Chapter 3

The Primary System of the Tallied Syllables

Iconicity in the Debao dialect is represented by a set of vowels occuring in the tallied syllables. The systems of iconicity can be classified into two systems in terms of their productivity and semantic characteristics: the Primary System and the Secondary System. The phonological and semantic propertoes of the Primary System will be introduced in this chapter and the Secondary System in Chapter 4.

3.1 The Primary System

The Primary System is distinguished from the Secondary System by two features: the absolute productivity and the open-syllable structure of the tallied syllable.

3.1.1 Productivity

In the primary system, a headword can generate a tallied syllable after itself to form a lexical construction. There seem to be three parts of activation during the formation process of the tallied syllable. Firstly, the

initial consonant of the headword will be reiterated* and secondly an iconic vowel is generated by semantic motivation to complete the formation of a syllable. Finally the tone will be formed by a conditioned process of tonal configuration rules (see 3.3.3.2).

The process in which the initial consonant of the tallied syllable is always conditioned by that of the headword syllable, implies the absolute productive nature of the tallied syllables. Hence the number of tallied syllables in the Primary System is an open-ended set.

3.1.2 The Two Patterns

The primary system has only one type of tallied syllable, i.e. the productive type. This one type of tallied syllables has two patterns of formation. The distinguishing elements of the two patterns are revealed by the selection of different tone categories.

The two patterns can be presented in notational formula as follows:

(1) $CVC^{T} + C_{r}V : \#^{CT\{h/l\}}$

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*Most people will use 'reduplicated' instead of 'reiterated' but since I have excluded the reduplication process from my scope of study, I find that it is wise to follow E.Moravcsik's (1976:300) idea to use 'reiteration' to replace 'reduplication' in this case.

eg:

pa:i 325 + pe: 325

stampeding in spreading numbers

(2) CVC ^{T} + C_r V_1V_2 # LT{h/l}

eg:

to:n 213 + teɯ 33

to move something around casually

CVC ^{T} is a typical phonological strcuture of the sound unit in the Debao dialect, here representing a headword of the lexical construction, and the tallied syllable that occurs after it is an open syllable[1] .

C_r denotes the reiteration of the initial C of the headword syllable.

V is the vowel, a long vowel will be denoted by the colon :, symbolizing vowel length.

V_1 V_2 is a diphthong, V_1 is the first element of the diphthong, and V_2 is the second element.

(For the sake of convenience, both V: and V_1V_2 will sometimes be denoted by VV.)

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[1]Ladefoged (1975:73) in "A Course in Phonetics" defined an open syllable as one without a consonant at the end whereas a closed syllable is one that has a consonant at the end.

The superscript ^{CT} & ^{LT} represent the supra-segmental units, the contour tone category and the level tone category respectively. $^{\{h/l\}}$ represents the high or low pitch types as corresponding to the tone categories according to the rule of configuration. Details of the tonal configuration will be explained in section 3.3.3.3.

3.2 The Structural Relations

In order to understand the structural relations between the headword and its tallied syllable, or between the filler slots of a syllable, the parameters of the syntagmatic and the paradigmatic relationship should be observed closely.

The definition of the two kinds of relationship can be quoted from Lyons as below[2] :

> "a unit enters into paradigmatic relations with all the units which can also occur in the same context ... (a unit enters) into syntagmatic relations with the other units of the same level with which it occurs and which constitute its context."

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[2]Lyons, John (1968:73) Introduction to Theoretical Linguistics London & New York: Cambridge University Press. see also Ullmann (1973:57) quoted the definition by John Lyons in his book Meaning and Style.

At times, it is a combining phase of relations. Examples are given below to illustrate the definition given above.

3.2.1 The Paradigmatic Relations

In the process of formation of tallied syllables, a paradigm of a tallied syllable suggests a slot which will be filled in by discrete elements under the same context of the structure of sound units. In this study, the paradigmatic relation is focused on the vowels of the tallied syllables, and their semantic components.

This paradigmatic parameter also applies to the study of the context unit. Under the same context of the same headword, and the reiterated initial consonant of the tallied syllables being the same, an alternation of vowels may occur in the vowel slot, as can be seen in Figure 1.

lexical unit:	Headword	Tallied Syllable
CVC^T :	CVC^T	C_r $(V:)_1$ # ^{T}
	CVC^T	C_r $(V:)_2$ # ^{T}

fig.1

Fig.I shows how the alternation of vowels occurs in the vowel slot of the tallied syllables.

$(V:)_1$, $(V:)_2$ = alternation of two different vowels

e.g.

la:n 31 : la:n 31 le: 213

to block to stop by blocking one's way

la:n 31 la: 213

using a big object to block the way

The two different vowels /a:/ and /e:/ occurring at the same vowel slot of a tallied syllable under the same context of the headword /la:n 31/ reveal the contrastive meanings of the opposition pair. In this case, the vowel ablaut phenomenon can then be discovered by this contrastive approach to the data (see section 3.4.1).

3.2.2 The Syntagmatic Relations

The syntagmatic parameter provides a key condition to study the relationship between a headword and a tallied syllable.

When the syntagmatic parameter is used to study the segments of the head syllable and the tallied syllable, reiteration of the initial consonant of the headword is discovered. For example:

wa:t 55 : wa:t 55 wa: 325

to dig to dig up and search

If a few more different entries are compared, the reiteration is found to perform as an indicator of productivity in the system. Figure 2 will diagram the process.

Headword	Tallied Syllable
C_1 VC	C_1 VV #
C_2 VC	C_2 VV #
⋮	⋮
C_n VC	C_n VV #

fig.2

Fig. 2 shows how the initial consonants of the tallied syllables are linked to the initial consonants of the headword.

e.g.

la:n 33 : la:n 33 la: 213

to overdo something extravagant

fɯn 213 : fɯn 213 fe: 213

to squeeze overflowing

The initial consonants of the headword and the tallied syllable will be the same in any productive lexical

construction. In the case of /fɯn 213/, /f-/ is the initial consonant; then the reiteration of /f/ will become the initial consonant of the tallied syllable. If in the case of /la:n 33/, /l-/will be the initial consonant of the tallied syllable of the lexical construction.

3.3 The Phonological Properties

The phonological link that occurs between a headword and a tallied syllable involves not only the initial consonants, but also other phonological units as well. Within the structure of a tallied syllable in the Primary System, besides the initial consonant, the vowel and the tone are also found to have specific properties.

3.3.1 The Initial Consonants

The study of the initial consonants of the tallied syllables concerns mainly the syntagmatic relation between the headword and the tallied syllable.

The tallied syllable of the primary system is generated by reiterating the initial consonant of the headword, which accordingly forms an obligatory phonological constraint between the headword and the tallied syllable. For example:

fmn 213 ----- fmn 213 f e: 213

to squeeze out overflowing continuously

3.3.2 The Vowels

The vowels are all iconic in the tallied syllables. In the primary system, the set of iconic vowels consists only of three members :

/e:/, /a:/ and /em/

This set can be further separated into two subsets:

Set 1 = { /a:/, /e:/ }

Set 2 = { /em/ }

The vowels in set 1 can form an opposition pair, while the vowel of the other set occurs solely.

3.3.3 Tonal Configuration

The tallied syllable does not reiterate the tone of a headword directly. It needs a configuration of the tone shape category of the tallied syllable and the tone pitch type of the headword.

3.3.3.1 Tone Shape Categories

There are two sets of tone shape categories

grouped under the labels of CT for contour tones, and LT for level tones (cf. section 1.8.3.4). The contour tone category has only 2 members /213/ and /325/, leaving out /31/ and /52/. /55/ and /33/ remain as the regular members of the level tone category.

CT = { 325, 213 }

LT = { 55, 33 }.

The high pitch member of the contour tone category is /325/, and for the level tone category /55/. The low pitch member of the contour tone category is /213/ and /33/ of the level tone category. See table 1.5 for the illustration of tone shapes and pitch types.

The tone category is conditioned by the vowel quality of the tallied syllables. If the vowel is a long monophthong, the tone shape category will be a contour tone (CT), whereas if the vowel is a diphthong, the tone shape category will be a level tone (LT). In this thesis, the terms "tone shape category" will be used to refer to the tone category in the tallied syllable which is dictated by the vowel of the tallied syllable.

3.3.3.2 The Configuration

The tone of a tallied syllable steps is not only dictated by the vowel of the tallied syllable only but by

pitch of the tone of the headword. The combination of the two choices will result in what we call tone configuration. See figure 3 below:

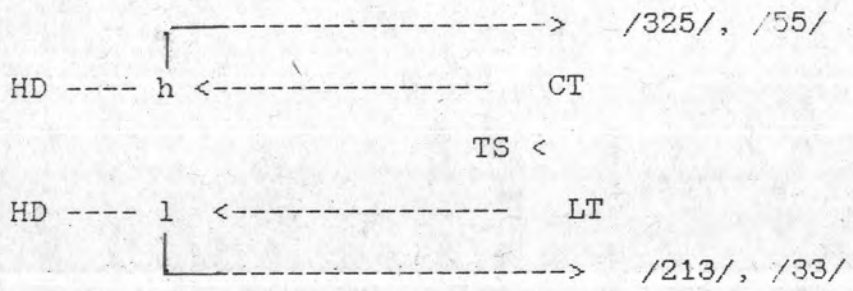

fig.3

Fig. 3 shows how the process of tone configuration between the headword and the tallied syllable takes place.

Firstly, before taking the headword into consideration, the tone shape categories of the tallied syllables has to be the prima facie choice. The vowel quality of the tallied syllable will decide on whether the tone shape category should be a contour tone or a level tone shape category. Secondly, the pitch of the tone of the headword, either high or low, will decide the tone configuration.

Table 3.1 shows how the tones of the tallied syllables are generally conditioned by the vowel qualities of the tallied syllable and the pitch type of the headwords:

HD Tone = tone of the headword

TS Tone = configuration tone of the tallied syllable

Vowel Set 1 V: # Contour Tone Category (TS)		Vowel Set 2 V_1V_2 # Level Tone Category (TS)	
HD Tone	TS Tone		TS Tone
High Pitch Type	config.	High Pitch Type	config.
325	325	325	55
55	325	55	55
52	325	52	55
Low Pitch Type	config.	Low Pitch Type	config.
213	213	213	33
33	213	33	33
31	213	31	33

Table 3.1 The tonal configuration of the pitch types of the headword and the tallied syllable in the Primary System.

For a tallied syllable with a CT (contour tone category), if the tone of the headword belongs to the (H) high pitch type, then the tone of the tallied syllable will be assigned the /325/ tone configuration. If the tone of the headword belongs to the (L) low pitch type, then the tallied syllable will be assigned /213/ tone configuration as its tone.

On the contrary, for a tallied syllable with a LT tone category, /55/ would be selected for the tallied syllable as corresponding to the (H) high pitch type and /33/ to the (L) low pitch type of the headword.

The tonal configuration process will be symbolized by CT{h/l} or LT{h/l}. The h vs l pitch in the brackets denotes a syntagmatic relationship in the correspondence between the pitch type of the headword and that of the tallied syllable.

Examples are given below to illustrate the phonological conditions concerning the productivity and tonal configuration of the tallied syllables, as discussed above. The tones of the tallied syllables are underlined:

CT

pa:i 325 ----- pa:i 325 pe: <u>325</u>

be defeated ----- stampeding into spreading numbers

fɯn 213 ----- fɯn 213 fe: <u>213</u>

to squeeze ----- overflowing

lai 52 ----- lai 52 le: <u>325</u>

to flow down ----- streaming down

lom 31 ----- lom 31 la: 213

to forget ----- be forgetful

lum 33 ----- lum 33 le: 213

to reach out and feel ----- to grope in the dark

wa:t 55 ----- wa:t 55 wa: 325

to dig ----- to dig up and search

LT

pha:n 325 ----- pha:n 325 phem 55

to wrap around ----- to entwine casually

to:n 213 ----- to:n 213 tem 33

to move an object around ----- to move an object around casually

tup 33 ----- tup 33 tem 33

to pound ----- to pound casually

nip 55 ----- nip 55 nem 55

to fasten together with a pin ----- to fasten together with a pin casually

wa: 52 ----- wa: 52 wem 55

to brandish in the air ----- to brandishcasually

wa: 31 ----- wa: 31 wem 33

to snatch in the air ----- to snatch at casually

In the four following exceptional cases, the tallied syllables which should select a CT tone category as the generalised rule goes, now have instead chosen a LT tone category :

dam	33	de:	33	sandy, gritty
ka:u	31	ke:	31	trouble-making
kjau	31	ke:	31	pleading
tam	33	te:	33	to rap and tap

I suspect echoic and euphonic elements as major stimulus for the change of tone shape category. More data has to be collected before any subcategorization can be made.

3.4 Semantic Properties

The semantic values of the tallied syllables are located in the vowels. Those vowels that reveal iconicity of the tallied syllables in Primary System are { /e:/, /a:/, /em/ }. They are classified and explained in the following sections.

Though the vowels of the tallied syllables can only carry marginal meaning in a lexical construction, each one of them display a core iconic value.

In the process of finding the semantic values of the iconic element in the vowel of a tallied syllable, the general meaning of the lexical constructions are compared, then the semantic values of the iconic element is extracted.

3.4.1 Vowel Ablaut in Vowel Set 1

The first type of iconic vowels in the vowel of the tallied syllables is found in the opposition of the vowels /e:/ and /a:/.

In the Debao dialect, the vowel /e:/ alternates with /a:/ to form an opposition pair that indicates the semantic contrastiveness of diminutive (DIM) vs augmentative (AUG). This opposition concept can be observed in several aspects such as scope, space, size, quantity, state, manner, distance etc.[3].

Examples are given below to illustrate the different aspects of meanings in an opposition pair:

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[3]Quoted from Jakobson (1979:199) : "In his earlier study (1957:56), Marchand posited that 'the symbolism underlying ablaut variation is that of polarity which may assume various semantic aspects.'".

(scope)

pa:n 325 *to plaster with a tool*

----- pa:n 325 pe: 325

to plaster with smaller action and area

----- pa:n 325 pa: 325

to plaster with larger action and area

(space)

pa:n 33 *to creep about*

----- pa:n 33 pe: 213

smaller objects as of ants dispersing

----- pa:n 33 pa: 213

bigger objects as of animals walking away

(size)

la:n 31 *to block the way*

----- la:n 31 le: 213

to stop by blocking one´s way

----- la:n 31 la: 213

using a big object to block the way

(quantity)

la:p 33 *to sweep up with the arm*

----- la:p 33 le: 213

to sweep up a number of small things

----- la:p 33 la: 213

to sweep at up some big objects

(state)

la:u 33 *to cut down trees*

----- la:u 33 le: 213

to cut down a smaller plantation of trees

----- la:u 33 la: 213

to cut down the forest with no restraint

(manner)

lop 33 *to apply with a swab*

----- lop 33 le: 213

to apply with smaller action

----- lop 33 la: 213

as of larger wound, to apply with larger action

(distance)

lum 33 *to grope in the dark*

----- lum 33 le: 213

to grope within a close distance

----- lum 33 la: 213

to grope within a longer distance

The alternation of /e:/ vs /a:/ in the tallied syllables indicates diminutive vs augmentative oppositions on a semantic contrastive scale.

There have been a great number of data reported on this phenomenon of vowel alternation as related in an environment of contrastive meanings. See Ultan (1971), Crisfield (1976), Diffloth (1976), Theraphan (1979) and Gregerson (1983). Nowadays it is mostly known as Vowel Ablaut.

Saussure (1959:159) describes the "ablaut" phenomenon in German as follows:"Ablaut, or radical vocalic variation coinciding with a grammatical opposition, is a prime example of alternation but is distinguished from the general phenomenon by no particular characteristic." This is a synchronic stuctural principle revealing a regular phonic opposition between two elements that have an opposition of value. From a principle of grammatical alternations referring to numbers, persons and tense, such as *Gast : Gäste* in the formation of numbers, he found that the principle also applied to any phonic bonds that help to strengthen correspondence in morphological and lexical meanings referring to the substantivization from adjectives or verbs. The example showing the same phonic difference as *Gast : Gäste* in the formation of numbers, *Stärke* in the formation of a substantive from the adjective *stark*, *floss* in the formation of tense from the infinitive *Fluss* (ibid. 158).

Although some disagreement would arise concerning what is grammatical and what pertains to meanings, anyway, Saussure is correct to emphasize the ablaut phenomenon in

the synchronic dimension[4]. This concept develops further when other data in various languages of different typological families are found to display the gradations, oppositions and even variations of consonant features in connection to the formation of contrastiveness in semantic values (cf. Ultan 1971, Gregerson 1983). That is how ablaut comes to be used nowadays in synchronic studies to refer to a system of vocalic alternations such that the opposing features of the vowels are equated with size-related contrastiveness.

Vowel ablaut is one aspect of the ablaut phenomenon. It does not stand for a direct substitution of an image in resemblance to the sound, but it represents a systematic mechanism of motivation. The phonetic features of the vowels concerned can either form significant systematic contrasts under certain environments, or just reveal a more transparent iconcism as connected with the tangible sensation of the physiological conditions of the sound producing organs.

3.4.2 The Single Occurrence of /e:/ and /a:/

In the case of a single occurrence of /e:/ or /a:/

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[4]Saussure (ibid:85) wrote:" It always calls forth two simultaneous terms. Not (Gäste) alone but the opposition Gast: Gäste expresses the plural. The diachronic fact is just the opposite: only one term is involved, and for the new one to appear (Gäste), the old one (gasti) must first give way to it".

where there is no opposition pairing of the vowel, i.e. either /e:/ or /a:/ occurs alone, the meaning of either DIM or AUG remains in an extended set of meanings. This view can be schematized by figure 4:

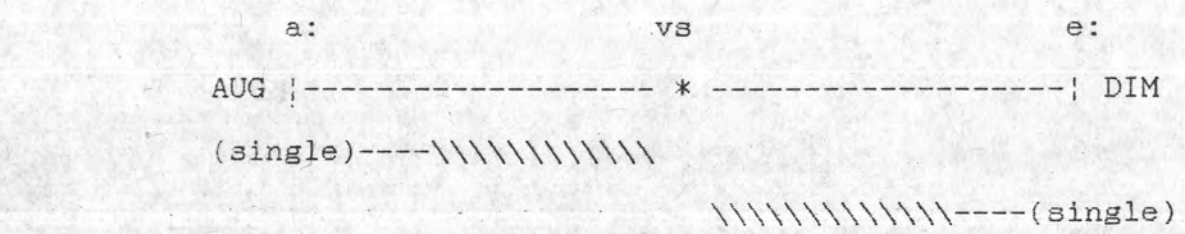

fig.4

Fig. 4 shows how the single occurrence of /a:/ and /e:/ extends the meanings from the polar values of AUG and DIM.

(a) A single occurrence of /e:/ :

The following data will present the iconic vowel /e:/ of the tallied syllables which occur with no opposition of /a:/. It does not express the diminutive meaning in an obvious way but nevertheless conveys shades of the same diminutive meaning, such as {[repetitiveness], [continuity], [incessantness]...}. See the following examples :

<:) [incessantness]

pa:i 325 ----- pa:i 325 pe: 325

be defeated stampeding in spreading numbers

kha: 325 ----- kha: 325 khe: 325

to kill to kill incessantly

kha:t 33 ----- kha:t 33 khe: 325

torn worn and torn in pieces

<:) [continuity]

phan 325 ----- phan 325 phe: 325

to entwine to entwine around

kwaŋ 213 ----- kwaŋ 213 kwe: 213

to stroll to hover above as of an eagle

kwan 213 ----- kwan 213 kwe: 213

to be off route to take a walk off route

fɯn 213 ----- fɯn 213 fe: 213

to squeeze cause to overflow

<:) [repetitiveness]

kan 213 ----- kan 213 ke: 213

to knead to knead repeatedly

?we:ŋ 33 ----- ?we:ŋ 33 ?we: 325

to loiter a close distance

mo: 55 ----- mo: 55 me: 325
to stroke with the hands stroking repetitively

li:n 33 ----- li:n 33 le: 213
to linger to linger on and on

(b) the single occurrence of /a:/:

The extended set of the iconic values associated with the iconic vowel /a:/, includes such semantic components that can be detected as {[randomness], [spacious], [excessive]... } , all of which cast a overtone of augmentativeness. See the following examples:

ʔwa:ŋ 33 ----- ʔwa:ŋ 33 ʔwa: 325
to roam to roam faraway

sei 325 ----- sei 325 sa: 325
to tear apart torn apart with big action

wa:t 55 ----- wa:t 55 wa: 325
to dig up to dig up and search thoroughly

la:n 33 ----- la:n 33 la: 213
to overdo something extravangant

lom 31 ----- lom 31 la: 213

to forget be forgetful, be oblivious

3.4.3 The Unique /eɯ/ of Vowel Set 2

Some iconic vowels can have a unique occurrence, such as the iconic vowel /eɯ/ of Set 2. The semantic components of the diphthong /eɯ/ can include { [casualness], [impatience] }.

The general iconic value given in the following examples in association with the iconic vowel /eɯ/ is only [casualness] in an unmarked context. I have to emphasize here that Western people may not have the concept of [casualness] under all the situations that are referred to, hence when I add "casually" to the meaning of the lexical constructions, it has to be understood as "a relaxed way of doing something", "to do something unintentionally".

ka: 31 ----- ka: 31 keɯ 31

to kill to kill casually

da: 325 ----- da: 325 deɯ 55

to mix (grains) to mix up some grains casually

fat 33 ----- fat 33 feɯ 33

to flutter to flutter the wings casually

ʃe:t 33 ----- ʃe:t 33 ʃɐ̈ 33

to slice to slice casually

ʃi: 325 ----- ʃi: 325 ʃɐ̈ 55

to tear apart to tear apart casually

?ot 55 ----- ?ot 55 ?ɐ̈ 55

to fill up to fill up a hole casually

This unique iconic vowel has the highest frequency of occurrence besides its absolute degree in productivity. Therefore I only choose to list a few examples to demonstrate the active condition of the process.

3.4.4 Notes on Ilocutionary Meanings

In the study of the semantic meanings of the tallied syllables in the lexical constructions, there are two categories of meanings, the inherent and the illocutionary meanings.

The inherent values have been discussed in the previous sections. In this section, illocutionary meanings will be discussed.

The iconic vowel /ɐ̈/ is found to have meaning. There seems to be an affecting influence upon the hearer.

For example:

Situation A:

pa:n 325 peɯ 55 !

(get the wall) plastered, hurry up!

In situation A, when the speaker intends to enforce the illocutionary* effect upon the listener, the iconic vowel /eɯ/ will convey the meaning [impatience].

Situation B:

Te 52 pa:n 325 peɯ 55 paj 52 !

He plasters (the wall) in a casual manner.

Without the implementation of illocution, such as in situation B, the listener will receive the meaning of [casualness] from the iconic vowel /eɯ/.

In the following table, the two sets of vowels that convey iconicity, will be listed with the semantic entities that each one of them indicates. This table will not include the illocutionary meanings, because they are outside the scope of this thesis:

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*The illocutionary force of a speech act can vary with purposes to express a warning, a promise, a threat etc. all depending on the context of the utterance.

Sets	Vowels	Iconic Values
1	a:	augmentatives (polar occurrence) --- (single occurrence) randomness, spaciousness, excessiveness ...
	e:	diminutives (polar occurrence) --- (single occurrence) repetitiveness, continuity, incessantness ...
2	eɯ	(sole occurrence only) casualness, impatience

Table 3.2 The iconic values detected as inherent semantic components of those iconic vowels in Set 1 & Set 2. The dotted line is used to separate the polar concepts and the extended set of meanings.

Vowel Set 1 includes /e:/ and /a:/, which forms the ablaut set that reveals the contrastive size-related meanings of Diminutives and Augmentatives. When only one of the pair exists, only the extended meanings of the polar concept will be indicated.

Vowel Set 2 consists of the unique vowel /eɯ/, which has only inherent semantic values.

3.5 Summary

In the Primary System of the tallied syllables, the syllabic structure is limited to open syllables. This is the only type of tallied syllable which is absolutely productive in nature, i.e. a predictable link between the initial consonant of the headword and that of the tallied syllable can be confirmed under all circumstances.

Two patterns of the tallied syllables are derived. The different sets of the iconic vowels are found to be responsible for the formation of the patterns.