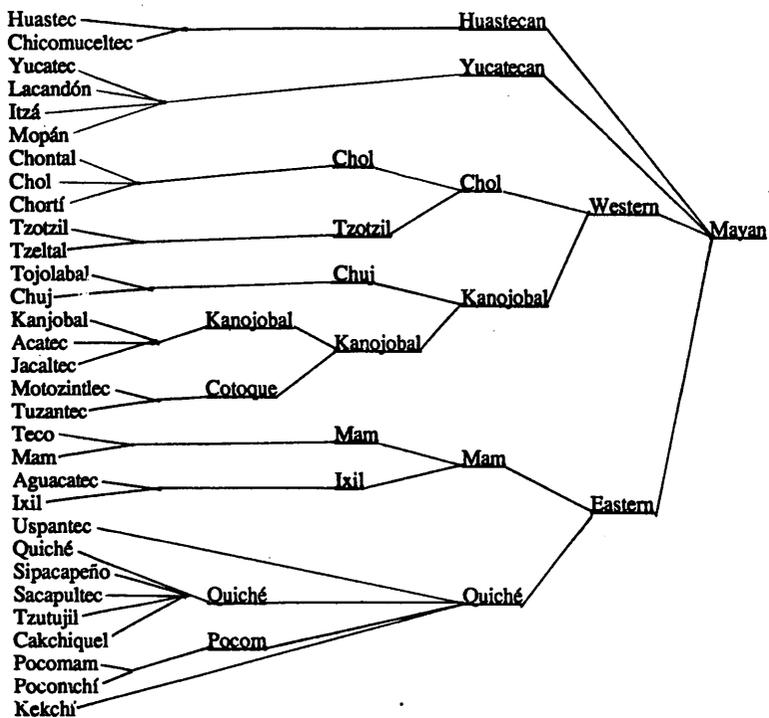


Figure 1: Mayan Family Tree
(after Kaufman, 1970: 85)

cakchiquel y el mam son bastante conocidos y por tanto no se les considera ya muy interesantes" (1974: 45). But even if modern Cakchiquel is well-known in some sense, this knowledge has not been transmitted to paper. As of today, there is no thorough grammar of Cakchiquel. The extant grammatical sketches, Stoll (1958), Brinton (1884), Latin American Mission Project (LAMP, nd), and Townsend (1961) are helpful but insufficient, being often imprecise and incomplete. One pedagogical text, Herbruger and Díaz Barrios (1956) unfortunately was never completed past volume one of the proposed three volumes. Blair et al. (1969), another textbook, is the best source of grammatical information available, but again misses many important forms and constructions. There are quite a few texts in Cakchiquel now, due to the efforts of the Summer Institute of Linguistics (SIL), but none provide any interlinear analysis. Only in 1986-1987 are Mayanists to see the emergence of sound modern dictionaries, by SIL and the Proyecto Lingüístico Francisco Marroquín (PLFM). The Saenz de Santa María dictionary (1940) is based primarily on pre-1900 missionary data, and since many changes have taken place in Cakchiquel since then, is not adequate for the contemporary language.

Research on verbal categories in the Mayan family as a whole also leaves room for more work, especially in the areas of tense, aspect and mood. Mayan languages are ergative, and many recent investigations have treated this interesting phenomenon. Ergativity is intimately related to voice, transitivity, and case marking systems, and these areas consequently have received more attention than other grammatical categories. Dayley (1981b), for instance, is an excellent study of voice in Mayan languages. Robertson (1976) is a comparative study of person in the Mayan verb complex, which is also quite thorough. Campbell (1977) makes mention of the development of the Cakchiquel verbal system in his comparative study of the Quichean languages. Kekchi tense and aspect are described in Stewart (1979). No one, however, has done a thorough analysis of the Cakchiquel verb. This study does that.

1.2 Theory

The theoretical framework in which this study is set is structural-functional, primarily following the teachings of the Prague School. This school of thought emerged from the meetings of the Prague Circle of Linguistics, held between 1926 and 1948. The Circle included Jakobson, Karčevsky, Mathesius, Trubetzkoy, and Vachek, to name but a few. Their particular approach to linguistic analysis developed as an alternative to the Neo-Grammarians and Humboldtian schools. The former was credited by the Praguians with developing more systematic methodologies for linguistic research, but criticized for studying the development of individual linguistic units in isolation, i.e., out of a structural and functional context. The approach associated with von Humboldt appreciated the individuality of different languages, and concentrated on languages in their present states, rather than historically. Its adherents, however, used methods which were considered unscientific by their critics, involving too much "psychologizing" and nationalistic characterization (Vachek 1966b: 16-17).³

The task of the linguist, according to the Praguians, is to analyze each language in a synchronic state as an organic whole, and from a means-ends point of view. "Synchronic" here means as the language is spoken in a particular place and time, usually "here and now." To say that language is an "organic whole" (Mathesius, 1964c: 306) means that it is a structured system of interrelating units. The means-ends point of view derives from the tenet that language is first and foremost an instrument of communication, and the linguist should "analyze all the instrumentalities of language from the standpoint of the tasks they perform" (Jakobson, 1971: 483).

Other scholars who have also contributed to the view of structuralism adopted here are Saussure, Benveniste, Whorf, Friedrich, and Aronson. As is explained in

³ Note that national characteristics involve political and other problems, such as literary traditions, and should be distinguished from culture. The study of language and culture has much validity.

chapter two, Saussure has had a great impact on the development of the Prague school of thought. His primary contribution is the notion of language as semiotic: a system of signs. The discussion of structuralism in chapter two is divided into three parts correlating with I see to be the fundamental concepts of Prague structuralism: sign, structure, and function. what

One sub-theory which has developed out of structural-functionalism concerns markedness relations. In any pair of opposing units or categories one member can be defined in terms of the other, the former lacking some feature which the latter has. The member with the distinguishing feature is said to be marked, and the opposing member unmarked, with respect to that feature. Applying markedness theory to linguistic units is a highly revealing method of analyzing the structure of a given language. Certain systemic characteristics adhere to the marked or unmarked members of an opposition which can be discovered through this type of investigation. The hierarchical relationships among categories may also be revealed with a markedness analysis. Oppositional types and markedness theory are the subject of section 2.4.

The focus of study of this dissertation within Cakchiquel is verbal categories. "Verbal categories" is a subgroup of the larger domain, "grammatical categories." In chapter three these classifications are defined and exemplified. I explore different ways grammatical categories are expressed or manifested in language, including morphosyntactically, lexically, synthetically, overtly, covertly, at the surface or at underlying levels. In addition, two different approaches to the investigation of grammatical categories are discussed, form to meaning and meaning to form. These distinctions are illustrated with examples from the work of Whorf (1956), Jakobson (1971b), and Friedrich (1974). The terms involved in the analysis of verbal categories are examined using a model set forth by Jakobson (1971b).

One of the manifestations of verbal categories which is focused here is the lexical one. Inherent lexical expression of aspect is the clearest and one of the most interesting examples of this. Vendler (1967), Dowty (1979), and Foley and Van Valen (1984), among others, have devised classifications of verbs according to their inherent aspectual meanings. These classifications are explored in relation to Cakchiquel verbs in chapter five.

1.3 Dialects

Cakchiquel has been classified with anywhere from two to twelve dialects (see fig. 3). Campbell (1977) divides the language into Eastern and Western dialects, arguing against Grimes (1968, 1969) who finds three dialects, Eastern, Central, and Western. Colhoun (1983) counters Campbell's arguments and supports the claim for a separate Central dialect. Other discussions on Cakchiquel dialects include Stoll (1958), Kaufman (1970), and Echerd (1982). My informants were from Patzún or Comalapa, or one of the nearby hamlets. These two villages are grouped in the same dialect region in all the classifications of which I am aware. Following Grimes, Colhoun and others I call this dialect Central Cakchiquel. Although I found many differences in the language of the two towns (see Krueger, in progress), they are quite close. The differences between Patzún-Comalapa, or Central Cakchiquel and other dialects, however, can be very great, and the observations presented here do not necessarily hold for other dialects.

1.4 Phonology

The following will be a brief description of Cakchiquel phonemes and phonology.

1.4.1 Stress

Stress is fixed. As pointed out elsewhere (LAMP: 1.4, Townsend, 1961: 9) it usually occurs on the final syllable of the word, thus functioning as a word boundary

marker. Often, however, the stress falls on the end of "sense groups," as it does in French (Hyman, 1975: 205). For example, in the phrase

- (1) jĭn jisaméx rumá? ʔúʃ níná?
 I work because good I-feel
 I work because I feel well

each word is stressed. But when the negative words are included, it is the negative verb phrase which carries syllable-final stress.

- (2) jĭn man jisamex tá
 I neg work neg
 I don't work.

When suffixes are added to a word, the stress shifts to final-syllable position. Thus we have the rule:

- (3) V -> [+stress] / ___ (C) ##

as in,

- | | | | | |
|-----|-----|-------------------------|-----|------------------------------------|
| (4) | (a) | náʃót
You mix it up. | (b) | taʃoló?
Mix it up (imperative). |
| (5) | (a) | ʃaxó?
He dances. | (b) | ʃaxonfk
to dance. |

There are a few exceptions to the syllable-final stress generalization, most of which are borrowings from Spanish, and they are listed below. All are nouns with the exception of 'xanfla,' "very much," which likewise has no obvious Spanish source. These irregular forms are written with accent marks.

(6)	<u>Cakchiquel</u>	<u>Spanish</u>	<u>English</u>
	ánima	ánima	soul
	ax-lémpa		bad spirits
	bójiš	buey	ox
	lávuš	clavo	nail
	nána	máma, señora	mom, ma'am
	nója	señorita	miss
	pátiš	pato	duck
	páša	paja	straw
	pája		kind of cloth

petákil	petaquilla	small leather trunk
rámiš	palma ⁴	palm branch, leaf
táta	papá	dad
tenáša	tinaja	water jug
túćur	tecolote	owl
túta	tuétana	marrow
vákiš	vaca	cow
xanfla		very much

1.4.2 Phonemes

Table 1 is a consonant phoneme chart for Cakchiquel. It agrees for the most part with those of Kaufman (1970: 125), Colhoun (1983: 248), and LAMP (nd: §1). Kaufman, however, includes palatalized velar stops (see discussion below). There is also disagreement in the literature on the form of the labial fricative: whether it is /v/, /f/, or /w/. This largely represents dialectal differences between /v/ and /w/, while /f/ is a conditioned allophone of these (see table 1).

TABLE 1
CONSONANT PHONEMES

	labial	alveolar	alveopalatal	velar	uvular	glottal
voiceless stops	p	t		k	q	
voiceless affricates		ʈ	č			
glottalized stops	b	t'		k'	q'	ʔ
glottalized affricates		ʈ'	č'			
fricatives	v	s	š	x		
nasals	m	n				
liquids		l	r			
glide				j		

NOTE: /b/ is a (voiced) imploded bilabial stop. /t'/, /ʈ'/, /č'/, /k'/, and /q'/ are ejectives. /r/ is an alveolar flap.

⁴ This probably originally came from Spanish 'rama,' "branch."

The consonant phonemes are illustrated below in words which are distinguished solely by the particular sound (minimal pairs) or words which demonstrate the sound's distribution to be phonemic.

(7)	p	pan	stomach	pop	mat
	b	ben	do	xɔb	rain
	t	tit	grandmother		
	t'	t'ot'	snail		
	ɸ	ɸix	word	ʉɸ	good
	ɸ'	ɸ'il	duty	meɸ'	boyfriend/girlfriend
	ɕ	ɕoj	lake	veɕ	eye
	ɕ'	ɕ'oj	mouse	ɕ'iɕ'	vehicle
	k	kul	neck	tik	plant
	k'	k'u'l	find	sik'	cigarettes
	q	qum	drink	nulaq	my dish
	q'	q'en	yellow	nuloq'	he buys it
	ʔ	k'uʔs	center		
		k'ut	teach		
	m	man	not		
	n	nim	big		
	s	saq'ul	banana	ʃk'is	it finished
	ʃ	ʃaxab	sandle	k'iʃ	chayote squash
	x	xil	cost	vux	book
	v	vil	find	ivir	yesterday
	r	riʃ	you(pl)	ora	hour
	l	leq	dish	q'olon	head
	j	jin	I	xujuʔ	hill

There has been quite a bit of disagreement over the vowels of Cakchiquel. Most accounts claim there are either nine (Kaufman 1970: 125, Stewart et al., 1980: 2.5) or ten (LAMP: 1.4, Robertson 1976: 4) vowel phonemes in Central Cakchiquel. There are two sets of vowels in Cakchiquel, tense and lax. The difference is primarily one of quality, although there is also some distinction of length. All vowels in non-final syllables are tense, so evidence for lax phonemes must be sought in final (or móno-) syllables. Kaufman's system differs from mine in that he has a lax /a/, which he says is realized as [ɛ]. This assignment of [ɛ] to an /a/ phoneme rather than /e/ derives from an alternation in Cakchiquel between [a] and [ɛ], as discussed below. Since I find no

phonetic evidence for linking [a] and [ɛ], my analysis has an eight-vowel system, with morphophonemic rules governing the [a]-[ɛ] alternation.

TABLE 2
VOWEL PHONEMES

tense		lax	
i	u	ɨ	ʊ
e	o		ɔ
	a		

		allophones	
/i/	k'iš	chayote squash	[i]
/i/	riš	you(pl)	[ɨ, i]
/e/	rixɛ?	they	[e, ɛ]
/u/	ʃu?	see	[u]
/ũ/	ũʃ	good	[ʊ, ʊ]
/o/	ox	avocado	[o]
/ɔ/	ɔk	little	[ɔ]
/a/	rat	you(sg)	[a]

1.4.3 Allophonic variation and phonological rules

1. Before uvular /q/ or /q'/, some vowels optionally become centralized. /a/, /e/, and /o/ become [ə], /i/ becomes [ɨ], and /ũ/ becomes [ʊ]. For example,

(9)	vineq	[vinəq]	išɔq	[iʃəq]
	people		woman	

2. /e/ is raised slightly before /ʃ/ and [ç]. The first case is optional, the second, obligatory. For example,

(10)	(a)	[nuvɛɛ]	(b)	[ronoxɛ]
		my eye		all of it
	(c)	[veç]	(d)	[rixɛʃ]
		tortilla		they

gives possible etymologies for the words in (b) and (c) to account for the distribution of their palatalized velars.

Campbell (1974) discusses the possibility that the palatalization rule did not originate in Proto-Quichean, but rather arose later, and is still productive. Campbell suggests that it diffused from the Mamean languages, a neighboring Mayan group, and spread eastward across the Quichean area. He shows there to be much dialectal variation among the Quichean languages in the modern form of the Proto-Quichean rule. He says that eastern dialects of Cakchiquel do not have the rule at all, while the central (Patzún and Comalapa) dialect has a limited version, compared to more western dialects. Some western dialects have generalized the conditioning factors to include all velars (k, k', x, ɲ, and q, q'). Campbell has two rules for modern Central Cakchiquel:

- (19) $\left\{ \begin{array}{l} k \rightarrow kj \\ k' \rightarrow kj' \end{array} \right\} / \text{---} \begin{array}{c} V \\ [-\text{round}] \end{array} \left\{ \begin{array}{l} q, q' \end{array} \right\}$ Patzún and
- (20) $\left\{ \begin{array}{l} k \rightarrow kj \\ k' \rightarrow kj' \end{array} \right\} / \text{---} \begin{array}{c} V \\ [-\text{round}] \end{array} \left\{ \begin{array}{l} C \\ [+velar] \\ [+uvular] \end{array} \right\}$ Comalapa
(after Campbell, 1977: 6)

My data from Central Cakchiquel supports Campbell's claim that palatalized velars are predictable, although I disagree with him on the form of the rule. Observe the following data.

- | | | | | | | | | | |
|------|----|-------|-------|----|-------|-----------|----|--------|-------------|
| (21) | d) | kjex | horse | e) | kik' | blood | f) | kax | sky |
| | | kjeq | red | | kem | weave | | kox | lion |
| | | iklex | ax | | k'in | with | | k'im | straw |
| | | kj'eq | flea | | k'ek' | miserable | | kix | squash |
| | | | | | | | | išk'eq | finger nail |

The forms in (e) do not have palatalized velars, as the same words in (b) (Grimes' data) do, and thus are not problematic. Unlike Campbell's data, the above show the rule to be conditioned by only non-high front vowels, or /e/, instead of all non-round vowels, and by velar fricatives as well as uvular stops. Thus the rule for Central Cakchiquel is:

$$(22) \left\{ \begin{array}{l} k \rightarrow kj \\ k' \rightarrow kj' \end{array} \right\} / \text{ — } e \left\{ \begin{array}{l} q, q' \\ x. \end{array} \right\}$$

7. Cakchiquel has a tendency to avoid consonant or vowel clusters. In order to achieve this, epenthetic vowels or consonants are invoked. Epenthetic -i- is often inserted to break up certain consonant clusters.

- | | | | |
|----------|--|-----|---|
| (23) (a) | n - Ø - i - ki-ben
TAM-A3-ep-E6-do
they do it | (b) | n - Ø - i - be-ver
TAM-A3-ep-mov-sleep
he goes and sleeps |
| (c) | ʃ - Ø - i - num
TAM-A3-ep-hunger
he was hungry | (d) | ʃ - in - iv - atin - i - sa - x
TAM-A1-E5-bathe-ep-cau-act
you(pl) saw me |
| (e) | t - Ø - i - qa-ben
TAM-A3-ep-E4-do
let's do it | (f) | Ø kam-i - neq
A3 die- ep-pf
he has died |

It is an optional insertion rule, and is more frequent in careful or slow speech. The following pairs are equally acceptable.

- | | | |
|------|--|--|
| (24) | n - at - inv - atin - sa - x
TAM-A2-E1-bathe-cau-act
I bathe you | n - at - inv - atin - i - sa - x
TAM-A2-E1-bathe-ep-cau-act |
| (25) | n - Ø - r - elesa-x
TAM-A3-E3-steal-act
she steals it | n - Ø - i - r - elesa - x
TAM-A3-ep-E3-steal-act |
| (26) | e kam-neq
A6 die- pf
they have died | e kam-i-neq
A6 die-ep-pf |

It was mentioned above that glottal stops are often inserted in between vowels. Sometimes an epenthetic -t- or -v- is used. The choice seems to be dialectal or individual, or in free variation.⁵ For example,

⁵ Sometimes epenthetic consonants are inserted even without a vowel cluster. -t- is optionally inserted after third person markers in -o-initial intransitive verbs, as in n-Ø-t-oqa, they arrive and n-Ø-t-ok, s/he enters. This only occurs with the n-TAM prefix.

- (27) n - Ø - a - be - v - il - a n - Ø - a - be - ? - il - a
 TAM-A3-E2-mov-ep-find-md TAM-A3-E2-mov-ep-find-md
 you go and find it
- (28) s - e - t - oqa s - e - ? - oqa
 TAM-A6-ep-arrive,come down TAM-A6-ep-arrive,come down
 they arrived

1.4.4 Morphophonemic rules

1.4.4.1 /a/ versus /e/

There is an alternation in Cakchiquel between the phonemes /a/ and /e/. It is not purely conditioned by the phonological environment, therefore it is morphophonemic. In some words, which are lexically selected for this change, an /e/ changes to /a/ when no longer in syllable-final, or stressed position. For example,

- (29) (a) naben tabana?
 you do it do it
- (b) šten štani?
 girl girls
- (c) jiver varan
 I sleep sleep (n)
- (d) joxk'ule? k'ulanen
 we marry marriage

Compare

- (30) naŋ'et taŋ'eta?
 you see it look at it.

There is another environment for this change. In some nouns, again lexically selected, an /e/ in a final syllable changes to /a/ when the noun is possessed. For example,

- (31) (a) ker rukar (b) ŷaket nučakat
 fish his fish basket my basket
- (c) vej avaj (d) ŋieq qaŋiaq
 tortilla your tortilla clothes our clothes

It is not the case that every non-final or possessed /e/ becomes /a/. Observe:

- (32) (a) xej ruxej (b) q'eq' q'eq'um
 tail his tail black darkness

1.4.4.2 Vowel Insertion

The above-mentioned tendency to avoid consonant clusters also has manifestation at the morphophonemic level. When a consonant-initial suffix is attached to a consonant-final root or stem, a vowel is often inserted. There are three patterns of vowel choice in these instances a) reduplication, b) suffix-specific rules and c) unpredictable or lexically specified vowels.

1.4.4.2.1 Reduplication

There are several suffixes which attach only to CVC roots. When they do so, the root vowel is usually repeated before the suffix. With some suffixes the vowel is obligatory, with others less so, depending upon the suffix. The reduplicating suffixes are listed below, with the section in which they are discussed.

(33)	C ₁ o?	4.6.1.3	ma?j	4.6.1.4
	C ₁ ot	4.6.1.4	maji-	4.6.2.5
	C ₁ a?	4.6.3.2.3	ba?	4.6.2.1
	C ₂ e-	4.6.2.4	l	4.10.1 ⁶
	ma-	4.6.2.6		

In the first four listed above, a consonant is also reduplicated, as indicated in the suffix. For example, C₁o? derives intransitive verbs from transitive verbs, adjectives, or positionals (see §4.5.3.1) by reduplicating the root vowel and the first root consonant, followed by o?. From the transitive root 'ɸ'eb, "slap," is derived 'ɸ'ebeɸ'o?', "fall with a big splat."

1.4.4.2.2 Suffix-Specific Rules

Several inflectional suffixes govern the choice of vowel inserted when they attach to a consonant-final root or stem. These are passive and antipassive voices, perfect and mood. The vowel choice is explained in the sections on those suffixes.

⁶ This suffix, which forms adjectives and perfects from positional roots, has a defect in its reduplicative pattern in that /a/ roots take an -el suffix.

1.4.4.2.3 Unpredictable or lexically specified

Finally, several suffixes attach to consonant-final roots or stems with an intervening vowel which is unpredictable. The choice of vowel seems to be governed by the base. These suffixes are:

(34)	r	4.6.1.2	be (focus)	4.7
	V-	4.6.2.3	j (voice)	4.8.4.1
	šta-	4.6.3.1	tex (voice)	4.8.3
	la	4.6.3.2.1		

1.4.4.3 Vowel Harmony

Cakchiquel has instances of partial vowel harmony. It is governed by certain suffixes, and therefore is morphophonemic. The antipassive -on, the perfect -on, and the derivational suffixes -C₁oʔ, and -C₁ot become -un, -un, -C₁uʔ, and -C₁ut, respectively, when they follow an /u/ syllable. For example, 'čup,' "put out (fire, light)" takes the -C₁ot suffix and becomes 'čupučut,' "flicker."

1.5 Fieldwork

I began studying Cakchiquel in 1979 in an intensive, two-month course. This was with a native speaker of Patzún under the auspices of PLFM. My teacher and I met for eight hours each day, five days a week. After some initial classes of grammar, we moved to as much conversation in Cakchiquel as I could manage, covering new grammatical constructions as they arose. After this course I lived on a coffee plantation for three months teaching school to the children of the workers. The farm was near Patzún, so the dialect was similar to that which I had studied. Although my classes were conducted in Spanish, most of the children were bilingual and some spoke no Spanish, so I was able to practice speaking Cakchiquel. I also gained some insight into the plantation lifestyle and culture, although I did not live in the workers' quarters.

During my graduate coursework I read all the written material I could find on Cakchiquel. Fieldwork for the dissertation was conducted during a series of visits to Guatemala from 1983-1985. Because the political situation was unstable during this time and the countryside not always safe, I conducted my fieldwork in Antigua. My informants, most of whom I met through PLFM, traveled to Antigua for our sessions. I compensated them for their busfare, meals, and time, according to PLFM standards. My first visit, which lasted four months, was made possible by an overseas dissertation research grant from the University of Chicago. First I elicited many texts, usually in narrative form. The informant would tell a story, which I recorded. Then we would transcribe the tape together to make sure I had understood it accurately. Following this, the informant would give a running translation into Spanish, referring to the transcription. I analyzed these results, bringing questions to my informants, until I felt I had a good grasp of the basic grammar. We then did translation exercises from Spanish to Cakchiquel and vice-versa. This brought out many less common constructions which had not surfaced in texts. Occasionally I worked with two informants from the same village to obtain conversational material. As my analysis proceeded, I returned to informants with questions of grammaticality or preference and meaning and usage differences. The methodology for studying the lexical manifestations of aspect in Cakchiquel is discussed in chapter five. I returned to Guatemala in 1984 for five weeks, this time with the help of a Latin American Studies travel grant. I also returned for four weeks in 1985. During these trips I pursued questions which had arisen as I analyzed my data and wrote the dissertation. During the periods in the United States, I kept up a written correspondence with my informants, likewise clarifying data.

My principal informants were Flavio Mucfa Patal, a native of Patzún, and Marcos A. Calf Semeya, of Comalapa. Several other Cakchiqueles were also consulted, always from the Patzún-Comalapa area. These two villages are both Central Cakchiquel, as discussed above.

The examples I use in the dissertation taken from informants are referenced with their initials (e.g., FMP, MAC, AYG and SCT) followed by the reference numbers of my field notes. The transcriptions used here are based on those made by the informants. Sometimes this results in minor inconsistencies such as 'a šuan' versus 'aš Xuan' for "Don Juan," which I have not edited.

1.6 Orthography

Orthography is a hotly debated topic among Mayanists. Bilingual educators in Guatemala and Mexico each have their own alphabets. Linguists and other groups have still other systems. Some of these practical alphabets are based on Spanish while others attempt to be phonemically accurate, while still allowing use of common typewriters. In order that this thesis might be accessible to non-Mayanists as well as linguists familiar with Mayan, the orthography used here is adapted from the International Phonetic Alphabet.

1.7 Prospectus

In chapter two the Prague structuralist theories, including markedness concepts, are presented. The following chapter discusses grammatical and especially verbal categories, and defines such concepts as tense and aspect. Chapter four is an in-depth analysis of the Cakchiquel verb; its morphology, semantics, and markedness relations. Chapter five presents a closer look at the semantics of aspect in Cakchiquel, by examining lexical aspectual categories. Finally, in the conclusion some of the concepts

discussed in chapters two and three are reexamined in light of the observations made in chapters four and five.

CHAPTER II

THEORETICAL BACKGROUND

The approach I am adopting for the analysis of Cakchiquel verbal categories is structuralist, primarily Praguian, as mentioned above. In order to clarify the assumptions I make about language and linguistic analysis, I will begin with a presentation of the structuralist concepts I feel are important and relevant to this study. This will be followed by a closer look at one of these concepts, markedness theory, which my analysis especially utilizes.

2.1 Sign

The notion of language as a semiotic system is developed by Saussure in his Course in General Linguistics. The theory of the sign is central to Prague structuralism. A sign is an indissoluble unit composed of a form (the signifier), a concept (the signified), and the relation linking the two. According to Saussure the signified does not exist independently of the signifier, or conversely, rather each derives its essence from its membership in the sign (Saussure, 1959: 66f). For instance, when a Cakchiquel speaker hears or uses the word 'če?', "tree," he immediately recalls a conceptual tree, and likewise the word 'če?' is recalled upon thinking about a tree.

This semiotic view of linguistic entities led to the strict doctrine in Prague structuralism that "speech sounds must be consistently analyzed in regard to meaning, and meaning, in its turn, must be analyzed with reference to the sound form" (Jakobson, 1971a: 104). This approach set the Prague scholars apart from those of Bloomfieldian descriptivism, another brand of structuralism, who held that meaning should not be a concern for linguists, and indeed only clouds the issues (see Bloomfield, 1961: 74-75

and Ch. 9, and Joos, 1957). But the European versions of structuralism (Prague, Geneva, and Copenhagen schools¹), as well as the more anthropologically oriented American linguists (Sapir, Voegelin, Swadesh, Haas) correctly maintained that form and meaning necessarily go hand in hand in linguistic research, based on the semiotic nature of language.

The nature of the linguistic sign has also been debated in the structuralist literature, and Praguians have come to reject some aspects of Saussure's version. Saussure claimed that the sign is arbitrary, i.e., that there is no motivated or natural connection between the signifier and the signified (Saussure, 1959: 67-69). Benveniste (1971a: 44-45) interprets Saussure's claim of arbitrariness to hold for the sign-thing relationship. He says the signifier-signified connection is not arbitrary, rather it is necessary. The signified is a concept (not a thing), and the concept cannot exist or be delimited without the associated sound image. For Saussure linguistic signifiers are words and consequently the sign is only a lexical phenomenon. Later structuralist literature has extended sign theory to encompass all levels of language from the phoneme "up," namely, phonemes, morphemes, phrases, sentences and so on (Jakobson, 1971a). With this extended viewpoint, several good cases have been made for at least qualifying the claim that there are no motivated signs in language (Jakobson, 1965, 1971d, Friedrich, 1979). Motivation for the specific nature of sign relationships can be found in the structure of the language. The existence of markedness and core-periphery relations entails a high degree of orderliness, and there are several examples of iconicity in language. For example,

The temporal order of speech events tends to mirror the order of narrated events in time or in rank. Such a sequence as "the President and the

¹ The Geneva School is represented by Saussure, Bally, Brøndal, Gardiner, Sechehaye, and (in some accounts) Karčevsky. The Copenhagen School, also called "glossematics", is primarily associated with Hjelmslev. Cf. Trnka (1948) Trnka et al. (1966a) and Mathesius (1966). Many Prague School adherents are mentioned in this chapter.

Secretary of State attended the meeting" is far more usual than the reverse, because the initial position in the clause reflects the priority in official standing (Jakobson, 1965: 27).

(See also Friedrich, 1978: 27-31.) The functional role of language as an instrument of communication motivates many aspects of its structure, too. Studies of universals also provide evidence for non-arbitrariness in language (Greenberg 1966a, 1966b).

Another difference between the Saussurian and Praguian views of the sign has come about through different stances on the nature of 'langue' and 'parole.' For Saussure, 'langue' is a homogeneous system which is "both a social product of the faculty of speech and a collection of necessary conventions that have been adopted by a social body" (Saussure, 1959: 9). 'Parole,' on the other hand, is a heterogenous summation (versus product) of individual instances of speech. It is highly irregular and ever-changing. Change in 'langue' happens when the relations between signifiers and signifieds shift, and this comes about only after the new version has been repeated in 'parole' long enough to gain social acceptance. Saussure implies that there is always a set signifier-signified relationship in 'langue,' such that there is never confusion or ambiguity within a given sign (Saussure, 1959: 98). A change in the system takes place suddenly, when the new sign is accepted by the community and the new relationship becomes a fact of 'langue.'

The Prague linguists, however, see 'parole' as the instantiation of 'langue.' In fact, one cannot exist without the other, in much the same way a concept does not exist apart from its formal counterpart. In this view, 'langue' is no longer homogeneous, stable, and static. Karčevskij, a student of Saussure's, claimed instead that the sign has an "asymmetric dualism" (Karčevskij, 1964). He says that all signs are simultaneously synonyms and homonyms in that for any given use of a sign, there exist other signifiers ('signes') which could have been used to refer to the signified ('signification') and also other signifieds which the signifier could have expressed.

This situation results in a language system which is economical and flexible, as well as changeable. It is economical in that speakers can convey far more concepts than they could if the sign consisted of a one-to-one, fixed relationship between its parts and a separate form were required for every nuance of meaning. It is flexible since it allows the speaker to use a form with new or special senses in a given context. As is discussed below, unmarked categories and forms permit broad interpretations. The Cakchiquel tense-aspect-mood (TAM) prefix 'j/n-' can function as present, non-completive, future, generic, or affirmatory, depending on the context (see §4.2.5.2). Karčevskij points out, however, that 'langue' does not permit too many significations of any one form, to the point of being intolerably ambiguous. The assymetry of the sign also allows language to change as needed. The process suggested by Saussure where new signs are used first in 'parole' and then become a part of 'langue' takes place at the level of Karčevskij's 'langue.' A new form-meaning relation is used and perhaps will be adopted as more central or normal than others. At the same time, new shades of meaning that can be expressed by that form become possible. This fluid conception of the sign seems to more realistically capture the nature of form-meaning units in language than does that of Saussure.

2.2 Structure

The thesis of the structural nature of language espoused by Prague linguists was influenced by, among others, the theories of Holistic biology, Gestalt psychology,² and phenomenology. The concept has direct roots, not surprisingly, in Saussure's Course. Specifically it arises from the concept of value and what Saussure calls its paradox:³

² See Steiner (1976) for a discussion of these theories and their effect on structuralism.

³ Not to be confused with the "Saussurian Paradox." Cf. Labov (1970: 185-187); see also Silverstein (1979: 238, note 10).

on the one hand the concept [signified] seems to be the counterpart of the sound-image, and on the other hand the sign itself is in turn the counterpart of the other signs of the language. Language is a system of interdependent terms in which the value of each term results solely from the simultaneous presence of the others (Saussure, 1959: 9).

This means that the signification of a form is determined by its negative association with all the other signifieds in the language. As Saussure says of concepts, "their most precise characteristic is in being what the others are not" (Saussure, 1959: 117).

To say that language is a structured system of signs means that it is not just a jumble or an inventory of linguistic units, but that it is an ordered arrangement of these forms-and-concepts. This arrangement has two aspects. The first of these is the fact that language is composed of levels, e.g., phonological, morphological, syntactic and discourse. Each of these levels is a system in and of itself, and in that sense is independent from all the rest. But language is not an inventory of systems, either. It is a system of systems: "the language is not just a sum of all of [the levels], obtained by a simple process of addition, but a structure of a higher order, within which all the levels are more or less closely interlinked" (Vachek, 1966b: 28).

This interlinkage is due to the second aspect of structure, the fact that elements are arranged hierarchically. Some categories dominate subcategories, while others, more precisely combinations of categories, participate in the pattern of a higher level. To clarify this idea, again consider a notion delimited by Saussure, that of paradigmatic and syntagmatic opposition. A sign is in a paradigmatic, or associative relation to all other signs which might appear in its stead in a given context. The realized sign exists "in praesentia," while the rest also exist, albeit "in absentia," or potentially. Syntagmatic relations are co-occurrent ones which hold among ordered signs in a linear sequence. Thus a paradigmatic set can be defined in terms of intersubstitutability within a syntagm. The hierarchy emerges when one paradigm combines with another in a syntagm; the combination may then oppose other sets paradigmatically at a higher level. For instance,

in Cakchiquel these allomorphs form an oppositional set: [o, oʔ, u, uʔ, Ø]. They are allomorphs of a verbal prefix of movement which means "movement towards" (see § 4.4.1.1). When they are combined grammatically according to syntagmatic requirements with the set of verb stems, the resulting set of verbs partakes in another paradigm which is opposed to verbs with the movement prefix meaning "movement away from" and to verbs which say nothing about movement. Thus language is a system of levels, each of which has its own hierarchical structure, and is also linked to sub- and super-levels.

It is worth stressing the role of the concept of "negativity" in structure. Structuralism differs from its theoretical predecessors in the importance it places upon the relationships between things, and not just the things themselves. This view allows the emergence of "negativism" in all aspects of the theory. For example, the paradigmatic nature of a sign inheres as much in its non-appearance as in its appearance. In the Cakchiquel example above, it was seen that one of the allomorphs of the movement prefix is Ø. This alternant is every bit as significant as the phonologically substantive allomorphs. The movement category itself is optional, thus the whole category is opposed to the absence of the category. This has significance at a higher level. Finally, as will be discussed below, the theory of markedness relies heavily on the notion of negativity.

The concept of oppositions is central to the Prague theory of structure. Above it was seen that a sign has value only in virtue of its opposition to other signs. In addition oppositions define levels and hierarchies within language. As oppositions are the nuts and bolts of ordered linguistic systems, much effort has been expended characterizing types of oppositions which are possible in language theory, and their manifestations in individual languages. An important concern has been the classification of oppositions found within a paradigmatic set (cf. Kuryłowicz, 1964: 17-21). One premise is that all oppositions are binary, or dichotomous. This view has its roots in phonology, as does

much of Prague theory. In the 1929 Thèses presented to the First International Conference of Slavists, the significant opposition was called a "phonological correlation." "Une corrélation phonologique est constituée par une série de couples de phonèmes opposés et se distinguent l'un de l'autre selon un même principe, que l'on peut penser en l'abstrayant de chacun des couples" (Thèses, 1964: 38). The principle, or phonetic feature in this case, was called the quality of correlation (Vachek, 1966b: 55). For example, in the Cakchiquel phoneme series /u-/t'/, /ɬ-/ɬ'/, /ɕ-/ɕ'/, /k-/k'/, and /q-/q'/, each pair-member is distinguished from the opposing one by the feature of glottalization (see §1.4.2). In the set /t'/, /ɬ'/, /ɕ'/, /k'/, and /q'/, all are glottalized, or carry the "mark of correlation," and are consequently the "marked" members of each pair, with respect to glottalization. The theory of markedness which has since developed is very useful in providing concrete analyses of structure in linguistic systems. This theory and approaches to oppositions will be discussed again in more detail below.

There is another important aspect of language structure, which calls to mind Mathesius' epithet of language as an "organic whole." It is well known that language does not stay in a fixed state, but changes through time. In trying to provide linguists with a means to grasp this slippery linguistic object, Saussure resolved that only a synchronic state of language, i.e., the system frozen in a slice of time, should be handled (Saussure, 1959: 81). But recalling Karčevskij's discussion of the asymmetry of the sign, it seems that the exact relation between the signifier and the signified can vary from one use to the next, so that even the synchronic state of a language is non-fixed. In his now famous analogy of language with a chess game, Saussure says that between each move the pieces (synchrony of language) are in a state of equilibrium (Saussure, 1959: 88). Jakobson points out that Saussure's characterization of diachrony as being a series of independent, unmotivated, haphazard events leads to a synchronic situation which is not

in balance, but is disorderly and in fact degenerate (Jakobson, 1962b: 17). He takes Saussure's chess analogy one step further in arguing that changes are not unmotivated:

Et, de même qu'en jeu d'échecs la perte d'une pièce provoque souvent toute une série de déplacements de la part du joueur menacé en vue de rétablir l'équilibre, de même, dans une langue donnée, on a besoin de toute une série d'innovations visant à redonner au système phonologique sa stabilité et son équilibre (Jakobson, 1962b: 17).

Hence, changes have a purpose; they restore stability to some part of the system. Jakobson calls this "therapeutic change" (Jakobson, 1962b: 18). But, as he points out, a change in one part inevitably leads to a compensatory change elsewhere, often throwing another sector out of balance. Thus we have the following picture of language structure. At any given point in time it is a system, but one which is unstable in some parts and relatively stable in others. Just as water seeks the lowest level it can find, the language system is always seeking equilibrium. This provides a never-ending impetus for change, since a balancing change in one aspect produces imbalance in another. Language systems are consequently not homogeneous structures.

There are, however, systematic regularities in heterogeneity. Some scholars have examined the nature of the stable parts of language structure, or its "core" versus the unstable, "peripheral" elements. The phenomenon of peripherality is also called "vagueness" (Neustupný, 1966), "potentiality" (Mathesius, 1911), and "fuzzy categories" (McCawley, 1981). The idea is that given any category, class, or level, there are some marginal elements whose membership therein is questionable. According to the Czech linguist Daneš,

classes of elements should not be regarded as "boxes" with clear-cut boundaries but as formations with a compact core and with a gradual transition into a diffuse periphery which, again, gradually passes into the peripheral domain of the next category (Daneš, 1966: 11).

To try and force these border-line elements into the categories of one's analysis, says Daneš, is to distort the real nature of language. For example, the perfect construction in

many languages is on the periphery of nominal and verbal categories (see §4.10). Likewise it is often hard to draw the distinction between inflectional and derivational categories in some cases (see §3.1.1). In conclusion, language can be thought of as homeostatic, to borrow a term from physiology, or as a "system-in-process."⁴

2.3 Function

This apparently innocent word has caused much consternation among scholars, who seem to be forever reclassifying it and clarifying its uses. The proliferation of discussion, while often insightful and no doubt valuable has brought about the situation of requiring one to enter into another discussion to specify which definition is used in the present case. Thus I, too, will attempt an account of function, not only in the context of this exposition of Praguian concepts, but in order to convey my understanding of function as it surfaces in the analysis below. This section draws upon discussions concerning functionalism by Bühler (1934, as discussed in Lyons, 1977, Vachek, 1966a), Jakobson (1960, 1964), Lyons (1977: §2.4), and Mukařovský (1966, as discussed in Steiner, 1976).

My innovation to the classification of functions is to distinguish two primary types; external functions or functions-of-language versus internal, or functions-in-language.⁵ Another way to conceive of these two types is as 'parole' function versus 'langue' function. The former involves those functions which language has in virtue of it being an instrument or communicative device used by people. External functions are context-embedded. In other words, the paradigmatic choices have been made and the exact signifier-signified relation is fixed, for the purpose of the specific context. This means that external functions are pragmatic, in a broad use of that term.

⁴ These terms were suggested to me by Paul Friedrich.

⁵ Hymes (1974: 167-170) also discusses functions in and of language, but in a quite different way.

Several scholars who have investigated functionalism have set up tripartite systems of what I call external functional types, at least two of which are by and large comparable. The first is called referential (Bühler, Jakobson), descriptive (Lyons), or objective (Mukařovský). It designates the use of language utterances to refer to and predicate about some aspect of extralinguistic⁶ reality. It is important to note that the referential-descriptive function, like all external functions, is context-dependent and thus pragmatic, although it is usually not considered so in the grammatical literature (cf. Lyons 1977: §§ 4.4, 14.2), since it is reference in a specific context. Grammatical indices such as tense and demonstratives would only be realized as indexical in their referential-descriptive function, otherwise they are only potentially so. They have conventional semantic functions, however, which refer to some aspect of the speech event (see below). An example of the referential-descriptive function is the Cakchiquel TAM prefix 'j/n-'. It can be interpreted several different ways depending upon the context in which it is used, as mentioned above.

The second external function is called expressive (Bühler, Lyons), emotive (Jakobson), or subjective (Mukařovský). It is the role language plays in conveying information about the speaker, whether this is intentional or not. Expressive functions include information about gender or social roles, which is often conveyed by pronouns or honorifics and other grammatical categories. In Cakchiquel lexical items for family members can have this function. There is a different term for the relative depending upon whether the speaker is male or female. Thus:

- (1) valk'val: my child (man speaking)
 val: my child (woman speaking)
 numiʔal: my daughter (man speaking)
 višoqal: my daughter (woman speaking)
 višxajil: my spouse (man speaking)

⁶ This term should be qualified. In many respects, there is no extralinguistic reality, since all concepts of reality can be communicated about with language. What is meant here is that aspect of reality which is farther removed from 'langue.'

vačixil: my spouse (woman speaking)⁷

When referring to another person's relative, the gender of the possessor is the relevant one, so "his child" would be 'ralk'val' and "her child," 'ral.' Thus these terms only have expressive function when the speaker is talking about his or her own relative. Non-grammatical linguistic devices can also convey social or cultural information about the individual, for example the choice of certain lexical items and intonation.

The third member of the functional trio varies among Bühler, Jakobson, Mukařovský, and Lyons, indicating that there are more than three external functions of language. In fact, depending upon the criteria used, there is no limit to the number of external functions. There are basically two alternatives they choose to include in their functional models. One type is called 'Appellfunktion,' or "calling-out function" by Bühler and conative by Jakobson. It represents a focus on the addressee of the utterance. For Bühler, any utterance which refers to the hearer contains this function, whereas Jakobson is thinking more specifically of imperatives and vocatives. Another type, included in the triads of Lyons and Mukařovský, is the function of language in a social sense. This is often thought of as the pragmatic function, but as mentioned above, other external functions are also pragmatic. Examples of the social function include utterances which create and maintain group membership and solidarity, performatives, and pragmatic implication. The phatic function, originally defined by Malinowsky (1953), probably is a social function in this sense. The part of language used to moderate the communication channel has a phatic function in Jakobson's system. Jakobson also discusses poetic and metalingual functions of language.

These arrays of external functions are general types, and in a given utterance the specific functions need to be determined. I say functions, because these types are not

⁷ Note that English 'wife' and 'husband' operate the same way. They actually mean "spouse of a man" and "spouse of a woman," respectively.

mutually exclusive. An utterance always has several functions. For example, if I say "It is cold in here" in the context of you sitting near an open window, my statement functions to 1) describe an objective situation (referential-descriptive), 2) give information about my condition (expressive: I feel cold), 3) request that the window be closed (social: conventionally understood pragmatic implication), 4) request that you do it (conative).

The alternative class to functions-of-language is functions-in- language, or 'langue' functions. These pertain to the role of a linguistic unit within the language system. Although external functions are the primary referents of the epithet structural-functionalism, the internal mode of expression is often used in Praguian language descriptions and elsewhere, and thus no less in need of definition.

In my view there are three types of 'langue' functions. The first is the semantic. This is the capacity of signs to be used in referring to and predicating about extralinguistic reality. Although it may sound like the referential-descriptive external function, and is certainly parallel to it, this is its systemic counterpart, which is context-independent. One referring function of a sign cannot exist without the other, as was seen above in the discussion of 'langue' and 'parole.' Perhaps one way to think of the relationship between the semantic internal and the referential-descriptive external functions is their capability for intensional and extensional (or type and token) meanings, respectively. The semantic function is known as semantics or logical form in other theories. Thus, for example the Cakchiquel movement prefix '-be?-' is defined as "motion away from." That is its semantic internal function. In context, however it may have the referential-descriptive external functions of "intention," "future," or "general movement" (see §4.4.2.2).

The next function-in-language is the grammatical function. "Grammatical function" is to be broadly interpreted here, and does not refer only to, for example, subject and object relations, although these are certainly included. The grammatical

function involves meaning-bearing forms and categories which have intrasystemic roles: they combine so as to contribute to the semantic function of their products. Items functioning grammatically serve to relate and connect content forms in meaningful ways, regardless of whether they have concrete contents themselves. Grammatical functions are performed by word-classes, nominal and verbal categories, quantifiers, etc., as well as by the order of these elements. Note that an element may have more than one grammatical function. For example, derivational affixes simultaneously function grammatically, specifying a part of speech and class membership, and semantically, conveying a meaningful message. The Cakchiquel derivational suffix '-ba?' derives transitive verbs from intransitive ones, and means "cause to Vb." When this suffix is present one knows the word involved is a transitive verb as well as its causative semantic function (see §4.6.2.1). Inflectional affixes often share grammatical and semantic functions, too, although the semantic function is diminished in them. While a meaning often is involved, a grammatical role like concord may be more central.

The distinctive, or formal function is the third kind of internal function. Units with this role create and maintain the system by setting up formal oppositions, which in turn allow grammatical and semantic roles. Distinction is generally the domain of non-meaningful units, such as phonetic segments and phonemes. Units such as words or word-parts and sentences or sentence-parts can have purely formal functions, too. Formal aspects like the relative complexity or simplicity of a form, including zero forms, reinforce grammatical and semantic functions. Thus in the discussion on markedness it is shown that the least marked member of an opposition is more likely to have a zero expression than its counterpart. The null form, in addition to performing grammatical and semantic functions like other morphemes, has a distinctive function of signalling its unmarked status due to its simple form.

The functions in and of language, like other aspects of linguistic structure, are interdependent, each building upon another. The distinctive function makes possible the realization of other functions in that it provides distinct forms capable of being used grammatically and of reinforcing semantic oppositions. Expressions whose units function grammatically and semantically have referential potential and, when uttered in context, take on a referential-descriptive function. The more explicitly pragmatic functions of the utterance, such as expressive, social, and conative are often extensions of the descriptive use, as in the window illustration above. In other words, a contextualized expression usually has a referential function, and in addition may have other external functions. There is no upper bound to the external functions of language, as people dream up goals they try to accomplish with language as one of their basic tools.

In Praguian doctrine, language analysis must proceed with the notion of function ever in the forefront. Linguistic categories and utterances should be investigated with the goal of determining their functions. This is the means-ends approach to language, articulated by Jakobson as mentioned in chapter one (Jakobson, 1964). The means-ends philosophy is another factor in the rejection of Saussurian arbitrariness on the part of the Prague linguists. If an element seems to be unmotivated, more often than not a concrete function for it can be found on a higher level.

By way of example, recall Jakobson's observation that "therapeutic change" in language is never completely that, since in correcting one aspect, another is thrown out of balance, as if by chance. Vachek differs with Jakobson on the last point, and says there is a reason the structure can never achieve perfect balance (Vachek, 1966b). In its unbalanced state there are always some peripheral elements, or elements whose internal functions do not have as high of a "functional load" as others in its paradigm. Elsewhere, Vachek defines functional load for phonemes as "the degree of utilization of a phonological opposition (or phoneme) for the differentiation of meanings of words in the

given language" (Vachek, 1966a: 65). This quantificational approach to function can be extended to all sorts of linguistic elements, and to functions other than pure distinctiveness.

Vachek observes that although peripheral items have low functional loads, they often have additional non-referential external functions. His example is /h/ in Modern British English. It has a small functional load in the phonological system: it only appears before vowels and morpheme-initially. In some dialects /h/ hardly has a phonemic function at all, but instead has an emotive one (Vachek, 1966a: 26). Another case of this can be found in Cakchiquel. Most nouns are not marked for singular or plural: plurality is determined by the context. A small set of nouns, however do take a plural suffix.

(2)	išōq	woman	išoqi?	women
	vineq	person	vinaqi?	people
	šten	girl	štani?	girls
	čikōp	animal	čikopi?	animals
	tjjonel	teacher	tixonela?	teachers
	ax-q'oxom	musician	ax-q'oxoma?	musicians

With the exception of 'čikōp,' all of the nouns which take plural suffixes are human. Thus the plural suffix serves a secondary purpose of indexing nouns which have high animacy. Having a low functional load in one respect allows these elements to take on more functions in another.

In order not to miss observations like Vachek's, a linguist needs to consider language in its contexts: within the language system, the situation of utterance, and the socio-cultural environment. Otherwise the real identity of a linguistic unit will not be properly understood.

2.4 Markedness

With regard to the practice of analyzing language as a system based on arbitrariness, Jakobson said:

this agnostic habit is being supplanted by an insight into the objective stratification within any series which displays a set of correlations between the lack and presence of "markedness" (Jakobson, 1971d: 719).

The analysis of markedness relations in a language results in a description which elucidates the structure and intrasystemic functions of linguistic units. It also helps one to understand external functioning as well, as will be discussed below with respect again to Vachek's /h/ case. A model based on markedness relations shows an organized picture of the language's structure and the relative importance of different processes and categories. Another advantage of markedness studies is that they provide a foundation for cross-linguistic comparison and universal generalization.

2.4.1 Types of Oppositions

2.4.1.1 Early Prague school

The first formalized characterization of markedness relations is found in early discussions of phonology under the name of "correlation," as was mentioned above. Correlation pairs appear in series, where each member of a pair is distinguished from the other by the same feature, or quality of correlation. The whole series of such pairs is called a correlation bundle ('Korrelationsbündel'). Besides correlation bundles, a language has units in opposition which are distinguished by more than one feature, like Cakchiquel phonemes /t'/-/q/, /m/-/s/, /r/-/p/. These types of pairs do not, according to early Praguian thought, have any markedness relationships, since these, by definition, are only found between correlation pairs (Vachek, 1966b: 56). Thus this was a very limited "theory" of markedness, since it only applied to a subset of phonological elements in a language. It could not be used to describe the structure of language to any great extent.

2.4.1.2 Trubetzkoy

Trubetzkoy perceived that the domain of disjunctive oppositions could be organized systematically as well. In his Principles of Phonology (1969), he developed a

system of oppositions with three main types. The first of these consists of bilateral oppositions, where the shared (not distinctive, as in correlation bundles) features of a pair are not found together in any other pair of the language, and these are contrasted with multilateral oppositions, where the features are. An example of a bilateral pair is Cakchiquel /q/-/q'/, where uvular and occlusive are not found together in any other two phonemes. Multilateral oppositions would be, for instance /p/-/b/-/m/, which are all bilabial. The second category of oppositions in this system is proportional versus isolated. Proportional pairs are like correlations in that they are distinguished by a single feature which also distinguishes other oppositional pairs, as in /t/-/t'/, /k/-/k'/, /q/-/q'/. Isolated oppositions are at the extreme other end of possibilities: a pair whose distinctive feature or feature set is distinctive in no other pair, e.g., /n/-/p/.

The third dimension of oppositions involves three sub-types: privative, gradual, and equipollent. A privative opposition, again like a correlation, occurs where a pair is distinguished by the presence of a certain feature (mark of correlation) on one member of the opposition. For example, in chapter four it is shown that the movement verbal subcategory in Cakchiquel is marked with respect to the feature of [+movement]. Verbs which are [+movement] are marked for this feature semantically plus they have a formal mark (the prefix) which other verbs lack.

The second type is a gradual opposition. This is a relationship between two or more units which are differentiated by different degrees of the same feature. An example would be English 'pink' vs 'red.' It seems that it is not the case that 'pink' or 'red' is marked with the presence of some feature lacking in the other, rather that 'red' stands for a higher degree of "redness" than does 'pink.' Trubetzkoy's last type, equipollent, in contrast to the privative where one unit expresses a positive feature and the other is unspecified for that feature, refers to the situation where each opposing unit expresses a positive feature. For example, the Cakchiquel lexemes 'k'axol,' "son (male-

related)" and '-miʔal,' "daughter (male-related)" are both positively marked, for [+male] and [-female] respectively. Compare this relation to Spanish 'hijo'-'hija.' On a formal level, the opposition is equipollent, each form bearing a positive mark (-o or-a). But semantically, 'hija' is the marked term in a privative opposition. It means specifically "female child" while 'hijo' can denote either "male child" or, in contexts of neutralization, a "(gender-indefinite) child." Notice that the concept of marked versus unmarked categories is only applicable to privative oppositions in Trubetzkoy's system.

2.4.1.3 Jakobson

Likewise seeing the inadequacy of a "disjunctive" category, and also the possibilities of the theory of markedness in describing language structure, Jakobson developed a different theory of oppositions (Jakobson and Halle, 1971). For him, all oppositions in language are binary, or dyadic, and privative. Jakobson handles gradual pairs not by opposing them according to different degrees of a feature, but as two extremes which the speaker-hearer perceives as being distinct from one another (Jakobson, 1939a: 273). If there are more than two units in a Trubetzkoyan gradual series, Jakobson divides them into pairs, and identifies different distinctive features for each pair. Thus 'pink'-'red'-'crimson' could break down into 'pink' [+pastel] versus 'red' [±pastel] and 'crimson' [+dark] versus 'red' [±dark]. Likewise he would decompose an equipollent opposition into two privative ones. '-k'axol' and '-miʔal' can be opposed also to '-alk'val,' "child (male-related)," giving a system like that represented in figure 4.

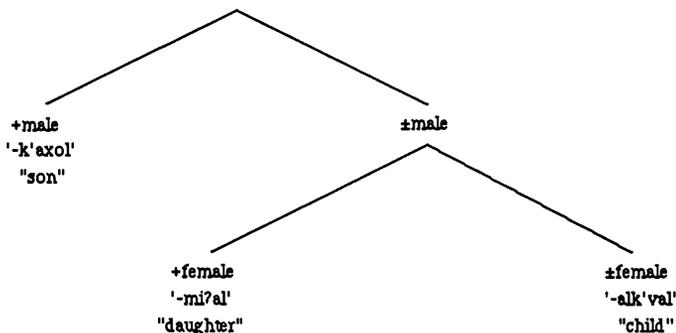


Fig. 4 Tree 1

Jakobson's system has advantages over that of Trubetzkoy. First, it provides a unified approach to oppositions. Units can be analyzed as all participating in the system in more or less the same way. This does not mean they share the same functions, of course, but that they are classifiable by the same criteria, instead of having, as Trubetzkoy does, different classes of opposition-types. This makes for a clearer presentation of the language system, and greater comparability with other language systems. A second advantage of the all-privative approach is that it allows the linguist to classify all units according to markedness relations, which also contributes to comparability and understanding of the structure.

There are also problems with the Jakobsonian scheme. The division of more than two gradually opposed units into dichotomous oppositions is often ad hoc. For example, consider another series of color terms: 'white,' 'off-white,' 'grey,' 'charcoal,' and 'black.' We could set them up as in table 3 and achieve the desired binary distinctions. To say, however, that 'charcoal' is distinguished from 'white' in that it is medium-dark versus light or non-medium-dark seems to obscure the fact that these two

terms are part of a series which ranges from light to dark. Thus in cases like this a gradual opposition model seems to represent the facts more accurately.

TABLE 3
COLOR TERMS

	light	medium	dark
white	+	-	-
off-white	+	+	-
gray	-	+	-
charcoal	-	+	+
black	-	-	+

The binary analysis of a Trubetzkofian equipollent opposition also seems arbitrary, in that the position and consequently the relative markedness of '-k'axol' and '-mi?al' could potentially be reversed in the tree, as in figure 5.

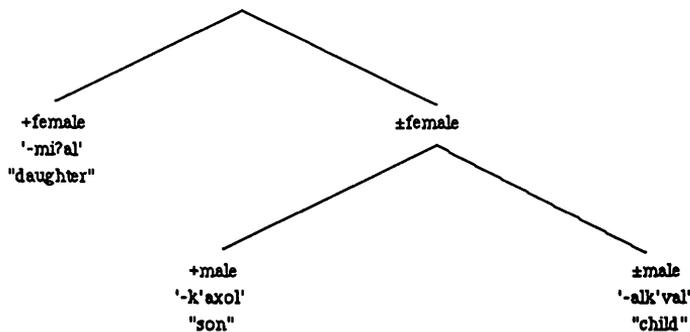


Fig. 5 Tree 2

This leads to the second drawback of a strictly dichotomous system related to the above-mentioned advantage of extending markedness relations to all units. Since the assignment of marked versus unmarked appears arbitrary in this equipollent case, it is

questionable to maintain that '-k'axol' and '-mi?al' stand in any markedness relation to each other.

For this analysis, I will assume oppositions are privative and binary and look for their markedness relations. If, however, a certain pair or series seems to be gradual or equipollent, and the privative-binary analysis forced, I will classify those units as follows. For example, a gradual pair or series may be better characterized as more-or-less marked with respect to each other, while the equipollent example more satisfactorily rendered as in figure 6.

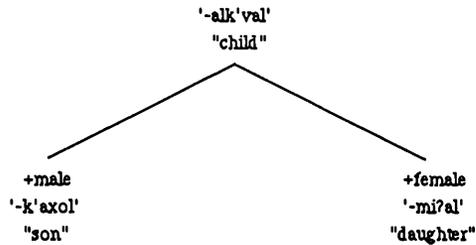


Fig. 6 Tree 3

2.4.2 Characteristics of Marked and Unmarked Categories

Jakobson characterized markedness thus:

The general meaning of a marked category states the presence of a certain (whether positive or negative) property A; the general meaning of the corresponding unmarked category states nothing about the presence of A, and is used chiefly, but not exclusively, to indicate the absence of A (Jakobson, 1971b: 136).

Elsewhere (Jakobson, 1966a) Jakobson emphasized that the general meaning of the unmarked category is not the positive assertion even of not-A, but rather the lack of assertion at all with respect to A. But the unmarked category, being more general, can

take on many meanings. Jakobson says it is necessary to look at each instantiation of the item in context to determine its meaning. Even then he warns the linguist not to confuse the most common usage with its ever-ambiguous (see below) general meaning. One meaning the unmarked member often has is, however, not-A. This occurs when it is contrasted to the marked member. For example, consider two Cakchiquel TAM forms, sk- and j-, the former being marked for [+irrealis] while the latter unmarked. They can both be used in future contexts. In trying to determine the difference between them, I asked my informant to contrast these sentences, both of which were translated the same initially:

- (3) jĭn jik'oxe pa vačoč čuaq.
I will-be-located in my-house tomorrow.
- (4) jĭn škik'oxe pa vačoč čuaq.
I will-be-located in my-house tomorrow.

The difference turned out to be one of certainty: the first sentence assures the listener that the speaker will be home while the second only implies probability. Thus when opposed to [+irrealis], the [±irrealis] form is interpreted as [-irrealis].

Jakobson makes an interesting observation about Karčevsky's theory of assymmetric dualism in language (Jakobson, 1966a; see p. 25 this chap.). Recall that on the one hand, a sign can have more than one semantic function. Jakobson points out that the unmarked term always has two potential meanings, the unspecified and the negative of the marked meaning. Similarly, the assymetry model relates to markedness phenomena in that two signs can denote the same object, yet do so slightly differently. One sign, Jakobson says, designates a certain feature of this object (the marked term)

while the other leaves that feature unmentioned (the unmarked term). Concurring with Karčevsky, Jakobson says these facts are behind the force of diachronic change.⁸

2.4.3 Markedness Criteria

The marked-unmarked relation in language depends on certain properties which are useful criteria for determining which member of an opposition is marked and which is unmarked. Greenberg, within the context of his studies of universals, presents a detailed discussion of markedness (Greenberg, 1966b), enumerating eight properties of marked and unmarked categories in grammar and the lexicon, incorporating some observed by Jakobson and Hjelmslev. He concludes that one criterion can be taken as definitional, namely, frequency of occurrence, although several properties are relevant. Greenberg's markedness properties are:

- | | |
|---------------------------|------------------------|
| 1. facultative expression | 5. zero expression |
| 2. neutralization | 6. formal irregularity |
| 3. syncretism | 7. frequency |
| 4. defectivation | 8. dominance |

2.4.3.1 Facultative expression

This is the property of the unmarked category having the ability of denoting the whole category generally, the opposite of its marked alternant, or even the marked feature, as just discussed. The unmarked category may or may not assume a specific character depending upon the context. The marked category, on the other hand, is always specific and can never be interpreted with the general or opposite sense. The chief use of the unmarked member is the antonymical one. Greenberg calls this the "par excellence' interpretation." Jakobson gives a concrete test for this feature as it is expressed at the lexical level (Jakobson, 1966b: 112). When the marked term is substituted for A in the

⁸ It is worth noting that much work was done on markedness especially as it relates to grammatical systems, as opposed to phonology in the 1930's (cf. Hjelmslev, 1935). Likewise the Praguian tradition is not confined to these earlier decades of linguistic theory. It is a healthy theory even today (cf. the work of Aronson, Friedman, Friedrich, Stankevicz, Robertson, to name a few).

frame "It is A, not B," the sentence should be bad, although it should be good when the unmarked term is used. For example, 'coffee' is unmarked with respect to the feature [±decaffeinated] and it is opposed to 'Sanka,' which is marked for [+decaffeinated]. "This is coffee, not decaf,"⁹ where A has been filled by the unmarked member of the 'coffee-Sanka' opposition, is fine, whereas "This is Sanka, not decaf" is bad. Lyons points out some similar tests (Lyons, 1977: §9.7).

- | | | |
|-----|----------------------|--|
| (5) | decaffeinated coffee | ok |
| | decaffeinated Sanka | tautologous |
| | caffeinated coffee | ok (consider a scene in restaurant
where only Sanka is served. A disgruntled customer complains: "But I
wanted caffeinated coffee.") |
| | caffeinated Sanka | contradictory |

Another example can be found in the Cakchiquel verbal system. The set of movement prefixes mentioned above has two opposing members, '-o?-' and '-be?-.' '-o?,' the marked member, always means "movement toward." In some contexts, however, '-be?-,' the unmarked member can mean "general movement." In other contexts it has the specific meaning of "movement away from" (see §4.4.2.2).

2.4.3.2 Neutralization

In a position or context where only one member of the opposition appears, that member will be the unmarked one. This observation was first made by Trubezkoy (1969) and was central to his work on correlation pairs. The context of neutralization is one in which the quality of correlation is irrelevant, thus the unmarked item appears, standing for the whole category and unspecified for the irrelevant feature. For example, in Cakchiquel, the singular person on the verb can be used to denote plural arguments (see §4.3.3). Singular is unmarked compared to plural.

⁹ 'decaf,' pronounced ['di kæf], is a nominalization of the adjective 'decaffeinated.'

2.4.3.3 Syncretism

The previous two criteria deal with possible meanings of the unmarked category. Syncretism pertains to the category as a context itself. It is the situation where sub-categories which are distinguished within an unmarked category are not distinguished in the marked. In other words, it is a type of neutralization where the site of neutralization is the marked category. In the English pronominal system, gender and class are distinguished in the unmarked singular, but not in the marked plural: 'he,' 'she,' 'it' versus 'they.' And, looking at oppositions of person, it is in the unmarked third person (non-personal, cf. Benveniste, 1971b; Jakobson, 1966a) and not in first and second persons (personal) where gender and class are differentiated. Thus in English, the sub-categories of gender and class are said to be syncretized in the marked pronominal categories of plural and personal.

2.4.3.4 Defectivation

This is a markedness quality of Hjelmslev's that Greenberg borrows, and it is difficult to see how it is much different from syncretism. In fact, Greenberg says it is

a variety of syncretism in which the representative of the syncretized category can be definitely identified with a particular member of that category. The others can then be said to be lacking or defective (Greenberg, 1966b: 61).

One example he gives is number in Hebrew nominals. Many nouns have two forms while some have three: singular, dual, and plural. Where there are just two forms, they are identified as singular and plural. If one uses a noun from the class without dual to refer to two referents, most assuredly the plural form is used, not the singular. Thus it seems that these nouns constitute a context of syncretism where the unmarked plural form appears, standing for the general category at the expense of the syncretized marked dual form. The interesting fact about syncretism, as Greenberg points out, is that one has evidence simultaneously for the marked nature of both the syncretized category (English

gender, Hebrew dual) and the context of syncretization (English plural and personal, Hebrew verb class with only two number distinctions).

2.4.3.5 Zero expression

This is an aspect of markedness discussed by Jakobson in his article, "Signe Zero" (1966b). It refers to the fact that if one of two opposed categories is formally null, that one is the unmarked category. For example, the Cakchiquel third singular absolutive person marker is null, implying that third person, singular, and absolutive are all unmarked compared to their opponents (see §4.3.3).

2.4.3.6 Formal irregularity

Greenberg observes that unmarked categories exhibit more irregularity in their forms than do marked categories. This can be exemplified with Spanish tense/aspect. In the past, there are two aspects, traditionally called imperfect and preterite. There are several verbs, including 'caber,' 'fit,' 'decir,' 'say,' 'estar,' 'be,' 'haber,' 'be,' 'ir,' 'go,' 'poner,' 'put,' 'saber,' 'know,' 'ser,' 'be,' and 'tener,' 'have' which have irregular stems and endings in the preterite. Only two verbs, 'ser' and 'ir' have irregular imperfect forms. This is evidence that the imperfect is more marked than the preterite. Cakchiquel has an apparent exception to this criterion in the first singular ergative person marker (see §s 4.3.3).

2.4.3.7 Frequency

The claim that the unmarked grammatical category is more frequent in text is Greenberg's extension of Trubetzkoy's observation about unmarked phonemes (Greenberg, 1966b: 35). Greenberg gives evidence of this fact in several types of grammatical categories and in several languages.

2.4.3.8 Dominance

This markedness quality, which Greenberg points out may only be applicable to number-related categories, is the use of the unmarked category to represent itself and the opposing member in situations where there is a heterogeneous plural. For instance, if there is a roomful of women and one man is present, any reference to the whole group in Spanish will take a masculine form because a single man is included. Thus, e.g., 'ellas' can only be used if all referred to are female, otherwise masculine 'ellos,' is used. This quality is actually a special case of facultative expression, where the unmarked category can stand for the whole category.

2.4.4 Conclusion on Markedness

In evaluating these eight markedness criteria, Greenberg concludes that frequency should be definitional for grammatical and lexical categories. He argues that (a) facultative expression and zero expression of the unmarked member of an opposition, which Jakobson holds to be the most important criteria, can be accounted for in terms of frequency. He also claims that (b) evidence of frequency can be found for all types of categories in all languages, whereas the other criteria are more limited. In addition, he says that (c) markedness classification by the criterion of frequency allows one to make finer distinctions in a hierarchy, and also (d) accounts for Jakobson's observation that marked utterances are often unusual and expressive.

While Greenberg's reasons for using frequency data in exploring markedness relations are all valid, they do not lead to the conclusion that it should be the only or fundamental criterion, especially for the analysis of a particular language.¹⁰ First, there is a counterpoint which serves to qualify the value of his arguments (b) and (c). This is that

¹⁰ In all fairness to Greenberg, it should be pointed out that his survey of many languages necessitates an easily quantifiable method such as text-counting. Also, his emphasis on frequency is consistent with his model, which is probabilistic. The point here is that the emphasis on frequency should not be carried over to other types of studies involving markedness.

frequency of occurrence may be attributed to other factors besides markedness. For example, in Greenberg's own discussion of the markedness of personal pronouns, he has to mention the following facts which qualify his frequency count results: "non-pronominal uses of 'it,' conversational versus narrative text samples, texts which are odes addressed to divinities, and mood of the sentence (second person being more frequent in imperatives and hortatives than other persons)" (Greenberg, 1966b: 45). Absolute reliance on quantitative results thus can be misleading. Greenberg's points (a) and (d) also seem to be misguided. One could as accurately argue that a category with zero expression appears (or does not appear) more frequently because of ease of articulation, or a similar principle. More likely, an unmarked term may crop up more frequently in text precisely because it has facultative expressiveness; it can be appropriate in more contexts than the marked opponent. Thirdly, an element may appear less often simply because it is not the mundane form, but has an expressive or creative function. The point is that all of these properties inhere in the markedness relationship. Their relationship is naturally circular, and no quality is more basic than the rest.

For this reason, and also because any single criterion may not always be applicable or absolutely dependable, I will use a combination of types of evidence to determine the markedness relations of Cakchiquel verbal categories. As mentioned above, dominance is a sub-case of facultative expression, and defectivation is a variant of syncretism. Thus the criteria to be used are the following six: facultative expression, neutralization, syncretism, zero expression, formal irregularity, and frequency. Each category will be evaluated using as many of these as are relevant. If there is a discrepancy, or an even split of marked and unmarked qualities between a category and its alternant, this will be taken as evidence of an equipollent opposition.

2.5 Chapter Summary

This chapter has addressed the question of the nature of language and linguistic inquiry from the perspective of Prague structural-functionalism. First it was seen that language is a semiotic system, and as such its elements must be approached as indissoluble form-meaning units. The signs which constitute language are non-static and asymmetric. They have value only in their opposition to all of the other signs in the language, and it is through these oppositions that the structure as a whole is formed.

This language structure is composed of separate but interlinked levels which are hierarchically arranged: a system of systems. This structure is not homogeneous and static, but is composed of core and peripheral elements. It changes as it seeks equilibrium, and is homeostatic. The system must be investigated 'qua' system; nothing can be taken in isolation. The context of the structure and the usage always must be kept in view.

Context of usage refers to the idea that language is functional; language is a tool for human activity. External and internal functions were discussed in this chapter. External, or parole, contextualized functions include descriptive, conative, expressive, social, and others. Internal functions are 'langue' or systemic functions. They include semantic, grammatical, and distinctive types.

Finally, a closer look was taken at the kinds of relations found in language. Different types of oppositions were illustrated. It was concluded that, while most oppositions are probably binary and it is advantageous to so analyze them, there are some caveats to this approach. The phenomenon of markedness was discussed. Various characteristics of marked and unmarked categories and their relationship were presented, and six criteria were selected for judging markedness oppositions: facultative expression, neutralization, syncretism, zero expression, formal irregularity, and frequency of occurrence.

With this understanding of the general subject matter, language, and an approach in hand, I will now turn to concepts involved in the study of verbal categories.

CHAPTER III

GRAMMATICAL CATEGORIES

When one considers the realm of linguistic entities called "grammatical categories," immediately a few simple labels such as "case," "tense," "aspect," "person," "number," and so on, come to mind. These categories are thought of as being expressed typically by inflectional affixes on a verb or noun. But when one looks at the range of grammatical categories actually found in specific languages, the complexities of the domain emerge. There are several intersecting dimensions of grammatical categories on which language phenomena may be classified. This chapter defines the terms and concepts relevant to an analysis of grammatical categories. The various dimensions of grammatical categories and approaches to grammatical category analysis are discussed. The phrase "grammatical category" itself is here intended in a broad sense, so as to encompass all the distinctions below. It is often used in a more limited sense, but there is much variation in the literature. The three dimensions involve means by which grammatical categories are expressed in language.

3.1 Grammatical Category Expression

3.1.1 First Dimension

The first means of grammatical category expression is composed of three types: morphosyntactic, lexical, and synthetic. Morphosyntactic expression includes inflection and periphrastic constructions with auxiliary verbs, particles, prepositions, etc. Its members comprise a closed set in a given language (Lyons, 1968: 436). These include the "typical" grammatical categories; what we usually think of as comprising this

domain. It is not surprising that this is so, because morphosyntactic categories are the most obvious and accessible to the linguist. Examples of this sort of expression include case in Latin, tense in Spanish, and aspect in Bulgarian. Notice that tense in English manifests itself in inflection ([wɒks] versus [wɒkt]), suppletion ([go] versus [went]), and periphrastic constructions ([tʌz lɪvɪŋ] versus [wɒl lɪv]). Many languages express a given grammatical category with a combination of morphosyntactic devices the way English does.

The lexical expression of grammatical categories occurs in the inherent meanings of words, plus in what is traditionally called derivation (as opposed to inflection, see below). It differs from morphosyntactic expression in that its members form an open, not a closed set. With respect to verbal categories, the significant lexical items are usually adverbs and verbs. Many languages, including some Mayan languages, do not have a morphosyntactic category of tense, and temporal quantification is expressed by adverbs. Adverbs and other devices can also bear aspectual and modal semantics. Verbs themselves often have inherent meanings which convey a verbal subcategory. Much has been written about their aspectual characteristics (see below), but verbs can also have modal meaning, like English 'hope,' 'doubt,' and 'believe.' Derivation can likewise reflect verbal categories on the lexical level. In some Mayan languages such as Mam (England, 1983) and Tzutujil (Dayley, 1981a) voice is treated as a derivational category, and aspect is sometimes derivational as for instance, in Homeric Greek (Friedrich, 1974: S37).

It is necessary to say more about the differences between inflection and derivation, and the criteria for distinguishing them. This traditional dichotomy is at the core of many Praguian descriptions. With regard to the Cakchiquel verbal system, the main difference between morphosyntactic and lexical expressions of verbal categories is the difference between inflection and derivation on the verb. Therefore in the description

in chapter four each category will be identified as one of these types. A perusal of literature discussing criteria for distinguishing inflection from derivation shows fundamental agreement on the primary criterion (Robins, 1964; Matthews, 1974; Hill, 1958; Lyons, 1968). It is put succinctly by Bloch and Trager.

If a complex word is grammatically equivalent to a simple word--i.e., if it plays an equivalent role in the construction of phrases and in further morphological constructions--we say that the complex word is derived from some underlying word or morpheme. If a complex word is not grammatically equivalent to any simple word in all the constructions where it occurs--i.e., if no simple word can function everywhere in exactly the same way--we say that the complex word is inflected (1942: 54).

In other words, a word with derivational morphology should be substitutable for non-derived words of the same class. This substitution will be grammatical, even if the sentences do not have the same meaning. For example, "The production of oil is falling" is grammatically equivalent to "The cost of oil is falling," showing that -ion is a derivational ending. There is no verb without a TAM which can substitute for 'šinc'et' in the Cakchiquel sentence

- (1) Ivř š - Ø - i - n - t'et ri nu - te?
yesterday TAM-A3-E1-ep-see art E1-mother
Yesterday I saw my mother.

showing that š- is inflectional (see §4.2). To clarify what is meant by "grammatically equivalent," consider this remark by Robins.

Derivational formations, by definition, do not directly involve the word in syntactic relations with other constituents of sentences in the way that inflectional formations do. Their grammatical relevance lies principally in the word class that results from their use; members of word classes that result from derivation have the same grammatical status, inflectional paradigms, and syntactic functions as do underived or simple members of the class (1964: 258)

Inflectional categories thus have syntactic functions and are required by grammatical rules, while derivational ones reflect the syntactic functions of its form-class. In

Cakchiquel inflectional categories are the obligatory categories of the verb, as conditioned by the grammatical context.

There are several concomitant but not definitional features of derivational and inflectional categories. There is a regular semantic relation between an inflectional affix and the base, whereas there may not be a regular correlation with derivational affixes. Inflectional affixes usually attach to every form in its host class, while derivational affixes are often only semi-productive. Derivational affixes form new lexical items and can change the form-class of a word; inflectional affixes add grammatically required information to the existing lexical item and do not change the form-class. One significant difference between Mayan and Indo-European languages with respect to the inflection-derivation distinction is that Mayan languages allow derivational affixes to "build upon" inflectional ones. Bloomfield took the tendency of inflectional affixes being "outside" derivational ones as practically definitional. In citing a German exception to this, 'kinderchen,' where the derivational suffix -chen follows the inflectional plural -er, he says, "If a language contained too many cases of this sort, we should simply say that it did not distinguish such morphologic layers as are denoted by the terms inflection and word-formation" (Bloomfield, 1961: 226). But applying the criterion discussed above produces some inflectional categories in Cakchiquel which violate this tendency. Personal prefixes and voice suffixes are among the Cakchiquel verbal inflectional affixes which intermingle with derivational ones, as discussed in chapter four (see also Dayley, 1981a: 279 for Tzutujil examples).

The third level of expression in this dimension I call synthetic, borrowing the term from Friedrich (1974). The various morphosyntactic and lexical categories combine to express categorial meanings that are often quite different from those of any one device in isolation. Both nominal and verbal categories influence categories at the synthetic level. For instance, "Martha has been singing songs all day" is durative while "Martha

has been singing a song all day" is iterative. It may be difficult to distinguish between a synthetic category and a periphrastic morphosyntactic one. The difference is that the latter is a member of a closed set of possible alternants while the former is not.

It is important to take into account all of the levels of this dimension in a thorough analysis of grammatical categories. Likewise these levels should not be merged accidentally. One pitfall to avoid is the confusion of morphosyntactic with lexical aspect. Verbs like 'cough' or 'explode' seem inherently punctual, but at the speaker's inclination they can be made durative, by inserting them into a certain synthetic (or extralinguistic) context. Comrie (1976: 42-43) gives the example of a medical film of a cough in slow motion, where someone could say "As the patient is coughing,...." It is sometimes difficult, however, to keep the three distinct in actual analysis. For some particles in Cakchiquel it is hard to tell if they belong to the morphosyntax or the lexicon. Two particles, 'ta' and 'na?' (see §6.1) regularly follow verbs and interact semantically with TAM or other categories. Does the combination of the verb and these particles constitute a morphosyntactic phrase like English progressive, or is this situation simply the interaction of lexical meanings? Arguments can be made for both views. Similarly, the difficulties involved in distinguishing between inflection and derivation are well-known.

3.1.2 Second Dimension

The second dimension of expression is taken from Whorf's classification of grammatical categories (Whorf, 1956). He distinguishes between overt and covert categories. An overt category is "one marked by a morpheme which appears in every sentence containing the category," while a covert category is "not marked in sentences in general, but requir[es] distinctive treatment in certain types of sentence" (1956: 113). One example Whorf gives of a covert category is gender in English. Unlike, for example, Spanish where every noun has an affix or an article indicating its gender, English nouns appear to have no grammatical gender. But in a special type of sentence,

namely, where the noun is pronominalized, covert gender becomes apparent. For some speakers, cats, nations, boats, and cars are feminine while dogs and most other animals are masculine. Many other non-human entities as well as human babies are neuter. Whorf calls these telling pronouns the "reactants" of covert gender in English.

The overt-covert levels cross-cut those of the first dimension. The lexical level can have both overt and covert categories. Where a derivational affix expresses a grammatical category, for instance, iterative suffixes in Cakchiquel (see §4.6.3) or aspect in Homeric Greek, lexical and overt verbal categories coincide. Gender on most Spanish nouns is indicated by classificatory endings '-o' (masculine) or '-a' (feminine), but there are many nouns which do not carry these distinctive markings. A more reliable diagnostic for noun gender is found in the article, ('el,' 'los,' 'un,' 'unos,' M; 'la,' 'las,' 'una,' 'unas,' F) which is almost always present.¹ This is nevertheless an example of an overt lexical category, since gender inheres in the noun and has "a formal mark [the article] which is present (with only infrequent exceptions) in every sentence containing a member of the category." Whorf goes on to say that this formal mark

need not be part of the same word to which the category may be said to be attached in a paradigmatic sense; i.e., it need not be a suffix, prefix, vowel change, or other "inflection," but may be a detached word or a certain patterning of the whole sentence (1956: 88).

An example of covert lexical categorization is inherent verbal aspect, as discussed in Vendler (1967), Dowty (1979) and elsewhere (see §3.4 and chap. five). An achievement verb, for instance, to use Vendler's term, is known by its non-cooccurrence with progressive constructions, durative adverbs, and intentional adverbs like 'carefully' (cf. Dowty, 1979: 60 and table 20). Dowty and Vendler's tests are designed to discover

¹ Sometimes the article is deceptive. Consider the feminine noun 'agua,' "water." Because it begins with a stressed [a], it takes the article 'el.' By examining the adjectives which agree with it, however, it is shown to be feminine, as in 'el agua fresca,' "the fresh water." This case is an "infrequent exception," and Spanish gender still qualifies as an overt category. This example was pointed out to me by Howard Aronson.

the relevant reactants in a sentence which reveal the nature of the covert lexical aspect of the verb. The English gender example above is also lexical and covert.

Synthetic categories can likewise be overt or covert. In order to be overt, the parts contributing to the specification of the synthetic category must all be overt, whether they are morphosyntactic or lexical. An example of this can be found in Common Slavic. Aronson (1979: 299) says that a Common Slavic transitive verb which is negated requires a genitive, not an accusative "direct object." He argues that this argument is not treated as a direct object in the language because of its genitive marking. Thus the combination of a transitive verb form and negation gives the synthetic category of intransitive.² Covert synthetic categories occur when one or more of the components is a covert category. This type of category has been much discussed with respect to aspect (e.g., Dowty, 1979; Verkuyl, 1972), since other grammatical categories interact with inherent verbal aspectual categories in interesting ways. For example, the synthetic aspect of a sentence with an achievement verb depends on the number and definiteness of the object noun. "Don discovered leaks in his roof for days," which has an indefinite plural object, is durative. "Don discovered the leak in his roof for days," where the singular noun phrase is definite, only has an iterative reading. Thus aspect in these sentences is expressed at the covert and synthetic levels.

It seems that overt and morphosyntactic categories always coincide. Since morphosyntactic categories are formally marked on linguistic elements as inflection or other overt indicators, it is not possible under these definitions to have a covert morphosyntactic category.

² Aronson calls this "syntagmatic transitivity" (1979: 297).

3.1.3 Third Dimension

The third contrast which relates to means of expressing grammatical categories is drawn between surface or formal and underlying or semantic categories. Surface categories display an obligatory formal indicator of the category. These include all categories at the morphosyntactic level, lexical-derivational categories, and covert (inherent) lexical classes, since these latter have overt reactants. Overt synthetic categories are also superficial. The deep, or underlying categories are purely semantic. A deep aspectual subcategory like durativity may be realized in a number of surface forms in a language. In English, underlying durative is denoted by progressives, adverbs such as 'during' or 'while,' Vendler's activities and states, and other formal configurations. Likewise, several deep categories may be correlated to one surface category. For example, English present (or non-past) tense is correlated to the deep categories of present tense, future tense, habitual aspect, and generic. The ultimate locus of deep categorial meaning is at the synthetic level, but lexical and morphosyntactic components are also important for realizing semantic categories.

Another example will further serve to illustrate the concepts presented thus far as well as define some terms I will be using below. "Deep" transitivity is a grammatical category which has many manifestations in language. It is sometimes expressed in a language through inflection or derivation on a verb or lexically, and in these cases the verb is said to be transitive or intransitive. As such, it is a formal, morphosyntactic or lexical-derivational category. In most languages a verb which is transitive must take two arguments or else be marked, usually with a non-active voice. In Cakchiquel the two arguments of a transitive verb are formally marked on the verb through person agreement prefixes (see §4.3.1). In English a verb is transitive if it can be followed by a direct object noun phrase. Thus "John is writing a letter," shows that 'writing' is transitive, even though in other sentences, such as in "John is writing," it appears to be intransitive

(Lyons calls these "pseudo-intransitives," 1968: 360). This is a covert category of transitivity since transitive verbs carry no mark of their status. The example given above from Common Slavic illustrates the synthetic category of transitivity.

When the normal transitivity of a verb is changed, the verb is usually marked with a voice change. Voice indicates the arguments which are in a direct relation to the verb, as opposed to those which if present, must be marked obliquely. Voice is a subcategory of transitivity.

An inherent lexical subcategory of deep transitivity is valency. A verb can be monovalent, bivalent, trivalent, and so on, referring to the number of arguments semantically involved in the action of the verb. In the formal expression of valency, one or more of these arguments may be absent but understood to exist, or they may be marked obliquely. Thus valency does not necessarily coincide with formal transitivity in a given case. For example, in English 'give' is a transitive verb, but it is trivalent. Its third argument is marked obliquely, in a 'to'-phrase. Usually, synthetic transitivity parallels valency, although this is not necessary.

3.2 Approaches to Grammatical Categories

3.2.1 Direction

Thus far three dimensions of grammatical category expression have been discussed. It is also important to distinguish two dimensions of approaches to the analysis of grammatical categories. The first of these is directional: form-to-meaning, or concrete-to-abstract (CA), versus the converse. The concrete-to-abstract approach starts with the overt formal categories, i.e. the morphsyntactic and lexical derivational. So, for example, if there are series or pairs of affixes on verbs in a language which are in opposition to each other, the researcher would first try to discover what semantic categories are expressed by these forms. Next would be included covert and synthetic categories. In other words, the researcher looks at surface phenomena and tries to

determine what semantic categories are represented and emphasized by the language system.

In the alternative approach, abstract-to-concrete (AC), the linguist starts with semantic categories and looks for their realizations in the language system. The procedure is the reverse of concrete-to-abstract. A given semantic category may have numerous surface manifestations, and these are what the researcher looks for. The initial results of the two approaches will be quite different, although once an analysis is completed (as much as possible) the results of the other approach should be deducible. For example, suppose Linguist CA is examining verbal categories in Language X. She finds that the forms associated with the verb, the inflectional and derivational morphology, auxiliary verbs and periphrastic constructions, can be associated with several semantic categories which are tense-like, aspectual, and modal. She might then label the categories of this group "tense," "aspect," and "mood." The study could be enlarged to include other forms which interact with these grammaticalized verbal categories, such as verb classes, adverbs, nominal categories, and synthetic categories. Always her strategy is to proceed from forms to the meanings they are used to express. Linguist AC, on the other hand, may want to see how the tense-like, aspectual, and modal semantic categories are expressed in Language X. He might find that durative is expressed by a derivational suffix, a couple of adverbs, a certain formal verb class, a combination of a mass noun and a motion verb, and perhaps some discourse devices. But after Linguists AC and CA finish their respective studies, they should each be able to discern the other's results from his or her own data.

There are advantages and disadvantages to each method taken by itself, and each is more appropriate to certain investigating situations. The concrete-to-abstract analysis runs the risk of missing generalizations about diverse formal devices which have similar semantic functions. The abstract-to-concrete strategy is susceptible of

highlighting some categories which really are not significant in that particular language system. The analysis might be biased by a widespread category distinction like tense, when really a more unusual or subtle categorization is being made. For these reasons, the concrete-to-abstract approach is more suited for basic descriptions of languages which are not well-known: the data is allowed to guide the researcher to the most salient categories in that language with less likelihood of 'a priori' theoretical bias. In fact, the abstract-to-concrete approach practically presupposes the existence of a concrete-to-abstract analysis. Abstract-to-concrete is suitable for making higher level generalizations about a language and cross-linguistic comparisons. Thus, in order to do a complete analysis of grammatical categories, the two approaches should be integrated. No matter what the starting point, the researcher should follow through both methods.

3.2.2 Scope

This brings us to the second dimension of approaches to grammatical categories. The distinction here is between language-specific and universal scope, or microsystemic versus macrosystemic, to use Friedrich's terms (1974). Although a microsystemic study can involve quite abstract distinctions, a macrosystemic analysis will make broader generalizations at a higher level of abstraction in order to achieve comparability with other language systems. Thus an abstract-to-concrete approach is more compatible with a macrosystemic analysis while a concrete-to-abstract approach is perhaps more compatible with the microsystemic.

To review, we have looked at three facets of grammatical categories: morphosyntactic-lexical-syntactic, overt-covert, and formal-semantic. Two dimensions of approaches to grammatical categories have also been discussed: direction (concrete-to-abstract versus abstract-to-concrete) and scope (microsystemic versus macrosystemic). There are undoubtedly other distinctions which can be drawn with respect to types of grammatical categories and approaches to their study, but the system presented here is

one that seems to capture the significant oppositions and is general enough to provide a guide for grammatical category analysis in any language. In the next section, the verbal category systems of Whorf (1956), Jakobson (1971b), Aronson (1977), and Friedrich (1974) will be examined in light of these distinctions.

3.3 Illustrations of Grammatical Category Analysis

3.3.1 Whorf

Whorf's study of Hopi verbal categories (1956: 102-124) is an example of a concrete-to-abstract, microsystemic approach. Whorf's analysis is introduced with a confession that he initially approached the data thinking that Hopi "was an exotic language cut very much on the pattern of Indo-European." It was only when, "after long study and continual scrapping of my preconceived ideas, the true patterning emerged at last" (1956: 112). This "true pattern" is quite different from traditional Indo-European systems. Hopi has a well-developed aspect system, but no tense. What Whorf at first called tense (1956: 51) was later (1956: 113) re-labeled assertion. This category and another called modality distinguish "realms and subrealms of validity" (1956: 118). Subcategories of assertion designate reported facts (reportive), anticipated situations (expective), and general truths (gnomic).³

Whorf argues for several distinctions he finds significant in the nature of grammatical categories. Of course, my overt-covert distinction is taken directly from Whorf's system. His modulus versus word (also called selective) distinction has no

³ In focusing on the forms and configurations only of Hopi, Whorf noticed that verbs can be divided into four semantic classes, which are covert categories (or "cryptotypes"). The reactants of these classes are the assertion subcategories which are required when certain English sentences are translated into Hopi. The semantic classes he describes are reminiscent of Vendler categories. Whorf predated Vendler, Kenny, and Ryle, who all wrote on inherent aspectual verb classes, although it is possible Whorf was aware of Aristotle's similar work. Nevertheless, his Hopi classes are different from those of this group of scholars. It would be interesting to see if the Hopi classes could be recast in the more orthodox way; on the other hand Whorf may have discerned the "true system" via an open-minded concrete-to-abstract approach.

exact counterpart here. A modulus category is one which modifies a word, like inflection or derivation. Word categories, on the other hand, are fixed lexemes, primarily roots and stems, which can be modified by a modulus category (Whorf, 1956: 93-96). My morphosyntactic and lexical classes cover the same material as do modulus and word classes combined, although the perspective is somewhat different.

Whorf was aware of the importance of examining the interaction of categories (at least with respect to overt and covert categories), which my synthetic level expresses, as shown by this statement:

The meaning of a phenotype [overt category], though ostensibly plain, can really not be completely understood in all its subtly until the cryptotypes [covert categories] that go with it have been dredged up from their submerged state and their effective meanings to some extent brought into consciousness. ... the totality of meaning is a joint product of cryptotypic and phenotypic factors" (1956: 109-110).

In practice, Whorf sometimes implicitly distinguishes between morphosyntactic and lexical categories, as in (1956: 113) where he treats only modulus and overt categories in Hopi, saving the description of covert and selective ones for another article. He also makes a distinction between configurationally (including covertly) and functionally or semantically defined categories. He says, "The categories studied in grammar are those recognizable through facts of a configurational sort, and these facts are the same for all observers" (1956: 88). According to this view, after the categories of a language are determined by examining the configurational or what is called surface phenomena here, the researcher can then consider categories from semantic and functional points of view in order to better characterize their meanings and uses.

Finally, although Whorf's linguistic work is mostly done with language-specific scope, he identifies a type of category relevant to cross-language comparison, taxonomic. Taxonomic categories are specific categories, for instance, passive voice or past tense, which have analogues in other languages. Whorf begs the question of what

would be analogous, which of course is the crucial one in any comparative work. He opposes his taxonomic categories to descriptive ones, which are only language-specific.

3.3.2 Jakobson

In order to give general definitions of the concepts represented by "tense," "aspect," "verbal categories," etc., one must step into the macrosystemic or universal mode and focus upon the semantic and pragmatic natures of these categories in many languages. Such descriptions are derived by comparing the underlying concepts realized in the surface structures of one language with those of others. One particularly influential attempt to give universal definitions of grammatical categories is Jakobson (1971b). By distinguishing between the participants of the speech event, the speech event, the speech, and the event which is narrated with the speech, Jakobson delimits eight types of verbal categories. Two of these are further divided according to the criteria of quantitative versus qualitative. Table 4 is an adaptation of Jakobson's chart.

TABLE 4

JAKOBSON'S VERBAL CATEGORIES

		P involved		P not involved	
	qualifier	gender	P ⁿ	status	E ⁿ
	quantifier	number	P ⁿ	aspect	E ⁿ
non-shifters		voice	P ⁿ E ⁿ	taxis	E ⁿ E ⁿ
		person	P ⁿ /P ^s	tense	E ⁿ /E ^s
shifters		mood	P ⁿ E ⁿ /P ^s	evidential	E ⁿ E ⁿ S/E ^s

NOTE: Pⁿ=participant of the narrated event, Eⁿ=narrated event, E^s=speech event, P^s=participant of the speech event, /= with reference to.

For example, the category of gender involves the participant of the narrated event, and it qualifies it, as opposed to number, which quantifies it. Voice characterizes the participant of the narrated event with respect to the narrated event itself, while tense characterizes the narrated event with reference to the speech event. Jakobson makes other

important observations about the relations between these categories. For example, verbal categories which involve reference to the speech event or to the participants of the speech event are called "shifters," i.e., person, mood, tense, and evidential. The notion of shifters has received much attention in the linguistic literature. As indexicals, they necessarily tie the categories to the context of speaking. In this sense they are unlike most units of grammar, which exist in an independent system.

Jakobson calls those categories which indicate only the narrated event or the participants of the narrated event, "designators." These are the categories, gender, number, status, and aspect, which are distinguished along qualitative-quantitative grounds. The non-designators are "connectors," because they "characterize a narrated item with respect to another narrated item" (1971b: 134). The connectors in Jakobson's system are voice, mood, taxis, and evidential.

Jakobson's article is an example of the theory of oppositions at work, and lends itself easily, not surprisingly, to a description of markedness relations. Recalling the approaches specified above, this analysis is an example of abstract-to-concrete. Jakobson, having already established general categories, looks for their manifestation in the Russian verbal system. For instance he says, "Status is expressed in Russian on a syntactical, but not on a morphological level" (1971b: 137). Given that the purpose of his article is to establish universal grammatical categories, an abstract-to-concrete approach is natural. Jakobson wishes to give an illustration of the general in a concrete language. One could just as easily use his system in a concrete-to-abstract analysis, by determining the specific then comparing these to Jakobson's categories. Even though the Russian data is presented from an abstract-to-concrete point of view, Jakobson's discussion of subcategories is confined for the most part to their formal expressions.

3.3.3 Aronson

Jakobson's analysis can be criticized on a few points. He takes his definition of mood from Vinogradov, who says that it "reflects the speaker's view of the character of the connection between the action and the actor or the goal" (Jakobson, 1971b: 135). Accordingly, mood is determined to be PnEn/Ps, or that which "characterizes the relation between the narrated event and its participants with reference to the participants of the speech event" (ibid.). This means that mood is a shifter since it involves the speech event.

Aronson (1977) argues convincingly that Jakobson has switched his status and mood categories. First he points out a problem with the Vinogradov-Jakobson definition of mood, saying that the phrase, "the speaker's view" has

the same value as it would in any other definition of a grammatical opposition wherein the speaker can choose between an unmarked and a marked form. So a speaker can choose to "view" the totality (plurality) of lions as singular [in English] in an utterance such as "The lion is a member of the cat family," or he can choose to "view" an action completed in the past as non-past perfective, as in...Bulgarian (1977: 12).

In other words, the speaker often has a choice in expressing a given event, as in these examples. Sometimes there is no choice, and the event limits the possible alternatives. Aronson's point is that a speaker's choosing to put a sentence into, for example, hypothetical is no different than his or her choosing past non-past perfective, as far as being a shifter is concerned. The hypothetical nature of an event would remain so if another speaker were to refer to it, and thus is not tied to the speaker nor the speech event as a shifter must be. It is a part of the message, and is not a speaker's comment on the message.

Aronson prefers Golab's definition of mood: "a grammatical category expressing the ontological evaluation of the process denoted by a given verb" (1977: 12). I interpret "ontological evaluation" to mean an evaluation of the reality or truthfulness of the process. He observes that modals like imperatives only seem to be shifters because

the sentences are addressed to second persons, and it is this person which give the sentence a shifter-like quality. Furthermore, status, as in the English assertive, "gives the speaker's subjective evaluation of the narrated event" (1977: 13). Aronson continues:

Compare the sentences "It rains in April" and "it *d*oes rain in April." In both the first and second sentences we have a statement of objective reality. The second differs from the first in that it adds the speaker's personal assertion of the validity of the statement (1977: 13).

Thus he shows that mood is not a shifter, but that status is. The Aronson version of Jakobson's chart given in table 5. In Aronson's system mood qualifies the narrated event while aspect quantifies it.

TABLE 5
ARONSON'S VERBAL CATEGORIES

		<u>P involved</u>		<u>P not involved</u>	
	qualifier	gender	P^n	mood	E^n
	quantifier	number	P^n	aspect	E^n
non-shifters		voice	P^nE^n	taxis	E^nE^n
		person	P^n/P^s	tense	E^n/E^s
shifters		status	E^n/P^s	evidential	E^nE^s/E^s

3.3.4 Whorf Revisited

There is a second point of criticism, or, more accurately, a caveat. Jakobson's system appears symmetrical and complete⁴ so that one might be tempted to squeeze any aberrant language material into one of the boxes. But there may be categories in a language which do not fit neatly into this chart, or there may be two categories which are subsumed in one of Jakobson's. For an illustration of a possible problem, consider Whorf's Hopi verbal categories recast into the Jakobson-Aronson system. Some of the Hopi categories transfer straightforwardly: voice, aspect, person, and number. The category of assertion seems to be mood in Golab's sense. It qualifies the narrated event

⁴ But see Aronson, forthcoming.

according to its validity, and does so with regard to neither the speech event nor to its participants. Whorf's mode seems to fit neatly into Jakobson's taxis classification since it characterizes one narrated event with respect to another. As Whorf says, "Each mode refers to a certain kind of disparity or contrast, as well as of connection, between the two clauses" (1956: 115). Jakobson has adopted his status from Whorf's Hopi category of the same name. Status in Hopi includes affirmative, negative, interrogative, and indefinite. The expression of these subcategories range from sentence and verb-initial particles to the presence of a question word in the sentence. According to Aronson's discussion, all of these categories would more appropriately be classified as mood, since they objectively characterize the ontological reality of the narrated event. Finally, Whorf's analysis of Hopi includes a category called modality. This, he says, has much the same role as assertion, but modality is formally distinct in that it is not exhibited in a verbal affix. Rather it is expressed by mutually exclusive particles.

So we now have a revised Hopi system with three categories of mood which Whorf feels should be distinct verbal categories. There is no reason why a language cannot have three categories of mood, but if it does, their similarities and differences should be made explicit. In other words, it appears that either the Jakobson-Aronson mood category is too broad, or that assertion, status, and modality are subcategories of mood in Hopi which need more specification.

Assertion and modality, though they have different subcategories and formal expression, do seem to belong to the same general underlying category. Whorf says the modalities "are methods of further modifying and amplifying the three-assertion system that distinguishes three basic realms of validity, so that in effect many more than three realms and subrealms of validity are distinguished" (1956: 118). Indeed, the difference seems to be of general versus specific modality. Assertion is a morphological component of the verb complex, and it seems to express more general semantic classes of validity.

Modality is a lexical class where each member denotes a specific type of validity. Whorf says the latter are not clearly distinct from other non-modal particles. His examples show that the modality particles do not comprise a morphosyntactic paradigmatic set. Thus, in my system, assertion and modality could be distinguished as morphosyntactic versus lexical or synthetic levels of mood.

The status category is a little less clear. On the one hand, Aronson's definition of mood seems correctly to apply here; the subcategories of this category are semantically modal. Hopi status, however, does not seem to be a verbal category. Its formal indicators are particles and words which occur pre-verbally in some cases, sentence-initially on others, and sometimes anywhere in the sentence (Whorf, 1956: 117-118). Nevertheless, many languages indicate negative, interrogative (yes-no), affirmative (declarative) and indefinite (a sentence with interrogative lexemes) similarly, namely, separately from a morphosyntactic category of mood, suggesting that they constitute separate categories from mood in these languages. The problem of handling non-declaratives and negation is not a new one in linguistics (cf. Jespersen, 1965: 301-312, 322-337; Schneider et al., 1982). Aronson admits the issue of negative-modal semantic connections is too complex to be dealt with in his article (1977: 14).

As was mentioned above, a universal category like aspect is defined by comparing its formal representations and their corresponding semantic subcategories across a large number of languages. To determine what categories comprise a universal class (or supercategory) like "verbal categories" one would look at the array of categories such as aspect which are represented in the morphosyntax of verbs in many languages. Thus tense is a verbal category because there is tense in English, Romance, etc. This holds even though in some languages, for instance Hopi, there is no tense as a morphosyntactic category of the verb. The same criterion applies to subcategory membership. For example, we determine that past "tense" is a tense, imperative "mood"

a mood, and perfective "aspect" an aspect. The question of whether non-declaratives and negatives are moods, and if they are, of what special type, is really a question of verbal category membership. I suggest that in many languages, questions (both interrogatives and indefinites in Hopi), declaratives, affirmatives, negatives and exclamations are not necessarily verbal subcategories, but subcategories of another level. In Hopi, negative, affirmative, indefinite, and interrogative belong to a mood-like sentential category. Just as the verbal category mood expresses "the ontological evaluation of the process denoted by a given verb," a sentential category of mood expresses the ontological evaluation of the proposition denoted by a given sentence. In Cakchiquel, interrogative is a sentential category, but negation does not belong to any supercategory. Any part of speech can be negated with the discontinuous constituent 'man ... ta.' Compare, for example, 'man kabe ta' (verb phrase), "Do not go," man xebel ta' (noun), "not pretty," 'man xa na vi ta' (particle series), "it is not certain."

Not only does mood have a sentential counterpart, but so does status. Sentences which express sarcasm, amazement, disgust, and so on give the speaker's subjective evaluation of the proposition, as status subcategories do the situation-type denoted by the verb. It is possible, in fact, that English assertive is actually a status-like sentential subcategory. The difference between a sentential subcategory and a synthetic verbal category is that the latter represents the expression of a category through the combination of a category marked on the verb and some other element. A sentential subcategory may just involve one indicator, which is a sentence modifier.

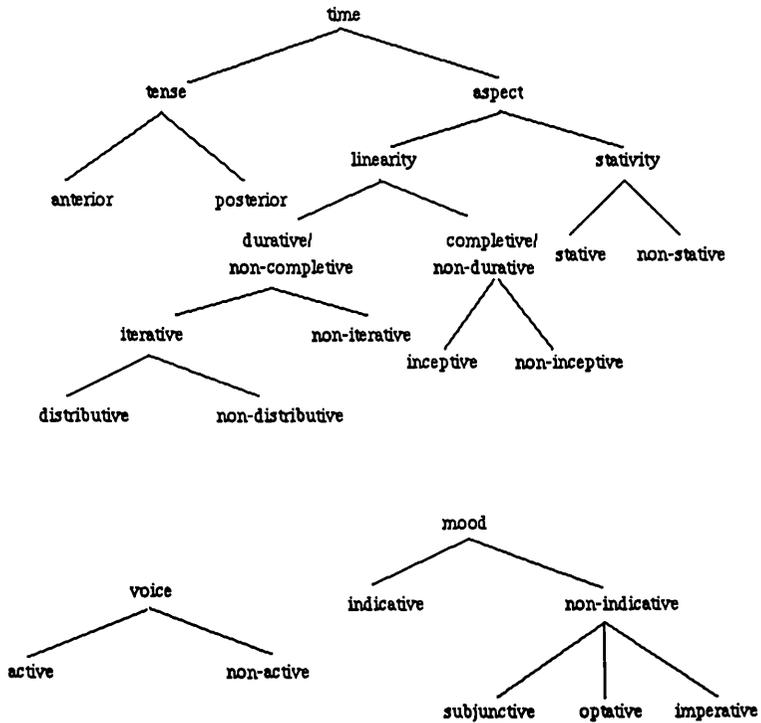
Obviously there are many unanswered questions associated with specifications of grammatical categories. The membership of status in various languages and the fuzzy boundary between verbal and sentential categories are only two mentioned here. The nature of sentential categories has not been fully explored and cannot be in this work. Since some sentential categories resemble modal and status verbal categories, it

would be interesting to see if there are other verbal categories or nominal categories with sentential relatives.

3.3.5 Friedrich

Friedrich's monograph, as the title "On aspect theory and Homeric aspect" (1974) implies, combines both macro- and microsystemic viewpoints of aspect. This work is rich with insightful observations about aspect, verbal categories, and language systems in general, and has had a great influence on the present analysis. Friedrich's approach follows the Praguian tradition, augmented by some ideas of the transformationalist movement. This means that together with the structuralist approach and the use of markedness, he is concerned with the relation of the underlying semantics of a sentence to its surface realization. He considers verbal categories to be universal semantic categories whose manifestations vary from language to language. Time, voice, and mood, Friedrich says, are found in all verbal systems. The time category which is significant in a language can be the "relative anteriority or posteriority of an action with reference to the speech situation," or the "temporal values inherent in the activity or state itself." The former is represented by tense and the latter by aspect. Friedrich thus concurs with Jakobson's characterization of tense, but not aspect, as a shifter. These categories have semantic subcategories which Friedrich also suggests are universal, and are extrapolated and recapitulated in figure 7 in a branching structure. These, at least, are the semantic categories which are present in the underlying levels of all verbal systems, according to Friedrich, although their surface categorization and mode of expression will vary. For example, in some languages tense and aspect are merged into one surface category, or tense may be displayed only in the adverbial system. Consistent with the structuralist approach, Friedrich stresses that an analysis must not only describe the subcategories of time, voice and mood found in a given language, but

Figure 7: Friedrich's Verbal System



that it should order them with respect to each other. In other words, the system must be disclosed, and this is best done as shown in chapter two, through markedness relations. Friedrich says categories and subcategories differ from each other in terms of relative "power" (1974: S24), in the system. He says,

In some languages, quite different categories such as "evidential" (e.g., Kwakiutl) or "modality" (e.g., Hopi) may be just as powerful. Similarly, there is great variation in the relative power of the major subdivisions; in Latin,... tense is more powerful than aspect.... In Homeric Greek, these universal categories of aspect, mood, and voice are more or less coordinate, but of the three, aspect is the most powerful (1974: S35).

A category is more powerful than another if it, for example, has a wider distribution among word classes (for example, aspect but not tense in Homeric Greek appears on infinitives and participles), crosscuts or occurs with more categories, and has less neutralization of its oppositions. These criteria are, of course, criteria adhering to the less marked category.

Friedrich's treatise illustrates many of the grammatical category types which have been delimited here. First, his work has both micro- and macrosystemic standpoints in different sections. The universal characterization of verbal categories is supported by the specific analysis of Homeric Greek and "quadrangulation." This latter is the use of "three to six empirical structures for which the scientist [has] some close analogue of native intuition but which [are] typologically diverse with respect to the theoretical problem" as a basis for generalization (1974: S34, note 108).

In one section the approach to Homeric Greek is microsystemic and abstract-to-concrete, insofar as Friedrich looks for the devices used for aspectual expression in Homeric Greek. These devices are either "inherent-radical," "derivational-thematic," or "adverbial-compositional" (1974: S5). The bulk of the study, however, is from a concrete-to-abstract perspective. It proceeds through the present, imperfect, and aorist

themes of Homeric Greek, as the various functions of each are discussed. In the more general section the concrete manifestations of abstract categories are again considered.

Throughout the monograph, Friedrich is primarily concerned with underlying and semantic verbal categories. He speaks disparagingly of the "narrow and shallow quality of much of the aspect analysis" (1974: S2) carried out by Transformational Grammarians in the 1960's and American Descriptivists prior to that, who focused excessively on formal verbal categories. As was just mentioned, though, Friedrich does pay attention to the formal units of Homeric Greek themes in his microsystemic section. But, whether the focus is formal or semantic, the important point is not to confuse formal and semantic levels, as he cautions in discussing the markedness relations of aspectual (semantic) subcategories. Friedrich investigates both overt and covert (1974: S12) aspect in Homeric Greek, and he also considers data from morphosyntactic, lexical, and synthetic levels. His conception of "synthetic" differs slightly from mine (although I have borrowed his term), his being more specific, as shown in this quote: "Equally universal are the kinds of synthetic aspect that derive from the interaction of the inherent features of verbs and the features inherent in adverbs, prepositional phrases, and so forth" (1974: S1). The synthetic categorization proposed here potentially includes combinations of formal, of formal-semantic, or of semantic features, versus Friedrich's, which primarily is composed of semantic lexical features.

3.4 Inherent Lexical Verbal Categories

Before concluding the presentation of concepts important for the analysis of the Cakchiquel verbal system, it is necessary to go into more detail about inherent verbal meaning. The literature on this subject has been dominated by discussion of verbal aspect, although lexical counterparts for mood and voice, at least, can also be found. Even in an analysis whose primary focus is the formal expression of verbal categories, investigation of inherent verb classes is very important. This is because certain

morphosyntactic categories are constrained with respect to cooccurrence with verb classes. In addition the meaning of the verb can combine with the meaning of the morphosyntactic form to produce a new synthetic meaning different from that of either component.

Vendler's 1967 article has been influential for studies of verbal aspect, and his four classes constitute the standard classification. In much subsequent work, even though they may be amended, the groupings and the phenomena of verbal aspect in general are referred to as "Vendler categories" (cf. Dowty, 1979, Cochrane, 1977, Holisky, 1980, etc.). Vendler drew upon previous classifications by Aristotle, Ryle (1947), and Kenny (1963: 171-186). He used facts about cooccurrence constraints between verbs and tenses or adverbs, as well as certain logical entailments, to establish his types.

First Vendler divides English verb phrases into two classes, the names of which, continuous and non-continuous indicate their potential for appearing in progressive constructions. Continuous verb phrases are of two types, activities and accomplishments. Vendler devised test sentence-frames to determine membership in his four classes. With an activity one can felicitously complete the sentence "How long did you ___?" Activity verb phrases include 'run' and 'push a cart.' Accomplishments, such as 'draw a circle' or 'run a mile' fit into the question-frame "How long did it take to ___?" In the non-continuous class Vendler delimits states and achievements. It is fine to ask with statives "For how long did you (love, know) him?" The appropriate question for an achievement is "What time did you (reach the summit, solve the problem)?" The situation denoted by a stative verb can be predicated of an argument for a duration of time, whereas an achievement verb is punctual; the action of the verb takes place in a single moment.

It is important to note, as several have (Comrie, 1976: 45; Lyons, 1977: 2.714; Verkuyl, 1972; and Dowty, 1979: 62-65) that these semantic distinctions must be drawn among verb phrases or whole sentences rather than just verbs. In the above examples, running and drawing are activities without their direct objects, the inclusion of which makes them accomplishments. Features such as number and definiteness of the arguments also bear upon a verb's class. For example, an accomplishment sentence with a singular or individuated direct object becomes an activity with a plural or mass direct object. Compare "Tom climbed a tree in 2 hours/*for 2 hours" with "Tom climbed trees *in 2 hours/for 2 hours." Thus, while the behavior of verbs in certain contexts allows their classification regarding inherent aspect, the qualities of "accomplishment" or "achievement" inhere in the sentence as a whole, and result from a combination of semantic features.

Dowty (1979) constructs an "aspect calculus" with which he attempts to account for the aspectual behavior of English verbs in a modal-theoretic framework. This research program necessitates a very detailed look at Vendler categories and the tests which have been proposed to distinguish their members. Dowty combines the observations of Kenny, Ryle, and Vendler, as well as those of Verkuyl (1972), Carlson (1977), and others, to come up with subcategories of the original four and many disambiguating tests. Foley and Van Valen (1984) take Dowty's analysis one step further, investigating semantic argument structure in relation to the predicate structures Dowty sets up for the aspectual classes. These ideas are discussed in more detail in chapter five.

Aspect is not the only verbal category which has lexical expression. Consider the famous English examples of the generative semanticists such as 'kill' equals "cause to die." The difference between 'kill' and 'die' is primarily the necessary inclusion of a

second argument with the former; 'kill' is lexically transitive and 'die' is lexically intransitive.

Modality also can have a lexical representation. The English class of modals ('may,' 'can,' 'must,' 'will') is certainly an example. It may be argued that these are not canonical verbs, but there are also undeniably modal verbs, e.g., English 'hope,' 'think,' 'doubt,' 'believe,' and so on. There are likewise many cases of modal adverbs and adjectives: 'possibly,' 'definitely,' 'certain,' 'doubtful,' etc. Adverbials are also the primary loci for the lexical representation of tense meaning, as in 'yesterday,' 'tomorrow,' 'in 10 minutes,' 'at 3:00,' and 'now.'

3.5 Verbal Category Intersection

Recall that a synthetic category is defined as one composed of a combination of units syntagmatically in a phrase or clause. Inflection and derivation thus interact, and these in turn interact with lexical items. As has been demonstrated, the synthetic representations of verbal categories are central to verbal systems. Another type of interaction involves whole categories. Categorical interaction is very important in Friedrich and Dowty's investigations.

Friedrich observes that stative aspect interacts with intransitive (a part of the voice system), middle voice, and tense in the Homeric Greek perfect. Likewise, he says non-distributive interacts with adverbials of space in Yokuts, a North American Indian language. He also mentions the type of interaction discussed above under synthetic categorization, for instance, where a nominal category like number interacts with aspect. The existence of what Friedrich calls "mixed aspect," as in these cases, points out the inadequacy of simple taxonomic branching structures as models for representing verbal systems. Friedrich says of Homeric Greek: "The way features from different domains intersect in the perfect indicates that the structure of the verbal system as a whole is that of a multidimensional network rather than a one-dimensional taxonomy or a transformational

tree" (1974: S19). This network is nearly impossible to illustrate on a two-dimensional page. The idea is that separate trees of, for example, aspect, mood, voice, as well as of number, definiteness, etc., exist in the structure of a language, and that they are on distinct planes. The trees may intersect with each other at one or more nodes, and in so doing, each category contributes to the meaning of the surface subcategory represented by that node. Thus the notion of semantic interaction between categories is conceived of as node intersection within this tree and plane model.

In some languages, the tense and aspect trees share most or all nodes, and the surface category which is hence a blend of both deep categories Friedrich calls "aspectoidal" (see discussions of Arabic and Chinese in Comrie, 1976: §4.4). A similar case (though in a different model) is discussed in Aronson (1977). Aronson says that in Bulgarian, aspect and mood are really one surface category, which he dubs "manner." He gives the following English example, where the difference between iterative and conditional meanings are conveyed by "when" or "if," but neutralized in the verb phrase.

(2) He would play golf every day when/if he lived in Chicago (1977: 15).

Still another example of a mixed category is future, which in many languages is a combination of tense and modal features.

It is interesting to compare Dowty's model of semantic representation with that of Friedrich. The main difference between the two, of course, is Dowty's orientation toward truth-functionalism. Dowty's program emphasizes decomposition into atomic units, whereas Friedrich looks for semantic features. But semantic features and semantic atomic units are perhaps not so dissimilar. Both models include the intersection of domains. For instance, Dowty suggests characterizing stative predicates with combinations of coordinates on axes of shape, size, color, texture, etc. This is similar to Friedrich's network model, except that his involves hierarchically arranged trees,

necessarily two-dimensional, while Dowty's logical space is organized into linearly ordered continua.

Having observed that Homeric perfect and the perfect in other languages include semantic features of tense, aspect and, especially, transitivity, Friedrich suggests that aspect is more closely related to voice than it is to mood. One voice subcategory found in many languages is causative. Hence it is interesting to note that one of the important semantic units in Dowty's system for defining aspect is CAUSE. Perhaps a unit or feature of causality, which Dowty associates with the notion of control, is the locus of the similarity between voice and aspect, or at least another example of a point of intersection. Lyons provides an example of an intersection also relating cause to tense and mood:

... in many languages there are parallels between causal, conditional and temporal constructions...a sentence like "water boils if/when you heat it to a temperature of 100 C" will generally be taken to imply that being heated is the cause of the water's boiling...the assertion that two situations succeeded one another in time will frequently be intended, and understood, to imply that they are causally connected (1977: 2.493).

The role of causality in the semantics of verbal categories merits further study.

There are also other examples which support claims of intersection between other verbal categories. Friedrich says of his suggestion that aspect is closer to voice than to mood, "the main exception is the universal tendency to use the unmarked present (durative) for the quasi-mood 'future,' as illustrated by the Greek present themes" (1974: S36). There is clearly a lot of intersection among categories, and it may take a thorough investigation of this phenomenon in many languages to illuminate all the possibilities.

3.6 Cakchiquel Verbal Categories

Having examined significant possibilities for focus and perspective in a study of verbal categories, and examples of such studies from Whorf, Jakobson, Friedrich, Aronson, Dowty, and Vendler, the approach taken in this study will now be delineated.

The analysis of the Cakchiquel verbal system is, of course, microsystemic, or language specific. A comparative study will have to wait until Cakchiquel is more thoroughly understood. The Cakchiquel research focuses on the surface, overt manifestations of verbal categories initially, that is, it follows concrete-to-abstract strategy. Through study of these facets of categories, the underlying semantic aspects are revealed. Overt categories are easier to examine than covert ones, and for that reason are pursued first. Next, covert categories are investigated, for they are just as integral to the surface system as the overt ones. Concurring with Friedrich that, "All these verbal categories [aspect, voice, and mood], in sum, may be handled at the surface by diverse morphological processes but must be posited as originating in the underlying meaning or semantic structure" (1974: S5), this semantic structure is the ultimate goal. Recalling the discussion of function in chapter two, some external functions of Cakchiquel verbal categories will also be revealed. A category with a given semantic function may be interpreted in other ways when it is in a specific context, in other words it may have a referential function which is not coincident with its semantic function.

Likewise consistent with the concrete-to-abstract approach, the focus of the Cakchiquel analysis proceeds from morphosyntactic to lexical to synthetic. The grammatical forms representing verbal categories will be identified and their distribution and functions discussed. In order to specify these functions in the Cakchiquel structure, the semantic subcategories represented on the surface in Cakchiquel (including the overt and covert morphosyntactic and derivational-lexical) will be arranged hierarchically via their markedness relations. Next the lexical semantics of the verbs will be considered with regard to aspect. Verb classes a la Dowty-Vendler will be presented. Finally, since inherent features interact with each other and cross-cut the formally represented categories, that data will be discussed. This is the synthetic level of the verbal system.

In the conclusion, I review the observations made with the concrete-to-abstract approach in terms of an abstract-to-concrete point of view. As for definitions of individual verbal categories, I subscribe to the Jakobson-Aronson system, with the revisions noted in the section where they were discussed. In the conclusion, these definitions and the other concepts discussed in this chapter, i.e., the Jakobson, Whorf, Friedrich and Vendler-Dowty classifications, will be reevaluated in light of the analysis of Cakchiquel.

CHAPTER FOUR

THE CATEGORIES OF THE CAKCHIQUEL VERB

4.1 Introduction

Having established a theoretical background and defined the concepts important for the analysis, this chapter now presents an in-depth analysis of the Cakchiquel verb. Its morphemes are analyzed and their semantics are systematized as much as possible.

One of the most pervasive oppositions in the Cakchiquel grammatical system is that of transitive vs intransitive. It cuts across another important opposition, the verbal-nominal one. Transitives, whether verbal or nominal, have two-place argument structures, while intransitive structures are one-place. Transitivity in Cakchiquel is defined by the presence or absence of ergative cross-referential prefixes. Many intransitive and transitive segments have absolutive role markers, but transitive ones also have ergative markers. These same markers appear with nominals, too. A transitive nominal has a bound ergative prefix, which serves to indicate the possessor of the nominal.

- (1) Ru-ɟiʔ ri a Luč
E3 - dog art hon Pedro
Pedro's dog (his dog Pedro)

Thus a transitive nominal is a possessed, or two-place noun. Transitive nouns may have concomitant absolutive markers, depending on their function in the sentence. A possessed noun may be used predicatively, and in that case is preceded by an absolutive marker.

- (2) Rixe eʔru - tʃiʔ ri a Luč
 they A6 E3 - dog art hon Pedro
 They are Pedro's dogs.

Intransitive nominals are adjectives and unpossessed nouns (see chap. 6 for more discussion of the difference between transitive and intransitive nominals). When nominals are used predicatively, they are preposed by an unbound absolutive marker, as in examples (2) and (3).

- (3) In k'atinel ken
 A1 important prt
 I was important, useful. (FMP 10.7)

The Cakchiquel verb is defined by its ability to take certain verbal prefixes and suffixes. In this formal sense, all finite verbs have a prefix of tense, aspect or mood (TAM). As shall be shown, these three semantic categories interact in complex ways in Cakchiquel. Location and motion are other concepts which are grammaticalized in the verb, via movement prefixes which denote a movement of the subject. Cakchiquel also has directional or locative post-verbal particles which describe the movement contained in the action denoted by the verb or a position in relation to the speaker. In addition to the initial prefixes which carry aspectual meanings, there are several specialized derivational suffixes which further characterize the nature of the action. These are followed in the verb by focus, voice and modal suffixes.

The perfect lacks the TAM and movement prefixes, focus, mood, and some derivational suffixes (§4.10). It does have markers of person, but the absolutive agreement forms are preposed, not prefixed as they are on finite verbs (see §4.3). Verbal nouns or infinitives lack all the features of a finite verb except voice and the ergative person marker, which indicates patients on de-transitive verbal nouns (see §4.11). Other nominals in Cakchiquel lack TAM prefixes. They share person markers and perhaps a nominal correlate of voice (see §6.1) with the verb. Thus the perfect construction and verbal nouns have both nominal and verbal qualities.

The Cakchiquel verb can be thought of as a series of slots or positions, each of which can be filled in a given instance by one of a finite set of forms.

TAM - abs - mov - erg - root - der - foc - voice - mood
 1 2 3 4 5 6 7 8 9

- + 1. TAM: tense-aspect-mood¹
- + 2. abs: absolutive pronominal cross-reference
- 3. mov: movement prefix (sometimes appears after erg)
- + 4. erg: ergative pronominal cross-reference
- + 5. root: verbal root or stem
- 6. der: derivational suffix
- 7. foc: focus suffix
- + 8. voice: voice suffix
- 9. mood: modal suffix

The slots which must be filled in any well-formed intransitive verb are TAM, absolutive, root, and voice. A transitive verb in addition needs an ergative morpheme. Movement prefixes and derivational suffixes are optional. The focus and modal suffixes are required in certain contexts as discussed in sections 4.7 and 4.9. In the appendix there are paradigms of Cakchiquel verbs with the possible combinations of categories.

The inflectional slots of the finite verb are TAM, pronominal (absolutive and ergative), focus, voice and mood. The derivational slots are movement and derivational suffixes. Derivation, unlike inflection, is an optional category. The speaker may choose to use a derivational form depending on the message he or she wishes to convey. Inflectional morphemes are required by grammatical rule. Perhaps it is this more lexical nature of derivation which makes its semantic relations less systematized than those of inflection. Derivational affixes are also less productive and less semantically transparent than inflectional ones. See sections 3.1.1 and 4.8.5 for more discussion of inflection and derivation in the Cakchiquel verb.

¹ Since I began using the term "TAM" for "tense-aspect-mood," I have noticed that it is also used by Givon (1982) for "tense-aspect-modal."

In this chapter each verb slot and its form set is examined starting with the TAMs and moving in a left-to-right fashion through the slots. First the form itself with its variants and their distribution is presented. Next are shown the main semantic function and secondary pragmatic variations of the form, this of course within the system, demonstrated through markedness relations to other forms in a slot. Finally, the perfect construction and verbal nouns are presented.

4.2 Slot 1: TAM

"TAM," the label of the first position of the Cakchiquel verb, stands for "tense-aspect-mood." This inflectional slot can be filled by one of four forms: j-, š-, k-, or šk-. Their meanings involve a mixture of those I have attributed to tense, aspect, and mood; thus the name of the slot. Aspect and mood are the most important categories of TAM prefixes, but tense meanings are often indistinguishable from mood or aspect in a given context. For example, future is a blend of modality and tense; completed aspect is perceived as closely linked to past tense. TAMs are very important in the verb and in the language. Every finite verb has a TAM prefix. The perfect construction does not have a TAM prefix, which is one aspect of its participial qualities. The person markers are required on verbs, but they are also found with nominals. Each time a verb is used, the speaker must choose one of the four TAM forms and a voice suffix, which is another important category. Tense, aspect, and mood are expressed in other parts of the language, as well, as discussed in chapter six.

TAM prefixes exhibit one common alternation in their forms. J- appears as n-, k- as t-, and šk- as št- when they precede the third person singular absolutive prefix, a null form. So, for example, in (4) and (5), the (a) examples alternate with the (b) examples.

- | | | | | |
|-----|-----|---|-----|---|
| (4) | (a) | j - i - pe
TAM-A1-come
I come | (b) | n - Ø - pe
TAM-A3-come
he comes |
| (5) | (a) | šk - a - ki - ꞥ'u
TAM-A2- E6 - see
they see you | (b) | št - Ø - ki - ꞥ'u
TAM- A3 - E6 - see
they see him |

4.2.1 Markedness Relations of TAMs

The major division among TAMs is one of mood. *k/t-* and *šk/št-* are distinguished from *j/n-* and *š-* in that the former two are marked for "modal," while the latter are unmarked for this feature. In Cakchiquel "modal" is a general non-indicative, and includes both deontic and epistemic qualities, as well as the taxis function common to subjunctives of many European languages. Within the domain of modal, *šk/št-* is marked with respect to the feature "future" while *k/t-* is unmarked for it. Within the domain of non-modal, or indicative, *š-* is marked with respect to the aspectual feature of "completive," while *j/n-* is unmarked for it. All of these oppositions are privative.² Thus each TAM prefix could be characterized:

šk/št- = +modal, +future
k/t- = +modal, ±future
š- = ±modal, +completion
j/n- = ±modal, ±completion

TAM prefixes are also discussed in other treatments of Cakchiquel. Stoll (1958) writes of future (*šk/št-*), imperative (*k/t-*), preterite (*š-*), and present (*n/nd/ng-*).³ Townsend (1961) has future, imperative, indicative mood past tense, and indicative mood present tense (*g/d-*).⁴ He gives the TAMs and pronominal prefixes together as units of

² I am grateful to Howard Aronson for help in determining the markedness relations of the TAMs.

³ Campbell claims that *nd-* and *ng-* were intermediate forms in a historical change from 'tan t-' and 'tan k-' to 'n-' and 'j-', where 'tan' was a present time particle and *k/t-* was completed aspect (1977: 126).

⁴ According to Colhoun (1983), *g/d-* are the forms of *j/n-* in the Patzicía dialect.

verbal prefixes. LAMP (nd) includes preterite, complete aspect, and incomplete aspect. Blair et al. (1969) has future tense, imperative/subjunctive, past tense, and non-past tense. Robertson (1976) says that k/t- is optative/imperative, š- is perfective, and j/n- is habitual. He adds that the combination of perfective and optative in šk/št- gives the meaning of future (1976: 353). I disagree with this, since I find no perfective (or completive) sense in šk/št- forms. The following will be an exposition of the forms and uses of each TAM prefix. This is followed in each case by a paragraph relating the above proposed markedness relations to the functions of each TAM as illustrated here.

4.2.2 šk/št-

4.2.2.1 Forms

Table 6 gives examples of šk/št- with various types of verbs and pronominal prefixes. "Person" is the subject in each of these cases, marked with ergative personal prefixes in the transitive verbs and absolutive in the intransitive verbs. In the consonant-initial transitive verb (TVb-C) here the object is 3rd person singular, indicated by a null absolutive prefix (-Ø-). In the vowel-initial transitive verb (TVb-V) the object is 3rd person plural, marked by the absolutive prefix, -e-. The first column of transitive verbs shows the verb -ben/-ban, "make, do," which takes the form -ben in this conjugation. It is an example of a consonant-initial transitive verb. -axo?, "love," is a vowel-initial transitive verb. The intransitive consonant-initial (IVb-C) example is -be, "go," and the intransitive vowel-initial (IVb-V) is -apon "arrive." The relevant formal alternation here is št- with šk-, the former only occurring before the absolutive third singular pronoun. Where št- occurs before a consonant, speakers sometimes insert an epenthetic [i] (see §1.4.3.7), and these are underlined here.

TABLE 6

šk/št- FORMS

person	TVb-C "do"	TVb-V "love"	IVb-C "go"	IVb-V "arrive"
1sg (1)	št-Ø-i-n-ben	šk-e-nv-axo?	šk-i-be	šk-in-apon
2sg (2)	št-Ø-a-ben	šk-e-v-axo?	šk-a-be	šk-at-apon
3sg (3)	št-Ø-u-ben	šk-e-r-axo?	št-Ø-i-be	št-Ø-apon
1pl (4)	št-Ø-i-qa-ben	šk-e-q-axo?	šk-ox-be	šk-ox-apon
2pl (5)	št-Ø-i-ben	šk-e-v-axo?	šk-iš-be	šk-iš-apon
3pl (6)	št-Ø-i-ki-ben	šk-e-k-axo?	šk-e-be	šk-e?-apon

In Comalapa, škox-, šk/št- plus a first person plural absolutive pronominal, alternates with šqu-. My informant said that 'škoxbe' and 'šqube' have the same meaning, but he sensed that the former is used more by older people while the latter more by younger ones (MAC 17). A similar alternation exists with k/t-

4.2.2.2 Meaning

The general meaning of šk/št- is "future time," for example:

- (6) ken kaʔi kami hora št - Ø - u - ben č i - r - ix la samax
emph 2 maybe hours TAM-A3-E3- do prep-E3-back that job
It will take maybe two hours to do the job. (FMP 13.36)
- (7) šaše rixe šk - e - be č - u - muq-ik ri ánima.
only they TAM-A3-go prep-E3- bury-nom art body
Only they will go to bury (for its burying) the soul/body. (MAC 14.34).
- (8) Teq št - i - Ø - qa qa ri aš Xuan št - Ø - u - ben ri
when TAM-ep-A3-arrive loc art hon Juan TAM-A3-E3 - do comp
š - Ø - u - bix ken.
TAM-A3-E3-tell prt
When Juan arrives he will do what he said [he would]. (FMP 14.63)
- (9) In taq šk - i - be-č'an j - i - be xe r-ik'in kikoten
A1 when TAM-A1-go-play TAM-A1-go always E3-with happiness
When I (will) go play I will always go happily. (MAC 9.21)
- (10) Pu šk - i - dixo-n r - ik'in, n - Ø - r - axo? pa kašlan č'abel
but TAM-A1-talk-act E3-with, TAM-A3-E3-want in Spanish language

š - Ø - ča?

TAM-A3-say

But I will talk with him [as] he wants, in the Spanish language, she said. (Quinac, 1978: 4)

This usage includes the immediate future, as with the adverb 'vakami', "today, now,"

- (11) Vakami jñ št - Ø - i - n - tixo-x č - av - e xun proječto, xun
now I TAM-A3-ep-E1-tell-act to-E2- to art project, art

noxbal pa ačike št - Ø - i - n - ben pa Armita.

idea for what TAM-A3-ep-E1- do in Guatemala.

Now I am going to tell you about a project, an idea for what I will do in Guatemala City. (AYG 1.47)

Actually, it is not only a matter of an event being after the speech event, but also of its non-certainty. Since in many belief systems people can never be absolutely sure about the reality of an event in the future, non-certain and future events are grammaticalized the same way in many languages. The connection between future tense and modal semantics is further discussed in chapter six. This irrealis future meaning of šk/št- is illustrated in the following examples.

- (12) N - t - Ø - oq' - šta - n pe ri ak'val vi šk - at - el el
TAM-ep-A3-cry- int- ap loc art boy if TAM-A2-leave loc
The child starts to cry immediately if you leave. (MAC 9.76)

- (13) Ačike ru - bi - š - ik - ŷ št - Ø - i - n - bix apo či - r - e toq
who E3-tell-ps-nom-der TAM-A3-ep-E1-tell loc to-E3-to when

šk - i - be či - r - ix, s - Ø - ča?

TAM-A1-go to- E3-back, TAM-A3-say

Who knows what it will be like that which I will say to her when she comes up to me, he said. (Quinac, 1978: 3)

In the first example the verb is preceded by 'vi', "if," and in the second by a 'ačike'-phrase. 'Ačike' combines with many words to give a "who knows" sense to them. The next example was said by a man trying to convince a girl to marry him.

- (14) Toq šk - a - be v - ik'ñ jñ maneq čik šk - a - be pan ik',
when TAM-A2-go E1-with me no more TAM-A2-go for month,

ni man št - Ø - a - tix ta čik kineq', š - Ø - ča?
 nor no TAM-A3-E2-eat prt more beans, TAM-A3-say
When you go with me you won't have to work by the month anymore, nor will
you eat anymore black beans, he said. (Quinac, 1978: 4)

Frequently šk/št- is used in future "if...then" constructions, as in,

- (15) vi la ačín la? št - i - Ø - kóm, ma xun čik št - Ø - i - ban-o
 if that man there TAM-ep-A3-die, no one then TAM-A3-ep-do ap

ru-samax.

E3-job

If that man dies, no one will do his job. (FMP 11.90)

šk/št- means future time and therefore I have assigned it the feature [+future].

It has a hypothetical, or non-certain meaning consistent with its marking as [+modal].

4.2.3 k/t-

4.2.3.1 Forms

The k/t- TAM verb forms are somewhat different from those of other TAMs. First, k- is prefixed in the TAM slot, with t- appearing before 3rd person singular absolutive -Ø-. In this respect the k/t- alternation functions the same as šk/št-. The stem of the verb to which k/t- attaches, however, has a special form in some cases. Specifically, the transitive verb roots in class one (see §4.5.2) take the modal suffix -V? with k/t- when they are affirmative and have future or hortative senses. For example, "make, do" has the form -ben with the other TAMs, but with k/t- it is usually -bana? (see also §4.9). k/t- forms are exemplified in table 7.

TABLE 7

k/t- FORMS

person	TVb-C "do"	TVb-V "love"	IVb-C "go"	IVb-V "arrive"
1sg (1)	t-Ø-i-n-ban-a?	k-e-nv-axo?	k-i-be	k-in-apon
2sg (2)	t-Ø-a-ban-a?	k-e-v-axo?	k-a-be	k-at-apon
3sg (3)	t-Ø-u-ban-a?	k-e-r-axo?	t-Ø-i-be	t-Ø-apon
1pl (4)	t-Ø-i-qa-ban-a?	k-e-q-axo?	k-ox-be	k-ox-apon
2pl (5)	t-Ø-i-ban-a?	k-e-v-axo?	k-iš-be	k-iš-apon
3pl (6)	t-Ø-i-ki-ban-a?	k-e-k-axo?	k-e-be	k-e?-apon

In a few contexts, however, the stem appears with k/t- without the modal suffix. Negation is one of these contexts.

- (16) Man t - Ø - a - ben ta
neg TAM-A3-E2-do prt
Don't do it

There is an alternation in the forms which have a 1st plural ergative and a 3rd singular absolutive, between *tīqa-* and *qa-*, as in *'tīqaʔu'* and *'qaʔu'*, *'tīqabana'* and *'qabana'*. These seem to be stylistic variants and have no observable semantic differences (see p. 101). Also the Comalapa dialect has an alternation between *kox-* and *qu-* for 1st person plural absolutive forms (see p. 90).

4.2.3.2 Meaning

The k/t- TAM prefix is [+modal] but unmarked for any other feature. It contrasts with *šk/št-*, and thus is non-future. k/t- has several contextualized functions. The first is hortative or imperative, depending on the person of the subject. Class one transitive verbs in this function always take the modal suffix mentioned above. With a 1st person singular subject k/t- is self-urging, i.e., "I will do it." For example,

- (17) T - Ø - i - n - ban - a na? xun v-ačo?
TAM-A3-ep-E1-do- md prt a E1-house
I will build myself a house. (MAC 13.71)

Compare

- (18) ʃt - Ø - i - n - ban-a xun v- ačo?
 TAM-A3-ep-E1- do- md a E1-house
I will build myself a house. (MAC 13.71)

The translation is the same but (18) is interpreted as being less forceful: as a suggestion or prediction.

1st singular k/t- forms in this function are almost always followed by the particle 'na?'⁵ which contributes no observable meaning to the phrase. Occasionally k/t- verbs are grammatical with a 1st singular subject without 'na?', if there is a preverbal adverbial. For example,

- (19) Mas ʃg t - Ø - i - n - ban-a vakamin
 more good TAM-A3-ep-E1- do-md today
It would be better if I did it today. (MAC 13.88)

Without a preceding adverbial or postposed 'na?', a k/t- sentence with 1st person singular subject is ungrammatical.

- (20) *T - Ø - in- ban-a ri samax
 TAM-A3-E3-do-md art work

⁵ 'Na?' is a post-verbal particle which, like other Cakchiquel particles has many functions and is hard to define. 'Na?' also occurs in idioms with other particles and with quantifiers. It seems to have two main meanings: necessity and forward progression in time from the speaking or reference point. For example,

kan ʃ - Ø - ban-Ø na ri xaj
 emph tam-A3- do- ps prt' art house
 The house had to be made. (FMP 12.45)

Jin in kos-neq na?
 I A1 tire-pf prt
 I keep feeling tired. (MAC 14.159)

'k'a ... na?' always means "still," as in,

k'a n - Ø - a - sik'a - x na ri xo?q
 prt tam-A3-E2-smoke-act prt art cigar
 You're still smoking that cigar. (MAC 10.113)

See also §6.1.

With 1st person plural k/t- also has an urging sense, which in Jespersen's terms is hortative (1965: 320), as in "Let's do it." For example.

- (21) K - ox - va.
TAM-A4-eat
Let's eat.
- (22) K - e - q - axov - a - x ri qa-vinaq
TAM-A6-E4-love-der-act art E4-people
Let's love our people. (MAC 13.52)

It also has what in Jespersen's terms is a promissive function, as in this sentence delivered to a person who is to remain behind,

- (23) k - e - qa - be - k'am - a? na mas q - ačibil ĩin
TAM-A6-E4-go-bring-md prt more E4-friends to
- n - Ø - i - qa - k'uax
TAM-A3-ep-E4-carry
We'll go get more friends to carry it. (Mactzul, A., 1973a)

Imperative is conveyed when k/t- verbs have a second person subject. There is no "subject-imperative deletion;" Cakchiquel allows or disallows deletion of noun phrases for pragmatic reasons.

- (24) T - Ø - a - ja xun ti ꞑ'ix ĩu - v - e k'a
TAM-A3-E2-give art little drop to-E1-to then
Give me a few little drops then. (FMP 13.30)
- (25) K - a - be ĩu - v - ix
TAM-A2-go prep-E1-back
Go with me, follow me. (MAC 13.25)
- (26) Riš t - Ø - i - ĩu? la q'abarel
you-pl TAM-A3-E5-see that drunk
Look at that drunk. (MAC 15.56)
- (27) k - iš - šaxo? čuaq
TAM-A5-dance tomorrow
Dance tomorrow. (FMP 11.56)

The third person singular and plural k/t- verbs basically mean obligative; "s/he/they should do it." These forms often appear in the lower clause of an imperative or a quotative, functioning as indirect commands.

- (28) T - Ø - a - bix čí - r - e če t - Ø - u - ban - a ru - samax
 TAM-A3-E2-tell to- E3-to comp TAM-A3-E3- do-md E3-work
 Tell him/her to do his/her work. (MAC 13.6)
- (29) T - Ø - ušlan ba? ri a Ruč man t - Ø - u - kam - sa - x
 TAM-A3-rest a-little art hon Pedro neg TAM-A3-E3- die-cau-act
 r - i? pa ru - samax
 E3-self in E3-job
Pedro should rest a little, he shouldn't kill himself at his job. (FMP 11.13)
- (30) T - Ø - i - ki - ban - a? ri bej
 TAM-A3-ep-E6-make-md art road
They must/should/make the road. (Would that they make the road.) (MAC 13.72)
- (31) Kami t - Ø - i - ki - ban - a?
 today TAM-A3-ep-E6-do-md
They must do it today. (MAC 13.74)

Some imperatives, desires, and suggestions are timeless, but others imply immediate or near future action. When k/t- verbs appear with the adverb 'kami', "now, today," as in the preceding example, they indicate the action will be done right away or later today, not that it was done already today or that it is in the process of being done. The negative adverbial, 'maxun bej', "never" before a k/t- form is a strong admonition or order: "never do it." Likewise a sentence with 'xantape_x', "always," means "always do it, s/he should always do it."

- (32) Maxun bey t - Ø - a - bix ču - v - e ri?
 not-one time TAM-A3-E2-say to-E1-to that
Never say that to me. (MAC 7.7)
- (33) kan xantape? t - Ø - i - qa - ban - a? k'a ri ũč
 emph always TAM-A3-ep-E4-do-md then art good
We should always do good. (Canú, 1973)

Similarly, a simple negator with a k/t- verb without a postposed 'ta' (see §6.1 for a discussion of 'ta') means "don't do it" (2nd person) or "s/he/they shouldn't do it" (3rd person).

- (34) I jĩn n - Ø - i - n - bix ě - av - e ěi man k'a t - Ø - a - ben
and I TAM-A3-ep-E1-say to-E2-to comp neg then TAM-A3-E2-do

ačičel š - Ø - i - n - ben jĩn
like TAM-A3-ep-E1-do I

And I say to you that you shouldn't do (don't do) as I did. (Canú, 1973)

- (35) T - Ø - ušlan ba? ri a Ruč man t - Ø - u - kam - sa - x
TAM-A3 -rest a-little art hon Pedro neg TAM-A3-E3- die-cau-act

r - i? pa ru-samax
E3-self in E3-job

Pedro should rest a little, he shouldn't kill himself at his job. (FMP 11.13)

The same type of sentence can be interpreted with more of an irrealis than an obligative meaning.

- (36) k'a ka?i q'ix ěik man t - Ø - u - ben kan ri samax
emph 2 days more neg TAM-A3-E3-do loc art job
He won't do it (finish it) for two more days. (MAC 13.21)

Although this sentence is future irrealis, k/t- is used instead of šk/št-. Presumably this is due to the status of k/t- as unmarked for future, combined with an emphasis on the irrealis nature of the situation.

Likewise, the following examples involve hypothetical events. They are timeless, however, and not future, so k/t- is used.

- (37) xa mismo ačĩn ri? Ø jo - j - on kan ěin ri tinamit
that same man (that) A3 give-ap-pf loc so-that art town

t - Ø - u - kusa - x vi n - Ø - i - k'a?i - n ěin šabačike kosa
TAM-A3-E3-use-act if TAM-A3-ep-need-act for whatever thing

That same man has left it so that the town might use it if it is needed for whatever thing. (Saquéc, 1973)

- (38) Re Xuan k'a re? š - Ø - pe r-ičĩn

this Juan this TAM-A3-come E3-to

š - Ø - o - ru-q'alax-ir-isa - x ri Saqñ, r- ičin kerì? kan
TAM-A3-mov-E3-clear-der-cau-act art Light, E3-for thus emph

k-onoxel k'a vineq t - Ø - i - ki - nima - x kan
E6-all then people TAM-A3-ep- E6-believe-act emph

t - Ø - i - ki - nima - x k'a ri n - Ø - u - ja? ru-ğixol rixa? ši - k - e.
TAM-A3-ep-E6-believe-act what TAM-A3-E3-give E3-word he to-E6-to
John came to clarify the Light, so that all might believe. So that all might believe
he gave his word for it. (New Testament, John 1:7)

- (39) A, komo ri seņora ri? ru- moq' -en ri anijo r- ičin man xun
ah, how that lady that E3-attach-pf art ring E3-for no one

t - Ø - elesa - n pa ru- q'a?
TAM-A3- take-act from E3-hand
Ah, how the lady had the ring stuck on so that no one could take it off of her
hand. (Mactzul, A., 1980: 30)

- (40) ri? vi ta t - Ø - i - qa š - u - več vi ta maneq xun šten i čqa
thus if prt TAM-A3-ep-like to-E3-eyes if prt not art girl and also

ri šten vi ta t - Ø - i - qa š - u - več vi ta maneq ri ala,
art girl if prt TAM-A3-ep-like to-E3-eyes if prt not art boy,
Whether this boy is pleasing to a girl or not, and also, the girl, whether she is
pleasing or not to the boy,... (MAC 6.69)

- (41) I q'alax k'a taq t - Ø - i - q'umar-tex la k'isis xari? toq
and clear then when TAM-A3-ep-wither -rp that cypress that-is when

n - Ø - i - řaq la iglesia
TAM-A3-ep-fall that church
and it is clear that when that cypress has withered that is when that church will fall
(FMP 14.67)

Another use of k/t- is for backgrounding or distancing. This is quite interesting, as it is very different from its other functions. Usually these forms are preceded by a time adverbial. This time adverbial is not necessarily explicitly past, but in this context, i.e., with k/t-, it is understood as past. The sentence usually means time passed since the reported event of the verb ('t since NP (had) Vb-d'). If there is no

second action clause, the time passage referred to is between the reported event and the speech event ('NP Vb-d t ago'). A class one transitive verb never takes the modal suffix. This use of k/t- is like taxis (see Jakobson 1971b: 135) and is reminiscent of the English pluperfect. Observe the following examples.

- (42) K'o le?q ka?i ik' t - Ø - i - q - ak'aša - x ĕi ri vinaqi?
be/have maybe 2 months TAM-A3-ep-E4-hear- act comp the people

n - Ø - i - ki-?ixo - x ...

TAM-A3-ep-E6-tell-act...

About 2 months ago we heard the people tell it... (Ajsvinac, 1978)

- (43) Oxer ri? t - Ø - i - k'ul - e?
a-long-time-ago TAM-A3-ep-marry-der
s/he got married a long time ago. (MAC 15.3)

k'a ba t - Ø - i - n - k'is ri nu-samax

just a-little TAM-A3-ep-E1-finish art E1-work

I finished my work a little while ago. (MAC 7.3)

- (44) ka?i kan ik' t - Ø - i - n - ĕ'iba - x xun karta
2 prt months TAM-A3-ep-E1-write-act art letter
It had been 2 months since I wrote a letter. (FMP 8)

Often there is a second clause beginning with 'when'. In this case the time passage is between the reported event and the event of the second clause.

- (45) k'o xun tiempo t - Ø - u - ben kanu - n - ĭk toq
be/have a time TAM-A3-E3-do hunt-ap-nom when

š - Ø - apon xun q'ix š - Ø - be kanunel

TAM-A3-arrive art day TAM-A3-go hunting

He had hunted a long time when one day arrived and he went hunting. (Mactzul, A., 1980: 8)

- (46) k'o ka?i xuna ri k - i - samex ĕi - r - i taq
be/have 2 years comp TAM-A1-work at-E3-at when

š - Ø - i - n - ja kan ri nu-samax

TAM-A3-ep-E1-give loc art E1-job

I had worked there two years when I lost my job. (MAC 7.13)

Adverbials which denote other than an amount or point of time are also used in this construction, for example, the number of times or a distance.

- (47) Ačike na r - oma ri xun q'ix ri? k'a xuba? čk
 what prt E3-cause comp art day that then a-little emph

t - Ø - i - bijin komo xun kilómetro t - Ø - i - bijin apon pa
 TAM-A3-ep-walk about one kilometer TAM-A3-ep-walk loc in

k'ečelax toq š - Ø - be - k'ulun pe xun masat
 forest when TAM-A3-mov-appear loc art deer

Who knows why on that day just a little he had traveled, about a kilometer he had traveled over in the forest when a deer appeared. (Mactzul, A., 1980: 8)

- (48) ka?i oši leq jan t - Ø - u - paši - x
 2 3 maybe already TAM-A3-E3-drop-act
 Two or three times already he had dropped it. (MAC 2.3)

The effect of all these is to place an event in the background of the speech event or of another event indicated in a 'toq'-phrase.

In addition, there are some secondary uses involving the irrealis function of k/t- and other adverbials. The adverb 'maxani', "not yet" combined with a k/t- verb means "not done yet," e.g.,

- (49) i ša maxani t - Ø - u - k'is
 and only not-yet TAM-A3-E3-finish
 and he hasn't finished it yet. (FMP 14.53)

- (50) Ø il - tax - neq čqa čik ri grabadora? Maxani t - Ø - il - tex
 A3 find-rp- pf also yet art eraser? not-yet TAM-A3-find-rp
 Has she found the eraser? She hasn't found it yet. (FMP 9.16)

When the verb is negated, the sentence may mean "s/he has never done something."

- (51) kuči la š - Ø - pe vi xun učuq'a ma xun bej
 where quest TAM-A3-come prt art strength not one time

t - Ø - u - ben ta rixa kerí?
 TAM-A3-E3- do prt he thus

Where did his strength come from; never had he acted like that. (MAC 3.75)

Or it may mean "I wish s/he would have done it" or "s/he would have done it" when followed by 'ta'.

- (52) Mier ri t - Ø - u - ben ta ri ru-samax
 a-little-bit-ago comp TAM-A3-E3-do prt the E3-work
 He should have done his work a little bit ago. (MAC 14.150)

- (53) Mier ri k - i - ver ta
 a-little-bit-ago comp TAM-A1-sleep prt
I wish I would have slept a little while ago. (MAC 14.151)

The alternation mentioned above between 'tiqa-' and 'qa-' is one of formality and forcefulness. A pertinent example given by one of my informants was of a group of men, some of whom want to do a certain task and some of whom do not. One of those willing says "Tiqabana k'a" ('k'a' is an emphatic particle) in his effort to convince the others. When they are in agreement, one says "Qabana k'a," as an urge to take action, and a sign of concession. Another informant says that 'tiqa-' forms are written, more formal, while 'qa-' forms are spoken and informal. Both accounts are concordant since the marked use of a formal form in an informal context may convey a sense of forcefulness or urgency of the hortation.

In sum, k/t- is non-future modal. It has three main uses: obligative, irrealis and relative past. The combination of relative past and irrealis in one category is not as unusual as it may seem. Compare the two uses of the English and French pluperfects (and see §6.2).

- (54) I had finished my cake when she entered the room.
 If I had only gotten up earlier (i.e., I didn't get up earlier).
- (55) Quand il avait fini son travail, il regardait la télévision.
 Si hier il avait fait beau, nous serions sortis.

k/t- is unmarked in relation to $\text{\$/k/\$/t-}$, a status which is supported by its variety of uses, its greater frequency in texts, and its ability to appear in future contexts. $\text{\$/k/\$/t-}$

always means future. When it is opposed to k/t- in a future context, it is simply predictive, while k/t- has a more obligative interpretation.

4.2.4 ξ -4.2.4.1 Forms

The ξ - TAM is the most regular of all in form. By this is meant it does not have an alternate form when it precedes third singular absolutive - \emptyset -. Table 8 gives examples of ξ - with various types of verbs and pronominal prefixes.

TABLE 8

 ξ - FORMS

	TVb-C	TVb-V	IVb-C	IVb-V
person	"do"	"love"	"go"	"arrive"
1sg (1)	ξ - \emptyset -i-n-ben	ξ -e-nv-axo?	ξ -i-be	ξ -in-apon
2sg (2)	ξ - \emptyset -a-ben	ξ -e-v-axo?	ξ -a-be	ξ -at-apon
3sg (3)	ξ - \emptyset -u-ben	ξ -e-r-axo?	ξ - \emptyset -be	ξ - \emptyset -apon
1pl (4)	ξ - \emptyset -qa-ben	ξ -e-q-axo?	ξ -ox-be	ξ -ox-apon
2pl (5)	ξ - \emptyset -i-ben	ξ -e-v-axo?	ξ -i ξ -be	ξ -i ξ -apon
3pl (6)	ξ - \emptyset -ki-ben	ξ -e-k-axo?	ξ -e-be	ξ -e?-apon

There is one instance when the form of ξ - varies. When ξ - directly precedes another ξ - or an -s- it is omitted. These contexts arise when TAM precedes third singular absolutive - \emptyset - and an intransitive verb which begins with ξ - or s-. For example, ξ - \emptyset - ξ axo? -> ξ axo?, ξ - \emptyset -samex -> samex. ξ -deletion in these contexts is obligatory. Note that this change only applies to the TAM ξ -. In other instances where [ξ] and [s] or [ξ] cooccur the change does not take place. There is a clear difference between the pronunciations of the (a) and (b) forms in examples (56) and (57).

(56) (a) j- i- ξ axo?
TAM-A1-dance
I dance

(b) j- i ξ - ξ axo?
TAM-A5-dance
you(pl) dance

- (57) (a) j- i- samex (b) j- iš- gamex
 TAM-A1-work TAM-A5-work
 I work you(pl) work

4.2.4.2 Meaning

š- is [\pm modal, +completive] and occurs most often in past time contexts, for example with past adverbials. In fact, it is usually described as the "past tense" of Cakchiquel, although it is not just this, as shown below. Here are two examples containing š- with a past function.

- (58) Xun bej kan k'o xun ti umül n - Ø - u -č'er ru - si? i
 one time ago be a little rabbit TAM-A3-E3-cut E3-wood and
 š- - Ø - apon ri tio utif r - ik'in
 TAM-A3-arrive art uncle coyote E3-with
 One time a little rabbit was cutting wood and Uncle Coyote joined him. (Mactzul, C., 1980: 68)
- (59) Ašike r - uma j - a - t - oq' si ša xabel š- - a - va? pe --
 what E3-cause TAM-A2-ep-cry if just pretty TAM-A2-eat loc --
 n - Ø - i - če ri ač'in ši - r - e
 TAM-A3-ep-say art man to- E3-to
 "Why are you crying if you just ate well?" the man says to him. (FMP 5)

There are also a few contexts when š- is used in non-past time, as in this instruction from a recipe where a future completed event is denoted using š-.

- (60) 4. Toq š- - Ø - k'ili- tex ri šnaket, n - Ø - i - jo? - oš qa ri kineq'
 when TAM-A3-brown-rp art onion, TAM-A3-ep-give- ps loc art beans
 i n - Ø - i - čaq'-ir - is - eš
 and TAM-A3-ep-dry-der-cau-ps
 When the onion has browned, the beans are put in and [fried until] dried.

'škiliteš' is in š- and the resultative passive voice (-tex, see §4.8.3), but the time frame is future.

When opposed to j/n-, š- is found to have a completive aspectual sense. By "completive" I mean that the action indicated by the verb is over and done with. This is in

contrast to "perfective," which, following Comrie (1976: 16-21) and others I take as portraying the action as a whole unit, without relevant internal stages or intervals. Thus one can focus on the internal structure of an event in ξ -. There is a construction in Cakchiquel which means "to be in the process of." It can equally as well be used with ξ - as with j/n -. For example,

- (61) $\text{jin } \xi\text{-in-axin } \xi\text{e r-atin-isa-}\xi\text{-ik}$
 I TAM-A1-process at E3-bathe-cau-ps-nom
 I was washing it (but now I'm done).

The Cakchiquel completive simply indicates the action is no longer going on; it does not necessarily focus on a completed state of an object. The action has stopped, but has not necessarily been finished. There is another category in Cakchiquel, the resultative passive, which indicates a finished state (see § 4.8.3). Obviously, completive events usually occur in past time. A "past tense" indicates an action which happens before the speech event, and only secondarily entails completion. The Cakchiquel completive is primarily concerned with completed action and often entails past time.

Here are sections of two narratives, set in past time, which show the contrast between completive ξ - and non-completive j/n -. In each example, j/n - is used for habitual, backgrounded actions. When the action begins, the verbs are in ξ -, showing more punctual, completed events.

- (62) $K'o \quad vi \text{ xun a}\xi\text{in ax pa xuju?} \quad i \quad k'o \quad vi \text{ xun}$
 there-be there a man from on hill, and there-be there a
- $ru\text{-kiex } i \text{ r-onoxel bej toq } n\text{-}\emptyset\text{-i-be pa tinamit}$
 E3- horse and E3-all times when TAM-A3-ep-go to town
- $n\text{-}\emptyset\text{-i-}\xi\text{'ok-e? } e\text{i } \xi\text{i- r-ix. } K'o \quad k'a \text{ xun q'ix, toq}$
 TAM-A3-ep-sit-der loc to-E3-back. there-be then a day, when
- $\xi\text{-}\emptyset\text{-apon pa nik'ax bej maneq } \xi\text{ik } \xi\text{-}\emptyset\text{-r-axo? ta}$
 TAM-A3-arrive at half road no more TAM-A3-E3-want prt
- $\xi\text{-}\emptyset\text{-bijin, stape? ta } n\text{-}\emptyset\text{-u-}\xi\text{'ej } i \text{ maneq } n\text{-}\emptyset\text{-i-bijin ta.}$
 TAM-A3-walk, although prt TAM-A3-E3-hit and no TAM-A3-ep-walk prt.

There was there a man from the hill, and he had a horse and always when he would go to town he would ride on it. There was one day, when he arrived half-way he didn't want to walk more, even though he was hitting him, he wouldn't walk. (Sotz Otzoy, 1978: 6)

- (63) ri vakš ri? xantape ki- ġob-en k- i? j- e- va j- e- ?uk'
art cows those always E6-join-pf E6-self TAM-A6-eat TAM-A6-drink

ja ri k'uči xe n- Ø- i- k- axo j- e- be xantape
water comp where prt TAM-A3-ep-E6-want TAM-A6-go always

ki- ġob-en k- i?. Ma xun bej n- Ø- i- ki- xe? ta k- i?.
E6-join pf E6-self. not art time TAM-A3-ep-E6-separate prt E6-self.

Xun bej š- Ø- ki- ben ojoval či-ki-ve
art time TAM-A3-E6-make fight to-E6-eyes

These cows would always eat and drink together, wherever they wanted to go they always were together, never would they separate. One day they fought among themselves (MAC 4)

Since š- is unmarked for [modal], it is not impossible to find it in a modal context. Here is an example.

- (64) Vi š- Ø- av- ojohe- x ta xuba?, š- Ø- av- ak'aša- x ta ri avion.
if TAM-A3-E2-listen-act prt little, TAM-A3- E2- hear -act prt art plane
If you had listened a bit you would have heard the plane. (Blair et al., 1969: 2.326)

š- means completed action and thus I have marked it [+completion]. Its use for past time is consistent with its marking as [+completion], since most completive events are interpreted as past, and its use in hypothetical contexts is consistent with its marking as [±modal].

4.2.5 j/n-

4.2.5.1 Forms

Table 9 shows four types of verb forms with the j/n- prefix. Following the same pattern as šk/št-, n- alternates with j-, the former only occurring before -Ø-.

TABLE 9

j/n- FORMS

person	TVb-C	TVb-V	IVb-C	IVb-V
1sg (1)	n-Ø-i-n-ben	j-e-nv-axo?	j-i-be	j-in-apon
2sg (2)	n-Ø-a-ben	j-e-v-axo?	j-a-be	j-at-apon
3sg (3)	n-Ø-u-ben	j-e-r-axo?	n-Ø-i-be	n-Ø-apon
1pl (4)	n-Ø-i-qa-ben	j-e-q-axo?	j-ox-be	j-ox-apon
2pl (5)	n-Ø-i-ben	j-e-v-axo?	j-iš-be	j-iš-apon
3pl (6)	n-Ø-i-ki-ben	j-e-k-axo?	j-e-be	j-e?-apon

4.2.5.2 Meaning

j/n- is the least marked of all the TAMs, and as such has very broad range of functions. It is used in past, present, and future time frames. Its predominant interpretations in context include present, future, imperfective, habitual, and generic. Notice that adverbs such as 'vakami', 'now, today,' 'č'in Diciembre', 'in December' and 'xanfla', 'much,' and the TAM š- elsewhere in the context influence the interpretation of j/n-.

(65) present

- (a) Vakami n - Ø - i - nv - axo n - Ø - i - n - řixox č - a - ve xun,
now TAM-A3-ep-E1-want TAM-A3-ep-E1-tell-act to-E2-eyes art,

xun banokil ri oxer.
art event comp long-ago

Now I want to tell you something that happened long ago. (FMP 4.1)

- (b) I - i - řo?n č - i - ve ri qa-č'alal Markuš Calí vave? pan Antigua.
TAM-A1-talk to-E5-eyes art E4-compañero Marcos Calí here in Antigua
I, a colleague, Marcos Calí am talking to you here in Antigua (said into a
microphone) (MAC 1.1)

(66) future

j - a - pe č'in ri ik' Diciembre
TAM-A2-come for the month December
You will come in December (MAC 16.6)

(67) past imperfective

š - ox- be pa taq fabrikas, almasenes n - Ø - qa - kanux šaba ačike
TAM-A4-go to pl factories, stores TAM-A3-E4-look-for whatever

samax ta šaba ačike n - Ø - j - q - ŋ. R- oma ri?
work prt whatever TAM-A3-ep-E4-find. E3-cause that

n - Ø - i - q - axo? j - ox - samex r-oma ri?, manaq qa- media.
TAM-A3-ep-E4-want TAM-A4-work E3-cause that, none A4-money
We went to factories, stores looking for whatever work could be found, because
we wanted to work because we didn't have any money. (FMP 15.7)

(68) habit, custom

Taq jin j - i - tik - o?n i xebel nu-samax, xanfla j - i - kikot,
when I TAM-A1-plant-ap and well E1-work, much TAM-A1-happy,

j - i - kikot n - Ø - i - n - e'et xebel kineq', xebel išin i
TAM-A1-happy TAM-A3-ep-E1-see well beans, good corn and

xubul taq koš'ix j - e - ? - el pe
fragrant pl flower TAM-A6-ep-come here
When I plant and my work is well done, I am very happy. I am happy seeing
good beans, good corn and fragrant flowers coming up. (Xón Vargas, 1978)

(69) generic

Pa xun kosina n - Ø - i - k'ati - n či ri išoq,
in a kitchen TAM-A3-ep-need-act that the woman,

n - i - r - etama - x n - Ø - u - ben r-onoxel ru-ve? q'utun,
TAM-ep-E3-learn-act TAM-A3-E3-make E3-all E3-eyes food,

k'o k'ix išoq - i? manaq Ø k - etama - n ta
there-be many woman-pl no A3 E6-learn-pf prt

n - Ø - i - ki - ja ru- sabor ri ki-q'utun.
TAM-A3-ep-E6-give E3-flavor the E6-food
In a kitchen it is necessary that a woman learn how to make all kinds of food,
there are many women who don't know how to give flavor to their food.
(Itzol, 1978: 14)

When contrasted with a verb in modal šk/št-, j/n- has a affirmatory use.

- (70) (a) J - i - k'oxe pa v - ačoč čuaq.
TAM-A1-be at E1-house tomorrow
I will be home tomorrow.
- (b) šk - i - k'oxe pa v - ačoč čuaq.
TAM-A1-be at E1-house tomorrow
I will be home tomorrow.

While both these sentences are translated as future, the former carries an implication of certainty while the second only indicates probability.

j/n- can, however, be found in many contexts where other TAMs occur, that is, it can substitute for them in a given context. These subsidiary uses include imperative, completive, hypothetical and future (see example #66). The following list comprises the instructions of a recipe. Note that in lines (1)-(3) the commands are in j/n- and in line (5), in the more common k/t-.

(71) imperative

1. N - Ø - i - đak ri kineq'
TAM-A3-ep-cook the beans
Cook the beans.

2. N - Ø - i - čaju - x
TAM-A3-ep-puré-act
Puré them.

3. N - Ø - i - k'ili - x ri puk'un šnaket pa aseite o manteka
TAM-A3-ep-brown-act art diced onion in oil or shortening
Fry the diced onion in oil or shortening.

4. Toq š - Ø - k'ili - tex ri šnaket, n - Ø - i - jo? - oš qa ri kineq'
when TAM-A3-brown-rp art onion, TAM-A3-ep-give-ps loc art beans

i n - Ø - i - čaq' - ir - is - eš
and TAM-A3-ep-dry-der-cau-ps
When the onion has browned, the beans are put in and [fried until] dry.

5. K'a k'a ri? t - Ø - a - xač - a? i k - a - va?
then TAM-A3-E2-distribute-md and TAM-A2-eat
Then serve them and eat. (Itzol, 1978: 17)

(72) completive

- (a) "Vakami tfo si j - at -i - n -tex! Vakami si j - at -i -n -tex!"
 now uncle yes TAM-A2-ep-E1-eat! now yes TAM-A2-ep-E1-eat! ? ?
š - Ø - ča, ri utif č̣i - r - e.
 TAM-A3 -say art coyote to-E3-to
 "Now, Uncle I'm going to eat you! Now I'm going to eat you," the coyote said to him.
- (b) "Ne? tfo hombre ne?, t - Ø -av- ak'aša-x ri? n - Ø - i - čaq ri
 no uncle man no, TAM-A3-E2-listen-act that TAM-A3-ep-fall art
 xuju? č̣i - q - ix, n - Ø - i - ča? ri umül.
 hill to-E4-back, TAM-A3-ep-say art rabbit.
 "No Uncle man, no. Listen to that, the mountain is going to fall on top of us,"
said the rabbit. (Mactzul, C., 1980: 68)

In the "s/he said" of quoted speech in (71), š- and j/n- seem to be in free variation.

- (73) hypothetical

Vi ta j - a - be č̣iri?, rat j - a - samex ta jalan.
 if prt TAM-A2-go there, you TAM-A2-work prt much
If you went there you would work a lot. (Blair et al., 1969: 2.43)

In (72), 'vi ta' means "counterfactual 'if,' 'ta' being an irrealis particle (see §6.1).

Since j/n- is totally unmarked, it is the neutral TAM. Its function is usually derived from context, or, in neutral contexts, it is present indicative.

4.2.6 TAM Summary

In sum, the TAM prefixes include a modal pair, which is marked in relation to š- and j/n-. These latter are much more frequent in text than k/t- and šk/št-. š- can appear in future contexts, and j/n- can appear as future and imperative, these being instances of facultative expression. Likewise, k/t- can appear in future contexts, but šk/št- can never take on the meanings of any of the other TAMs. k/t- is more frequent in text than the more marked šk/št-. š- and j/n- are even in frequency. This may be due to the fact that most of my texts are narratives where completed activities are being related. j/n- exhibits more formal irregularity than the more marked š-, which is contrary to the Greenbergian

markedness criterion of formal irregularity (cf. §2.4.3.6). The TAMs are summarized in table 10.

TABLE 10
TAMS

Modal		Non-Modal	
Future šk/št-	Non-Future k/t-	Completive š-	Non-Completive j/n-

The following sentences serve as minimal pairs for comparing the four TAMs in their most general uses.

- (74) (a) Ri ačín š t - Ø - u - čiba - x xun vŭx
art man TAM-A3-E3-write-act a letter
The man will write a letter.
- (b) Ri ačín t - Ø - u - čiba - x xun vŭx
art man TAM-A3-E3-write-act a letter
The man should write a letter.
- (c) Ri ačín š - Ø - u - čiba - x xun vŭx
art man TAM-A3-E3-write-act a letter
The man wrote a letter.
- (d) Ri ačín n - Ø - u - čiba - x xun vŭx
art man TAM-A3-E3-write-act a letter
The man writes/is writing a letter.

4.3 Slots 2 and 4: Personal Dependent Pronouns

Proceeding in a left-to-right order, the next category to be treated is the absolutive personal dependent pronoun. Cakchiquel has two sets of personal dependent pronouns, absolutive and ergative. Although these two slots may be separated by a movement morpheme, they will be treated together here because of their similarities. They are inflectional, and both convey information about the arguments which are involved in the action of the verb, namely, person and number.

In the literature on Mayan languages similar sets are usually referred to as Set A and Set B. The Set A and B forms function as markers of ergative and absolutive, respectively. In some Mayan languages the ergative-absolutive system is not clear cut, and the absolutive forms may denote ergative arguments or vice versa. For this reason the A-B terminology is used in those languages to avoid confusion. Cakchiquel, however, is almost perfectly ergative. The one possible example of split-ergativity (see Hendrick, 1980) can easily be handled in a description of Cakchiquel without confounding the functions of pronominals. Thus the terms ergative and absolutive will be used here. Each set has other functions, too, but they are not inconsistent with those of ergative and absolutive pronouns in other ergative-absolutive systems. As mentioned above, dependent pronouns exhibit person and number. Each person/number category has several forms in each set, listed in table 11.⁶

TABLE 11
PRONOMINAL PREFIXES

	Independent ⁷	Dependent Ergative	Absolutive
1sg (1)	j̃n	n, nu, nv, v	i, in
2sg (2)	rat	a, av	a, at
3sg (3)	rixa	u, ru, r	Ø
1pl (4)	rox	qa, q	ox
2pl (5)	r̃š	i, iv	iš
3pl (6)	rixe	ki, k	e, e?

⁶ My system of pronominals differs from those in other treatments of Cakchiquel on only a few counts. LAMP (nd) and Blair et al. (1969: 2.464) include first person singular ergative forms 'in' and 'inv', whereas I identify this 'i' as epenthetic. LAMP also includes epenthetic 'i' as a third person absolutive singular alternate to Ø. Blair et al. lists absolutive first and second person singular alternants, respectively, as 'iv' and 'av', for which I find no evidence. Finally, Townsend (1961: 12-13) implies that the particle 'xa' is a third person absolutive singular form.

⁷ The independent pronouns are optional, used for emphasis or clarification, like those of Spanish. Historically, they come from the definite article 'ri' plus absolutive dependent pronouns. Some dialects of Cakchiquel preserve the first singular form 'rin' (Patzicfa: Colhoun, 1983: 252). Blair et al. (1969: 1.309) suggests that 'rixa' derives from 'ri' plus the affirmative particle 'xa'. Dependent pronouns are so called because they do not appear independent of another unit, either a verb, adjective, or noun. In the case of ergative pronouns, they are always bound to this unit.

regardless of the initial sound of the following word, indicating that there is a word boundary present. Observe:

- | | | | | |
|------|-----|--|-----|--|
| (78) | (a) | <u>in</u> <u>kikoten</u>
A1 happy
I am happy | (b) | š - <u>i-ken</u> ta
TAM-A1-die prt
I would have died |
|------|-----|--|-----|--|

Another use of absolutive pronouns is in the perfect construction. This construction is somewhat like a nominal or adjectival predication and somewhat like an inflected verb (see §4.10). The absolutive pronoun is preposed to the verb, but it acts semantically as it would with a TAM-ed verb.

- (79) Rīš e? i-ʔ'ei-on
you(pl) A6 E5-see-pf
You(pl) have seen them.
- (80) La vinaqi? la? in ki-č'ai-on oxer
those people those A1 E6-hit-pf a-long-time-ago
Those people hit me a long time ago. (FMP 15.50)

4.3.1.2 Ergative

As mentioned above, ergative pronouns serve to cross-reference one of the arguments of a transitive verb. This argument is usually the more agent-like of the two. The ergative form is preceded by the absolutive form. Transitive perfects follow the same pattern, the only difference being that there is no TAM prefix, and the absolutive is a preposed free form. Thus the word-initial form of ergative pronouns is used.

- | | | | | |
|------|-----|--|-----|---|
| (81) | (a) | š - <u>at-ki-č'ej</u>
TAM-A2-E6-hit
They hit you | (b) | k - <u>e?</u> <u>iš-tix-a?</u>
TAM-A6-E5-eat-md
(you pl) Eat them |
| | (c) | <u>e?</u> <u>nu-č'iba-n</u>
A6 E1-write-pf
I have written them | (d) | j - <u>e?</u> <u>n-č'iba-x</u>
TAM-A6-E1-write-act
I write them. |

Another important use of ergative forms is to mark the possessor of possessed nouns. They are prefixed to the noun, as in the following examples. If there is an explicit possessor noun-phrase, it follows the possessed noun, as in,

- | | | | | |
|------|-----|--|-----|---|
| (82) | (a) | v - ačoč jin
E1-house I
my house | (b) | ki-media ri Xuan ri Luč
E6-money art Juan art Pedro
Juan and Pedro's money. |
|------|-----|--|-----|---|

There is a set of nouns in Cakchiquel called "relational nouns" (Mam: England, 1983: 71-74; Tzutujil: Dayley, 1981a: 215) or prepositional forms (Cakchiquel: Blair et al., 1969: 1.182; LAMP, nd: 10.1) in literature on Mayan languages. These nouns function much the same as prepositions in other languages. Relational nouns are obligatorily possessed and as such are always bound to an ergative prefix.

- | | | | | | | |
|------|-----|--|-----|--------------------------------------|-----|--|
| (83) | (a) | k - ič'in
E6-to, at, for
to, for, or at them | (b) | r - ik'in
E3-with
with him/her | (c) | q - uma
E4-for, because of, by
for, because of, by us. |
|------|-----|--|-----|--------------------------------------|-----|--|

Infinitives or nominalized verbs (see §4.11) are other types of nouns which use ergative pronouns with a possessive function,⁹ for example,

- | | |
|------|--|
| (84) | n - Ø - u - čaŋ <u>ru-ban-Ø-ŷk</u>
TAM-A3-E3-start E3-do- ps-nom
he starts <u>doing it</u> (he starts it its doing) |
| (85) | j - e - taxin <u>r-aq'oma-š-ŷk</u>
TAM-A6-process E3-cure - ps-nom
they are in the process of <u>curing him</u> (they in process his curing) |

4.3.2 Forms

The forms vary according to the phonological or morphological context; both the preceding and following segments may be relevant to the form of a pronominal prefix.

⁹ This type of construction has been much discussed in the literature of several Mayan languages (Jacalteco: Craig, 1974: 115-116; Norman and Larsen, 1979) as an example of split ergativity, since the ergative pronominal, which usually marks the agent, here marks the patient.

4.3.2.1 Absolutive

4.3.2.1.1 A1 (i, in)

First singular -i- of absolutive is used before consonants, with the exception of ergative third person plural -ki-. Elsewhere, i.e., before vowels, before ergative third person plural -ki-, and independently, -in- is used. Note that -i- appears before verbs which begin with -k-, so this is not merely a phonological restriction on distribution. For example,

(86)	ʃ - <u>in-ok</u> TAM-A1-enter I entered	<u>in_kikoten</u> A1 happy I am happy	j - <u>i-ru-ʃ'et</u> TAM-A1-E3- see he sees me
	k - <u>in-a-k'uax</u> TAM-A1-E2-carry (you) carry me	j - <u>in-ki-ʃ'et</u> TAM-A1-E6-see they see me	s - <u>i-ken ta</u> TAM-A1-die prt I would have died

4.3.1.2 A2 (at, a)

The distribution of the two second singular absolutive forms is very similar to that of first singular. -a- is used before consonants, with the exception of ergative second person plural -qa- and ergative third person plural -ki-. Elsewhere, i.e., before vowels, before ergative second person plural -qa- and ergative third person plural -ki-, and independently, -at- is used. Again, these restrictions apply only to other prefixes, not to verb-initial segments. In other words, -at- does not appear before intransitive verbs which begin with 'k' or 'q'. For example,

(87)	k - <u>at-ok</u> TAM-A2-enter come in	j - <u>a-be</u> TAM-A2-go you go	j - <u>a-n-ʃ'et</u> TAM-A2-E1-see I see you
	ʃ - <u>at-k-il</u> TAM-A2-E6-find they find you	ʃ - <u>at-qa-toʃ</u> TAM-A2-E4-help we help you	<u>at_tixoʃel</u> A2 student you are a student

j - a-q'um-un	j - a-kikot	ʃk - a-kǝm
TAM-A2-drink-ap	TAM-A2-happy	TAM-A2-die
you drink	you are happy	you will die

Occasionally -at- also precedes ergative third person singular -ru-, although -a- is preferred.¹⁰

(88) j - a-r- Ø - il- a?	j - at-ru- bev- il- a?
TAM-A2-E3-mov-find-md	TAM-A3-E3-mov-find-md
he comes and finds you	he goes and finds you
j - a-ru- to?	j - a-ru- k'uax
TAM-A2-E3-help	TAM-A2-E3- carry
he helps you	she carries you

4.3.2.1.3 A3 (Ø)

Third singular absolutive is always phonologically null. There are, however, several concomitant features which set it off from other pronouns. Occasionally an epenthetic -i- is inserted between the TAM marker and the absolutive or the verb stem. See the discussion on epenthetic -i- in section 1.4.3.7. Another peculiarity of -Ø- is that special forms of TAMs precede it. Instead of the TAM forms j-, k- and ʃk-, we find n-, t-, and ʃt-, respectively, before -Ø-.

4.3.2.1.4 A4 (ox) and A5 (iʃ)

These two pronominal categories have no contextual variants.

4.3.2.1.5 A6 (e, eʔ)

The forms of third plural absolutive are -e- and -eʔ-. -e- occurs pre-consonantly and -eʔ- occurs elsewhere. For example,

(89) j - e-geʔen	j - eʔ-apon
TAM-A6-laugh	TAM-A6-arrive
they laugh	they arrive

¹⁰ This may be a symptom of a spread of 'at' at the expense of 'a' even in consonant-initial contexts. I found another example, 'jatinbeʔejaʔ' (see # 106) where one would expect 'janbeʔejaʔ'.

e? nu-ʒap- on
 A6 E1-grab-pf
 I have grabbed them

e? tixonel-a?
 A6 teacher-pl
 they are teachers

4.3.2.2 Ergative

4.3.2.2.1 E1 (n, nu, nv, v)

First singular ergative forms 'nu' and 'v' are used instead of 'n' and 'nv', respectively when they immediately follow a word boundary as opposed to appearing within a word. Like all ergative forms, they are word-initial in perfect constructions and possessed nominals. For example,

(90) e? nu- loq'-on
 A6 E1-buy-pf
 I have bought them

e? v- il - on
 A6 E1-find-pf
 I have found them

nu-ɬ'i?
 E1-dog
 my dog

v- ačoč
 E1-house
 my house.

In contrast, 'n' and 'nv' are found within verb complexes with TAM prefixes, as in

(91) j - e - n - ben
 TAM-A6-E1-make
 I make them

j - e - nv - axo
 TAM-A6-E1-love
 I love them.

Within their respective word-initial or non-word-initial environments, 'n' and 'nu' are pre-consonantal forms, while 'nv' and 'v' are pre-vocalic, as can be seen in the above examples.

4.3.2.2.2 E2 (a, av)

Second singular 'a' occurs pre-consonantly, whereas 'av' occurs pre-vocalically, as in

(92) ʒ - in - a - ɬ'et
 TAM-A1-E2-see
 you saw me

ʒ - in - av - axo
 TAM-A1-E2-love
 you loved me

a - d'i?
E2-dog
your dog

av-ačoč
E2-house
your house

4.3.2.2.3 E3 (u, ru, r)

There are two intersecting criteria governing the distribution of third singular ergative forms. The first of these is pre-vocalic position, where -r- always appears. If the following phoneme is a consonant, the determining factor is whether ergative third person singular immediately follows a TAM marker in the phonetic sequence or not. After TAM, ergative third person singular appears as -u-, and elsewhere as -ru-. Note that TAM markers are only adjacent to ergatives when the absolutive argument is absolutive third person singular, which is phonologically null. Observe some examples of ergative third person singular.

(93) š - Ø - r-axo
TAM-A3-E3-want
he wanted it

š - a - r-il
TAM-A2-E3-find
she found you

rixa Ø ru-čaq
he A3 E3-brother
he is his brother

rat at ru-čaq
you A2 E3-brother
you are his brother

š - Ø - u-ben
TAM-A3-E3-do
she did it

š - a - ru-č'et
TAM-A2-E3-see
she saw you

Ø r-il - on
A3 E3-find-pf
she has found it

e ru-ban-on
A6 E3-do -pf
he has done them

4.3.2.2.4 E4 (qa, q)

First plural ergative form -qa- occurs before consonants while -q- occurs before vowels. For example,

(94) š - Ø - qa-ben
TAM-A3- E4-do
we did it

š - Ø - q-eqax
TAM-A3-E4-carry
we carried it.

4.3.2.2.5 E5 (i, iv)

Second plural ergative form -i- occurs before consonants while -iv- occurs before vowels. Observe:

- | | | |
|------|--|---|
| (95) | t - Ø - i - č'aj-a?
TAM-A3-E5-hit-md
hit it (you pl) | k - in - iv - jl - a?
TAM-A1-E5-find-md
find me (you pl). |
|------|--|---|

4.3.2.2.6 E6 (ki, k)

-ki- is the pre-consonantal form of third plural ergative, while -k- appears before vowels.¹¹

- | | | |
|------|--|--|
| (96) | j - e - ki - č'ej
TAM-A6-E6-hit
they'll hit them | š - at - k - jl
TAM-A2-E6-find
they found you. |
|------|--|--|

4.3.3 Markedness Relations of Dependent Pronominal Prefixes

As shown above, the system of dependent pronominal prefixes distinguishes three subcategories: person, number, and case relation. Person is subcategorized into first, second, and third persons, while within number is found singular and plural. Singular-plural forms an oppositional pair, and person an oppositional set. Their markedness relations, and some justification for their selection as marked or unmarked, follows.

The Cakchiquel system illustrates the argument proposed by Benveniste for a three person system revolving around the features of "personality and subjectivity" (1971b). The Cakchiquel third person is unmarked with respect to the semantic feature of person, and is thus non-personal. It is opposed to first and second persons, which are marked for person. Third singular absolutive has zero expression and causes formal

¹¹ There may be a regularization process at work in Cakchiquel. Occasionally speakers use -ruv-, -qav-, and -kiv- pre-vocalically instead of -r-, -q-, and -k-, respectively, but this is still quite rare.

irregularity in the TAM markers. In reflexives, the singular third person absolutive is always the grammatical object of the verb, which is always transitive. The verb is followed by a relational noun, possessed by the same person as the subject.

- (97) § - Ø₁ - i - n₂ - šibix v₂-iX₁
 TAM-A3-ep- E1- scare E1-back
 I am scared/I scared myself

As is explained in §4.8.4.3, Cakchiquel has a special antipassive construction which treats third persons quite differently from first and second persons. Third person is also much more frequent than other persons in text.¹²

Benveniste says that first person is marked for the feature of subjectivity, while second person is unmarked for it. An example of a phenomenon which he cites as support for this claim is also found in Cakchiquel. When one refers to a third or generic person indefinite, the second person singular often is used, as it is in colloquial English.

- (98) Rat j - a - kaŋi - n xantape n - Ø - a - ben ri ŷŋ.
 you TAM-A2-need-act always TAM-A3-E2-do art good
You must always do the right thing. (One must always do the right thing.)
- (99) You have to know what you're doing these days (i.e., one has to know what one is doing these days).

Thus third or non-person is the least marked of the Cakchiquel person system, being unmarked for both person and subjectivity. This is followed by second person, which is marked for person and unmarked for subjectivity, with first person marked for both of those features.

Plural is marked with respect to plurality, while singular, or more accurately, non-plural is unmarked with respect to plurality. There are cases where a singular pronominal is used when the actual referent is plural. For instance, example (82b) is just as often found like this, where we would expect 'ki-media':

¹² In Yucatec and other Mayan languages, the A6 form doubles as the plural marker on nouns, providing evidence that third person is non-personal in these languages (Bill Hanks, personal communication).

- (100) ru-media ri Xuan ri Luč
 E3-money art Juan art Pedro
 Juan and Pedro's money.

It is the singular of third and second persons which are used in reflexives (see example #97) and impersonals (example #98). A singular prefix, third absolutive, has zero expression, another corollary of unmarked status. With regard to formal irregularity, there are irregular patterns in the first and third singular ergative forms. Third singular absolutive is the environment for irregular forms of TAM markers. Finally, singulars are more frequent than plurals in text. All of these facts point to the status of singular in Cakchiquel as unmarked, compared to plural, which is marked with respect to plurality.¹³

Absolutive is the unmarked member of the absolutive-ergative pair. It appears in positions of neutralization, i.e., wh-questions and relativizations. An ergative argument cannot be questioned or relativized, rather, the verb must be in an antipassive voice in these constructions so that it is an absolutive argument which is focused. Observe these sentences.

- (101) (a) Ačike₁ § - Ø₁ - φ'et-on ri φ'i??
 quest TAM-A3- see - ap art dog
 Who saw the dog?
- (b) Ačike₁ § - Ø₁ - u₂ - φ'et ri φ'i?₂?
 quest TAM-A3- E3-see art dog
 What did the dog see?

(101b) cannot mean "Who saw the dog?" Likewise in the following relativized sentences, (102b) cannot mean "I know the one who killed Juan."

¹³ Note that this situation is unusual. In most European languages plural is less marked than singular (Howard Aronson, personal communication).

(102)

(a)

Jin v-etama-n ru-več ri_ačike₁ š - Ø₁-kam-sa- n (r-ičín) ri aš Xuan.
 I E1-learn-pf E3-eyes art who TAM-A3-die-cau- ap (E3-to) art hon Juan
 I know the one who killed Juan. (FMP 11.154)

(b)

Jin v-etama-n ru-več ri_ačike₁ š - Ø₁-u₂-kam-sa- x ri aš Xuan₂.
 I E1-learn-pf E3-eyes art who TAM- A3- E3-die-cau-act art hon Juan
 I know the one who Juan killed.

The absolutive set has zero expression in third person singular, although the ergative set has more formal irregularity and complexity. Absolutives are more frequent than ergatives, since they occur in every verbal complex. The personal pronominal markers are summarized with the TAMs in table 12.

TABLE 12
 SLOT SUMMARY

Slot 1 ^a TAMs	Slot 2 Absolutive	Slot 4 Ergative
šk/št	(1) i/in	(1) n/nu/nv/v
k/t	(2) a/at	(2) a/av
š	(3) Ø	(3) u/ru/r
j/n	(4) ox	(4) qa/q
	(5) iš	(5) i/iv
	(6) e/e?	(6) ki/k

^a In this table and the others which summarize slots the forms in each column are mutually exclusive to each other. The forms in a given row separated by slashes are variants of the same morpheme.

4.4 Slot 3: Movement Prefixes

The Cakchiquel verb complex has a slot for a derivational prefix of movement. It is an optional category. There is quite a bit of variation in the realization of these morphemes between the dialects of Comalapa and Patzún. There are two movement

morphemes, one meaning 'movement away from (going)' and the other 'movement towards (coming)'.¹⁴

4.4.1 Forms

The forms and positions of the movement morphemes relative to the ergative markers in transitive verbs vary between and within dialects. The absolutive person marker always precedes a movement form. The forms of the absolutive and ergative markers are as described in the preceding section. One important aspect of movement verb forms is that transitive verbs of class one take the modal suffix -V?, so that -ben becomes -bana?, -ɛ'et becomes -ɛ'eta?, etc., as in k/t- verb forms (see §4.9).

4.4.1.1 -oʔ/-uʔ/-Ø- (movement towards)

The form of 'movement towards' is usually -oʔ-, or -o- before consonants (cf. below). It follows absolutive prefixes and precedes ergatives if any. For example,

(103) j - in-o - ver TAM-A1-mov-sleep I come to sleep.	k - at-o - va TAM-A2-mov-eat Come and eat.
n - Ø - oʔ-iv- il - a? TAM-A3-mov-E5-find-md You(pl) come to find him. (viene a encontrarlo)	j - iʃ - o - ki-ɕ'aj-a? TAM-A5-mov-E6-hit-md They come to hit you. (vienen a pegarte)
j - at-o - n - ɕ'aj-a? TAM-A2-mov-E1-hit-md I come to hit you. (vengo a pegarte)	n - Ø - o - qa-ban-a? TAM-A3-mov-E4-do-md We come to do it. (venimos a hacerlo)

¹⁴ Both Townsend and Blair et al. mention these prefixes. Blair et al. describes them as "directional prefixes" or "motion-specifiers" (Blair et al., 1969: 2.160-161, 203-205). Townsend says they are the auxiliary verbs 'be', 'to go' and 'oqa', 'to arrive,' "written as prefixes" (Townsend, 1961: 19).

Other Mayan languages have similar affixes. Mam has quite a range of directional prefixes which are similar in meaning to Cakchiquel's post-verbal locative particles, but they occur between absolutive and ergative person markers, or sometimes are suffixed to the verb (England, 1983: 167-172). Kekchi has three directional prefixes which mean "toward here," "toward there" and "upon passing" (Stewart, 1980: 72-74). Tzotujil, a language closely related to Cakchiquel, has a system of directional prefixes very similar to the movement prefixes described here (Dayley, 1981a: 135-144).

In the Patzún dialect there is an alternation for 'movement towards' forms among -oʔ-, -uʔ- and -Ø-. Of these, -oʔ- and -uʔ- are in free variation.

- | | |
|--|--|
| (104) j - in - u - ru - ʔ'et-aʔ
TAM-A1-mov-E3-see-md
She comes to see you
(viene a verte) | n - Ø - o - ru - bix
TAM-A3-mov-E3-say
he comes and says it. |
|--|--|

The 'movement towards' morpheme is either -uʔ- or -oʔ- in intransitive verbs, but is often null with transitive verbs. In class one transitive verbs the modal suffix is then the only overt bearer of the movement meaning, but in other transitive verbs there is no overt indicator.

- | | |
|--|---|
| (105) j - ox - Ø - a - ʔ'ej-aʔ
TAM-A4-mov-E2-hit-md
You come to hit us. | j - e - Ø - ru - loq'-oʔ
TAM-A6-mov-E3-buy-md
He comes and buys them. |
| n - Ø - Ø - i - k - il - aʔ
TAM-A1-mov-ep-E6-find-md
They come to find it. | j - at - Ø - i - n - toʔ
TAM-A2-mov-ep-E1-help
I come help to you. |

4.4.1.2 -beʔ-/eʔ- (movement away from)

The form for 'movement away from' is either -beʔ- or -eʔ-, this latter occurring only in Comalapa. -beʔ- usually appears after the ergative person marker, in a pre-verbal position.

- | | |
|--|---|
| (106) j - i - be - ver
TAM-A1-mov-sleep
I go to sleep. | n - Ø - bey-uʃlan
TAM-A3-mov-rest
She goes to rest. |
| j - ox - a - be - ʔ'et-aʔ
TAM-A4-E2-mov-see-md
You go to see us.
(vas a vernos) | j - eʔ - a - be - ʔ'ej-aʔ
TAM-A6-E2-mov-hit-md
You go to hit them.
(vas a pegarlos) |
| ʃ - Ø - qa - be - ʔ'et-aʔ
TAM-A3-E4-mov-see-md
We go to see them. | j - in - ki - be - kam-sa - x
TAM-A1-E6-mov-die-cau-act
They go to kill me.
(me van a mater) |

j - at - i - n - be - č'ej - a?
TAM-A2-ep-E1-mov-hit-md
I go to hit you

n - Ø - i - ru - bev - il - a?
TAM-A3-ep-E3-mov-find-md
He goes to find him.

š - e - be? - apon
TAM-A6-mov-arrive
They arrived there.
(llegaron allí)

j - e - ru - be - k'aji - x
TAM-A6-E3-mov-sell-a
She goes to sell them.
(va a venderlos)

Notice that with the vowel initial verbs -ila?, -apon and -ušlan, -be?- sometimes takes the form -bev-, and before consonants it becomes -be- (cf. §1.4.3.4). -be?- may also come between the absolutive and ergative prefixes, seemingly in free positional variance.

(107) š - Ø - be - ki - ban - a?
TAM-A3-mov-E6-do-md
They go do it.
(se fueron a hacerlo)

j - e - be - ru - loq' - o?
TAM-A6-mov-E3-buy-md
He goes to buy them.

j - e - be - n - č'aj - a?
TAM-A6-mov-E1-hit-md
I go and hit them.

n - Ø - be - r - ojox
TAM-A3-mov-E3-call
She goes to call her.
(se va a llamarla)

With both -be?-, 'movement away from', and -o?-, 'movement towards', the first ergative forms may optionally be reduplicated, so that instead of

(108) j - e - n - be - č'et - a?
TAM-A6-E1-mov-see-md
I go to see them.

j - iš - i - n - be - č'ej - a?
TAM-A5-ep-E1-mov-hit-md
I go to hit you(pl).

n - Ø - i - n - be - ojox
TAM-A3-ep-E1-mov-call
I go to call him.

we find

(109) j - e - n - be - n - č'et - a?
TAM-A6-E1-mov-E1-see-md

j - iš - i - n - be - n - č'ej - a?
TAM-A5-ep-E1-mov-E1-hit-md

n - Ø - i - n - be - ny - ojox
TAM-A3-ep-E1-mov-E1-call

This seems to be purely a phonological variant, and has no discernible semantic or pragmatic effect.

The other form of 'movement away from', used only in Comalapa, is -e?-. It follows the absolutive marker, and is always immediately followed by the ergative in the case of transitive verbs.

- | | | | |
|-------|-------------------|-------------------|-----------------------|
| (110) | j - in - e- samex | k - iš - e- va? | j - at - e- n - to? |
| | TAM-A1-mov-work | TAM-A5-mov-eat | TAM-A2-mov-E1-help |
| | I go to work. | You go to eat. | I go to help you(sg). |
| | (voy a trabajar) | (vayanse a comer) | |

The only restriction I can find on the selection of -e?- versus -be?- in Comalapa is with third person plural absolutive markers. In this case there is a preference for -be?-. The form of third person plural absolutive is -e?, and when followed by the movement form -e?- the sequence would be -e?e-. There are instances of like vowels coming together in Cakchiquel verbs, but in this case the configuration is usually avoided.

- | | | |
|-------|---|--------------------------|
| (111) | j - e- be?- apon | j - e- be- n- č'aj-a? |
| | TAM-A6-mov-arrive | TAM-A6-mov-E1-hit-md |
| | They arrive there. | I go to hit them. |
| | j - e- be- ki-č'aj-a? | j - e- be- ru- to? |
| | TAM-A6-mov-E6-hit-md | TAM-A6-mov-E3-help |
| | They ₁ go to hit them ₂ . | She goes and helps them. |

4.4.2 Semantics of Movement Prefixes

Since this is an optional category, the movement morphemes contrast with their absence as well as with each other. Both movement morphemes are marked for the feature [+movement], as opposed to their absence, which is unmarked for this feature. -o?- is marked with respect to the feature "agentive movement toward a reference point" and -be?- is unmarked for that feature. -be?- is much more frequent in text, and appears with a variety of uses, i.e., movement, future, intention, and achievement of a state (examples follow). -o?- only means movement toward the reference point. More importantly, however, -be?- may mean "come" while -o?- never means "go," as can be

seen in examples (135)-(137) with the locative particle 'pe'. In those constructions, -be?- means "come" or "general movement." Thus -be?-, being unmarked for movement towards the reference point, may or may not express movement away from the reference point. While the semantics of these prefixes specify the direction of movement in relation to a reference point, the choice of this point seems to be pragmatically determined. In first and second person utterances it is usually the speaker or some aspect of the speech event. In some cases, however, it is difficult to characterize the reference point, such as in example (116) where it seems to be connected to the protagonist (the man's house).¹⁵

It is likely that -be?- is derived from the verb 'benik', "to go." The movement morphemes never appear with this or the other movement verb, 'penik', "to come."

- | | | | | | | | |
|-------|----|-------|-----------------------|--|----|--------|----------------------|
| (112) | *§ | - i - | <u>be</u> - <u>be</u> | | *§ | - in - | <u>o</u> - <u>pe</u> |
| | | | TAM-A1-mov-go | | | | TAM-A1-mov-come |

4.4.2.1 Movement towards (-o?-/u?-/Ø-)

This movement prefix generally translates as "come to Vb" or "come and Vb." These sentences are usually rendered in Spanish as "venir a" plus infinitive. -o?- denotes a situation where the subject travels a distance from somewhere away, or "there" toward the speaker or other reference point. If the reference point is not the speaker it is usually something associated with the speaker or speech event, like the protagonist's house in example (116). Note that this prefix, as well as -be?- is sometimes a shifter, namely when the reference point is the speaker, and sometimes not. -o?- is very regular in its meanings. Examples include:

- | | | | |
|-------|---|--------|-----------------------------|
| (113) | j | - at - | <u>o</u> - va |
| | | | TAM-A2-mov-eat |
| | | | Come (to) eat. (MAC 10.177) |

¹⁵ I am grateful to Bill Hanks for help with the distinction between semantics and pragmatics in these cases.

- (114) n - Ø - o - n - ban - a xun samax
TAM-A3-mov-E1-do-md a job
I come to do my job. (MAC 10.179)
- (115) N - Ø - i - n - na? ċi rixe maneq ģk - e - tikir ta
TAM-A3-ep-E1-feel comp they no TAM-A6-be able prt
ģk - e - t - o - k'ul - un v- ik'in
TAM-A6-ep-mov-meet- ap E1-with
I am sorry that they they won't be able to come with me. (MAC 11.2)
- (116) ģa xun ģten ri ģ - Ø - u - k'ul pa bej i ģe
just a girl comp TAM-A3-E3-meet in road and just
ģ - Ø - o - ru - xaċ - a? kan ģ - u - ċi? qexox
TAM-A3-mov-E3-bring-md loc to-E3-door house
just a girl whom he met in the road and who only accompanied him to the house.
(Coyote Tum, 1978: 2)

4.4.2.2 Movement away from (-be?/-e?-)

This prefix generally means 'going to Vb' or 'go and Vb'. It is translated to Spanish as 'ir a' or 'ir (a) ir a' plus infinitive, as in, "va a hacerlo" or "va (a) ir a hacerlo." Usually the movement morpheme signifies the action of traveling from 'here' to 'there' in order to do something 'there'.

- (117) Vi j - a - be ċuaq n - Ø - i - qa - be - loq' - o ri a-ċiaq.
if TAM-A2-go tomorrow TAM-A3-ep-E4-mov-buy-md art E2-clothes
If you go tomorrow we will go buy you clothes. (FMP 11.93)
- (118) n - Ø - i - n - be - ban - a? xun samax
TAM-A3-ep-E1-mov-do-md art job
I go to do my job. (MAC 10.178)
- (119) n - Ø - i - be - ki - kanu - x pe mas k - aċibil
TAM-A3-ep-mov-E6-look-for-act loc more E6-friends
They go to look for more friends (Mactzul, A., 1973b: 17)
- (120) i ģ - Ø - ki - ja? ċi-ki-veċ ċi n - Ø - i - ki - be - e'ob - o?
and TAM-A3-E6-give to-E6 eyes comp TAM-A3-ep-E6-mov-talk to-md

r - ik'in xun axq'ix

E3-with art witch doctor

They thought among themselves that they should go consult a witch doctor.
(Coyote Tum, 1978: 2)

- (121) Ri aš Xuan š - Ø - u - be - ban-a ri samax r-ik'in ri ru-čaq'
art hon Juan TAM-A3-E3-mov-do-md art job E3-with art E3-brother
Don Juan went to do the job with his brother. (FMP 15.34)

- (122) xun q'ix š - Ø - be kanunel i komo siempre pa k'ečelax
one day TAM-A3-go hunting and since always in forest

n - Ø - i - be - kan - un vi, či - r - i? š - Ø - be vi

TAM-A3-ep-mov-hunt- ap prt, to-E3-to TAM-A3-go prt

One day he went hunting and since he always went to hunt in the forest, there he went. (Mactzul, A., 1980: 8)

- (123) š - Ø - be - ru - ban-a? xun ru-taqikil
TAM-A3-mov-E3-do-md art E3-favor
He went to do an errand. (Canú, 1973: 2)

-be?-, however, can have several pragmatic functions. An imperative form with k/t- is interpreted as 'go do something'.

- (124) k - at - e - ø'uj-e?
TAM-A2-mov-sit-der
Go sit down. (MAC 14.110)

- (125) k - iš - e - va?
TAM-A5-mov-eat
Go eat (you pl). (MAC 14.117)

With šk/št-, k/t- and j/n- verbs -be?- may function as a future as in 'going to'.

- (126) J'in taq šk - i - be - k'ul - e? j - i - be r - ik'in kikitoten.
I when TAM-A1-mov-marry-der TAM-A1-go E3-with happiness
When I marry I'll be happy (go with happiness). (MAC 9.20)

- (127) Vakami toq šk - a - be - ru - ja? kan ri masat
now when TAM-A2-mov-E3-put loc art deer
Now the deer is going to leave him. (Mactzul, A., 1980: 20)

- (128) Ken j - i - be - k'oxe vi? čuaq š - v-ačo?
emph TAM-A1-mov-be prt tomorrow in-E1-house
Certainly I will be in my house tomorrow. (FMP 15.20)

In addition to motion, -be?- sometimes has other interpretations. When j/n- and šk/št- verbs are followed by 'na?', a particle which is discussed in footnote 5 and §6.1, the sentence includes a declaration of intention or purpose.

- (129) n - Ø - i - ki - be - kam - sa - x na? ri balma če?
TAM-A3-ep-E6-mov-die-cau-act prt art tiger they-say
They say they are going to kill the tiger. (FMP 12.50)
- (130) A, n - Ø - i - be - ny - ak'aša - x na k'a.
ah, TAM-A3-ep-mov-E1- hear- act prt well
Ah, I am going to inform myself. (Mactzul, A., 1980: 24)
- (131) k - e - qa - be - k'am - a? na mas q - ačibil
TAM-A6-E4-mov-bring-md prt more E4-friends
We'll go get more of our friends. (Mactzul, A., 1973b: 17)

-be?- can also be interpreted as purposeful in other contexts.

- (132) I šk - Ø - be r - ik'in ri vesino šk - Ø - be - ru - k'utu - x vi
and he-A3-went E3-with art neighbor TAM-A3-mov-E3-ask- act if
k'o ke- taq-ri?, ri r-išxajil
be over- there, art E3-wife
And he went to his neighbor to ask if his wife was there. (Mactzul, A., 1980: 21)
- (133) I šk - Ø - be r - ik'in ri rej šk - Ø - be - r - ak'aša - x.
And TAM-A3-go E3-with art king TAM-A3-mov-E3- hear-act
And he went to the king in order to learn it. (Mactzul, A., 1980: 24)

-be?- is even used with some verbs where there is no real destination involved, but rather the achievement of a state, such as sleep.

- (134) Ma šk - i - be - ver ta čik r - uma rixa.
neg TAM-E1-mov-sleep prt again E3-for him
I didn't go to sleep because of him.
(Dejé de dormir por él. "I quit sleeping because of him.") (FMP 13.37)

'Ma šibeverta' means "I didn't go to sleep," literally just the same as the English phrase.

Finally, there is a use with the locative particle 'pe' when -be?- means "come" or "general movement." Cakchiquel has a set of post-verbal locative particles. They express a relationship between the action of the verb and the location of the speaker. -o?-

seldom appears with one of these, but if it does, it combines with 'pe', which means "towards the speaker." -be?, however, often appears with locatives, and not infrequently with 'pe'. In these sentences, -be?- means only "agentive movement," or it means "come." For example,

- (135) § - Ø - be? - el pe § - Ø - be - jakatex pe
 TAM-A3-mov-leave loc TAM-A3-mov-stand-up loc
 She left and came toward me. She stood up and came toward me.
- § - Ø - be - ačlišem pe
 TAM-A3-mov-sneeze loc
 He sneezed (and the sound come toward me)

The following three verb phrases are identical in their meaning: "he appeared before me."

- (136) § - Ø - k'ul - un pe § - Ø - ɔ - k'ul - un pe
 TAM-A3-meet- ap loc TAM-A3-mov-meet-ap loc
- § - Ø - be - k'ul - un pe
 TAM-A3-mov-meet- ap loc

Occasionally a dual movement is conveyed, as in

- (137) § - Ø - be?-ojox pe
 TAM-A3-mov-call loc
 Someone went and called him [to come] here.

The slots discussed thus far are summarized in table 13.

TABLE 13
 SLOT SUMMARY

Slot 1 TAMs	Slot 2 Absolutive	Slot 3 Movement	Slot 4 Ergative
§k/št	(1) i/in	o?/u?/Ø	(1) n/nu/nv/v
k/t	(2) a/at	be?/e?	(2) a/av
§	(3) Ø		(3) u/ru/t
j/n	(4) ox		(4) qa/q
	(5) iš		(5) i/iv
	(6) e/e?		(6) ki/k

4.5 Slot 5: Verbal Roots

Verbal roots are neither inflectional nor derivational, but are the bases to which inflectional and derivational affixes are added. A root is a basic form, which cannot be broken down into any other morphemes: the semantic and morphological nucleus of a word. Roots can be independent, or free, or they can be dependent, or bound, like Cakchiquel's atransitive roots discussed below. A stem, on the other hand, is an independent root or a root plus one or more derivational affixes, to which other affixes may be added. Cakchiquel verbs may be divided into several formal classes. Roots are inherently transitive or intransitive, except for the atransitive class (see the Appendix for more examples of each class). The Cakchiquel verbal roots are classified according to three criteria: 1) their transitivity, 2) the shape of the root, and 3) the suffixes the form can or cannot take.¹⁶

4.5.1 Intransitive Roots

Intransitive roots are divided into two classes, depending upon the causative suffix they take. Some intransitive verbs, such as 'be,' "go" and 'pe,' "come" cannot be transitivized, and thus I cannot assign them to one of these root classes, since intransitive roots behave the same in all other respects. All intransitive roots take the ending -neq in the perfect.

4.5.1.1 Class one

atin	bathe
ken; kom	die
ver	sleep
nox	fill up

These roots becomes derived transitive stems with the suffix -(i)sa- (§4.6.2.2).

¹⁶ For different classifications of Cakchiquel verbs, see Townsend (1960: 53-60), and Blair et al. (1969: 2.441-449).

4.5.1.2 Class two

xel	move near
samex	work
q'aš	pass, move over

This class is transitivized with the suffix -V-, as illustrated in §4.6.2.3.

4.5.2 Transitive Roots

4.5.2.1 Class one

ben	make, do
il	find
š'aj	hit
φ'et	see

This class is very large, and is comprised of mostly CVC forms. Its behavior is distinctive in several ways. Often when these verbs are in k/t- TAM, and when they have a movement prefix, they have a reduplicative modal suffix (see §§4.2.3, 4.4 and 4.9). Many in this class do not take the passive suffix -Vš; rather they exhibit no change or the root vowels are ablated. For example, 'šuben' becomes 'šban'. In the Patzún dialect this class also has a distinctive antipassive form (see §4.8.4).

4.5.2.2 Class two

axo?	love
to?	help
na?	feel; taste
ja?	give; put

This is a small class of transitive roots, formally defined as ending in -V?. Most of them are CV?, 'axo?' providing an exception. Unlike the former class, these verbs never take the modal suffix and are always passivized with -oš.

4.5.3 Atransitive Roots

Atransitive roots are those which have no inherent transitivity. They cannot stand alone, but must take suffixes which determine the transitivity of the derived stem.

4.5.3.1 Class one, positionals

ø'uj-	sitting down
jok-	late
k'av-	lying supine
paʔ-	standing up

Positionals are a class common to all Mayan languages. They have been much discussed, and their status is controversial (cf. Knowles, 1984; Martin, 1979). Positionals in Cakchiquel are CVC roots which become intransitive verbs with the suffix *-eʔ* (§4.6.1.1), transitive verbs with *-baʔ* (§4.6.2.1) and adjectives or perfects with *-l* or *-an* (§4.10.1). Thus it is possible that they are not verbal roots, but roots of a class all their own. Since this dissertation is concerned with verbs, I will include them here as a verbal root with this caveat.¹⁷ As the name implies, most of these forms indicate positions or states. Not all atransitive class one roots have positional meanings, as seen by 'jok-'.

4.5.3.2 Class two

ili-	feed
ak'aʃa-	hear/listen
ropi-	jump
kusa-	serve/use
tixo-	teach/learn

These roots are not inherently transitive or intransitive, but become one or the other depending upon the suffixes they take. In the active voice they either receive (*-x*), making them transitive or (*-n*), making them intransitive (see §4.8.1).

4.5.4 Root Summary

The various forms of the slots discussed thus far are summarized in table 14.

¹⁷ Norman (1979) presents arguments that in Quiché positionals are verbal roots. I do not have the adequate syntactic data to see if his arguments hold for Cakchiquel, too. Townsend (1961) and Blair et al. (1969) treat the positional intransitive stems as roots.

TABLE 14

SLOT SUMMARY

Slot 1 TAMs	Slot 2 Absolutive	Slot 3 Movement	Slot 4 Ergative	Slot 5 Roots
šk/št	(1) i/in	o?/u?/∅	(1) n/nu/nv/v	IVb-1
k/t	(2) a/at	be?/e?	(2) a/av	IVb-2
š	(3) ∅		(3) u/ru/r	TVb-1
j/n	(4) ox		(4) qa/q	TVb-2
	(5) iš		(5) i/iv	Atr-1
	(6) e/e?		(6) ki/k	Atr-2

4.6 Slot 6: Derivational Suffixes

This group of suffixes is not united formally or semantically. The suffixes share the feature of being optional and occurring in the same relative position on the verb, although some may cooccur. When compared to the inflectional affixes of the Cakchiquel verb, they are not as productive or semantically transparent. Whereas inflectional categories bear systematic relations to one another, these derivational suffixes seem to have no definable relation as a group. Some subsets of them, however, such as the iterative suffixes, can be systematized.

The first subgroup of derivational suffixes presented here is made up of intransitivizers. These derive intransitive verbs from non-verbs or verbal roots. The second subgroup contains transitivizers, which derive transitive verbs from non-verbs, transitive roots, and intransitive verbs. The last group, consisting of -šta- and iterative suffixes, like the movement prefixes already discussed, are similar to adverbs. Unlike most of the other suffixes in this section, they do not change the form-class of the stem to which they affix, rather they qualify the action of the verb like an adverb does. Cakchiquel has suffixes which derive nouns and adjectives from verbs, but those are not treated here (see §4.11, however, for one example).

4.6.1 Intransitivizers

4.6.1.1 -eʔ

This suffix derives intransitive stems from atransitive positional roots. The verbs mean "to be in a position or state." They can also indicate the change into such a state, depending upon the context (see chap. 5).

ϕ'ujeʔ	be sitting down, sit down (ϕ'uj-: sitting down)
jokeʔ	be late (jok-: late)
k'av'eʔ	be lying supine, get into a supine position (k'av-: lying supine)
paʔeʔ	be standing up, stand up (paʔ-: standing up)

4.6.1.2 -Vr

This suffix derives intransitive verb stems from adjectives. They can be further derived into transitives with -(i)sa-. The suffix means "to become adj," and is referred to as "versive" in the Mayan literature (Stewart, 1979: 187; Kaufman, 1976: 77). The suffixal vowel is usually /i/, but sometimes it is /e/, and this is not predictable.

ʒaq'ir	dry (ʒaq'ix: dry)
nimer	grow, enlarge (nim: big)
laʔer	become narrow (laʔ: narrow)
saqir	whiten (seq: white)
q'alaxir	clear up (q'alax: clear)

4.6.1.3 -C₁oʔ/-C₁uʔ

This derivational suffix is one of several involving partial reduplication of a CVC root. The CVC root may be a class one transitive verb, an adjective or a positional. The abbreviation "-C₁oʔ" means that the first root consonant is repeated, followed by -oʔ or, if the root vowel is 'u', -uʔ (see §1.4.3). The suffix is usually preceded by a reduplicated root vowel (see §1.4.2.1). The verb which is formed in this case is intransitive, and cannot be further derived to a transitive. Some speakers find perfect forms with -neq acceptable while others do not.

-C₁o? is by no means a productive suffix which is added to a base with a certain meaning producing a new form with a predictable new meaning. Often the relationship between the base and the derivative is unclear and often no base could be found. In at least one case, 'jopojo', "start," the base and derivative seem to have the same meaning. Verbs which end in -C₁o?, however, all denote some kind of sudden motion. Most verbs formed with -C₁o? mean "to fall in a certain way."

- (138) Keri n - Ø - u - bix taq k'a n - Ø - u - na rixa
thus TAM-A3-E3-say when prt TAM-A3-E3-feel he

§ - Ø - be-xum-u-xu pe xun ru-več ri ox
TAM-A3-mov-? -ep-der loc art E3-eye art avocado-tree

§ - Ø - o - e'eb-e-e'o qa se ru-škin.
TAM-A3-mov-slap-ep-der loc just E3-car

Thus he was saying when he felt that a fruit from the avocado tree went and fell, it fell with a big splat right beside him. (MAC 1.19) (xumuxu: no base; c'ebeco: from c'eb, "to slap")

- (139) xaq'axo?: go backwards in a chair (xaq'e?: recline in an armchair) (SIL, in progress)

Another frequent meaning is "come apart, explode."

- (140) k'arak'o: to separate in pieces, to fall apart, e.g., a basket (no base)
koroko?: come loose (kor: loosen something) (SIL, in progress)

- (141) § - Ø - i - kir - i - ko ri išim
TAM-A3-ep-separate-ep-der art corn

The corn scattered. kiriko?: the action of grain or corn spilling. (FMP 12.102)
(kir: separate something)

Another example of "sudden movement" is "start (from surprise)."

- (142) Entons rixa § - Ø - u - šbix r - i? § - Ø - jop - o - jo čiri.
then he TAM-A3-E3-scare E3-self TAM-A3-jump/start-ep-der there

Then he was frightened (scared himself) and started there. (MAC 1.20) (jop: jump or start)

-C₁o? sometimes implies "sudden debilitation," because of the "fall," "start," or "coming apart." Thus the following examples, while not exactly falling or coming apart, seem to fit the semantic paradigm.

- (143) malamo?: appear and disappear quickly; die (mal: rub something)
 majamo?: wither, fade (possibly related to majix (adj): sore from tiredness)
 nakano?: benumb, stupify, disturb, interrupt. (nake?: be in a group of people without saying or contributing anything)

4.6.1.4 -C₁ot/C₁ut

This reduplicative suffix forms intransitive verbs from CVC roots which are class one transitives, nominals, or positionals. The vowel of the root is optionally reduplicated, followed by the first root consonant and -ot. If the root vowel is -u-, the final part of the suffix is -ut. Like -C₁o?, this suffix is only partially productive, in that it cannot be added to all CVC roots, and since the semantic change it causes is not always predictable or regular. Intransitive verbs formed with this suffix cannot be further derived into transitive verbs. Some, but not all can take the perfect -neq ending.

When the root is a class one transitive verb, there is usually an identifiable semantic correlation. One such correlation is 'make the sound of Vb', where Vb is the action of the class one transitive verb.

- (144) botobot: sound of something made of lamina, when it is folded and wrapped up.
 (MAC 11.162) (bot: wrap, fold it)

Another is 'to Vb continuously'. This sense is sometimes said deprecatorily, as in, "that is all the person ever does."

- (145) La šta María š - Ø - e - boš - o-bot čila?
 that hon María TAM-A3-mov-light-ep-der there
 Doña María only goes and fans the fire there (said deprecatorily; she doesn't do anything else). (FMP 12.86) (boš(o)bot: light, fan the fire continuously. [MAC 11.163]) (boš: light [a fire])
- (146) čojočot: cut (it) continuously (MAC 11.166) (čoj: cut it with a machete)
 č'oboč'ot: think continuously (MAC 11.102) (č'ob: think about it)

loq'olot: buying things (the action, the movement, e.g., pick up the thing, throw it in the basket). (MAC 11.158) (loq': buy it)

One interesting semantic correlation of the derived verb to its root is a focus on some repetitive movement related to or contained within the action of the class one transitive verb. This meaning is sometimes in addition to the 'continuous' one. For example,

- (147) čaqaçot: knead the tamal (the action, movement). (MAC 11.165) (čeq: grind the tamal on a grinding-stone)
čupučut: flicker (action of light going weak and strong when a light is going to burn out). (FMP 12.90) Also, put (it) out continuously. (MAC 11.167) (čup: put out the light, fire [SIL, in progress])
č'opč'ot: continuous hurting of a bite or sting. (MAC 11.109); throb (a wound). (SIL, in progress) (č'op: bite it, sting it, pinch it; plough the ground.)
- (148) še n - Ø - i - kem - e - koł la šta María čila man
 just TAM-A3-ep-weave-ep-der that hon María there neg

n - Ø - i - ben ta čik xun ru-samax.
 TAM-A3-ep-do prt other art E3-work
 That Doña María just weaves there and doesn't do any other work. (kemekot: weave [keeps doing it, repetition]). (kem: weave it).

'Kemekoł also can mean "move as a watery thing moves" (e.g., fat people moving when they walk, or gelatin). (FMP 12.97)

- 149) Jan n - Ø - i - kor - o - koł čik ri če?
 already TAM-A3-ep-loosen-ep-der again art stick
 The stick is already wiggling again. (korokot: wiggle something in a hole. (kor: loosen it)

'Korokoł also may mean "knock or tap on a door or table (the action)." (FMP 12.103)

- (150) kubukut: continuous chewing with the mouth closed of soft things, e.g., bread, tortilla, banana. (MAC 11.98) (kub: enjoy eating big pieces of bread; eat with gusto)
 xaqaxot: open and close, open and close. (FMP 12.96) (xeq: open it)

Verbs derived from units other than class one transitive verbs have similar meanings, although the semantic correlations are more tenuous. These examples are derived from nouns or positional CVC roots.

- (151) Manaq ki - k'iš la taq ak'val-a i - e-ĉ'an - a-čot čuva xaj.
 none E6-shame those pl boy - pl TAM-A6-naked-ep-der in house
 The children have no shame, they go naked in the house. (ĉ'anač'ot: go naked;
 also the sound and movement of wet feet, barefoot and walking. [FMP
 12.93]) (ĉ'an: [n] sound like a bell ringing; ĉ'an-: [p] naked)
- (152) La ačin n - Ø - i - ĉ'aq - a-č'ot š - Ø - q'aš
 that man TAM-A3-ep-be wet-ep-der TAM-A3-pass
 That man was making a wet sound as he passed. (FMP 12.91) (ĉ'aqāč'ot: sound
 and movement of someone wet running through the rain.) (č'eq: [n] the sound
 something soft and heavy makes when it falls in the mud: ¡Paf!; ĉ'aq-: [p] be
 wet)

Many intransitive verbs with the -C₁ot ending have no identifiable root or have roots whose semantic contents are quite distant from those of the derived verbs. The meanings of the derived forms, however, follow patterns similar to those mentioned above.

- (153) baj(a)bot: tremble from fear or cold (SIL, in progress; MAC 11.144) (baj: [n] 'tartuza', an animal which eats roots)
 busbut: movement of a body bowing down; head or whole body moves down and up. (MAC 11.164) (bus: fold soft things, e.g., tortilla, clothes, paper)
 čakačot: the movement of an animal, or a drunk, walking on all fours. (FMP 12.89) (ča?k: a type of grain)
 č'oq(o)č'ot: sound of water moving in a dish when someone carries it. (MAC 11.103); bubble out, gush out (water) (SIL, in progress). (no base)
 k'utuk'ut: cluck (chickens) (SIL, in progress). (k'ut: show something)
 misimot: bark (dogs) (FMP 12.80). (no base)
 musmut: drizzle (MAC 11.115). (no base)
 roqrot: sound of water boiling (MAC 11.154). (no base)
 seqesot: sniff, continuously (MAC 11.121). (seq: smell something)
 sinasot: sexual intercourse (MAC 11.125). (no base)
 xačaxot: action of scratching fleas (FMP 12.94). (xeč: deliver, distribute something)
 xalaxot: pull something out of its place, e.g., a door off its hinges; wiggle ones knuckles. (FMP 12.95). (xel: change something)
 xulxut: continuous aching of bones or ones insides, e.g., when washing with cold water (MAC 11.108). (xul: (n) cave, hole in the ground)

In sum, -C₁ot is a semi-productive derivational suffix which derives an intransitive verb from a CVC root and has a meaning of some sort of "undistributed repetition." I say undistributed to contrast with some other suffixes which are distributed

repetition, for example -la? and -jax (see §4.6.3.2). Sometimes a movement and other times a sound is focused by a verb with -C₁ot.

4.6.1.4 -ma?j

This suffix forms intransitive verbs from CVC (nominals, class one transitives or positional) roots. There is usually no vowel between the suffix and the root, but occasionally a reduplicated vowel is found. In many cases no roots were identified. Some, but not all, can be placed in the perfect with -neq. The class of verbs derived with -ma?j has semantic coherence: most of them involve movement in a way that is not normal, right or straight.

- (154) baqma?j: go carelessly through the street (baq: [adj] thin; [n] bone, needle)
 bexma?j: limp (no base)
 bolma?j: roll around; movement of a snake or worm (no base)
 čakma?j: action of almost falling; moving like an elderly person (no base)
 janima?j: wobble (e.g., a table with uneven legs, only said of non-persons) (no base)
 lekma?j: go with the toes raised because of a thorn; walk hunched over (no base)
 nakma?j: almost falling; make fun of (nake?: be in a group of people without participating)
 tek'ma?j: move stiffly (no base)
 řalma?j: stagger (řal-: lie, put on one's side)
 vok'ma?j: drum with heels, make a noise with one's shoe, e.g., "puk, puk, puk" (no base)
 xekma?j: limp, wobble (e.g., uneven table or chair legs) (no base)
 xeč'ma?j: limp; walk with certain type of sandal (no base) (SIL, in progress; FMP 10.5)

-ma?j is somewhat productive, but the possibilities are restricted. In these derivations, the meaning is often "repetition."

- (155) xotema?j: action of going up and down, up and down. (FMP 12.164) (xote?: climb)
 lukema?j: go with head and arms heavy; trees swaying. (FMP 12.165) (luke?: hang)
 řulma?j: go up and down, up and down a rod. (FMP 12.166) (řul-: go down)
 raq'ma?j: stagger (raq'-: recline, lean on)
 řeqma?j: hang, dangle (e.g., a broken branch) (řeq-: hang)

- (156) še n - Ø - oq'-maʔj la ačín
just TAM-A3-cry-der that man
The man just cries. (FMP 12.167) (oq'maʔj: cry continuously, from oq': cry)
- (157) Xabel n - Ø - i - č'ob - o-maʔj ri ačín
well TAM-A3-ep-think-ep-der art man
The man thinks well. (FMP 12.170) (č'obomaʔj: think a lot, from č'ob: think about it).
- (158) xočmaʔj: cat climbs (e.g., a tree; goes up and down a little, with its paws scratching). (FMP 12.174)
- (159) še n - Ø - i - sik'-maʔj
just TAM-A3-ep-smoke-der
He just smokes. (FMP 12.175) (sik'maʔj: smoke a lot, from sik': smoke)

According to my informant, most intransitive verbs formed with -maʔj are deprecatory.

4.6.2 Transitivity

4.6.2.1 -baʔ

These transitive verbs are derived from positional atransitive roots with a reduplicated root vowel, followed by -baʔ. The stems behave the same as class two transitive roots in that they never take the modal suffix and are always passivized with -oš. The suffix means "cause to be in a certain state or position."

č'egebaʔ	wet it (č'eq-: wet)
č'ujubaʔ	sit it down (č'uj-: sitting down)
lukubaʔ	lean it (luk-: lean)
pabaʔ	stand it up (paʔ-: standing up)

4.6.2.2 -(i)sa-

This class of transitive stems is formed by the suffixation of -(i)sa- to intransitive roots of class two and -Vr intransitive stems, and to some adjectives. -(i)sa- means "cause to Vb." It must take -x in the active voice (cf. atransitive roots, §4.5.3).

from intransitive verbs

vartisa-	put to sleep (ver: sleep)
kam(i)sa-	kill (kem/kam: die)

saqir(i)sa-	whiten (saqir: whiten)
čaqir(i)sa-	dry (čaqir: dry)

from adjectives

q'alaxisa-	clarify; explain (q'alax: visible, clear)
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4.6.2.3 -V-

These transitive verbs are derived with the vowel suffix, -V-, which is added to class three intransitive roots, nouns, and some adjectives. The suffix does not have a consistent meaning, but serves to transitive whatever it is added to. The choice of vowel is not predictable. Like-(i)sa-, this suffix must take -x in the active voice.

from class three intransitive verbs

xelo-	move it near (xel: move near)
q'aša-	pass over; change its place (q'aš: pass)
vara-	babysit (var: sleep)

from nouns

matioši-	thank (matioš: thanks)
karu-	fish (kar/ker: fish)
fixo-	tell about (fix: story, word)

from adjectives

nabeji-	precede (nabej: first)
k'aso-	wake up (k'es: alive, alert)

4.6.2.4 -C₂e-

Another reduplicative suffix involves repetition of the root vowel and the second root consonant followed by -e-. It derives transitive verbs from class one transitive roots. -C₂e- is only partially productive. When there is a semantic connection to the root, the suffix acts as an intensifier, meaning "to Vb much, hard or quickly." It takes -x in the active voice.

- (160) beqeqe-: shuck very quickly. (beq: shuck [corn])
 buqeqe-: cover very well (e.g., airtight). (buq: cover)

ʕ'olole-: peel quickly and a lot. (ʕ'ol: skin, peel)
 kač'ač'e-: grind, press, pound. (keč': chew)
 kememe-: weave quickly. (kem: weave)
 mesese-: sweep quickly; skim over. (mes: sweep)
 nuk'uk'e-: arrange quickly. (nuk': arrange)
 qumume-: chug. (qum: drink)

Sometimes the derivative involves a narrowing in meaning; the action of the root is applied to a specific object.

- (161) buxuxe-: urge a horse on with a stick. (bux: hit with a stick)
 mutume-: break bones easily. (mut: chew something that crumbles easily)
 tukuke-: move or raise dust; move quickly. (tuk: stir, dig, scrape)
 xurure-: suck out marrow (from bones). (xur: take out)

Quite often, however, there is no obvious semantic connection between a root and the derived verb, nor is there any semantic coherence to the class of derivatives with -C₂e- which are not merely intensified versions of their roots. In the following examples, the -C₂e- forms are purely lexicalized.

- (162) banane-: to top off all evils (T4). (ben: make, do)
 k'ešeše-: rattle (teeth). (k'eš: exchange)
 loq'oq'e-: love, value; pamper, spoil. (loq': buy)
 taqaqe-: guffaw. (teq: send)
 ʕ'ilile-: singe, scorch. (ʕ'il: take off bed sheets, uncover a person)

4.6.2.5 -maji-, -mi-

These are two alternations of the same suffix. The suffix applies to CVC roots (with the exception of pačq'om-) producing transitive verbs meaning some kind of pushing or turning over. This suffix is not productive, and only one base form could be identified. It takes -x in the active voice. Usually no vowel intervenes between the root and the suffix, but occasionally the root vowel is reduplicated.¹⁸

- (163) ʕakmaji-: push a person (no base).

¹⁸ It was suggested to me by Howard Aronson that this class may be like the English 'spl-' words since they are totally unproductive and have no identifiable base morphemes. The idea would be that the semantic coherence the group appears to have is purely coincidental and not due to a derivational morpheme.

- čikmaji-: push a person (no base).
 čokomi-: push something backwards (no base).
 čoq'maji-: bother someone (no base).
 čoxmi-: turn something in the same direction; point it at something (čox: (adj) straight)
 čuq'maji-: pound a fruit; separate, pull something apart. (no base).
 pačq'omi-: push (a person) back (no base).
 tikmaji-: push, turn over, turn something around e.g., clothes or dirt (no base).
 tukmaji-: overturn; turn inside out; yield, surrender something (no base).
 ŋalmaji-: overturn, capsize something (no base).
 xaq'maji-: push something backwards; grab and pull back (no base).

4.6.2.6 -ma-

This suffix involves reduplication of the root vowel, followed by -ma-, and derives transitive verbs from CVC roots. It is a very limited, non-productive class, with no obvious semantic pattern. It takes -x in the active voice.

- (164) kaxma-: get pale, waste away (kax: sky)
 k'avoma-, k'ovoma-: be grateful for something, thank (no base)
 k'uluma-: arrive on time or at the same time; receive the same action (k'ul: receive, meet, find)
 q'oxoma-: play (an instrument) (q'oxom: an instrument)
 varama-: watch over (an invalid) (ver: sleep)
 xunuma-, xuluma-: compare, match (xun: one)

4.6.3 Adverbial Derivational Suffixes

Adverbial derivational suffixes qualify the action of the verb similar to the way an adverb does. Unlike most of the other derivational suffixes, they do not change the form-class of the root or stem to which they affix. They can be classified as two types, the time intensifier -šta- and several iterative suffixes. Adverbial suffixes are interesting for their relation to semantic aspectual classes of verbs (see §5.3.2).

4.6.3.1 Intensifier -šta-

4.6.3.1.1 Form

-šta- is a very productive derivational suffix. There is, however, a dialectal restriction on its occurrence. -šta- is not found in Patzún. It is used at least in Comalapa

and two southeastern dialects, San Andrés Itzapa and Parramos. Since these villages are quite distant, with many others intervening (see fig. 2), it would be surprising if there were not other dialects which also have -šta-. -šta- appears with all TAMs, and with both intransitive and transitive verbs. When it is in the active voice, it is followed by the intransitive voice marker -n or the transitive marker -x, depending upon the transitivity of the stem to which it attaches. In this respect, it maintains rather than changes the class of the stem. -šta- is occasionally preceded by an unpredictable epenthetic vowel (see §1.4.4.2.3).

- (165) n - Ø - u-ban-a-šta-x
TAM-A3-E3-do-ep-int-act
She does it with enthusiasm, quickly (MAC 9.57)
- (166) n - Ø - i - be-šta-n
TAM-A3-ep-go-int-act
He goes in a hurry, right now (MAC 9.58)
- (167) T - Ø - a-ban-a-šta-x ri av-aveš
TAM-A3-E2-do-ep-int-act art E2-planting
Do your planting quickly (MAC 9.65)
- (168) šk - Ø - i - be-šta-n či r-ojo-š-ik
TAM-A3-ep-go-int-act for E3-call-ps-nom
I'll go immediately to call him. (MAC 9.69)
- (169) š - Ø - e -kam-sa-šta-x
TAM-A3-E6-die-cau-int-act
They killed it quickly, at once. (MAC 10.14)

4.6.3.1.2 Meaning

-šta- is a time intensifier. A verb suffixed with -šta- means 'hurry up and Vb', 'Vb quickly', or 'Vb at once'.¹⁹

¹⁹ Blair et al. also discusses this suffix saying it means "quick or sudden action" (Blair et al., 1969: 2.210). We differ on the distribution of -šta-. Blair says it only applies to transitive verbs producing transitive verbs, whereas my data shows it to appear on intransitives also. Townsend mentions it, calling it the "rapidative suffix" (1961: 5).

- (170) ξ ta ξ i ξ ξ - \emptyset - biso - ξ ta - n r - uma ξ - \emptyset - u - ϕ eq ru - mero
 hon Patricia TAM-A3-sadden- int- act E3-because TAM-A3-E3-lose E3-money
 Doña Patricia became sad at once when she lost her money. (MAC 15.134)

In sentences where the action has duration, such as those with j/n- or the repetitive suffixes -jax- and -la?, - ξ ta- usually indicates that the action was initiated quickly. The remainder of the action may be unhurried.

- (171) N - \emptyset - t - oq' - ξ ta - n pe ri ak'val vi ξ k - at - el el
 TAM-A3-ep-cry- int-act loc art boy if TAM-E2-leave loc
 The boy starts crying immediately if you leave. (MAC 9.76)
- (172) n - \emptyset - i - be- ξ ta-jax
 TAM-A3-ep-go-int-iter
 He travels regularly, quickly (when he goes he up and leaves quickly). (MAC 9.64)

- ξ ta- is not perfective or completive, since the action of the verb need not be finished. Compare the following minimal pairs of - ξ ta- and -tex (§4.8.3), the resultative passive suffix. When the TAM is ξ -, the actions are, of course, completed. But - ξ ta- denotes that it was done quickly, whereas -tex emphasized its resultative state.

- (173) Vakami ξ - \emptyset - ban-a-tex xun č'a?ox
 now TAM-A3-do-ep-rp art crime
 Already a crime has been committed (says nothing about how fast it happened).
 (MAC 12.17)
- (174) Vakami ξ - \emptyset - ban-a - ξ t - e ξ xun č'a?ox
 now TAM-A3-do-ep-int-ps art crime
 The crime happened quickly. (MAC 12.18)

When the TAM is j/n-, the action may or may not be completed. -tex implies completion but - ξ ta- does not.

- (175) N - \emptyset - i - ban-a-tex ri q - ač'oč
 TAM-A3-ep-do-ep-rp art E4-house
 They will construct our house to its finish.
- (176) N - \emptyset - i - ban-a - ξ t - e ξ ri q - ač'oč
 TAM-A3-ep-do-ep-int-ps art E4-house
 They will start building our house immediately (don't know if they will finish it).

Recall that the transitivizing suffix $-C_2e-$ was also called an intensifier (§4.6.2.4). There are several differences between $-šta-$ and $-C_2e-$. $-šta-$ is far more productive, as it can go on most verbs, transitive or intransitive, and its meanings are fairly regular. $-C_2e-$ verbs are a limited class, and many of the verbs formed with this suffix have lexicalized meanings. While $-šta-$ is an intensifier of time, its usual meaning being "to do something quickly, all at once, or immediately," $-C_2e-$ is a more general intensifier. It usually means "hard" or "a lot," in addition to "quickly." The aspectual nature of these suffixes is discussed more in chapter six.

4.6.3.1.3 With other suffixes

$-šta-$ occurs with passive and antipassive voices, but not with the resultative passive (cf §4.8).

(177) ξ - \emptyset -ban-a- ξt -e ξ
 TAM-A3-do-ep-int-ps
 It was done quickly. (MAC 9.71)

(178) j - e - tixo - ξt -an
 TAM-A6-teach-int-ap
 They teach in a short time (e.g., a short lesson). (MAC 10.21)

(179) (a) $\ast\xi$ - \emptyset -ban-a- ξta -tex
 TAM-A3-do-ep-int-rp (MAC 9.70)

(b) $\ast\xi$ - \emptyset -ban-a-~~tax~~- ξta -n
 TAM-A3-do-ep-rp-int-act (MAC 10/85)

$-šta-$ does not usually appear in the perfect. It does, however, in the case of the perfect of the aspectual suffix $-la?$ (variant $-lo-$, §4.6.3.2.1). This is surprising since this combination of suffixes is a more marked construction, and one would think that the less marked, or simpler constructions would also exist.

(180) $\ast e$ ru -ban-a- ξt -an
 A6 E3- do-ep-int-pf (MAC 9.73)

- (181) E a-ban-a-šta-lo-n ri Ø nu-bi-n ħ-a-ve
 A6 E2-do-ep-int-iter-pf art A3 E1-say-pf to-E2-eyes
 You have done what I told you several times, quickly. (MAC 11.75)

-šta- also appears with -la? in other contexts.

- (182) n - Ø - i - ħ'aj-o- šta-la?
 TAM-A3-ep-hit-ep-int-iter
 He hits it quickly various times.
- (183) n - Ø - i - be-šta-la?
 TAM-A3-ep-go-int-iter
 She goes quickly, several times. (MAC 9.61)

Besides -la?, there are two other suffixes with which -šta- occurs, repetitive -jax and -C₁o? (§s 4.6.3.2.2 and 4.6.3.2.3).

- (184) n - Ø - i - be-šta-jax
 TAM-A3-ep-go-int-iter
 He travels regularly, quickly (when he goes he up and leaves quickly). (MAC 9.64)
- (185) j - e - tixo - jax-šta-n
 TAM-A6-teach-iter-int-ap
 They teach quickly (e.g., some professors give a short lesson.) (MAC 9.23)
- (186) n - Ø - i - ħ'eb-e - ħ'o-šta-n
 TAM-A3-ep-fall-ep-der-int-act
 It suddenly falls with a splat. (MAC 10/85)

4.6.3.2 Iterative suffixes

There are three derivational suffix morphemes in Cakchiquel which express repetition or iteration, -la?, -C₁a?, and -jax. -la? can be suffixed to intransitive verbs and transitive verbs, while -C₁a? is a transitive suffix and -jax an intransitive suffix. -la? is the least marked of these three. It has a very wide distribution, as is discussed below. -C₁a? and -jax are semantic counterparts of each other. They are marked with respect to a feature I call "over and over." Sometimes this means continuous repetition, but more often it is repetition after an interval without the action. It conveys "every so often," "one after another," "every little bit," and habitual. There is not necessarily a regular interval

involved, nor a certain period of time. *-laʔ* is unmarked for "over and over." It means repetition in general, i.e., that the agent does the action several times, although it can have the above-mentioned specific senses, too. *-C₁aʔ* appears to be in an equipolent relation with *-jax*, the former being marked for the feature [+transitive] and the latter marked for [+intransitive]. *-C₁aʔ* has a more restricted distribution, however, since it is limited to CVC transitive roots. All are marked for [+iterative], as opposed to their absence which is unmarked for it.²⁰

4.6.3.2.1 *-la/-lo-*

In the Comalapa dialect, *-laʔ* is the main form, but in Patzún, *-laʔ* is suffixed to transitive verbs while *-la-* appears on intransitive verbs, followed by *-n* in the active voice. Both dialects have an intraword variant, *-lo-*. *-la* is sometimes preceded by an unpredictable vowel (see §1.4.4.3).²¹

- | | |
|-------------------------|-----------------------------|
| (187) ʃ - i - var - laʔ | ʃ - i - var - <u>la</u> - n |
| TAM-A1-sleep-iter | TAM-A1-sleep-iter-act |
| (Comalapa) | (Patzún) |

I kept sleeping.

- (188) E a - ban-a-ʃta -lo - n ri Ø nu - bi - n ʃ - a - ve
 A6 E2-do-ep-int-iter-pf art A3 E1-say-pf to-E2-eyes
 You have done several times, quickly what I told you. (MAC 11.75)

This suffix is one of the most productive in Cakchiquel. It can go on every verb class, both transitive and intransitive, with the exception of verbs ending in *-C₁ot*.

- (189) Rat ak'val xantape j - a - var - laʔ
 you boy always TAM-A2-sleep-iter
 You, boy you're always sleeping. (MAC 10.8)

²⁰ Townsend (1961: 69-71, 73) discusses *-laʔ*, *-tax*, and *-jax*. He calls them the "frequentative," and says the different forms occur on different verb classes. Stoll (1958: 165) gives one example of the "distributive," namely a verb with a *-laʔ* suffix. Blair et al. (1969: 2.211) also mentions *-laʔ*, and says it means "repeated action."

²¹ Kekchi has a cognate repetitive prefix *-lax-* which occurs between the tam and the absolutive person marker (Stewart, 1980: 74).

- (190) Ri ru - te? ri šta María n - Ø - u - kem - la? poft
 art E3-mother art hon María TAM-A3-E3-weave-der huipiles
 María's mother always weaves huipiles. (FMP 12.99)
- (191) Ri ačín čeq š - Ø - apo - la - n ču - r - ačo ri šta María
 art man only TAM-A3-arrive-iter-act at-E3-house art hon María
 The man just kept coming to María's house. (FMP 12.6)
- la? often appears with plural objects.
- (192) I manaq samax i xare ox k'o vekame ačike na taq samax
 and no work and thus we have now what prt pl job
i - e - qa - ban - a - la? čila č - u - pan nu-tinamit.
 TAM-A6-E4- do-ep-iter there in-E3-stomach E1-town
 And there was no work, and so we had now, whatever jobs we would do them
 there in my town. (FMP 1.23)
- (193) i rixa? š - e - ru - ban - a - la? r - aq'omal.
 and she TAM-A6-E3-do-ep-iter E3-medicine
 And she gave him medicines ("my aunt gave him medicines to cure his
 hangover"). (Coyote Tum, 1978: 2)
- la? can combine with -šta-, -jax, -C₁a?, the various voices, and the perfect.
- (194) n - Ø - u - ban - a - šta - la?
 TAM-A3-E3-do-ep-int-iter
 do it various time in a hurry (šta + la?) (MAC 9.60)
- (195) Ri poj n - Ø - i - silo - lo - n
 art scarecrow TAM-A3-ep-move-iter-ap
 The scarecrow himself is moving. (-la? + antipassive) (MAC 10.2)
- (196) š - Ø - ban - a - lo - š ri ča?ox
 TAM-A3-do-ep-iter-ps art crime
 The crime was done several times (-la? + passive) (MAC 11.94)
- (197) La taq vux la? š - e - 'iba - tax - la - n oxeř čin
 that pl paper that TAM-A6-write-rp-iter-act long-ago for
 n - Ø - i - q'aš ča-qa-več rox ri kaslen vakami.
 TAM-A3-ep-pass to-E4-eyes we comp life now
 Those brochures were written years ago for us, so that we might understand the
 [old] life nowadays. (resultative passive + -la?) (FMP 12.5)
- (198) n - Ø - i - be - ja - la?
 TAM-A3-ep-go-iter-iter

She goes many times, every so often (-jax + -la?) (MAC 9.86)

- (199) n - Ø - i - n - ~~ɸ~~'u - ~~ɸ~~'a - la?
TAM-A3-ep-E1-suck-iter-iter
It sucks on it various times (-C₁a? + -la?) (MAC 12.9)
- (200) n - Ø - i - ki - ~~ɸ~~'et - ~~ɸ~~'a - la?
TAM-A3-ep-E6-see- iter-iter
They just keep looking at him (-C₁a? + -la?) (FMP 10.59)
- (201) e? nu-ban-a- lo - n
A6 E1 -do-ep-iter-pf (-la? + perfect)
I have done them several times.

4.6.3.2.2 -jax/-tax/-lax

-jax is the primary form of this iterative suffix but it has alternants of -lax and -tax. The choice among them is verb-specific, that is, each verb is marked in the lexicon for -jax, -tax, or -lax, with -lax only appearing in the Patzún dialect. These suffixes only affix to intransitive verbs, although they may attach to any intransitive class of root or stem.

- (202) n - Ø - i - be-jax
TAM-A3-ep-go-iter
He goes various times, every so often (he travels as a profession, habit). (MAC 9.83)
- (203) ša taq ma š - Ø - e - kam-sa - tax r-uma xōb
just pl not TAM-A3-E6-die-cau-iter E3-by rain
They were almost killed several times by the rain. (MAC 10.11)
- (204) Taq n - Ø - i - n - k'ul ri a Lučō xantape
when TAM-A3-ep-E1-meet art hon Pedro always

n - Ø - i - č'o - jax kan ču-v - e
TAM-A3-ep-talks-iter prt to-E1-to
When I meet Pedro he always talks to me. (MAC 11.27)
- (205) j - e?-axmax-lax
TAM-A6- flee - iter
They go fleeing, one after another (FMP 10.26)

4.6.3.2.3 -C₁a?

The transitive counterpart to -jax is -C₁a?. This iterative suffix reduplicates the root vowel of transitive class one or two roots and their first consonant, followed by -a?. It derives transitive verbs. -C₁a? is quite restricted, as it does not suffix to monosyllabic transitive verbs, nor is there any semantic counterpart to -C₁a? or -jax for transitive verbs which do not take -C₁a?.²²

- (206) Ri?, k'o ax k'a xun, ča, kōx č - u - pan ri xuju
then, there-be from well art, they-say, lion at-E3-stomach art hill

ri? j - e - ru - ču - ča pe či xampe ri
that TAM-A6-E3-watch-iter loc comp when comp

št - Ø - u - xeč' - ux r - i? xun š - i - ki - koxōl r - ač'il,
TAM-A3-E3-separate-der E3-self art from-ep-E6-among E3-friend,

"n - Ø - i - n - tex," ča

"TAM-A3- ep-E1-eat," he-said.

Then, there was a (they say) lion in that mountain, he kept watching them so that when one might separate from his friends, "I'll eat him," he says. (č'u?: watch) (MAC 4.10)

- (207) še xaj n - Ø - i - n - ban - a - ba jñ
only house TAM-A3-ep-E1-make-ep-iter I
I'm only building houses (finish one, then start the next). (MAC 8.7)

- (208) š - Ø - u - čap - a - ča?
TAM-A3-E3-grab-ep-iter
He kept grabbing him. (FMP 16.182)

4.6.4 Summary

The derivational suffixes are summarized in table 15.

²² The only other mention I have found of this suffix is in Stoll (1958), where he says "Verbs frecuentativos que se forman como lo muestra el ejemplo siguiente: 'tur', 'desgarrar'; y el frecuentativo: 'turutá', 'repartir, distribuir, o totalmente' (Stoll, 1958: 165).

TABLE 15

DERIVATIONAL SUFFIXES

Intransitive	Transitive	Adverbial		
		Intensifier	Iterative	
Vr e? C ₁ o?/C ₁ u? C ₁ ot ma?j	ba? (i)sa- ^a V- C ₂ e- maji-/mi- ma-	ʃta-	la-/lo-	jax/tax/lax C ₁ a?

^a Forms followed by a hyphen require another suffix, i.e., they cannot be word-final.

4.7 Slot 7: Focus Suffix

This category is considered to be inflectional in this analysis because it is required in certain grammatical contexts. Unlike other inflectional affixes in the Cakchiquel verb, it is also optional in some contexts. There is evidence that it developed from a voice category in an earlier stage of Cakchiquel, and probably is still in a state of transition. It no longer has the diagnostic features of voice, nor does it contrast with voice suffixes. Thus I consider it a separate category, labeled focus.

4.7.1 Instrumental (-be-)

The suffix, -be-, not to be confused with the movement prefix with the same form, indicates the presence of an instrumental phrase in the sentence. It is a non-voice suffix which focuses on the instrumental without drawing it into a direct relation with the verb.²³ Comparative data (Dayley, 1981: 27-28) from other Quichean languages shows

²³ An argument in a "direct relation" with the verb is one that is marked on the verb. A true instrumental voice would demote one of the direct arguments of the verb and require the instrumental phrase to be marked on the verb. The Cakchiquel instrumental case is what Aronson calls "oblique valence" which "involves the addition or deletion of an actant, but without affecting the transitivity or intransitivity of the verb, and thus not affecting subject/object relations." He opposes this to "rectus valence," the traditional voice process which does change subject/object relations (Aronson, forthcoming: 13).

that they have instrumental voices, which do change the argument-verb relations, with suffixes which are cognates of *-be-*. Furthermore, Norman (1978) discussing Proto-Central Mayan shows that *-be-* used to be the suffix of a real instrumental voice.²⁴ This suffix no longer has the essential property of a voice; it does not change any argument relations in the sentence. It does, however, only apply to transitive verbs, and an instrumental phrase must be present in the sentence. If the instrument phrase is focussed, either by fronting or questioning, *-be-* is obligatory. *-be-* can be suffixed to all classes of transitive verbs except causatives derived from positionals with *-ba?*.

- (209) [R - ik'in xun če?] i - e - n - č'aj - o - be - x vi?
E3 - with art stick TAM-A6-E1 - hit-ep-foc-act prt
With a stick I hit them. (MAC 13.36)
- (210) Ri iščq₁ n - Ø - u₁ - ban - a - be - x ri? r - ik'in ru-č'amaj
art woman TAM- A3- E3-do-ep-foc-act that E3- with E3-cane
The woman did that with her cane. (FMP 14.119)
- (211) *texbe-*: eat with something (e.g., a dish) (FMP 14.123) (*tex*: to eat)
kembe-: weave with something (FMP 14.124) (*kem*: weave)
banobe-: do it with something. (*ban*: do, make)
toxbe-: pay with something. (*SIL*, in progress) (*tox*: pay)

The instrumental phrase is usually, though not necessarily, preposed into a pre-verbal position.²⁵ When it is, 'vi?', a "trace"-like marker which marks sentences with preposed locatives, follows the verb. In these cases, *-be-* is obligatory. Compare the following sentences.

- (212) R - ik'in ru - q'a š - Ø - u - č'ap - o - be - x vi?
E3-with E3-arm TAM-A3- E3-stop-ep-foc-act prt
With his arm he stopped him.
- (213) *R - ik'in ru - q'a š - Ø - u - č'ap vi?
E3 - with E3-arm TAM-A3- E3-grab prt

²⁴ Stoll (1958: 165) mentions *-bex*, but it is not clear from his example whether it acts as a voice or not.

²⁵ Townsend (1961: 70-73) says that in order for *-bex* to be used the instrumental phrase must appear in sentence-initial position, but my data show otherwise.

- (214) § - Ø - u - čap - o - be - x r-ik'in ru-q'a
 TAM-A3-E3-grab-ep-foc-act E3-with E3-arm
 He stopped him with his arm. (FMP 14.125)

The -be- suffix is also required if an instrument is questioned, as in

- (215) ¿Ačox-k'in § - Ø - u - kam - sa - be - x vi??
 what -with TAM-A3-E3-die-cau-foc-act prt

§ - Ø - u - kam - sa - be - x r-ik'in xun ce?
 TAM-A3-E3-die-cau-foc-act E3-with art stick
 With what did he kill it? He killed it with a stick. (FMP 14.120)

It is not required when an instrument is in the sentence, if the instrument is not being focused.

- (216) § - Ø - u - kam - sa - x r-ik'in xun če?
 TAM-A3-E3-die-cau-act E3-with art stick
 He killed it with a stick. (FMP 14.120)

Norman (1978) claims that -be- is required only when 'vi?' is not used in sentences where an instrumental phrase is fronted or focused. According to his analysis when 'vi?' is used -be- is optional. Therefore he concludes that 'vi?', which has wider usage, has almost supplanted -be- in function. Thus when -be- and 'vi?' co-occur, -be- simply indicates that the extracted²⁶ phrase is an instrumental.

In my research I found that -be- and 'vi?' are both required when an instrumental phrase is extracted. In any case, -be- seems to be in a transitional stage and it is possible that it eventually will be replaced in this function by 'vi?'.

The instrumental suffix, like -šta- and atransitive roots, must be followed by a voice suffix such as active -x (see §4.8.1). It may also combine with the other voices and with the perfect.

²⁶ Norman, working in a relational grammarian framework, calls constituents which are fronted or focused without a resulting change in argument relations "extracted" constituents.

- (217) § - Ø-ban-a - be-š
TAM-A3-do-ep-foc-ps
it was done with something
- (218) § - Ø-ban-a - be-n
TAM-A3-do-ep-foc-ap
he did it with something
- (219) ¿Ačike Ø nu - čap - o - be-n vi?? Ø Ru- čap - o - be-n.
what A3 E1-start- ep-foc-ap prt? A3 E3-start-ep- foc-ap
With what have I started it? With I don't know what. (FMP 14.134)

-be- is marked for the feature [+instrument], and it contrasts with its absence, which is unmarked for that feature. As mentioned above, -be- may be absent when there is an instrument phrase in the sentence, which is consistent with the unmarked nature of the null focus marker. This slot is incorporated into the summary of suffixes in table 16.

TABLE 16
VERBAL SUFFIXES

Slot 6 Derivation				Slot 7 Focus
Intransitive	Transitive	Adverbial		be-
		Intensifier	Iterative	
Vr	ba?	šta-	la-/lo-	C ₁ a? jax/tax/lax
e? C ₁ o?/C ₁ u? C ₁ ot ma?j	(i)sa- V- C ₂ e- maji-/mi- ma-			

4.8 Slot 8: Voice

In Cakchiquel a voice suffix is required on every verb and in the perfect construction. There are four voices: active, passive, resultative passive, and antipassive. The antipassive has two variations, regular and switch-reference. The voices in the perfect are treated in §4.10.

Voice is an inflectional category in Cakchiquel. This is not an obvious fact. In most descriptions of Mayan languages voice is treated as derivation (Dayley, 1981a, England 1983). In Pocomam voice can apply iteratively, that is, for example, a passive verb can be causativized, and vice versa. Smith-Stark (1983: chap. 5) handles this in a non-traditional way: the same voice suffix is sometimes derivational and sometimes inflectional, depending on whether one is considering an intransitive or a transitive verb. After presenting the various Cakchiquel voices I will return to the issue of their inflectional status.²⁷

4.8.1 Active

The active voice is the only voice in Cakchiquel which may appear with transitive verb forms, i.e., where there are two person markers on the verb. It is used in the normal argument-verb situation where the ergative marks the agent of the action and the absolutive marks the patient. The active has three forms, -x for transitive verbs, -n for intransitive verbs, and -Ø for both transitives and intransitives. -x suffixes to atransitive roots, making them transitive, to -šta- when it is suffixed to transitive stems, to several derivational suffixes, and to instrumental -be-. For example,

atransitives

ilix	feed (il-: feed)
ak'ašax	listen (ak'aš-: hear/listen)
ropix	jump (rop-: jump)
kušax	use (kus-: serve/use)
tixox	teach (tix-: teach/learn)

-šta-

banaštax	do, make it quickly (ban: do, make + -šta-)
čajaštax	hit it suddenly (čaj: hit + -šta-)

²⁷ Quite a lot has been written on Cakchiquel voice, relatively speaking. For several different treatments, see Stoll (1958: 158), Townsend (1961: 69-74), Blair et al. (1969), LAMP (nd: 15.1-22.1) and Dayley (1981b: 24-28).

-(i)sa-

kamisax	kill (kam: die + -isa-)
atinisax	bathe someone (atin: bathe + -isa-)

-be-

kembex	weave with something (kem: weave + -be-)
toxbox	pay with something (tox: pay + -be-)

-n suffixes to adverbials -šta- and -la- (Patzún dialect only) when they are added to intransitive stems, and to atransitive roots, making them intransitive. For example,

atransitives

ilin	feed (il-: feed)
ak'ašan	hear (ak'aš-: hear/listen)
ropin	jump (rop-: jump)
kusan	serve (kus-: serve/use)
sokan	get shaved; have a haircut (sok-: cut hair)
tixon	learn (tix-: teach/learn)

-šta-

beštan	go quickly (be: go + -šta-)
--------	-----------------------------

-la-

varlan	keep sleeping (var: sleep + -la-)
--------	-----------------------------------

It is sometimes difficult to tell these de-atransitives from antipassive forms, which end in -Vn. Usually, the antipassives of the transitive counterparts to these atransitive stems are semantically distinct from them. For example, the antipassive of 'tixox', "teach" would mean that one teaches, in general or as a profession. 'Tixon', however, means "learn," and is thus a separate lexeme. In addition, there exist intransitive verbs from atransitive roots which have no transitive counterpart, like 'šaxon', "dance."

-Ø suffixes to all other verbs in the active voice. These include transitive and intransitive roots, stems with intransitive derivational suffixes, the transitive causative -ba?, and the iterative suffixes -la? (in the Comalapa dialect), -jax and -C₁a?.

4.8.2 Passive

This is the canonical passive in Cakchiquel, as opposed to the resultative passive (§4.8.3). It forms intransitive verbs from transitive verbs. Like passives in other languages, the Cakchiquel passive serves to de-emphasize the transitive agent in favor of the transitive patient. The agent may be present in the sentence with an oblique -uma, "by, for," phrase and the patient is the subject of the passive verb.

4.8.2.1 Form

The passive has two basic forms depending on the form of the transitive verb, -Vš or -Ø. If the verb is a class one transitive verb, there is usually a null ending. Some, but not all class one transitive verbs with root vowel -e-, ablaut it to -a-. This is lexically determined. For example,

(220) š - Ø - u - ben
TAM-A3-E3-do
he does it

š - Ø - u - e'et
TAM-A3-E3-see
she sees it

š - Ø - u - loq'
TAM-A3-E3-buy
he buys it

š - Ø - r - ĩl
TAM-A3-E3-find
she finds him

š - Ø - ban - Ø
TAM-A3-do-ps
it is done

š - Ø - e'et - Ø
TAM-A3-see-ps
it is seen

š - Ø - loq' - Ø
TAM-A3-buy-ps
it is bought

š - Ø - il - Ø
TAM-A3-find-ps
he is found

e/a

e/e

o/o

i/i

Class one transitive verbs may optionally take the -Vš ending. When they do, the suffixal vowel is /o/ when the root vowel is /a/, /o/, or /e/, it is /i/ when the root vowel is /i/, and /u/ when the root vowel is /u/.

(221) š - Ø - loq' - oš
TAM-A3-buy- ps
it is bought

- (222) § - Ø - ił - ił̄
TAM-A3-find-ps
it is found

The passive ending for the remaining transitive verbs is always -Vš. The choice of vowel again depends on the preceding vowel in the root or stem. If the active verb ends in -ox, -ix, -ex, or -ux, the -x alternates with -š and the vowel remains the same, as in

- (223) § - Ø - u - kutu - x
TAM-A3-E3-ask-act
he asked it

- § - Ø - kutu - š
TAM-A3-ask-ps
it is asked

- § - Ø - u - k'aji - x
TAM-A3-E3-sell-act
she sold it

- § - Ø - k'aji - š
TAM-A3-sell-ps
it is sold

- § - Ø - u - tixo - x
TAM-A3-E3-teach-act
he is taught it

- § - Ø - tixo - š
TAM-A3-teach-ps
it is taught

- § - Ø - u - ban-a - be - x
TAM-A3-E3-do-ep-foc-act
she did it with something

- § - Ø - ban-a - be - š
TAM-A3-do-ep-foc-ps
it was done with something

If the active verb ends in -ax or -a? the passive ending alternating with this is -eš.

- (224) § - Ø - u - kam - sa - x
TAM-A3-E3-die-cau-act
he killed it

- § - Ø - kam - s - eš
TAM-A3-die-cau-ps
it was killed

- § - Ø - u - pa - ba?
TAM-A3-E3-stand-cau
she stood it up

- § - Ø - pa - b - eš
TAM-A3-stand-cau-ps
it was stood up

Finally, in the case of class two transitive verbs, -oš is added.

- (225) § - Ø - u - to?
TAM-A3-E3-help
she helped him

- § - Ø - to? - oš
TAM-A3-help-ps
he was helped

- § - Ø - u - na?
TAM-A3-E3-feel
he felt it

- § - Ø - na? - oš
TAM-A3-feel-ps
it was felt

In the perfect the passive has a null form, as discussed in §4.10.2.

4.8.2.2 Meaning

The passive focuses on the patient and/or de-emphasizes the agent of a transitive action. It allows the speaker to omit the agent when it is unknown or irrelevant, although it may be included in the sentence with an oblique phrase. Here are some examples of the Cakchiquel passive.

- (226) Ri a, šuan š - Ø - tixo - š r - uma ri šta María
 art hon Juan TAM-A3-teach-ps E3-by art hon María
 Juan was taught by María. (MAC 10.146)
- (227) I kerí š - ox - ŋolin pe š - ox - qa čik č - qa - čo čik
 and thus TAM-A4-return loc TAM-A4-arrive again to-E4-house again
 i š - Ø - kutu - š č - q - e si k'o samax
 and TAM-A3-ask-ps to-E4- to if there-be work
 And so we returned here, we arrived to our house again and it was asked of us if
 we found work. (FMP 1.32)
- (228) vakami ri k'uč man n - Ø - r - ūl ta ru - vaj, i ri ačín ri
 now art vulture neg TAM-A3-E3-find prt E3-food, and art man comp
 xabel, xabel n - Ø - il - iš r - uma ri iščq
 good, good TAM-A3-find-ps E3-by art woman
 Now the vulture couldn't find food, and [for] the man it was found very well by
 the woman. (FMP 4.42)
- (229) A qiq'ix k'ari čí š - Ø - kam - s - eš ri aš Xuan r - uma ri balma?
 quest true then comp TAM-A3-die- cau-ps art hon Juan E3-by art tiger
 Is it true that Juan was killed by the tiger? (FMP 11.139)
- (230) xun tiqaq'ix Domingo, rixa? š - Ø - be - bijax pa bej i
 one afternoon Sunday, he TAM-A3-mov-walk in road and
 š - Ø - u - čop ru - tix - ik ja? k-ik'in r - ačibil, pa xun
 TAM-A3-E3-begin E3-drink-nom liquor E6-with E3-friend, in art
 xaj ri akuči n - Ø - i - k'aji - š vi ja?
 house comp where TAM-A3-ep-sell-ps there liquor
 One Sunday afternoon he went walking on the road and he began to drink with
 his friends in a house where liquor is sold. (Coyote Tum, 1978: 1)

4.8.3 Resultative Passive (-tex)

This suffix is interesting in that it has features of both aspect and voice. It forms an intransitive verb from a transitive verb. The transitive agent can be present in the sentence in an oblique -uma, "by, for," phrase and the transitive patient is the subject of a -tex verb. In other words, it is a passive. It also conveys the meaning that the action is completed or finished, thus I call it the resultative passive. When -tex appears in a verb with non-completive j/n- or future šk/št-, the action has not been done yet but it is certain that it will be done to completion.

- (231) toq n - Ø - i - tix - tex ki-q'or,...
when TAM-A3-ep-drink-rp E6-atol
When they have finished drinking their atol,...
- (232) man čik n - Ø - i - teq-e - tex ta
no more TAM-A3-ep-lift-ep-rp prt
It could no longer be lifted.
- (233) ša k'a št - Ø - u - ban - a - tex na ri samax
but still TAM-A3-E3-do-ep-rp still art job
The job isn't done yet.
- (234) Ri xaj š - Ø - ban - a - tex k-uma ri vinaq-i?
art house TAM-A3-make-ep-rp E6-by art people-pl
The house was built by the people.
- (235) š - Ø - pa - ba - tex ri če?
TAM-A3-stand-cau-rp art stick
The stick was stood up all at once. (MAC 10.72)
- (236) k - i - vaj - tex na el
TAM-A1-eat-rp prt loc
(Wait) until I've finished eating. (FMP 11.62)
- (237) ke vakami k'a n - Ø - ili - tex na pa xuju č - u - pan re
comp now still TAM-A3-find-rp still in hill to-E3-stomach this
qa-sivan qa-tinamit
E4-ravine E4- town
...that it is still found in this mountain in our town. (Saquec, 1973: 5)

-tex may combine with the perfect, in which case the /e/ ablauts to /a/.

- (238) man Ø ɛ'uk - un ta ša ken ke vi ri? Ø ban-a-tax-i-neq oxeɾ.
 no A3 invent-pf prt just prt thus emph thus A3 do-ep-tp -ep-pf long-ago
 It is not made up but just like this it happened long ago. (Mactzul, A., 1973a: 2)

4.8.4 Antipassive

Since there are two arguments marked on the verb in Cakchiquel, it is possible to have voices which defocus or omit each of them from a direct relationship with the verb.²⁸ Cakchiquel allows both of these possibilities. The passive voices defocus the argument which is the transitive agent, making the transitive patient the sole argument of the passive intransitive verb. The voice which does the converse, i.e., defocus the argument which is the transitive patient and make the transitive agent the sole argument of the resulting intransitive verb is called "antipassive." The translations of antipassive sentences into English or Spanish are practically the same as their active counterparts, since the antipassive argument relations are the same as the active ones in those languages. Sometimes the meanings translate with stress on the subject, as in "it was he who did it; he was the one who did it."

4.8.4.1 Form

A final -ʔ or -x becomes -n. If the stem is one syllable, -on or -un is added, this latter if the stem vowel is -u-. In Patzún, final -n alternates with glottal stop or nothing on verbs of class one transitive verbs. While both forms are acceptable, the -Vʔ form is preferred. Various antipassive forms are given in table 17.

²⁸ Jerry Sadock has pointed out to me that this is not a necessary situation. Bantu marks two arguments on the verb and has a passive, but no antipassive.

TABLE 17

ANTIPASSIVE FORMS

active	antipassive	Patzún	gloss
ʃ-Ø-u-č'ej	ʃ-Ø-č'ajon	ʃ-Ø-č'ajo(?)	hit
ʃ-Ø-u-tex	ʃ-Ø-tixon	ʃ-Ø-tixo(?)	eat
ʃ-Ø-u-č'u?	ʃ-Ø-č'u?un	ʃ-Ø-č'u?u(?)	see
ʃ-Ø-u-kamsax	ʃ-Ø-kamsan	--- ^a	kill
ʃ-Ø-r-eleqax	ʃ-Ø-eleqan	---	hide
ʃ-Ø-u-tiox	ʃ-Ø-tixon	---	teach

NOTE: ^a Same as the previous column.

Notice that a neutralization occurs in the Comalapa dialect between the antipassive forms of 'teach' and 'eat'. This is avoided in Patzún because of the alternate suffix.

In the perfect the antipassive has a different form, -j. For example,

- | | |
|-------------------------|------------------------|
| (239) Ø ban - a - j -on | e? kam-sa -j -on |
| A3 make-ep-ap-pf | A6 die-cau-ap-pf |
| S/he has made [them] | They have killed [it]. |

4.8.4.2 Meaning

As mentioned above, the antipassive voice is used to defocus the patient or focus the agent. Thus it is used when the patient is unknown or unimportant, as in

- (240) Ri ax - q'oxoma? j - e-q'oxom-an pa taq nimaq'ix.
 art prof-marimbas TAM-A6- play - ap in pl parties
 The marimbistas play in the parties.

The sentence is marginal when the understood patient, 'ri marimba' is included, perhaps because it is overly redundant. Usually antipassive sentences are fine when the patient is

present, although it often must be marked obliquely with the relational noun *-ičin*.²⁹ Another use of the antipassive is to question or relativize an agent. In Cakchiquel an ergative argument cannot be questioned or relativized, rather it must be put into a construction, i.e., the antipassive, where it is absolutive. Compare the pairs of sentences in (241) and (242).

- (241) (a) Ačike₁ § - Ø₁ - ꜑'et-on ri ꜑'i??
 quest TAM- A3 - see-ap art dog
 Who saw the dog?
- (b) Ačike₁ § - Ø₁ - u₂ - ꜑'et ri ꜑'i?2?
 quest TAM-A3 - E3 - see art dog
 What did the dog see?
- (242) (a) Jĩn v-etama-n ru - več ri ačike₁ § - Ø₁-kam-sa - n (r-ičĩn)
 I E1-learn-pf E3-eyes art who TAM-A3-die-cau-ap (E3-to)
 ri aš Xuan.
 art hon Juan
 I know the one who killed Juan. (FMP 11.154)
- (b) Jĩn v - etama-n ru- več ri ačike₁ § - Ø₁ - u₂-kam-sa -x ri aš Xuan₂.
 I E1-learn-pf E3-eyes art who TAM-A3 - E3-die-cau-act art hon Juan
 I know the one who Juan killed.

Another example of an agent-focusing sentence is

- (243) Entonses ri ačĩn xari n - Ø - u - bix "A, entonses ša xa riš
 then art man thus TAM-A3-E3-say "Ah, then just it-is you(pl)

²⁹ The distribution of *-ičin* is still not clear to me. It seems to be required when the patient is not recoverable from the context, as in

Ri štan-i § - e - ꜑'et-o? av-ičĩn.
 art girl-pl tam-A6-see-ap E2-to
 The girls are the ones who saw you.

When there is an overt patient noun phrase, it seems to be optional. For example,

Ri taq bala § - e - kam-sa - n (r-ičĩn) ri ačĩn.
 art pl tiger tam-A6-die-cau- ap E3-to art man
 The tigers killed the man.

But there are many instances where more than this seems to be governing its usage.

iš loq'om-a" n - Ø - i - ĉe "ša xa riš ri
A5 thief - pl" TAM-A3-ep-say. "just it-is you(pl) comp

š - iš-eleq'a-n ri v - aq tokoq'a" n - Ø - i - ĉe ĉi - r - e
TAM-A5-steal- ap art E1-pig last-night" TAM-A3-ep-say to- E3-to.
Then the man said thus, "Ah, then it is you (pl) who are the thieves" he said, "it is
you who stole my pig last night," he said to him. (FMP 5.14)

The antipassive voice also has an aspectual function. It often is used in a habitual sense, or to indicate a profession.

(244) Rixa n - Ø - i - ĉ'ol - on kan ĉi - r - e ru-ĉ'ititata? taq n - Ø - u - k'ul.
he TAM-A3-ep-talk-ap prt to-E3-to E3 - uncle when TAM-A3-E3-meet
He would talk a lot to his uncle when he would meet him. (MAC 11.32)

(245) Ri aĉin n - Ø - i - kam - sa - n ri ek'
art man TAM-A3-ep-die-cau-ap art chicken
The man is a chicken butcher.

4.8.4.3 Switch-reference antipassive

There is another construction in Cakchiquel involving the antipassive. The main difference between this construction and the regular antipassive is that the verb agrees not with the agent, but with the patient. For this reason I call it switch-reference antipassive. It has been suggested that this is a fifth voice (LAMP, nd: 22.1) in Cakchiquel. This is not so, however, for several reasons. First, the verb forms are identical to regular antipassive forms. Secondly, there is no observable difference in meaning between switch-referenced constructions and regular antipassives. They also appear to be used in many of the same contexts, i.e., questioning and otherwise focusing agents. Finally, the occurrence of switch-reference antipassive is highly restricted, as shown by the following rules, and does not extend to the whole paradigm. Instead of being a separate voice subcategory, switch-reference antipassive is an alternate variation of the standard antipassive.

The main principle governing the usage of switch-reference antipassive is that the agent be third person and the patient non-third person. The verb always agrees with

the patient, i.e., first or second person. Since the verb agrees with first or second person as opposed to third person, a person hierarchy is revealed (1, 2 > 3). The agent must be indicated by a noun or pronoun, and it must precede the verb. This is one of the few instances where Cakchiquel has a rigid word-order. The patient noun phrase may or may not be indicated in the sentence. If it is, it follows the verb, and is usually not preceded by -ičín. The feature of animacy is also relevant. The third person singular agent must be animate in order to bring on switch reference, but that restriction does not hold for third plural. There are several inconsistencies among data from my informants, which may indicate further conditions. Some examples of this construction are:

- (246) Ačike š - a - ŋ'et-o(n)?
 quest TAM-A2- see- ap
 Who saw you?
- (247) Ri taq aq'om ri š - in₁-oq'oma-n jñ₁
 art pl medicine comp TAM-A1- cure - ap I
 The medicines are what cured me.
- (248) Ačike na š - ox - šibi - n čaq'a
 quest prt TAM-A4-scared- ap last-night
 Who knows who/what scared us last night. (MAC 14.167)

4.8.5 Conclusion on Voice

The resultative passive is marked with respect to the feature [+resultative state] while the opposing category, passive is unmarked for that feature. The resultative passive contains the entire meaning of the passive, plus it carries an additional meaning of resultative state. It is also less frequent in text than the passive. The unmarked passive is the equivalent in meaning of the whole passive category which subsumes both passive and resultative passive. Both of these are marked for [+passive]. The antipassive likewise is marked for the feature [+antipassive]. Thus the passives and the antipassive stand in an equipollent relation to each other, both being marked for different features. A speaker has a clear choice between these categories: there is no overlap in their usage.

Both the passive and the antipassive are [+non-active], and are opposed to the active, which is [-non-active]. Since the switch-reference antipassive is a formal variant of the antipassive and is not in semantic opposition to it, it is not included in the table 18 representing the voice system.

TABLE 18

VOICE

+Non-Active			±Non-Active
+Passive		+Antipassive	x/n/∅
+Resultative Passive	±Resultative Passive	Vn/j-	
tex	Vs/∅		

Having presented the Cakchiquel voices, I return to the issue of their inflectional status. As mentioned above, it is not a clear-cut issue. Cakchiquel voice has some characteristics which are associated with derivation in many languages. In one respect, voice causes a change in form-class, from transitive verbs to intransitive verbs and vice-versa. While these classes are both verbs, the transitive-intransitive distinction is so important in Cakchiquel it can be argued that this change constitutes a change in form-class. As discussed below, this is not a sufficient criterion for determining that Cakchiquel voice is derivational. Another respect voice is like derivation in some other languages is that passive and antipassive forms can be derived into nominals (§4.11). But the non-derivation of inflectional categories simply does not hold in Mayan languages. Dayley (1981a: 279) shows that in Tzutujil, some adjectives inflected for plural can be derived into verbs meaning "for plural objects to get adj." The Cakchiquel movement prefixes, which are clearly derivational, intermingle with the inflectional person markers (§4.3, 4.4).

Recalling the discussion of derivation and inflection from chapter three, it was shown that "members of word classes that result from derivation have the same grammatical status, inflectional paradigms, and syntactic functions as do underived or

simple members of the class (Robins, 1964: 258). Consider a Cakchiquel passive verb, which is intransitive, vis-a-vis an active intransitive one. They have the same inflectional paradigm (TAM, absolutive person marker), but not the same syntactic function in a sentence. The simple intransitive cannot be substituted in all the constructions where the passive occurs and function syntactically the same way (Bloch and Trager, 1942: 54). For example,

(249) Ri balma ʃ - Ø-kam-s - eʃ (r - uma ri ačín).
 art tiger TAM-A3-die-cau-ps (E3-by, because-of art man)
 The tiger was killed (by the man).

(250) Ri balma ʃ - Ø-kam (r- uma ri ačín).
 art tiger TAM-A3-die (E3-by, because-of art man)
 The tiger died (because of the man).

In the first sentence, the tiger was killed by the man's direct action, but in the second, there is no requirement of direct agency; the man may have ordered the tiger to be left without food. A more striking example involves the antipassive.

(251) Ri ačín ʃ - Ø-kam-sa - n r-ičín ri balma.
 art man TAM-A3-die-cau-ap E3-to art tiger
The man killed the tiger.

(252) *Ri ačín ʃ - Ø-kam r- ičín ri balma.
 art man TAM-A3-die E3-to art tiger

When a simple intransitive is inserted into the same context as the antipassive verb, the sentence is ungrammatical.

Thus, although Cakchiquel voice causes a possible form-class change between transitive and intransitive verbs and can participate in derivations, it is required by syntactic rule and fulfills a syntactic function. No simple verb of the same form-class can substitute for voiced verbs and function the same way in the syntactic construction. Therefore, voice in Cakchiquel is inflectional.

The suffixal slots discussed thus far are summarized in table 19.

TABLE 19

VERBAL SUFFIXES

Slot 6 Derivation				Slot 7 Focus	Slot 8 Voice	
Intransitive	Transitive	Adverbial			be-	x/n/Ø Vš/Ø Vn/j- tex
		Intensifier	Iterative	C ₁ a?		
Vr e? C ₁ o~/C ₁ u? C ₁ ot ma?j	ba? (i)sa- V- C ₂ e- maji-/mi- ma-	šta-	la-/lo-	C ₁ a? jax/tax/lax		

4.9 Slot 9: Mood

The modal slot is a very restricted inflectional category. Its single member appears in only a few specific contexts. Based on comparative data (Mam: England, 1983: 59; Kekchi: Stewart. 1980: 209-224), it is possible this is a remnant of a much broader category.

4.9.1 -V?

Class one transitive verbs are characterized by a partially reduplicative suffix which is added in certain contexts. This reduplication is Cakchiquel's only modal suffix. When the root vowel is /a/, /o/ or /u/, it is reduplicated, followed by a glottal stop. In the cases where the root vowel is /i/ or /e/, the suffix vowel is /a/. An ablauting process also takes place, converting /e/ to /a/. For example,

(253)	n-Ø-a-ben	t-Ø-a-ban-a?	e' a
	n-Ø-a-k'em	t-Ø-a-k'am-a?	c' a
	n-Ø-a-mal	t-Ø-a-mal-a?	
	n-Ø-a-ŋ'et	t-Ø-a-ŋ'et-a?	
	n-Ø-av-ŋl	t-Ø-av-il-a?	
	n-Ø-a-loq'	t-Ø-a-loq'-o?	
	n-Ø-a-kul	t-Ø-a-kul-u?	

The modal suffix occurs with affirmative future, obligative, and hypothetical uses of k/t- verbs and verbs of all TAMs with movement prefixes. It does not appear

with negative and past time k/t- verbs, nor with non-movement forms of other TAMs. Considering the affirmative and non-past k/t- environments, I suggest that the modal suffix is marked for the feature [+potential]. Recall that movement verb phrases often have future or goal-oriented senses, so movement is not incompatible with potential. The modal suffix contrasts with its absence, which is unmarked for that feature.³⁰

See table 20 for a summary of all the slots of the verb with their forms.

4.10 The Perfect Construction

The Cakchiquel perfect is a semi-verbal construction. It is characterized by several features, some verbal and some nominal. It is a well-known fact about languages that perfects often cross over verbal and nominal borders, and lie in the marginal area between those categories. In English, the perfect consists of a form of 'have' plus a "participle," so called because it participates in both nominal and verbal constructions. The Cakchiquel perfect has verb-like semantics and takes a number of verbal suffixes. It does not, however, have the TAM prefixes characteristic of finite verbs, and intransitive perfects are often indistinguishable from adjectival constructions.

4.10.1 Form

The perfect is formed by suffixing an ending onto the verb stem the form of which depends on the stem. An unbound absolutive form precedes the verb, and, if it is transitive, an ergative form is prefixed. The intransitive ending is -neq for intransitive roots or stems, except for positionals. Intransitive positional perfects are formed by adding -an to roots which end in /l/ and -l to the rest. The suffixal vowel reduplicates the root vowel except that root /a/ takes an /e/ suffixal vowel. Intransitive positional perfects are identical to positional adjectives.

³⁰ This suffix is treated as a part of the class one transitive root by Townsend (1961: 53-55) and Blair et al. ("alternating verbs," 1969: 2.128).

TABLE 20
SLOT SUMMARY

Slot 1 TAMs	Slot 2 Abs	Slot 3 Mov	Slot 4 Erg	Slot 5 Roots	Slot 6				Slot 7 Focus	Slot 8 Voice	Slot 9 Mood	
					IVb	TVb	Der	Adv				
š/k/š k/t š j/n	(1) i/m (2) a/at (3) Ø (4) ox (5) š (6) e/e?	o?/u?/Ø be?/e?	(1) n/nu/nv/v (2) a/av (3) u/uv/r (4) qa/q (5) i/v (6) k/k	IVb-1 IVb-2 TVb-1 TVb-2 Atr-1 Atr-2	Vr e? C ₁ o? C ₁ ot maʔ	ba? (i)sa- V- C ₂ - maji-/mi- ma-	Int šta-	la-/lo-	iter C ₁ a? jax/tax/fax	be-	x/n/Ø Vg/Ø Vn/j- tex	V?

The transitive ending is -(V)n. In transitives a final -ʔ or -x becomes -n. If the stem is one syllable, -on or -un is added, this latter if the stem vowel is /u/. Note that the transitive perfect form is identical to that of antipassives. Some examples of perfect forms follow.

1. Intransitive

a. Class One Roots

eʔ	kamineq	they have died
eʔ	varineq	they have slept
eʔ	noxneq	they have filled up

b. Class Two Roots

eʔ	samaxneq	they have worked
eʔ	q'ašneq	they have passed, moved over

c. Non-Classed (see §4.5.1)

eʔ	beneq	they have gone, they were going
eʔ	peteneq	they have come, they were coming

d. -Vr Stems

eʔ	nimerneq	they have grown, enlarged
eʔ	saqirneq	they have whitened; cleared up

e. Class Two Atransitive Roots

eʔ	ilineq	they have fed
eʔ	ak'ašaneq	they have heard
eʔ	ropineq	they have jumped
eʔ	kusaneq	they have served
eʔ	tixoneq	they have learned

f. Positionals

eʔ	ɕ'ujul	they have sat down, they are sitting
eʔ	jokol	they have been late, they are late
eʔ	k'avel	they have lain supine, they are lying supine
eʔ	paʔel	they have stood up, they are standing
eʔ	k'ulan	they have gotten married, they are married
eʔ	šulan	they have descended, they are down there

2. Transitive

a. Class One Roots

e?	nubanon, nubanun	I have made them, done them
e?	vilon	I have found them
e?	nuč'ajon, nuč'ajun	I have hit them
e?	nuč'eton	I have seen them

b. Class Two Roots

e?	vaxovan	I have loved them
e?	nutoʔon	I have helped them
e?	nunaʔon	I have felt them; tasted them
e?	nujoʔon	I have given them; put them

c. -baʔ Stems

e?	nuč'egeban	I have wet them
e?	nuč'ujuban	I have seated them
e?	nulukuban	I have leaned them
e?	nupaban	I have stood them up

d. -(i)sa- Stems

e?	nuvartisan	I have put them to sleep
e?	nukamisan	I have killed them
e?	nusaqirisan	I have whitened them

e. -V- Stems

e?	nuxelon	I have moved them near
e?	nuq'ašan	I have passed over them; changed their place
e?	nuvaran	I have babysat them

f. Atransitive Stems

e?	vilin	I have fed them
e?	vak'ašan	I have heard them
e?	nuropin	I have jumped them
e?	nukusan	I have served them
e?	nutixon	I have taught them

4.10.2 Meaning

The perfect has several uses, the first of which is for a past action continuing to a present state. This contrasts with a verb in š- where the action is over and done with, before the moment of speaking.

- (254) Rixa xa?el Ø ru-č'aju-n ru - pan ri kinaq'
 he well A3 E3-hide-pf E3-stomach art beans
 He has it well hidden inside the beans. (MAC 14.78)
- (255) Rixa xa?el š - Ø - u - č'aju - x ru - pan ri kinaq'
 he well TAM-A3-E3-hide-act E3-stomach art beans
 He hid it well inside the beans. (MAC 14.79)

The perfect often has a stative meaning. It is usually ambiguous between a present or past state, and particles are used to disambiguate it.

- (256) perfect + kan = past
 perfect + na? = still, continues in the present

As a stative, the perfect verb form can act as a noun or an adjective, as in

- (257) xun kam-i-neq
 art die-ep-pf
 one who has died, or a dead person

The verbs 'be', 'go' and 'pe', 'come' have irregular meanings in the perfect construction. They usually are used with a progressive function.³¹ For example,

- (258) Jin in be-neq r- ič'in n - Ø - i - n - be-ban-a? pu rixa š - i - ru - q'et.
 I A1 go- pf E3-for TAM-A3-ep-E1-go- do-md but she TAM-A1-E3-stop
 I was going to do it but she stopped me. (FMP 15.64)
- (259) Rixa Ø pe-te-naq vakami r- ič'in j - i - ru - k'ul-u?
 she A3 come-pf now E3-for TAM-A1-E3-find-md
 She is coming now to find me. (FMP 15.79)

The perfect may be combined with other categories, namely voice and some derivational suffixes. The antipassive has a special form in the perfect, -j. A vowel is sometimes reduplicated from the root vowel before the suffix. The antipassive is

³¹ This fact was noted by Blair et al. (1969: 33).

followed by the regular perfect suffix for a transitive verb, even though an antipassive verb is intransitive. As in non-perfect antipassives, the absolutive person marker indicates the agent and the verb phrase is intransitive.

- (260) Xari q'abarik Ø ban-a-j-on ši-r-e re?, š - Ø - ča qa ri nu-č'itite?
 then drunkenness A3 do-ep-ap-pf to-E3-to this, TAM-A3-say prt art E3- aunt
 Then it is drunkenness that has done this to him, my aunt said to herself. (Coyote
 Tum, 1978: 2)

- (261) Xa rixa?ri Ø čap-a-j-on ri iğel bej
 it-is she comp A3-take-ep-ap-pf art bad road
 It is she who has taken the bad road. (FMP 12.144)

The passive perfect is formed with a null suffix likewise followed by the perfect suffix for a transitive verb, i.e., with the -Vn ending. An absolutive person marker precedes the verb and indicates the subject of the passive sentence. There is no ergative form prefixed to the verb, and this constitutes the only formal difference between passive and active transitive perfects.³²

- (262) In č'aj-on
 A1 hit - pf
 I have been beaten.
- (263) E? kam-sa- n
 A6 die-cau-pf
 They have been killed.
- (264) Rixa kan Ø k'at-on
 he prt A3 burn-pf
 He has been burned (FMP 15.44)

The perfect ending may also be combined with the resultative passive, by simple suffixation. The intransitive perfect ending comes last.

- (265) e č'et-[ilax-neq]
 A6 see - rp - pf
 they have been seen (various times). (MAC 10/85)

³² The only other mention of the perfect passive I have seen is Dayley (1981b: 25), who calls it the "adjectival passive."

(266) e-ban-a-tax-neq v-uma jĭn
 A6 make-ep-rp - pf E1-by I
 They have been made by me. (SCT)

(267) *e-č'et-[t]ax-neq v-uma jĭn
 A6 see- rp - pf E1-by I

Cakchiquel can even have an iterative resultative perfect, as in:

(268) Ač'ike e ban-a-tax-l-on
 quest B6 do-ep-rp-iter-pf
 How have (several things) they occurred?

4.11 Verbal Nouns

Like the perfect, this class has features of both nominals and verbs. Verbal nouns are nominal-like in that they lack TAM, movement prefixes, and derivational suffixes. Like verbs, however, they can take voice suffixes. Intransitive verbal nouns are formed by adding the suffix -Vl, -len, or -nen to positional roots. -Vn or -ĭk is added to other intransitive roots and stems. The choice of suffix is lexically specified. For instance,

(269) paʔ-el	standing (paʔ-: stand)
joto-nen	climbing (jot-: climb)
č'uju-len	sitting (č'uʃ-: sit)
kam-ik	dying (kam: die)
var-an	sleeping (ver: sleep)
eč'an-en	playing (eč'an: play)

Verbal nouns are formed from transitives by adding -ĭk to either a passive or an antipassive verb form, which actually are intransitive. For example,

(270) banĭk	making (-ban: is made)
kamisašĭk	killing (-kamiseš: is killed)
č'ajonĭk	hitting (-č'ajon: hit (ap))

Verbal nouns are used like other nouns, and they are also used in subordinate clauses. In the latter case, patients of transitive actions are marked with a possessive ergative prefix on de-passive verbal nouns. Observe some examples.

- (271) N - Ø - u - čop ru - řiba - ř - řk
TAM-A3-E3-grab E3-write-ps-nom
S/he begins writing it.
- (272) N - Ø - u - čop atin - řk
TAM-A3-E3-grab bathe-nom
S/he begins to bathe.
- (273) ř - e - taxin če qa-čaj-o - ř- řk
TAM-A6-be-in-process prep E4-hit-ep-ps-nom
They were in the process of hitting us.
- (274) ř - e - taxin če eřan-en
TAM-A6-be-in-process prep play-nom
They were in the process of playing.
- (275) Ačike ru- ban - Ø - řk?
quest E3-make-ps-nom
What is it like?
- (276) ř - Ø-k'ačox če kam-isa- n - řk
TAM-A3-quit prep die-cau-ap-nom
He quit killing (he was a butcher by profession).
- (277) Ůř n - Ø - i - ki -na? ri kanu -n - řk
good TAM-A3-ep-E6-like art hunt-ap-nom
They like hunting.

The perfect and verbal noun suffixes are summarized in table 21.

TABLE 21
PERFECT AND NOMINALIZING SUFFIXES

Perfect	Nominalizers
neq	VI
an	nen
VI	len
(V)n	Vn
	řk

Thus concludes the presentation of the Cakchiquel verb morphology. In the next chapter inherent aspectual semantics of verbal roots are examined. This is followed

in chapter six by more discussion of the Cakchiquel verbal system, focusing upon the interaction of its elements.

CHAPTER V

CAKCHIQUEL VERBAL SEMANTICS AND SYNTHETIC VERBAL CATEGORIES

5.1 Introduction

Recall from chapter three the discussion of lexical and synthetic manifestations of verbal categories. Verbs have inherent semantic qualities which are lexical expressions of verbal categories such as aspect, mood, transitivity, etc. In order to understand the verbal system of a language, these verbal semantics should be taken into account. In this chapter the inherent aspectual semantic qualities of Cakchiquel verbs are investigated, drawing upon the work of Vendler (1967), Dowty (1979) and Foley and Van Valen (1984).

Vendler (1967) identifies four semantic aspectual classes into which he divides the verbs of English. They are stative, accomplishment, activity, and achievement verbs. He suggests several syntactic test frames into which verbs can be inserted to determine class membership. Dowty (1979), working within model-theoretic Montague Grammar, sought a compositional model of lexical semantics. He turns to the Vendler classes, but makes finer distinctions and revises the test frames. He then explains the aspectual semantics of verbs as combinations of stative predicates with sentential operators or connectives. Foley and Van Valen (1984), who are concerned primarily with predicate-argument relations, make further revisions in the logical structures of verbs proposed by Dowty and they add semantic argument relations to the classifications.

This chapter is organized in two parts. In the first part, the Vendler-Dowty test frames, which were devised for English, are applied to Cakchiquel verbs with the

following goals in mind. First, to see if the frames can serve as adequate testing devices in a language other than English, and what revisions are necessary. Second, if the tests are adequate, to determine the aspectual classes of Cakchiquel verbs and see if there are correlations between semantic and formal classes. Finally, recalling that aspect can be expressed synthetically, to see what effect the various TAMs have on the semantic class of a verb. There are several results of this study, which are discussed more thoroughly below. Many, but not all of the tests proved adequate for classifying the Cakchiquel verbs. They needed some revisions, of course, and careful attention had to be paid to the meaning and context of the verb in the whole sentence. The verbs were often found to have lexical ambiguities, depending upon the syntactic context, such that some verbs fall into more than one aspectual class. The most surprising result was that TAMs appear to have very little influence on the aspectual class of a verb.

The second part of this chapter deals with the logical structures of aspectual classes as described by Dowty, Foley and Van Valen. The Cakchiquel verbs are further considered from this point of view, and the effect of derivational morphology on aspectual class is observed.

5.2 Part One

5.2.1 Vendler-Dowty Tests

The Vendler-Dowty test frames and their expected results for each aspectual class are recapitulated in table 22, after Dowty (1979: 55-123), and are followed by some illustrations.

TABLE 22

DOWTY TESTS

Tests	Statives	Activities	Accompl.	Achieve.
1. Vb 'for' X time(t)	OK	OK	some	*
'spend' t Vb-ing	OK	OK	some	*
2. 'force', 'persuade'	*	OK	OK	*
3. 'finish'	*	*	OK	*
4. control adv	*	OK	OK	*
5. 'almost' is ambiguous	no	no	does nothing began, not finished	no
6. X Vb-s	non-habitual	habitual	habitual	habitual
7. X Vb-d 'for' t	X Vb-d 'all' t	X Vb-d, repeatedly	*	*
8. X Vb-s, Vb-d 'in' t	*	*	OK	OK
9. 'take' t 'to' Vb	*	?, t before starting	duration of action	duration of process
10. X Vb-d 'in' t	*	*	X 'was' Vb-ing 'in' t	≠ X Vb-d 'all' t
11. X 'is' Vb-ing	*	X 'has' Vb-d	X 'not yet' Vb-d	some
12. X 'stopped' Vb-ing	OK [sic]	X 'did' Vb	X 'in process of' Vb-ing	*
13. imperative	*	OK	OK	*
14. Pseudo-cleft	*	OK	OK	*
15. instrumental PP	*	OK	OK	*

NOTE: * means that the verb is bad in that frame.

- John loved Joan for 2 years. John spent 2 years doubting his decision.
John ran for 2 hours. John spent 2 hours running.
?John walked a mile for 2 hours. John spent 2 hours walking a mile.
*John solved the problem for 2 hours. ?John spent 2 hours solving the problem.
- *Joan forced John to understand it. *Joan persuaded John to understand it.
Joan forced John to play cards. Joan persuaded John to play cards.
Joan forced John to write the letter. Joan persuaded John to write the letter.
*Joan forced John to discover the prize. *Joan persuaded John to discover the prize.
- *Mary finished smelling the odor.
?Mary finished lying down.
Mary finished eating the pie.
*Mary finished arriving.
- ?Stu liked beans intentionally. *Stu liked beans carefully.
Stu smoked intentionally. Stu smoked carefully.
Stu dug a hole intentionally. Stu dug a hole carefully.
*Stu realized the answer intentionally. *Stu realized the answer carefully.

5. Ralph almost built a house. (can mean he started and did not finish, or that he never started. All other types have only the latter meaning.)
6. Susan resembles her cat. (has no habitual meaning, which all other types do).
7. John loved Joan for 2 years. (John loved her all during the 2 years.)
John ran for 2 hours. (can mean "all during" or "repetition")
8. *Margaret hears the bell in two minutes. *Margaret heard the bell in two minutes.
*Margaret dances in two minutes. *Margaret danced in two minutes.
Margaret draws a picture in two minutes. Margaret drew a picture in two minutes.
Margaret detects the flaw in two minutes. Margaret detected the flaw in two minutes.
9. George took an hour to be jealous of her.
?George took an hour to smile. (questionable or "before he smiled.")
George took an hour to stack the cards. (the duration of his action)
George took an hour to reach the finishline. (duration of the process leading up to the reaching.)
10. Margaret drew a picture in two minutes. (during the two minutes she was drawing the picture).
Margaret detected the flaw in two minutes. (she was not detecting the flaw for the duration of the two minutes, only at the end of them).
11. *Paul is noticing the damage.
Paul is painting. (Paul has painted some).
Paul is painting the room. (Paul has painted some of the room; he is in the process of painting the room).
*Paul is recognizing his friend.
12. *Jan stopped having a dog.
Jan stopped sleeping in the afternoons. (Jan had slept in the afternoons).
Jan stopped reading the book. (Jan had been in the process of reading the book, or had read some of the book.)
*Jan stopped spotting the thief.
13. *Know it!
Work!
Eat your spinach!
?Discover the answer!
14. *What Fred did was know the answer.
What Fred did was swim.
What Fred did was erase the blackboard.
*What Fred did was reach Boston.
15. *Emily disliked the weeds with ?.
Emily ate with a fork.
Emily cooked a turkey with her microwave.
*Emily remembered the answer with her head.

A few clarifications are necessary. First, some accomplishments pass test #1 while others do not. This suggests that there is a subdivision within this class. Although

it is not included above, Dowty says a certain type of accomplishment presents an ambiguity under test #7, 'X Vb-d for t'. Accomplishments which have permanent resultant states are ambiguous between repetition or duration of the state when in this frame (1979: 58). His example is

- (1) The sheriff of Nottingham jailed Robin Hood for 4 years. (#36a)

It would be interesting to see if this subdivision correlates with the one revealed by #1. Likewise, there seem to be possible further divisions of activities and achievements based on tests #9 and #11, respectively. Finally, Dowty says that statives can appear with 'stop', which I interpret as meaning that statives can appear in the frame "X 'stopped' Vb-ing" (#12). This is inconsistent, however, with the fact that statives cannot appear in progressive constructions, as in #11.

5.2.2 Cakchiquel Test Frames

In order to set up the Cakchiquel test frames from the Vendler-Dowty model, I first translated the English frames to Spanish. These Spanish sentences, completed with the neutral verb 'hacer', "to do," were presented to my informants, who are bilingual in Spanish and Cakchiquel. They translated the Spanish sentences to Cakchiquel. After some discussions about the situations denoted by these frames and several revisions, we finally arrived at the Cakchiquel test frames. Test numbers 6, 7, 10, 14, and 15 from table 22 were not used for the final results either because they could not be translated adequately into Cakchiquel or they failed to give any distinguishing results among verbs. Here are the English frames, the Spanish intermediaries, and the Cakchiquel equivalents which I used, with literal and free translations. The numbers correspond to those in table 22. Sometimes there are different possibilities depending on the dialect, and differences within the sentence of one dialect depending on whether the verb is transitive or intransitive.

- 1a. The man ___ for two hours.
El hombre ___ por dos horas.
- Ri ačín ___ (čin) ka?i ora. (xuna?; ik')
art man ___ (for) 2 hour (year; month)
- 1b. The man spent two hours ___ing.
El hombre pasó 2 horas (haciéndolo).
- Ri ačín š - Ø - i -k'oxe či ka?i ora ri ___ .
art man TAM-A3-ep-pass at 2 hour that ___
- Ri ačín š - Ø -q'aš ka?i ora či ___ .
art man TAM-A3-pass 2 hour at ___
- 2a.i. Pedro forced the boy to ___.
Pedro forzó el niño a (hacerlo).
- Ri ma Luč š - Ø - u - ben puerša či ri ala? ___
art hon Pedro TAM-A3-E3-make force that art boy ___
- (ri čikōp/ ri če/ ri vŭx).
(art animal/art tree or stick/ art book)
- 2a.ii. Juan ordered Juan to ___.
Pedro obligó/compeló el niño a (hacerlo).
- Ri aš Xuan š - Ø - u - teq ču/či ___ ri šta Xuana
art hon Juan TAM-A3-E3-order that ___ art hon Juana
- (ri čikōp/ ri če/ ri vŭx).
(art animal/art tree or stick/ art book)
- 2b. The man persuaded the boy to ___.
El hombre persuadió/indució/movió/influyó el niño a (hacerlo).
- Ri ačín š - Ø - u - č'ek na vi? čin ri ala? ___
art man TAM-A3-E3-persuade prt prt to art boy ___
- (ri čikōp/ ri če/ ri vŭx).
(art animal/art tree or stick/ art book)
3. The woman finished ___ing.
La mujer terminó de (hacerlo).

Ri išóq § - Ø - k'ačox (jan) či/če/ču ____ .
 art woman TAM-A3- finish (already) at ____

- 4a. ____ carefully.
 ____ cuidadosamente.
 ____ r - ik'in xanila ru- čil.
 ____ E3-with much E3-care
- 4b. ____ intentionally.
 ____ intencionalmente/deliberadamente/premeditadamente.
 R - ik'in ru- no?ox ____ .
 E3-with E3-thought ____
5. (Someone) almost ____ .
 Casi ____ .
 (Xu)bama ____ .
 almost ____
8. (Someone) ____ in two hours.
 ____ en 2 horas.
 Pa ka?i ora ____ .
 in 2 hour ____
9. (Someone) took two hours to ____ .
 Tardó 2 horas en (hacerlo).
 § - Ø - u - k'uax ka?i ora če/ču/či ____ .
 TAM-A3-E3-carry 2 hour at ____
11. He/she is ____ ing.
 El/ella está (haciéndolo).
 Rixa n - Ø - axin če/či/ču ____ .
 He/she TAM-A3-in-process at ____
12. He/she stopped ____ ing.
 El/ella cesó/dejó de (hacerlo).
 Rixa § - Ø - u - tanaba (ri/či)/(ru/ču) ____ .
 He/she TAM-A3-E3-stop/quit at ____

13. imperative
Please, ____.
Por favor, ____.

T - Ø - a -ban- a uñil, ____ .
TAM-A3-E2-do-md favor, ____

5.2.3 Test Verbs

Into these frames my informants inserted forms from a list of 36 verbs I had compiled. The verbs which were selected seemed to be the semantic equivalents of verbs which in English fall into the categories activity, stative, accomplishment, and achievement. In addition verbs were chosen from each formal category in Cakchiquel, and I tried to avoid verbs which were obviously ambiguous. Not surprisingly, however, several turned out to have secondary meanings which surfaced in certain contexts. The list follows, with their formal class and the meanings initially attributed to them.

(2) aleš:	be born (a baby) (IVb) ¹
apon:	arrive (IVb)
atinisax:	bathe it/him (IVb + cau)
bison:	be sad (IVb)
č'ej:	hit it (TVb-1)
č'oke?:	sit down (positional IVb) (Patzún)
exqax:	carry it (TVb)
javex:	be sick (IVb)
kamsax:	kill it (IVb + cau)
k'astex:	wake up (IVb)
ken/kom:	die (IVb-2)
koč'e?:	lie down (positional IVb)
kos:	be tired (IVb)
kusax:	use, spend it (TVb)
k'ule?:	get married (positional IVb)
lukuba?:	lean it (positional + cau)
num:	be hungry (IVb)
ok el X:	become X (IVb, semantically transitive)
ok pa xaj:	enter the house (IVb)
oq':	cry (IVb)
paba?:	1. build it 2. stand it up (positional + cau)

¹ This verb is actually a passive of 'alax', "to deliver." It is, however, more common than its active counterpart.

rixix:	get old (IVb)
silon:	move (IVb)
šaxon, šaxo?:	dance (IVb)
šuke?:	kneel (positional IVb)
tex:	eat it (TVb-1)
to?:	help it/him (TVb-2)
ɕeʔen, ɕiʔen:	laugh (IVb)
ɕuʔ:	see it (TVb-2)
ɕ'ibax:	write it (TVb)
ɕ'uje?:	sit down (positional IVb) (Comalapa)
ušlan:	rest (IVb)
vaʔ:	eat (IVb)
ver:	sleep (IVb-2)
xixq':	drown (IVb)
xote?:	go up (positional IVb)

The informants took each verb and plugged it into each sentence frame. In some cases, the infinitive was required. Where this was not the case, they used verbs in j/n- and in š- TAMs. I started out asking only for yes/no grammaticality judgements for the frames which according to the Dowty model require only a "yes" or "no." I quickly learned that this was not adequate as the initial results showed no clear patterns and often seemed counterintuitive. Instead, complete meanings were needed for all sentences, which were provided by translating the sentences into Spanish. This kind of elicitation showed that many times the meaning of the frame or verb was changed.

In analyzing these data, I considered a verb to satisfy a given test frame only if the frame and the verb meaning each maintain their primary meanings. A "primary meaning" is that one which is given in citation form, or in a simple sentence. It seems to be the most common usage. For example, the verb "drown," 'xixq'', sometimes is grammatical in certain frames, not with the primary meaning of "dying in water," but as "choking" or "gurgling" without a death entailment. Thus by designating a verb to an aspectual class I have had to specify which meaning is involved. With other meanings that same verb may fall into another aspectual class. In two cases, 'paba?' and 'aleš' it was necessary to posit tertiary as well as secondary meanings. Likewise the meaning of

the frame changes in some cases. For example, the frame 'Ri išōq sk'ačox (jan) či ___', "The woman finished Vb-ing" with some verbs is translated as "The woman stopped Vb-ing," the equivalent of frame #12. In these cases, the verb was not held to satisfy the frame test.

5.2.4 Results

Here is a summary of the results, according to aspectual class. Some verbs are listed in more than one class, usually with a different meaning in each case. In the appendix is listed each verb with some comments. The results are discussed below.

Statives

bison	be sad
javex	be sick
num	be hungry

Activities

č'ej	1. hit it 2. shuck corn
č'oke?	be sitting down
exqax	carry it
koč'e?	be lying down
oq'	cry
silon	move
šaxon	dance
šuke?	be kneeling
to?	help (someone)
č'e?en	laugh
ču?	watch, look at it
č'uje?	be sitting
ušlan	rest
va?	eat
ver	sleep
xote?	climb

Accomplishments

atinisax	bathe (something, someone)
kamsax	kill it
lukuba?	lean it
ok pa xaj	enter the house
paba?	1. build it 2. stand it up 3. stop it
tex	eat it
č'ibax	write it

Achievements

aleš	be born (a baby)
apon	arrive
ken/kom	die
k'astex	wake up
kos	get tired
k'ule?	get married
num	get hungry
ok pa xaj	enter the house
rixis	get old
xiq'	drown

5.2.5 Observations

It must be noted that the verb corpus used for this study was not completely randomly chosen, nor is it perhaps a large enough sample on which to base conclusive generalizations. Thus the observations which follow are just that, and it must be kept in mind that further study may provide counterexamples.

First, most of the sentence frames which Dowty and Vendler devised to test category membership are effective in Cakchiquel, and presumably would hold for other languages.

There are some patterns which emerge relating formal characteristics of verbs to aspectual semantic types. Transitivity, which we have seen is an important category in Cakchiquel, has correlations among aspectual types. Most of the transitive verbs in this sample are accomplishments, with the exceptions of 'žu?', "watch it," 'to?', "help him/her," 'č'ej', "hit it," and 'exqax', "carry it," which are activities. Likewise, all of the accomplishments are transitive, except 'ok el', "become" and 'ok (pa jax)', "enter." 'Ok el' is an idiom composed of the verb 'ok' and the directional particle 'el', "out, away." Although the idiom is formally intransitive, it is synthetically transitive, which helps account for its accomplishment status. 'Ok' was found to have mixed features of an accomplishment and an achievement. This accomplishment-transitive pattern lends

evidence to an achievement designation for 'ok', and perhaps the accomplishment features are due to data errors.

Conversely, the intransitives are distributed among achievements, activities, and statives. All achievements and statives are intransitives. This is a surprising result, and contrasts with achievements in English where, for example, 'reach the summit', is a transitive verb phrase, and 'love someone' is a transitive stative. Achievements are often thought of as telic, which implies transitivity (cf. Foley and Van Valen, 1984: 371-2; Hopper and Thompson, 1980). There are only a small number of stative verbs. In Cakchiquel it seems most statives are adjectival, non-verbal predicates (see p. 196). Among intransitive verbs we can distinguish the positional intransitive class as having semantic correlates. They are all activities, with the exception of 'k'ule?', "get married," which is an achievement. The causative derived transitive verbs are all accomplishments (see more discussion below).

When the subject of a sentence is an inanimate object, it is an unusual state of affairs, or a marked occurrence of that argument in that context. Languages often indicate this type of marked nature somehow, for example with passive voice. When a verb of a certain aspectual type is inserted into a sentence frame which is supposed to be incompatible with that type, it is likewise a marked occurrence of that verb. An example would be an achievement verb in a 'force' sentence: "Malcolm forced Horace to drown." In this study, when this happened one of three indicators occurred. Often the sentence was simply ungrammatical. Alternatively, the meaning of the verb or that of the frame shifted from a primary to a secondary sense. We have already seen the secondary meanings for each verb which appear in certain contexts. The following are changes which take place in the meanings of the frames with marked occurrences of verbs.

#1. Some accomplishments are acceptable in this frame, 'Vb for t' or 'spend t Vb-ing' with the meaning "tried to Vb for t," or "the result lasted for t." This latter is found with

the causative positional verbs 'paba?', "stand it up" and 'lukuba?', "lean it" as in, "The house stood for 2 years." With some achievements the result is the same as #8, 'Vb in t', or "be in the resultant state for t."

#3. With accomplishments and achievements, 'finish Vb-ing' sometimes changes to habitual or repetitious meaning. Some sentences are acceptable with a plural object or subject. With activities the frame can mean "quit Vb-ing."

#5. This frame is supposed to distinguish accomplishments from other classes since accomplishments allow a reading where one starts the action but doesn't finish it. This frame doesn't work very well with regard to achievements since as many achievements as accomplishments have this reading.

#8. Some activities are acceptable in this frame with the meaning of "at t" or "after t." Almost all activities in j/n- have the future meaning: "will Vb in t."

#9. Quite a few accomplishments mean "duration of process" instead of the expected "duration of action." This may indicate an inability to understand the distinction either on my part or on the part of the informant. Also the Cakchiquel sentence, which literally means "carried t Vb-ing" may not pick out the same verbs as "take t to Vb." Likewise several activities are acceptable meaning "duration of the action," instead of the expected "t before starting."

#12. Some achievements and activities are permissible in the frame with a habitual meaning.

One other notable observation is that, with the exception of j/n- in frame #8 mentioned above, there are no major changes depending upon the TAM of the verb. The only TAMs considered in this study were j/n- and ʃ-, except for k/t- which was used in all the imperative sentences. The primary and secondary meanings found for verbs did not correlate with TAMs, nor did assignment to more than one aspectual class. This finding is contrary to my initial expectations, since in English tense does make a difference of the

acceptability of a verb in a given context. In four of the frames used, Cakchiquel requires an infinitive form of the verb. This should not make a difference, however, since many of the English versions also require an infinitive or -ing (gerund/progressive) form. In English, many sentences with present tense verbs are interpreted as habitual, as in "She climbs a tree for an hour." In Cakchiquel, *j/n-* can have a diversity of interpretations, including present, past non-completive, habitual, and future. Its flexibility allows *j/n-* to combine with all the aspectual types of verbs.

5.3 Part Two

5.3.1 Logical Structures

As mentioned above, Dowty posits logical structures for the four aspectual classes based on stative predicates plus operators such as *DO*, *BECOME*, and *CAUSE*. Thus the meaning of a (non-stative) verb is a function of a stative predicate. Dowty also makes further classifications using the notions of agency versus non-agency and interval versus momentary. Foley and Van Valen take these classifications and refine them still further. They also attribute semantic relations to the arguments in the logical structures of each class. The Dowty system with Foley and Van Valen's additions is recapitulated in table 23 (after Foley and Van Valen, 1984: 39, 47-53).

TABLE 23

DOWTY-FOLEY AND VAN VALEN ASPECTUAL SYSTEM

Verb Class	Logical Structure	Semantic Relation
I. Stative Verbs		
A. Locative	be-at' (x,y)	x=theme y=locative
B. Non-locative		
1. State or condition	predicate' (x)	x=patient
2. Perception (e.g., 'see')	predicate' (x,y)	x=locative y=theme
3. Cognition (e.g., 'believe')	predicate' (x,y) y=theme	x=locative
4. Possession	have' (x,y)	x=locative y=theme
II. Achievement	BECOME predicate' (x)	x=patient
III. Activity Verbs		
A. Potentially controllable		
1. Controlled	DO (x, [predicate' (x)])	x=agent
2. Uncontrolled	predicate' (y)	y=effector
B. Motional (e.g., 'fall')	predicate' (x)	x=theme
IV. Accomplishment	π CAUSE Ω (where π is normally an activity verb and Ω an achievement verb)	

NOTE: x and y are argument variables. Bold words are predicates. Words in all capitals are sentential operators.

While in this dissertation I am not concerned with the logical structures or semantic relations of aspectual predicates per se, the classifications and the logical structures of this system provide useful tools to further investigate the aspectual nature of Cakchiquel verbs. In identifying verbs which have the logical structures in table 23, several generalizations about the relation of semantic classes to formal manifestations can be made.

5.3.2 Observations

It was discovered that very few of the Cakchiquel verbs investigated in part one are statives. The stative verbs which were found are all "condition or state" statives: 'bison', "be sad," 'javex', "be sick," and 'num', "be hungry." The remaining state or condition statives in Cakchiquel are adjectival predicates. These include adjectives and intransitive perfects, and are always preceded by an absolutive pronominal marker. For example,

- | | | | |
|-----|--|---|---|
| (3) | ĵin in kikit
I A1 happy
I am happy | rat at ŷĉ
you A2 good
you are good | rixa Ø nĭm r-aqen
s/he A3 big E3-leg
s/he is tall |
| | rox ox pa? -el
we A4 stand-pf
we are standing
we have stood | rĭš is ĉ'uj-ul
you A5 sit- pf
you are sitting
you have sat | rixe e? kami-neq
they A6 die - pf
they are dead |

Notice that the perfect and adjectival forms of positional intransitives are the same, and can be translated two ways into English.

Locative and possession statives in Cakchiquel are expressed the same way, with the copula 'k'o.' Foley and Van Valen note the similarity and frequent confluence of these two types of statives (1984: 48). For example,

- | | | |
|-----|--|--|
| (4) | Rat k'o vave.
you be here.
You are here. | Rat k'o xun ĉ'ĭ?
you have a dog.
You have a dog. |
|-----|--|--|

Perception and cognition statives in Cakchiquel are transitive, for example, 'ĉ'et', "see," 'ak'ašax,' "hear," 'mal,' "feel (touch)," 'noxix,' "think about, believe," and 'na?', "feel (sense)." 'Ak'ašax' and 'noxix' are from atransitive roots, and their intransitive counterparts are activity verbs: 'ak'ašan,' "listen," and 'noxin,' "think." The stative predicate "know" is irregular. It is a perfect of the transitive verb 'etamax,' "learn." Thus we find

- (5) j̃in Ø v-etama-n
 I A3 E1-learn-pf
 I know it. (literally, "I have learned it.")

It was mentioned that the achievement verbs investigated above are all intransitive. With the exception of 'k'ule?', a positional intransitive, they were also all underived intransitive roots. There is another type of achievement in Cakchiquel: the intransitive verbs which are derived from adjectives with -Vr. -Vr means "become adj," (see §4.6.1.2) and its achievement status is consistent with the logical structure of achievements being operator BECOME plus stative (adjectival) predicate. For example,

- | | | | | |
|-----|--------|-----------|------|----------|
| (6) | ñim | nimer | baq | baqir |
| | big | get big | thin | get thin |
| | q'alax | q'alaxir | čeq | čaqir |
| | clear | get clear | dry | get dry |

Turning to activity verbs, recall that positional intransitives like 'čoke?', "be sitting down" were found to be in this class. They generally mean "be Vb-ing." I hesitate to call them controlled activities since the actor does not do much (cf. controlled activities 'swim,' 'walk,' and 'talk' [Dowty, 1979: 163]), but rather is in a certain position. Yet they pass the "control" test frames above, i.e., numbers 2, 4, and 13, unlike statives and two non-positional activity verbs, 'oq', "cry," and 'če?en', "laugh." 'oq' and 'če?en' are clearly uncontrolled activities. Likewise positional intransitives are not movement activities like 'fall' and 'roll.' In addition to positional intransitives there are verbs like 'var,' "sleep" and 'ušlan,' "rest" which also seem to lack control yet are not movement activities. Foley and Van Valen admit that "like Dowty we have been unable to provide a succinct logical formula to account for activity verbs,..." (1984: 51-52), and these Cakchiquel verbs seem to fall outside any of their classifications. I suggest a logical structure for them something like DO be-in-y' (x), where x is a theme (the agent) and the predicate contains y, which is a locative.

There are many controlled activities, however. These include

(7)	č'ej:	1. hit it 2. shuck corn
	exqax:	carry it
	silon:	move
	šaxon:	dance
	to?:	help someone
	çu?:	watch, look at it
	va?:	eat

Likewise there are some movement activities, such as 'çaq,' "fall."

Accomplishments are formed in Cakchiquel by causativizing statives, activities, achievements and atransitive positionals. The causative suffixes are -V-, -(i)sa- and -ba? (see §4.5.2). This is consistent with the logical structure π CAUSE Ω . Observe these examples.

stative

bison	be sad	bisox	make sad
-------	--------	-------	----------

activity

atin	bathe oneself	atinisax	bathe someone
------	---------------	----------	---------------

achievement

kam	die	kamisax	kill
saqir	become white	saqirisax	make something white

atransitive positional

ç'uj-	sit	ç'ujuba?	sit it down
pa?-	stand	paba?	stand it up

There is one more point about the relation between verbal morphology and aspectual semantics which needs to be discussed. Recall from §4.6.3 that there are a series of adverbial derivational suffixes in Cakchiquel. Unlike the intransitivizing or causative suffixes mentioned in the preceding paragraphs, adverbial suffixes do not produce verbs of a particular aspectual class. Being adverbial, though, they function like test frames to determine the class of the verb to which they are affixed.

-šta-, the time intensifier has two meanings, "quickly" and "all at once" or "suddenly" (see §4.6.3.1). It turns out that one can learn about the aspectual nature of

the verb by the meaning -šta- has in a given verb complex. With accomplishment verbs, it can have either interpretation, for example,

- (8) š - Ø - e - kam - sa - šta - x
 TAM-A3-E6-die-cau-int-act
 They killed it quickly, at once. (MAC 10.14)

With achievements, it only has the punctual meaning.

- (9) šta ši?š š - Ø - biso - šta - n r - uma š - Ø - u - čeq
 hon Patricia TAM-A3-sadden-int-act E3-because TAM-A3-E3-lose

ru -mero.

E3-money

Doña Patricia became sad at once when she lost her money. (MAC 15.134)

There are few statives with -šta-, partially because it is a verbal suffix and there are few stative verbs. But in one example I found, the stative verb allows an alternate, achievement meaning.

- (10) š - in - num - šta - n
 TAM-A1-hungry-int-act
 I got hungry immediately.

With the two activity examples in my corpus, -šta- gives the verb phrase an inchoative interpretation.

- (11) šk - Ø - i - be - šta - n či r - ojo - š - ĩk
 TAM-A3-ep-go-int-act for E3-call-ps-nom
 I'll go immediately to call him. (MAC 9.69)

Sentence (11) means that I will leave immediately.

- (12) N - Ø - t - oq' - šta - n pe ri ak'val vi šk - at - el el
 TAM-A3-ep-cry-int-act loc art boy if TAM-E2-leave loc
 The boy starts to cry immediately if you leave. (MAC 9.76)

As a test frame, -šta- is reminiscent of #9 in table 22, "take t to Vb." That test does not allow statives, and with activities t means the time before starting the action. With accomplishments, t is the duration of the action and with achievements, the duration of the process. In -šta- cases, t is a very short time, sometimes interpreted as instantaneous.

The iterative suffixes, discussed in §4.6.3.2 can also act as test frames. They are most compatible with activity verbs, and almost all my examples of them are affixed to activities. In one example of an iterative suffix on an achievement verb, the verb is interpreted as an activity.

- (13) Ri ačín čeq š - Ø - apo - la - n ču - r - ačo ri šta María
 art man only TAM-A3-arrive-iter-act at-E3-house art hon María
 The man just kept coming to María's house. (FMP 12.6)

The same happens in an example with a stative verb.

- (14) n - Ø - i - ki - č'et-č'a - la?
 TAM-A3-ep-E6-see-iter - iter
 They just keep looking at him. (FMP 10.59)

I have no examples with accomplishment verbs. It is possible iterative accomplishments would be acceptable, though, since several of Dowty's tests which filter out statives and achievements allow both activities and accomplishments. To determine this, however, would require native judgements.

I also have no data on how voice categories interact with semantic aspectual categories. This is an area which needs further research.

5.4 Summary

In conclusion, by using the frameworks of Vendler, Dowty, and Foley and Van Valen, much has been revealed about the inherent aspectual semantics of Cakchiquel verbs. The Dowty-Vendler test frames gave initial insight into the aspectual classes and lexical ambiguity, and a logical structure model allowed discovery of more generalizations. To review, the stative predicates in Cakchiquel are made up of many types of constructions, including intransitive and transitive verbs, adjectival predicates, intransitive perfects and copular constructions. Locative and possessive statives are conveyed with the copula 'k'o.' State and condition statives are expressed by adjectival

predicates, intransitive perfects, and a few intransitive verbs. Perception and cognition statives are expressed by transitive verbs.

The achievement class is made up of simple intransitive verbs and other intransitives derived from adjectives with the suffix, -Vr, which means "become adj." It is surprising that achievements in Cakchiquel are intransitive, since these actions are usually telic, and telicity has been associated with transitivity.

Cakchiquel has controlled, uncontrolled and movement activities. They are both intransitive and transitive, and have no other formal characteristics that I have observed. There is also a class made up of positional intransitives and a few other verbs, which do not seem to fit into any of the preceding subclasses. They mean "be in a position or condition." Iterative derivational suffixes have affinities with activity verbs, and can be used to test for them.

Accomplishments in Cakchiquel are transitive verbs. Three causative suffixes, -V-, -(i)sa-, and -ba? form accomplishments from statives, activities, achievements and positionals. Finally, the adverbial suffix -šta- can be used to test for aspectual class, as its different interpretations surface with different types of verbs.

CHAPTER VI

CONCLUSION

6.1 Abstract-to-Concrete Perspective

As discussed in chapter three, most of the foregoing analysis was done from the concrete-to-abstract perspective. In this chapter the data will be reviewed from the opposite viewpoint, abstract-to-concrete. In other words, starting from the assumption that verbal categories, primarily tense, aspect, mood, and voice, are expressed in Cakchiquel, how and at what levels are they expressed? For a guideline in answering this question, I will again appeal to the dimensions of expression delineated in chapter three. The first dimension of expression contrasts morphosyntactic, lexical-derivational, and synthetic levels. The second dimension of expression is covert versus overt, and the last is surface or formal versus underlying or semantic.

The underlying or semantic category of aspect has a surface or formal manifestation morphosyntactically in the TAM prefixes, especially in *ʃ-* and *j/n-*. Aspect also plays a role in the resultative passive voice and in the perfect. On the lexical level, it is expressed in the inherent verbal classes discussed in chapter five which are also examples of covert expression. An overt lexical instance is found in the particle 'na?'. Among other meanings (see below) 'na?' can mean "continuative." For example,

- (1) Ri Xuan n - Ø -eʃiʔen naʔ
art Juan TAM-B3- play prt
Juan is **still** playing (or he **keeps** playing).

There are also adverbs with aspectual meaning, such as 'k'ate?', "suddenly" and 'čanin', "quickly." Aspect is manifested in some of the derivational suffixes, namely, the iterative

-la?, -jax, -C₁a?, and also the intensifier -šta-. These are aspectual in that they qualify (as opposed to quantifying) some facet of time with respect to the action of the verb.

Tense is most obviously found in TAM prefixes. šk/št- is a future tense marker, and k/t- has a past function (see §§ 4.2.2 and 4.2.3). š- and j/n-, while semantically aspectual, are frequently interpreted as past and present, respectively (see §§ 4.2.4 and 4.2.5). Tense is also manifested lexically, in adverbs such as 'mier', "a little bit ago," 'čuaq', "tomorrow," 'vakami', "now, today," and 'oxer', "long ago." There is a post-verbal particle, 'ken/kan',¹ whose primary function is locative but it also has temporal meaning. 'šuja ken', literally "he put it behind" means "he left it." With adjective phrases and some perfects 'ken' gives a past time meaning. For example,

- | | | |
|-----|-----------------------|----------------------------|
| (2) | jīn in k'ašinel | jīn in k'ašinel <u>ken</u> |
| | I B1 important | I B1 important past |
| | I <u>am</u> important | I <u>was</u> important. |

Likewise another locative 'apo(n)² usually means "over, across." It can also mean future time, as in

- | | |
|-----|--------------------------|
| (3) | xun semana apo(n) |
| | a week future |
| | one week <u>from now</u> |

Finally, a future tense meaning is also implied by the movement prefix -be?-, "movement away from" in certain contexts.

- | | | |
|-----|--|--------------------------------|
| (4) | jīn taq šk - i - be - k'ul - e? | j - i - be ri - ik'īn kikitōn. |
| | I when TAM-A1-mov-marry-cau TAM A1-go E3-with happiness | |
| | When I marry I'll be happy (go with happiness). (MAC 9.20) | |

Modal meaning is primarily an inflectional category in Cakchiquel. It is found in the TAM prefixes, and also in the modal reduplicative suffix. There are several particles in Cakchiquel which, although not fully understood, have modal meanings as

¹ In Comalapa the form is 'kan' while in Patzún it is 'ken'.

² In Comalapa the form is 'apo' while in Patzún it is 'apon'.

well as other functions. 'Na?', in addition to its aspectual meaning mentioned above, often has an assertive sense. It is also required after a k/t- verb with a first person singular subject.

- | | | |
|-----|------------------------|--------------------|
| (5) | t - Ø - in-ban -a na? | *t - Ø - in -ban-a |
| | TAM-B3-A1-do-md prt | TAM-B3-A1-do-md |
| | I <u>should</u> do it. | |

'Ta' is another particle with modal meaning. It means "irrealis" and occurs in hypothetical and negative statements.

- | | | |
|-----|-------------------|--------------------------|
| (6) | Man š - i - be ta | vi in ta bejon... |
| | neg TAM-B1-go prt | if B1 prt rich |
| | I didn't go. | If I <u>were</u> rich... |

The movement prefixes are also modal in their intentional, declarative usage.

Motion is also an underlying category of Cakchiquel. It is expressed on the surface derivationally in the movement prefixes -be?- and -o?-. Likewise several derivational suffixes have meanings which convey some type of motion. For example, -C₁₀? means "to fall in a certain way" and -ma?j, "to move in a way that is not normal or straight." The locative post-verbal particles also involve movement.

The semantic category of transitivity has numerous surface manifestations in Cakchiquel. The main locus of the voice subcategory is in the inflectional suffixes: active, passive, resultative passive, and antipassive. The causative and (de)transitivizing derivational suffixes are other examples of surface expression of deep transitivity. Formal transitivity of a verb can be seen by the presence or absence of ergative person markers on the verb. Thus transitivity has covert expression in the person markers. In addition, transitivity has expression in the Cakchiquel nominal system. This fact was also observed by John Robertson (personal communication). He notices that many nouns, primarily body parts have a suffix in their unpossessed form which is absent when they are possessed. Robertson suggests that this suffix is the nominal equivalent of

verbal voice. It serves to mark an inherently transitive, or inalienably possessed noun when it is in an intransitive form. For example,

- | | | | | |
|-----|-----------------------|--------------------|-----------------------|--------------------|
| (7) | xun vačax
an eye | nuveč
my eye | xun xolomax
a head | nuxolon
my head |
| | xun tiʔex
a mother | nuteʔ
my mother | xun aqanax
a foot | vaqen
my foot |
| | xejax
a tail | ruxej
his tail | viʔax
hair | nuviʔ
my hair |

In addition, my data reveal some nouns which apparently are inherently intransitive, and must take a suffix when they are possessed. Whereas the suffix in the above examples would be the nominal equivalent of a passive or antipassive, the suffix in the following examples would correspond to a causative voice, since it increases the valence.

- | | | | | |
|-----|----------------|-----------------------|--------------|---------------------|
| (8) | k'ik'
blood | nuk'ik'eɭ
my blood | baq'
bone | nubaq'il
my bone |
| | sib
smoke | rusibil
its smoke | | |

Person and number are both expressed in the inflectional person markers. They likewise are indicated by the independent pronouns, and by the person markers in their other functions, namely possession and nominal complement markers. Number is also found inflectionally in the plural suffixes of some nouns. On the lexical level, the pluralizing particle 'taq' often precedes plural noun phrases. For example,

- (9) Ri taq čikop- iʔ eʔ ůʔ.
art pl animal-pl B6 good
the animals are good.

There is also a derivational expression of number which is covert. Achievement verbs with an iterative suffix such as -laʔ can only be understood as having a plural subject. This meaning is possible regardless of whether the person marker is plural or not. For example,

(10) § - Ø - xiq' - la?
 TAM-A3-drown-iter
 They drowned.

§ - Ø - rixi§ - la?
 TAM-A3-get old-iter
 They got old.

Recall from §4.3.3 that singular person markers sometimes are used when the referent is plural. It is interesting to note that repetition is conceptually related to plurality. To do something over and over is like pluralizing the action. With respect to Cakchiquel, there is still another connection. 'la?' is also the form of one of the plural suffixes which affixes to some nouns. I do not know if there is a real connection or if this is merely a case of homophony.

As may have been observed in the foregoing discussion, person, number, and transitivity are not only verbal categories in Cakchiquel, but they are also nominal categories. It is not so uncommon to find person and number expressed in both nominals and verbs, but nominal voice-like categories are rare.

6.2 Structure

Now that the Cakchiquel verb has been presented and its component parts analyzed, what structure of the verbal system as a whole is revealed? Moving up one level from the examination of how semantic categories are manifested in the verb, it is valuable to observe how these categories intersect.

The most obvious example of categorial intersection is in the TAMs, which are so named for the fact that the category is a blend of tense, aspect, and mood. §- combines elements of tense and aspect (past and completive), as does j/n- (present, future, and non-completive). j/n- also has a modal interpretation when it is contrasted to §k/§t- and is used as affirmation (see example #71, chap. 4). §k/§t- is a combination of tense and modal semantics as a future. It is not uncommon among languages for future to have both modal and tense connotations (see Lyons, §17.3). Likewise, the Cakchiquel TAM k/t- (like the English and French pluperfects) allows both irrealis and past interpretations, depending upon the context.

Tense and aspect also intersect in the perfect and in the resultative passive. In both these cases the category of voice also contributes. In the perfect, voice has a stative meaning, as it does in the resultative passive. But in the resultative passive the passive voice is also involved.

Tense intersects with mood in other forms, namely in the movement prefixes. '-be?-' can have a future tense or an intentional modal interpretation. Here is another instance of the future-modal connection mentioned above. Semantic categories of space and motion also contribute to the meaning of the movement prefixes.

Aspect intersects with mood also in the particle 'na?'. 'na?' has many functions and it is difficult to determine exactly what other semantic categories make up its meaning. Aspect interacts with number in the iterative suffixes, as discussed above. It also comes to play in the meaning of the locative particles. Like the movement prefixes, locatives also involve space and motion. Finally, aspect combines with the expressive category of emphatic to define the derivational suffix -*šta-*, which is a time intensifier.

The person markers are the node of intersection between the categories of number, person, and transitivity.

Stepping to still a higher level, it can be observed that nominal and verbal categories intersect, as mentioned above. They do this in the semantic category of transitivity, the person markers, the perfect, and perhaps in the suffix '-la?'

Thus it is evident that categorial intersection plays a large part in defining the surface categories of Cakchiquel. There is still more of the Cakchiquel verbal structure that can be disclosed. Following Friedrich (1974), the verbal categories can be arranged in terms of relative "power." Reiterating from chapter three (p. 75), his criteria for more powerful are a) wider distribution among word classes, b) crosscutting or occurring with more categories, and c) having less neutralization of oppositions.

It is difficult to rank each category exactly on a "power scale," but using these criteria it is possible to identify the most powerful and hence the most important categories in the Cakchiquel system. Accordingly, transitivity and aspect are the most powerful categories in Cakchiquel. They are obligatory in any utterance with a verb phrase. Transitivity cross-cuts verbal and nominal categories, and is evident on verbs, nouns, relational nouns, and adjective phrases. Aspect, in its synthetic manifestation involving TAMs, verbal semantics, and argument number also crosscuts nominal and verbal categories. Tense and mood follow on the power scale. They are also obligatory in any verb phrase. They are both expressed through TAMs, particles, and lexical-derivational means. Person and number are also important, since they are indicated on both verbs and nouns. Their oppositions are more often neutralized, however, than those of the preceding categories. Motion and space are the least powerful categories.

Structure can also be examined within the realms of inflection and derivation. The subcategories of the Cakchiquel inflectional categories, namely, TAMs, person markers, and voice have fairly systematic relations to one another. The derivational affixes, on the other hand, bear relatively little relation to each other; they are less systematic. The exceptions to this are the movement prefixes and the subset of iterative suffixes.

6.3 Oppositions and Markedness

With the exception of these semi-systematic derivational suffixes, the examination of oppositions was quite helpful to the analysis of the verbal categories. Both privative and equipollent oppositions (see § 2.4.1) were found in the Cakchiquel verbal system. In the voice system, passive and antipassive are in an equipollent relationship to each other. The remainder of the oppositions were privative. No oppositions which would seem to be gradual were found.

All of the markedness criteria discussed in chapter three were found to be indicators of markedness relations in the Cakchiquel categories with the exception of syncretism. There are no cases of subcategories being distinguished in the unmarked category but not in the opposing marked category. The other criteria, however, facultative expression, neutralization, zero expression, frequency, and formal irregularity were all relevant. For example, the use of movement prefix -be?- as general movement (§4.4.2.2) is an illustration of facultative expression. In third person singular, Cakchiquel has zero expression of the absolutive pronoun marker, and TAMs have irregular forms. An apparent exception to the tendency of unmarked categories to display more formal irregularity is found in the first person singular ergative marker. It has four forms (see §4.3.2.2.1), many more than any other pronominal, yet first person and ergative are shown to be more marked than second and third persons, and absolutive, respectively (§4.3.3).

6.4 Function

In chapter four categories illustrating several of the functional types delimited in chapter two were discussed. The referential-descriptive external function was particularly relevant in describing the TAM subcategory j/n- and the movement prefix -be?-. Each of these has several functions in certain contexts which are not specifically a part of their semantics, but are interpreted due to the interaction of the semantic features with other items (see § 4.2.5, 4.4.2). Another example of this is the variation found in inherent verbal aspect depending upon the context, as discussed in chapter five. All three types of internal functions (see §2.3) were also found. All meaningful categories have semantic functions, which were usually expressed in chapter four in terms of features. Many suffixes function grammatically to indicate that the form is a verb, and whether it is transitive or intransitive. The person markers also have the grammatical function of agreement.

6.5 Inherent Aspectual Categories

In chapter five the series of tests adapted from the work of Vendler and Dowty was described and the results of applying these tests to Cakchiquel verbs were presented. This chapter obviously deviated from the Praguian approach of the remainder of the analysis. The application of the Dowty-Vendler method served as a helpful heuristic device for discovering the nature of lexical aspect in Cakchiquel. The necessity of discussing contextual situations denoted by the test sentences with my informants both confirmed my belief that language data cannot be merely "run through" a series of tests blindly and lent confidence to the results. On the whole, the tests yielded satisfactory results with the Cakchiquel data, in that they did serve to identify verbs belonging to the four aspectual classes. What did not emerge, contrary to what I expected, was a clear relationship between aspectual classes and TAM markers. In other words, there were no restrictions found on the TAM markers based on the aspectual class of the verb. Perhaps this is because the TAM markers are not solely aspectual, but incorporate features of tense and mood. If an apparent conflict between aspectual class and a tense or aspect function of a TAM arises, the TAM may be interpreted in another way. This illustrates the primacy of synthetic expression of deep tense, aspect, and mood categories over morphosyntactic or lexical expression. The synthetic meaning is the one which is interpreted in a given utterance, overriding the meanings expressed in individual morphemes.

The predicate and argument structure model set forth in Foley and Van Valen (1984) served as another useful device to ferret out semantic aspectual categories and their relations to morphology. The manifestations of the four aspectual classes and their subdivisions were presented, and the behavior of adverbial suffixes as tests for these classes proved to be especially interesting (see §5.3.2).

6.6 Summary

In this chapter I have shown the interrelationships between the theoretical concepts discussed in chapters two and three and the Cakchiquel data presented in chapters four and five. In chapter three two approaches to the study of language were explained: concrete-to-abstract and abstract-to-concrete. It was mentioned that a thorough analysis should take into account both perspectives, thus this chapter has reviewed the data from the abstract-to-concrete view. The structure of the Cakchiquel verbal system was discussed through observations about interrelations among categories. The types of oppositions found among Cakchiquel verbal categories and the types of functions categories serve were also mentioned. Two tools of analysis, namely the markedness criteria and the Dowty-Vendler tests were evaluated. Although many questions still remain concerning the verbal system in Cakchiquel, it is hoped that this study constitutes a major step toward its understanding.

APPENDIX I

ROOTS

Intransitive

Class one

atin	bathe
ken; kōm	die
ver	sleep
nox	fill up
bijax	stroll
jaloX	delay
k'ačox	arrange

Class two

xel	move near
samex	work
q'aš	pass, move over
oq'	cry

Transitive

Class one

ben	make, do
il	find
č'ej	hit
q'et	see
biq	shuck
bot	roll up
boš	light
bus	fold
čop	begin, grab
čoj	cut
čup	turn off, put out
č'er	separate
č'ex	wash
xeč	distribute

jel	exchange
xaq	open
xik'	pull
xok'	grind
kem	weave
kir	untie
kol	save
kuj	forgive
k'em	receive
k'is	finish
k'ox	mend
k'ot	dig
k'ul	meet
k'ut	show
loq'	buy
mal	rub
meq'	warm up
mes	sweep
mol	gather
muq	bury
nim	push
pis	wrap
qum	drink
req'	lick
sač	lose
seq	smell
teq	send
tex	eat
tik	plant
tox	pay for
tuk	stir
ɸak	cook
ɸis	sew
šim	tie
šol	mix up
jup	blink
q'ex	break

Class two

axo?	love
to?	help
na?	feel; taste
ja?	give; put
sa?	roast
su?	erase, clean
ɸu?	watch

ʔa? choose

Atransitive

Class one, positionals

ʔ'uj-	sit down (Comalapa only)
ʔok-	sit down (Patzún only)
ʔ'an-	naked
jok-	late
k'av-	lie supine
paʔ-	stand up
xot-	go up
xup-	lie prone
kot-	curl up
kog-	lie down
k'es-	be alive
k'av-	lie supine
k'u1	marry
lik-	lean
rak'-	recline
ʔal-	turn
ʔup-	squat
ʔuk-	kneel
ʔul-	go down
ʔeq-	follow
ʔob-	pile up
tan-	stop

Class two

iii-	feed
ak'aʂa-	hear/listen
ropi-	jump
kusa-	serve/use
tixo-	teach/learn
silo-	move
ʂaxo-	dance
eta-	measure
eva-	hide
biʂa-	sing
nox-i-	think
sik'-	call out
sok-	shave

APPENDIX II

A SAMPLING OF VERB SLOT COMBINATIONS

TVb-1

j-e-ki-ben-Ø	(ban + act)	they make them
j-e-ki-kir-Ø	(kir + act)	they separate them
j-e-kir-a-ko?-Ø	(kir + C ₁ o? + act)	they scatter
j-e-ki-ban-a-bot-Ø	(ban + C ₁ ot + act)	they make them continuously
j-e-ki-ban-ma?j-Ø	(ban + ma?j + act)	they make them crookedly
j-e-ki-kir-i-ke-x	(kir + C ₁ e + act)	they separate them roughly
j-e-ki-ban-a-šta-x	(ban + šta + act)	they make them quickly
j-e-ki-ban-a-la?-Ø	(ban + la? + act)	they make them repeatedly
j-e-ki-ban-a-šta-la?-Ø	(ban + šta + la? + act)	they make them quickly, repeatedly
j-e-ki-ban-a-ba?-Ø	(ban + C ₁ a? + act)	they make them over and over
j-e-ki-ban-a-be-x	(ban + be + act)	they make them with it
j-e-ban-Ø	(ban + ps)	they are made
j-e-ban-on	(ban + ap)	they make (them)
j-e-ban-a-tex	(ban + rp)	they are made (in a state)
k-e-ki-ban-a?-Ø	(ban + md + act)	make them
j-e-be-ki-ban-a?-Ø	(ban + mov + md + act)	they go make them

TVb-2

j-e-ki-to?-Ø	(to + act)	they help them
j-e-ki-to-ma?j-Ø	(to + ma?j + act)	they help them in an odd way
j-e-ki-to-šta-x	(to + šta + act)	they help them quickly
j-e-ki-to-la?-Ø	(to + la? + act)	they help them repeatedly
j-e-ki-to-šta-la?-Ø	(to + šta + la? + act)	they help them quickly, repeatedly
j-e-ki-to-be-x	(to + be + act)	they help them with it
j-e-to?-oš	(to + ps)	they are helped
j-e-to?-on	(to + ap)	they help (them)
j-e-to-tex	(to + rp)	they are helped (in a state)
j-e-be-ki-to?-Ø	(to + mov + md + act)	they go help them

IVb-1

j-e-kam-Ø	(kam + act)	they die
j-e-kam-šta-n	(kam + šta + act)	they die suddenly
j-e-kam-yax	(kam + jax + act)	they die one after another
j-e-ki-kam-sa-x	(kam + (i)sa + act)	they kill them
j-e-ki-kam-sa-šta-x	(kam + (i)sa + šta + act)	they kill them quickly
j-e-ki-kam-sa-šta-la? + Ø	(kam + (i)sa + šta + la? + act)	they kill them quickly, repeatedly

IVb-2

j-e-samex-Ø	(samex + act)	they work
j-e-ki-samax-i-x	(samex + V + act)	they work them
j-e-samex-lax	(samex + lax + act)	they work over and over
j-e-samex-la-n	(samex + la? + act)	they work repeatedly

Atr-1

j-e-xot-e?-Ø	(xot + e? + act)	they go up
j-e-xaq'-e?-Ø	(xaq' + e? + act)	they recline in an armchair
j-e-č'aq-e?-Ø	(č'aq + e? + act)	they get wet
j-e-xaq'-a-xo?-Ø	(xaq' + C ₁ o? + act)	they fall backwards in a chair
j-e-č'aq-a-č'ot-Ø	(č'aq + C ₁ ot + act)	they go making a wet sound
j-e-xot-ma?j-Ø	(xot + ma?j + act)	they go up and down, up and down
j-e-ki-xot-e?-ba?-Ø	(xot + e? + ba? + act)	they make them go up

Atr-2

j-e-tixo-n	(tixo + act)	they learn
j-e-ki-tixo-x	(tixo + act)	they teach them
j-e-ki-tixo-šta-x	(tixo + šta + act)	they teach them quickly
j-e-tixo-jax-Ø	(tixo + jax + act)	they learn one by one
j-e-ki-tixo-la?-Ø	(tixo + la? + act)	they teach them repeatedly
j-e-ki-tixo-be-x	(tixo + be? + act)	they teach them with it

De-adjectival

j-e-nim-er-Ø	(nim + Vr + act)	they get big
j-e-nim-er-šta-n	(nim + Vr + šta + act)	they get big suddenly
j-e-nim-er-la?-Ø,		
j-e-nim-er-la-n	(nim + Vr + la? + act)	they get big repeatedly
j-e-nim-er-jax-Ø	(nim + Vr + jax + act)	they get big over and over
j-e-be-nim-er-la-n	(nim + mov + Vr + la? + act)	they go and get big repeatedly
j-e-ki-nim-er-isa-x	(nim + Vr + isa + act)	they make them get big

APPENDIX III

VERB BY VERB RESULTS OF TEST FRAMES

- aleš: 1. be born (a baby) 2. born again, spiritually 3. deliver (IVb)
Achievement
For #2.1, 4.1, and 13 the secondary meaning of "born again" substitutes, acting as an activity or an accomplishment. In #3, finish, the meaning "deliver" appears.
- apon: 1. arrive 2. come (IVb)
Achievement
Secondary meaning is with #13.
- atinisax: 1. bathe it/him 2. bathe (something) (IVb + cau)
Accomplishment
Some activity results from #11 and #12 presumably because he has bathed part of him.
- bison: be sad (IVb)
Stative
- č'ej: 1. hit it 2. shuck corn (TVb-1)
Activity
One problem was the idea of hitting something carefully, as in frame #4, which indicates a difficulty of a non-aspectual semantic clash.
- č'oke?: be sitting down (positional IVb)
Activity
This verb is only found in Patzun. The Comalapa counterpart is č'uje?
- exqax: carry it (TVb)
Activity
- javex: 1. be sick 2. get sick (IVb)
Stative
Achievement-like answers on a few indicate a secondary meaning of "get sick."
- kamsax: kill it (IVb + cau)
Accomplishment

Informants do not think one can "kill carefully." Also with #9, "take t to kill it" it has an achievement reading.

k'astex: wake up (IVb)

Achievement

There is an element of control in this achievement, which is acceptable with "force," "persuade" and the imperative.

ken/kõm: die (IVb-2)

Achievement

In #1, an interpretation of "play dead" is acceptable.

koɸ'e?: 1. be lying down 2. lie down (positional IVb)

Activity

A couple results indicate an achievement meaning, which seems to be the change of state between standing and lying down.

kos: 1. get tired 2. be tired (IVb)

Achievement

The secondary meaning appears with #1.

kusax: 1. use, spend it 2. bring, take it inside (TVb)

This verb presented mixed results. It has two, very different meanings and as such is a homophone. Nevertheless, the results did not allow me to classify 'kusax₁' and 'kusax₂' in clear-cut aspectual classes.

k'u!e?: get married (positional IVb)

Achievement

There is an element of control in this achievement, which is acceptable with "force," "persuade" and imperative.

lukuba?: lean it (positional + cau)

Accomplishment

In Comalapa this verb has a very different meaning, so this classification refers only to the Patzún verb. With #9, "take t to lean it," it has an achievement reading.

nũm: 1. get hungry 2. be hungry (IVb)

Stative, Achievement

Results are mixed between stative and achievement, with a slight preference for the achievement, or "get hungry" meaning.

ok el X: become X (IVb, synthetically transitive)

An exception is found with #3, and #9, "take t to become it" has an achievement reading.

- ok pa xaj: 1. enter the house 2. be in the house (IVb)
Achievement, Accomplishment
The first meaning shows a mix between achievement (1, 1.1, 3, 9, 11, 12) and accomplishment (1, 1.1, 2, 2.1, 4, 5, 8, 13). The second meaning surfaces with #1 and 1.1.
- oq': cry (IVb)
Activity
'Oq' fails the activity tests which involve control i.e., 2, 2.1, 4, and 13, yet it belongs in no other category. It seems to be a uncontrolled activity.
- paba?: 1. build it 2. stand it up 3. stop it (positional + cau)
Accomplishment
With #9, "take t to build it," it has an achievement reading.
- rixix̃: get old (IVb)
Achievement
- silon: move (IVb)
Activity
- šaxon, šaxo?: 1. dance 2. dance a dance (IVb)
Activity
Also shows some accomplishment results, as in "finish dancing" and "took t to dance (duration of the action)," implying a secondary meaning of perhaps "dance a dance."
- šuke?: be kneeling (positional IVb)
Activity
- tex: 1. eat it 2. eat (TVb-1)
Accomplishment
Some activity results from #11 and #12 presumably because he has eaten part of it. For informant FMP, with #9, "take t to eat it," has an achievement reading.
- to?: 1. help (someone) (TVb-2)
Activity
Sometimes has an accomplishment meaning.
- φeʔen, φiʔen: laugh (IVb)
Activity
There is some question of control as a counter answer results in #4.
- φu?: watch, look at it (TVb-2)
Activity

- ɸ'ibax: write it (TVb)
 Accomplishment
 With #11 and 12 it has an activity meaning, referring just to the action of writing.
 For informant MAC, with #9, "take t to write it," it has an achievement reading.
- ɸ'uje?: 1. sit down 2. be sitting (positional IVb)
 Activity
 This verb is only found in Comalapa. The Patzun counterpart is ɸ'oke?. It has
 some stative features, as in numbers 4, 9, and 11.
- ušlan: rest (IVb)
 Activity
- va?: 1. eat 2. eat (something) (IVb)
 Activity
 There are some features of accomplishment, as if an understood object surfaces.
- ver: 1. sleep 2. go to sleep (IVb-2)
 Activity, with meaning #1
 Some results show an achievement meaning of "go to sleep," for example, #8: At
 2:00, he went to sleep.
- xīq': 1. drown 2. choke (IVb)
 Achievement
 Secondary meaning surfaces in non-achievement frames.
- xote?: 1. climb 2. go up (something) (positional IVb)
 Activity
 It has a secondary accomplishment meaning where an object surfaces.

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