CHAPTER 2

LITERATURE REVIEW AND STEM DEFINITION

2.0 Introduction

This chapter contains a literature review of verb stem alternation studies in Chin languages, as well as offering a set of criteria that will be used for stem definition that will be used for this thesis.

It is laid out as follows: Section 2.1.1 summarizes phonological perspectives of stem changes in the previous literature; 2.1.2 presents grammatical perspectives of stem alternation. In section 2.2 of this chapter, a set of criteria used for defining the stems for *K'Chò* is outlined.

2.1 Literature Review

The phenomenon of verb stem alternation has been studied in several Chin languages to varying depths. The previous studies on verb stem alternation are surveyed from phonological and grammatical perspectives. The existing studies of verb alternation include representative languages from all three major branches of Chin as shown in Figure 6.

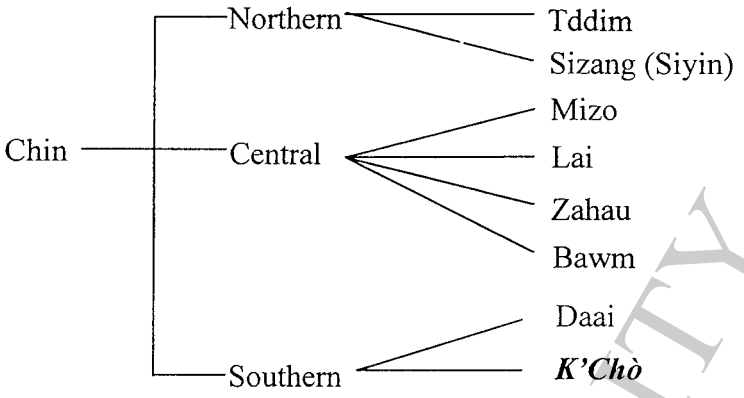

Figure 6: Chin languages in which verb stem has been studied.

The analysis of verb stem alternation has been conducted most extensively for the Central Chin languages. The Central Chin languages in which verbal alternation has been studied include *Mizo*, also called *Lushai* or *Lushei* (Bright 1957 and 1964, Hillard 1975, Chhangte 1986, 1993), *Lai* (Lehman 1982 and 1996, Melnik 1997, Kathol and VanBik 2002, Kathol 2003), *Zahau* (Osburne 1975, Yip 2003), and *Bawm* (Löffler 1973, 2002).

From the Northern Chin group, *Tiddim* (Henderson 1965) and *Sizang* (Stern 1963) have been studied.

The study of alternation in the Southern Chin languages has only recently been carried out for *Daai* (Hartmann 2002 and forthcoming) and *K'Chò* (Nolan 2003).

2.1.1 Phonological perspectives

Most verb stem alternation studies in Chin languages have dealt primarily with the phonological properties involved in the alternation. Since this thesis is a syntactic/pragmatic study of the alternation, it will not go into details of phonological perspectives of verb stem alternation. A summary of features and tendencies will suffice.

Studies of the phonological characteristics of stem alternation of verbs in Chin languages seem to vary slightly according to the perspective each linguist takes. Generally, many verbs in Chin languages have two phonologically distinct forms, which are called stem I and stem II respectively. Stem alternation of verbs in principle involves both segmental and tonal changes. Some linguists seem to examine the alternations primarily from their tonal perspectives (Stern 1963, Löffler 1973 and 2002, Osburne 1975, Yip 2003). Others take into account both tonal and segmental changes in their analysis (Bright 1975, Hillard 1975, Chhangte 1993, Melnik 1997, Kathol and VanBik 2002, Hartmann 2002, and Nolan 2003).

Despite the different approaches, some generalities in the phonological characteristics of verb stems appear to run across the Chin languages.

- Not all verbs in Chin languages exhibit overt stem alternation.
- Some traits of the stem changes are predictable or regular, but others are not.
- Some stem alternating verbs involve both segmental and tonal features. Some have only segmental and others only tonal modification.

Predictability of stem changes seems to vary with the individual language and/or the approach adopted by each linguist.

General tendencies of segmental modifications in deriving stem II from stem I include:

- Closure of open syllables
- Modification of final consonants: (1) change from velar nasal final to alveolar nasal, (2) oral stop final to glottal stop, (3) final nasal to oral stop, (4) addition of glottal stop to liquid and nasal finals (central and northern Chin languages)
- Vowel length adjustment (lengthening/shortening of vowels)

Since this thesis is concerned with the grammatical perspective of the alternations, it will not pursue further the details of phonological perspectives. But will proceed

with an overview of grammatical perspectives of the phenomenon as presented in studies of Chin languages.

2.1.2 Grammatical perspectives

This section surveys the syntactic distribution and accounts of verb stem alternation in Chin languages from previous studies.

2.1.2.1 *Tiddim*

Henderson (1965:84-89) gives three main syntactic domains for *Tiddim* Chin in which stem alternation occurs, namely main clauses, adjunctive clauses, and nominal phrases. All these syntactic domains can be either in the indicative or subjunctive mood.

She attributes the stem choice conditioning factor for *Tiddim* Chin in main clauses to the "conclusiveness" of the utterance. A conclusive sentence selects stem I form of the verb, while inconclusive sentence the stem II form. This conclusiveness and inconclusiveness of sentences are represented by indicative and subjunctive mood respectively. Some inconclusive sentences, however, may also take the stem I verb when the verb means 'doing something for someone'.

All adjunctive clauses take the verb in the stem II form. However, adjunctive clauses which are followed by the particle (conjunction) *la*, take the verb in its stem I form.

In a noun phrase consisting of a verb as the head, the verb form is always Stem II. In a compound noun phrase, which is a noun phrase comprising a noun and a verb form, the verbal constituent may be either Stem I or Stem II. The verbal constituent which conveys a 'permanent state' of the noun it co-occurs with is Stem I. The verbal constituent referring to a change in the state of its object argument, on the other hand, is Stem II.

2.1.2.2 *Zahau*

Osburne (1975) reports the following syntactic environments of stem I and II in *Zahau*. She also examined verbal alternation for *Zahau* in three main syntactic scopes: matrix clauses, subordinate clause (relative clauses and other subordinate clauses), and nominalization and verb-compounding.

Relative clauses and subordinate clauses, which are marked by various subordinators (*leh* 'if', *hnu* 'after', *hlaan* 'before', *veek* 'since', and *brang* 'because') uniformly select stem II in the subordinate clause.

In nominalization with nominalizing suffixes (*-nak* 'thing', *lam* 'way', *daan* 'custom', *ding* 'verbal patient') and nominalization without overt nominalizer, the verb is Stem II. As an exception, nominalization with the agentive nominalizing suffix *–tu* selects Stem I.

When verbs are followed by the causative suffix *–ter* and the benefactive suffix *–sak*, the verb is Stem II.

Account of Stem II in *Zahau*

Osburne (1975) proposes that stem choice in *Zahau* is determined by information focus. In a sentence, the theme of a sentence generally conveys old information and thus is less dynamic in communication, whereas the rheme of a sentence is more dynamic in communication as it expresses new information.

Following this principle, focusing on the rheme in *Zahau* is associated with stem I, and focusing on the theme is associated with stem II. In unmarked sentences of *Zahau*, the focus naturally falls on the verb or rheme. Therefore, unmarked sentences call for the verb in stem I. Focusing on the theme of a sentence rather than the rheme, on the other hand, requires stem II because the rheme is in non-focal status.

Relative clauses and other subordinate clauses are in non-focal use because they are just part of the theme of a sentence or subordinated to the matrix clause. As a result, the verb in relative clauses and various other subordinate clauses is Stem II.

Nominalized verbs are also in the Stem II form as they are being deprived of potentiality to serve as the main verb or rheme. And verbs with *-ter* 'causative' and *-sak* 'benefactive' suffixes, the focus is on the suffixes, and thus the matrix verb is in its Stem II form.

2.1.2.3 *Mizo*

Chhangte (1986 and 1993) gives the following syntactic environments for stem I and II in *Mizo*. The main syntactic environments are subordinate clauses, nominalization, and interrogatives.

Subordinate clauses include relative clauses, conditional clauses, cause-effect clauses, clauses of simultaneous actions. The verbs in these subordinate clauses are always Stem II. In Chhangte (1993), relative clauses are further distinguished such that subject relativization requires Stem I, while object relativization requires Stem II. Verbal complement clauses of complement taking verbs select Stem I, while nominal complements choose Stem II.

Agent nominalization selects stem I form of a verb. Non-subject nominalization such as object nominalization, instrument nominalization, and location nominalization, on the other hand, selects Stem II form.

Subject questions require stem I form of the verb, while non-subject questions in transitive sentences require stem II form.

Account of stem II in *Mizo*

Chhangte (1986) offers information focus, saliency, and animacy to account for the stem changes in *Mizo*. Old information, which is less focused, is generally

related to stem II. Likewise, animate agents and more salient constructions select stem I.

Old information is less focused and often in a subordinate construction. Therefore, various subordinate clauses take stem II form of the verb.

When an intransitive subject is questioned, stem I is used and if the object is questioned, stem II is used. Stem II is also used in the compound words of benefactive, causatives, and comitatives as the object is less focused or passivized. Animacy is the determining factor for stem choice in nominalization. More animate agentivizers use stem I, while the simple nominalizer *-na* uses stem II.

2.1.2.4 *K'Chò*

Although not a syntactic account, Nolan (2003) outlined the following grammatical contexts of the two stems for *K'Chò*.

In *K'Chò,* stem I form of the verb is found in both in matrix and subordinate clauses. Matrix sentences in which stem I occurs may be marked by *ci* 'realis', *khai* 'irrealis', and/or imperative markers.

Stem II form of the verb is used in some matrix clauses for discourse purposes. Subordinate clauses before the grammatical markers (*ung* 'when/if', *kon ah* 'after', and *ah phäh ah* 'for') normally have the verb in stem II form.

Account of Stem II

Nolan (2003) states in passing that, grammatically, stem II in *K'Chò* is a nominalized form of a verb as it can be modified by possessive pronouns or genitive noun phrase. Since his was not a syntactic account, the syntactic account of stem I and II in *K'Chò* can be viewed as not yet investigated.

2.1.2.5 *Daai*

Hartmann (2002) gives syntactic environments for the two alternating stems of a verb in *Daai* as below.

Stem I verb forms are found in the following syntactic contexts:

1. Finite clauses marked by tense *kti* and *kkhai*
2. Imperative, interrogative, permissive, negative clauses
3. Non-finite clauses marked by conjunction *lü*
4. Complement clause marked by *kti, kkhai*
5. Agent relativization

Stem II verb forms are found in the following syntactic contexts:

1. Subordinate or non-finite clauses with conjunctions: *ta, jata, üng, vai, phäh*
2. After subject agreement
3. Before particle *vai* (various readings)
4. Complement clause marked by *vai*
5. Relativizing place/quality of action
6. Before auxiliaries *pee:t, shak, püi, taak*
7. Nominalization

Account of stem II in *Daai*

Hartmann (2002) does not offer an account for stem alternation in *Daai* Chin. Hartmann (forthcoming), however, proposes transitivity and other specific constructions as the main constraints of stem choice in the language. She also proposes a default-overriding interaction among these constraints for stem determination in *Daai* Chin (which is similar to the case proposed by Kathol and VanBik (2002) for *Lai*).

The base or default stem in *Daai* Chin is stem I (her stem B) for intransitive verbs, and stem II (her stem A) for transitive verbs.

Environments for overriding the intransitive default stem are shown in the following table.

Overriding environments		**The default stem**
Constituent narrow focus questions	>>	Intransitive stem I
Causatives		
The applicative suffixes		
The subjunctive mood *vai*		
Subordinate clauses		

Table 5: Stem I overriding constraints

Default stem I in negative, imperative, and interrogative is overridden by appiicative, and subordinate clause.

Either stem I or stem II form is selected to form diffcrent types of nominalization. Stem II is used for general nominalization, and stem I for noun-verb compounding.

Transitive default stem II is overridden by the following constraints.

Overriding constraints		**Transitive default stem**
Agent focusing	>>	Transitive stem II
Future tense		
Negative		
Yes/no question		
Imperative		
Clause-chaining		

Table 6: Stem II overriding constraints

2.1.2.6 *Lai*

Stem alternation study in *Lai* receives the most advanced treatment in Chin languages. Kathol and VanBik (2002) give the following core syntactic environments for stem I and stem II in *Lai*.

Lehman (1996) also summarizes the syntactic environments of stem I and II for *Lai* as follows. Stem I of intransitive verbs is used in plain, tensed finite declarative clauses and stem II in gerundives and nominalizations with *–nak*. For transitive verbs, stem I is used in all contexts except in the negative sentence.

Stem I	Stem II
Unmarked intransitive sentence	Unmarked ergative sentence
Unmarked non-ergative sentence	Adverbial clauses
Negation, Imperative	Obj. Relativizing clause
Subj. Relativizing clause	Non-Subj./Ergative Subj. Q
Yes-No/Intr/Non-ergative Subj. Q	

Table 7: Syntactic environments of stem I and II in *Lai*

Account of stem II in Lai

According to Kathol and VanBik (2002), stem alternation constraints in *Lai* cannot be pinned down to a single parameter. Generally, stem choice in *Lai* depends on transitivity, ergativity of a transitive sentence, and also some other construction specific constraints. These constraints either work in isolation or in a default-overriding principle.

Transitivity of a verb correlates with stem choice in *Lai*. Stem I is the default stem for intransitive verbs, and Stem II is the default for transitive.

For transitive sentences, ergativity further determines the verb stem choice. When the subject argument is marked with ergative case, the verb is stem II. When it is

not marked with ergative case, the verb is stem I. They analyze the non-ergative transitive construction as equivalent to an antipassive construction.

A subject relativizing clause requires the stem I form of the verb, while an object relativizing clause takes stem II. They also propose that the stem I choice in subject relativization may be explained by antipassive construction.

There are also other construction specific constraints. Negative sentences, imperative sentences, and yes/no questions require stem I, while adverbial clauses require stem II.

They explain that these individual default constraints interact with each other to further determine stem choice. They propose a default-override principle for the interaction of these constraints within a clause following Optimality Theory. The default-overriding principle for *Lai* laid out by Kathol and VanBik (2002) is reproduced in the following diagram. The constraint in column C will be neutralized by the one in B, and the constraint in column B in turn by those in column A.

A		B		C
Imperative				
Polar Question				
Relative clauses	>>	Negation	>>	Lexical
Subordinate clauses				
Non-subject Questions				

Figure 7: Default-Overriding mechanism in *Lai* (Kathol and VanBik 2002)

The above ranking of constraints and their default-override rules are irrelevant for subject questions. They argue that the subject questions must have their own constraint rules that the lexical constraint overrides the negation constraint.

Lexical >> Negation

Kathol (2003) reorganizes the above mechanism from a different angle. Valence (transitivity and ergativity) and polarity (negation) are the default constraints for the selection of either stem I or II. These default constraints are called 'soft-constraints'. They are overridden by a particular constructional constraint like an affirmative ergative environment. These in turn are overridden by the clause-type constraints of polar questions and subordinate clauses.

In summary, verb-stem studies in Chin languages with respect to their morphological characteristics and motivating factors of stem choice have been outlined. Criteria used in distinguishing which stem is which will be spelled out in the subsequent section.

2.2 Stem designation in Chin languages

In this section, a short description of the verb stems and criteria used to distinguish the base stem and derived stem or stem I and stem II from the two alternating stems in *K'Chò* are presented.

First, we will briefly review how the two stems are labeled in other Chin languages. Linguists use different terms to refer to the alternating stems of verbs in Chin languages. Some use the terms *Stem I* and *Stem II*; others call them *Primary* and *Secondary* stems. Still others call them *Stem A* and *Stem B*.

Linguists almost universally accept that stem I is the base/primary form and stem II is the derived/secondary form. Melnik (1997:167-168) and Hartmann (1988 and forthcoming), however, propose for *Lai* and *Daai* that stem II is the root form and stem I is the derived form for some type of verbs in the two languages. Lehman (1996:5) also holds a similar line of explanation for *Lai* transitive verbs.

The term stem I and stem II will be used in this thesis for the two alternating forms in *K'Chò*.

2.2.1 The Verb Stem in *K'Chò*

In this section, we want to formulate criteria for stem designation in *K'Chò*.

Like in other Chin languages, many *K'Chò* verbs show two phonologically distinct forms.

(16) and (17) exemplify the two variant forms of a verb in *K'Chò*.

(16) *Pá* ***ip-ci.***
Father sleep.I-NF
Father sleeps/slept.

(17) *Pá* *a-**ih*** *kòn* *ah* *na-lo(k)-ci.*[20]
Father 3SG.SBJ-sleep.II after PART 2SG.SBJ-come.I-NF
After father had slept, you came.

In (16), the verb *ip* 'sleep' occurs in a simple clause and, in (17), it occurs in a subordinate clause. The two clauses obviously select different forms of the verb. Such distinct forms of a verb will be called Stem I and Stem II in this thesis. Nolan (2003) contains a comprehensive list of examples from the lexicon divided into classes by morphological behavior.

2.2.2 Stem Definition in *K'Chò*

Nolan (2003) has shown that some *K'Chò* verbs have two identifiably distinct forms called Stem I and Stem II. However, the majority of verbs in *K'Chò* show no overt phonological change in their verb stems. Therefore, phonological changes do not offer a viable means for distinguishing variant stems for all verbs. But all is not lost some morpho-syntactic and syntactic behaviors can be used as more universal diagnostic indicators of stem status.

Following Bedell (2002), these morpho-syntactic behaviors are used as general principles for stem distinction in *K'Chò*. The form which may be marked with tense/aspect *-ci* 'Non-Future' or *-khai* 'Future' but not with '3rd person subject

[20] (k) represents an epenthetic /k/, which normally closes open-syllable verbs with short vowel when followed by *ci* 'Non-Future' or *khai* 'Future'.

agreement' is called stem I, while one which can be marked with '3rd person subject agreement' but not with *-ci* 'Non-Future' or *-khai* 'Future' is called stem II. Following these criteria, the form of the verb 'sleep' in (16) is stem I, while the one in (17) stem II in this thesis.

Stem I = ø (3SG/DL/PL) + verb root + tense (*ci* 'Non-Future' or *khai* 'Future)

Stem II= 3SG/DL/PL + verb root + (-tense)

A brief, rather generalized, preview of stem distribution can be listed as follows:

Intransitive and transitive main clauses	Stem I or II
Non-final switch-reference clauses	Stem I
ah marked complement clauses	Stem I or II
Unmarked complement clauses	Stem II
Adverbial clauses	Stem II
Subject nominalization	Stem I
Non-subject nominalization	Stem II

However, there are restrictions based on syntactic and pragmatic issues, which will be the main discussion in the subsequent chapters of this thesis.

We have established which stem is which for *K'Chò*. Now, we want to begin the main discussion concerning different syntactic and pragmatic environments which govern stem determination in the language.