

Burmese Particles as Boundary Marking Units of Text

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ABSTRACT

Particles serve as boundary units identifying the terminus of conceptual units within sentences and texts of Literary Burmese. The function of boundary marking is important for readers and listeners, identifying and specifying the function of significant cognitive units of meaning and also identifying meaningful pause/breath units in the written text. Burmese is written in an Indic, Devanāgarī script that looks like a multitude of round bubbles attached to each other in different configurations and blown out through tubes into straight lines. Word space is not used but there is ‘white space’ used to indicate a conceptual unit larger than a word. This conceptual unit is normally bounded on the right by a *postposition particle* or noun and, if not, then by a symbol indicating reduced grammaticality.²

This paper demonstrates the relationship between the distribution of postpositional particles and ‘white space’, or rather that of the particle and its distribution in relation to the segment formed between ‘white spaces’ in written text. It is hypothesized that postpositional particles function as a regular chunking mechanism to manage and grammatically distribute information evenly and build structural form for lexical content. The methodology employed is exploratory. Two brief Literary Burmese texts are used as the base data, one hortatory, coming from a recent Burmese language newspaper, and the other narrative, coming from a traditional second-grade reader. Both are well formed texts. Comparisons are made of particles to lexical words in the text, within the sentence and within the conceptual unit, called a segment, and within and between the two texts. We also examine the structure that particles create in the text as a whole.

¹Paulette Hopple presented this paper at the Particle Party, but did not have the opportunity to revise it before she passed away. This is her original draft, with only minor editorial changes.

²A short straight line indicates the terminus of a unit without the rest of the completion particles of the construction. Many liken this to a comma, not in ordinary text, but as used in lists in English. Also in modern novels, a hyphen and dotted lines are used to indicate the loss of full grammatical forms; to set the reader’s expectation of abbreviated units.

CONTENTS

1	GRAMMATICAL SYSTEM VERSUS SEMANTIC SYSTEM
2	TEXT IMAGE AND STRUCTURES
2.1	Text 1 – Sn. Gen. Than Shwe’s Slogan (Hortatory Text)
2.2	Text 2 – Parrot Brothers (Narrative Text)
3	BOUNDARY SEGMENTS IN DISCOURSE STRUCTURE
4	CONCLUSION
5	FURTHER STUDY
	APPENDIX: TEXT TRANSLATION
	REFERENCES

1 GRAMMATICAL SYSTEM VERSUS SEMANTIC SYSTEM

The basic distinction between the grammatical system and semantic system is that of *structure* to *content* (Talmy 2000a, 2000b). Particles represent most of the overt grammatical operators in Burmese. Lexical forms are those which belong to open classes, while grammatical forms are characterized by closed-class forms. An open class is characterized by a large number of members and can be added to as new forms enter the language. A class is considered closed if it has a small and limited membership. A particle is defined as a closed-class form in this paper.

The particles of Literary Burmese and Colloquial Burmese (hereafter LB and CB, respectively), differ substantially (Okell and Allott 2001) between these two classically diglossic languages. However, the system of the particle function and distribution has remained highly stable over the last 600 years, such that a speaker or writer of Burmese can quite easily move between the two languages by simply changing all the particles from one corresponding form to the other, all the while keeping the basic position stable in relation to the lexical content. There are certainly lexical differences between the two languages, but such an exercise of merely changing particles would produce an acceptable and recognizable text which a native speaker could accept as the transformed speech register.

2 TEXT IMAGE AND STRUCTURES

Examine Figure 1 below and notice the use of space between segments.



Figure 1. Political Slogan Text with Sn. General Than Shwe (Myanmar Alin 2007)

The ‘bubble writing’ appears to be a string of short comments followed by a space. This text is composed of only two sentences. Each sentence is marked by a small set of parallel lines || at the end of the sentence in line 3 and the end of line 6. The units bounded by space within the sentence shall be referred to as ‘segments’ in this study. It has been argued by Burmese language instructors, Burmese literary scholars and ordinary people that the space separating units of the sentence do not matter; one is free to put space wherever it aesthetically seems best.

Segments within a sentence correspond roughly to the arguments of the verb and adjuncts or obliques. Their roles are various and can be so extensive that a mere constituent analysis of one sentence took four pages of tree charting (Hopple 2003:372). Typical sentences in Literary Burmese expository text are deeply embedded with such segments. One sentence is easily considered a discourse in itself.

The role of particles in structuring text was discussed in Hopple (2003) and the role of such structures in expository text in Hopple (2005). The present study examines particles in segments as boundary markers.

2.1 TEXT 1 – SN. GEN. THAN SHWE’S SLOGAN (HORTATORY TEXT)

Now looking again at the first text in Figure 1—it is a brief Literary Burmese text of 75 words taken from the front page of Myanmar Alin (New Light of Burma Newspaper February 10, 2007). The text is a political slogan with the author’s picture next to it. The author of this wisdom genre literature is Senior General Than Shwe, the head of the military government. The basic theme of the text is *If the spirit of unity is strengthened, the area of*

united (Myanmar) will exist forever. Particle use in this brief text seems radically reduced from what would be considered average in written LB syntax. Figure 2 is a marked copy of the previous image demonstrating the placement of particles in this section of text. Note the relationship of particles bounding the terminus of segments.

This brief hortatory text is composed of two sentences, Sentence 1 contains 5 segments and Sentence 2 has 8 segments, making the entire text 13 segments. This is a terse, well worked series of political statements to encourage the population to build a great and everlasting country. Each segment is dense with well crafted meaning and power.³

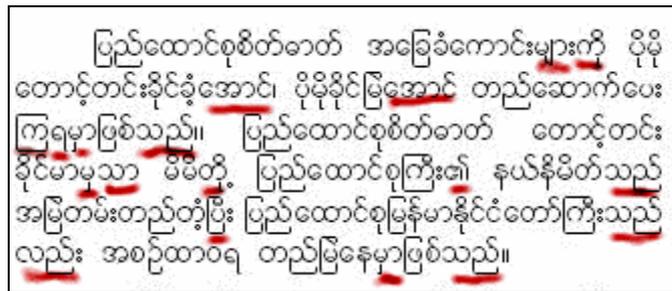


Figure 2. Sn. Gen Than Shwe Text Marked for Particles

Table 1 presents the summary total of segments and words, and of those words the number of particles in each sentence in the Gen. Than Shwe text. The second sentence is longer and more complex with 8 segments, 45 words and, of those, only 10 are particles. The average number of particles per segment is 1.6 for Sentence 1 and 1.3 for Sentence 2. The average number of words per segment is 5.8 and the average number of particles is 1.4 per segment for this text.

Table 1. Average Particles per Segment in Each Sentence

Sentence	segments	words	particles	Average Particles per segment
1	5	30	8	1.6
2	8	45	10	1.3
Average	6.5	37.5	9	1.4

Examining the individual 13 segments of this text, we find three segments with no particles. These are at significant points in the discourse—at the beginning of each sentence and at the keyword for the whole text, ‘eternal’, segment #12. Each of the particle-less segments terminate with a noun. Table 2 below demonstrates the percentage of particles in relation to all words in

³The Appendix contains an English free translation of both texts.

each segment. Particles are counted as words. Overall, 24% of this text is composed of particles, which is less than what we would expect, except in poetry. The explanation is likely that this text is hortatory genre and also that the style is crafted for impact, leaving the linkages between segments implicit, similar to poetry yet not quite poetry.

Table 2. Particles per Word in a Segment

Than Shwe Slogan					Particle Segment Position	
Segment	Words	Particles	ratio		Non-final	Final
1	5	0	0	Sentence 1	0	0
2	5	2	0.4		0	2
3	7	1	0.14		0	1
4	5	1	0.2		0	1
5	8	4	0.5		3	1
6	5	0	0	Sentence 2	0	0
7	6	2	0.33		0	2
8	3	1	0.33		0	1
9	5	1	0.2		0	1
10	9	2	0.22		1	1
11	9	2	0.22		0	2
12	2	0	0		0	0
13	6	2	0.33		1	1
Total	75	18	0.24		5	13
Mean	5.8	1.4	0.2		0.38	1

2.2 TEXT 2 – PARROT BROTHERS (NARRATIVE TEXT)

The second text is a story for children from the Myanmar government's Second Grade Primer (Myanmar Government 1993:49). It is a story about two parrots separated not long after birth. The environments in which they are raised are morally contrastive, accounting for their behavior, which parrots that of their human caretakers.⁴

Figure 3 below shows the first two of a six-paragraph story about two brother parrots, some thieves, some hermit monks and a king. The image on the left is the text unmarked for particles. Figure 4 on the right is the same portion of text marked for particles. Observe the boundary nature of the particles at the terminus of segment units within the sentence. Half of the full text is used here in order to be more comparable with the short Than Shwe hortatory text. The text is basically a narrative with embedded direct quotes.

⁴See the Appendix for an interlinearization and English free translations of the texts.



Figure 3. Elder and Younger Parrot Brothers

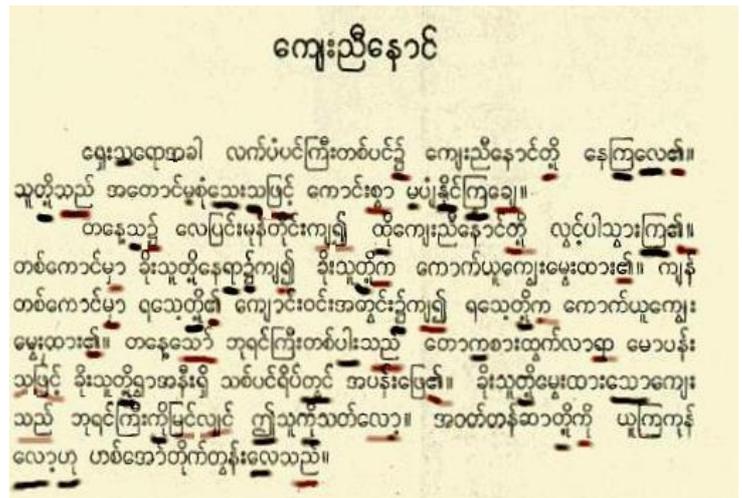


Figure 4. Particle Marking of Two Paragraphs of Elder and Younger Parrot Brothers

Table 3 below demonstrates the number of sentences (8), the number of segments (34), the number of words (165), and the number of particles (66) in their constructional environments for the Parrot text. The difference between words minus particles is the remainder, lexical forms. This text is composed of 60% lexical forms and 40% particles. That is, 40% of the text is the structural form of the text and represents the closed-class, grammatical structure.

Within the closed class of particles, 83% of these particles occur at the end of the segment.

Table 3. Percent of Particles per Words in a Segment

Elder and Younger Parrot Brothers						
					Particle Segment Position	
Sent	Segment	Words	Particles	% of Particles	Non-final	Final
1	1	4	1	0.25	2	0
	2	7	1	0.14	0	1
	3	4	1	0.25	0	1
	4	4	3	0.75	0	3
2	5	3	2	0.67	0	2
	6	6	4	0.67	1	3
	7	2	1	0.5	0	1
	8	5	4	0.8	1	3

Elder and Younger Parrot Brothers						
					Particle Segment Position	
Sent	Segment	Words	Particles	% of Particles	Non-final	Final
3	9	4	2	0.5	0	2
	10	6	2	0.33	0	2
	11	5	2	0.4	1	1
	12	5	2	0.4	0	2
4	13	3	1	0.33	0	1
	14	8	3	0.38	2	1
	15	4	2	0.5	0	2
	16	6	1	0.17	0	1
5	17	4	1	0.25	0	1
	18	4	3	0.75	0	3
	19	6	2	0.33	0	2
	20	4	3	0.75	0	3
	21	6	1	0.17	0	1
6	22	3	1	0.33	0	1
	23	5	1	0.2	0	1
	24	6	2	0.33	1	1
	25	4	2	0.5	0	2
	26	6	1	0.17	1	0
	27	4	1	0.25	0	1
	28	3	1	0.33	0	1
7	29	8	3	0.38	1	2
	30	5	3	0.6	0	3
	31	5	3	0.6	2	1
8	32	5	2	0.4	0	2
	33	5	2	0.4	0	2
	34	6	2	0.33	0	2
	Total	165	66	0.4	12	55
Mean	4.9	1.9		0.4	1.6	

The average number of words per segment in the Parrot text is 4.9. One of the most common patterns in Burmese is the compound noun and compound verb plus a particle at the end—NN +VV P.⁵ This structure would produce a 5-word segment. Other common patterns are NN+NN P, NVNPP, and VVPP(P).

The Than Shwe text had an average of 5.8 words per segment, which is likely at the higher number for text. It is assumed that poetry would yield minimal particles but the number of words per segment would not increase. The reason for this is that the reader must infer the grammatical relationships and if there is too much lexical bulk in the segment the structural relationships are much harder to infer and less elegant. The four-part compound word together with a particle is a frequent pattern.

The average number of particles per segment in the Parrot text is 1.9 and the average for the Than Shwe text is 1.4.

⁵N represents a noun, NN a compound noun, V a verb, VV a compound verb, and P a particle.

Table 4. Average Words & Particles per Segment in Both Texts

Text	Types of Words per Segment	
	Lexical Words	Particles
Parrot	4.9	1.9
Than Shwe	5.8	1.4
Average	5.3	1.7

The average figures in Table 4 demonstrate what is commonly practiced in Burmese writing to keep the segment at a fairly even rate of information content and information structure. It is assumed this structure is an aid in reading the text quickly.

3 BOUNDARY SEGMENTS IN DISCOURSE STRUCTURE

While the function of boundary marking and the function of the many segments within the typical Burmese sentence should be further investigated, it is profitable to note the distribution of particles within text as a potential correlate to other types of discourse charting, such as Longacre-Levinsohn (1978) or plot structure. If the role of particles is to provide structure, then for linguists investigating higher level structures above the sentence, particle distribution in Tibeto-Burman languages without regard to content provides yet another avenue of insight. Note the pattern in the charts of Figure 5 and Figure 6 below. Quite apart from the precise particle itself or the role of the segment within a sentence or paragraph, the raw percentage and amount of material itself is another marker of textual properties and an indicator of structural boundaries or points within the plot structure.

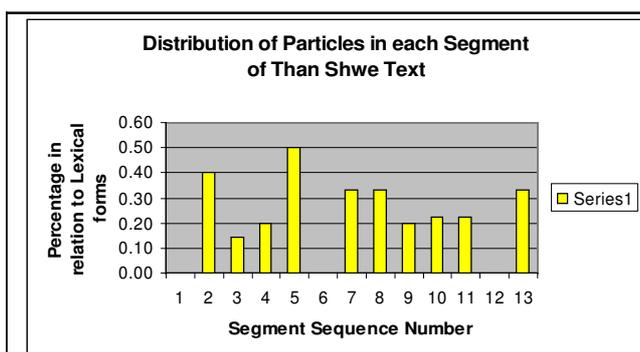


Figure 5. Particle Distribution in Than Shwe

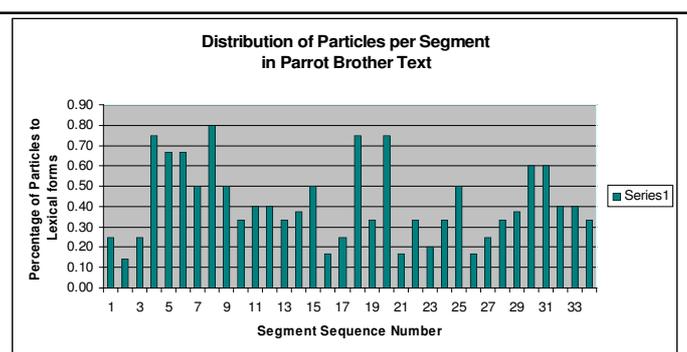


Figure 6. Particle Distribution in Parrot Text

Typically, the absence or reduced number of particles in the onset of the discourse is a function of introducing the topic or the participants. In the Than Shwe text, total absence of particles marked the introduction of each sentence, which happened to be the same repeated segment as the topic. The absence of a particle in segment #12 identifies a single key compound

noun as a key word to the logic of the text. Examining the discourse structure of the Parrot text, one could hypothesize major units (by looking at Figure 6) of 1-3, 4-15, 16-20, 21-25, 26-33. Such a study is beyond the scope of this paper, but demonstrates a possible use of particles identifying larger boundary units of text.

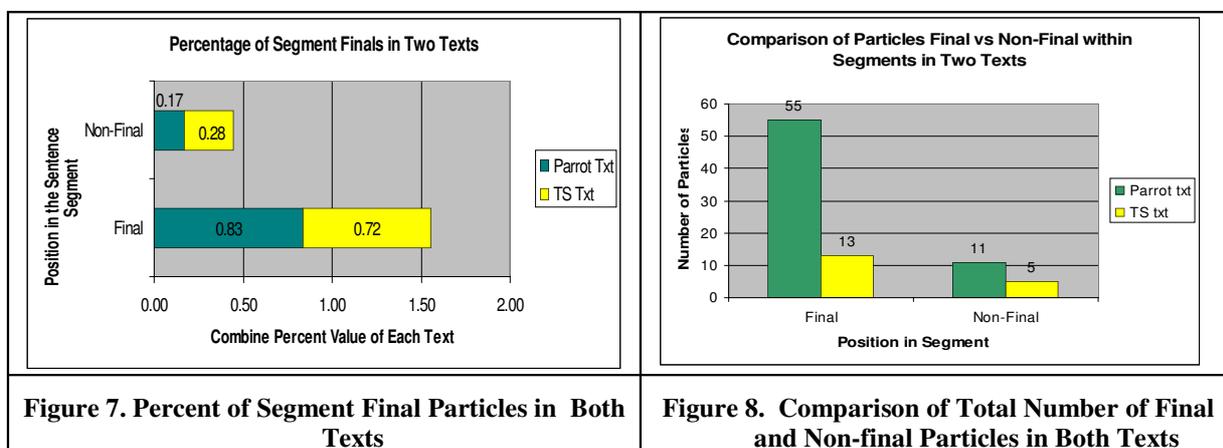
4 CONCLUSION

Combining the results of the two texts, (Table 5), the proportion of particles used at the terminus of a segment was 83% in the Parrot text and 72% in the Than Shwe text, and with a combined average for both texts of 78% of the particles marking the boundary of written LB segments.

Table 5. Average Distribution of Particles within Segments

	<i>Final</i>	<i>Non-Final</i>
Parrot Txt	0.83	0.17
TS Txt	0.72	0.28
<i>Average</i>	<i>0.78</i>	<i>0.22</i>

The segment organizes units in Burmese by using the particles to create a psychologically ‘real’ unit within Burmese grammar and thereby structuring text into regular units relating content indicated within the lexical–semantic structures.



Therefore we can conclude there is a *positive correlation* of particles at segment terminal boundaries in written LB. The role of the particle in structuring text is to

- identify segments
- bound logical units of function
- separate grammatical function from lexical content in an organized and patterned way

- order units: Content first – Structure second
- follow implicational universals in word order with grammar (structure) being final in a verb final typology.

5 FURTHER STUDY

Further investigation using this simple methodology should be made of more texts and in different genre—poetry, scientific or technical writing, religious texts (not parabaik—palm leaf manuscripts). To cross-validate the findings here, a double-blind study could be made of texts prepared with different ‘rules’ of spacing to follow the subject’s ability to read and comprehend text. Examination of the psychological reality of the segment unit in other related Tibeto-Burman languages could be made. It would be useful to study both languages with an Indic script, such as languages in Nepal, which do not have a tradition of writing word space, and languages which use a Roman-script tradition of word space, separating each word/syllable as a separate white-spaced item (such as Akha). Experiments could be undertaken to segment the units on the basis of the post-positional particles to see if reading and comprehension is enhanced.

APPENDIX: TEXT TRANSLATION⁶

သန်းရွှေ မိန့်ခွဲ Than Shwe Speech

1.1 ပြည်ထောင်စု စိတ်ဓာတ် အခြေခံ ကောင်း များ ကို ပိုမို တောင့်တင်း
p^hi.t^hauŋ.sû? siêt.dât ə.t^he.k^han kaúŋ m^há ko po.mo sttaúŋ?.tín
 united states spirit foundation good PL ACC more strong

ခိုင်ခံ့ အောင်
k^haiŋ.khân? auŋ
 long.lasting in.order.to

In order to make the good foundation of the spirit of unity strong, long-lasting,

⁶These texts were interlinearized by Vong Tsuhshi and Esther Wayesha. Grammatical abbreviations throughout the texts: ACC=accusative; CONT=continuous; DECL=declarative; EUPH.EXP=euphonic expression; GEN=genitive; IMPER=imperative; IDIC=indicative; IRR=irrealis; NOM=nominative; NUM.AGR=number agreement; PL=plural; QUOT=quote marker; TOP=topic; TOP/SUBJ=topic/subject.

1.2 ပိုမို ခိုင်မြဲ အောင် တည်ဆောက် ပေး ကြ ရ မှာ ဖြစ်သည် ။
po.mo khaiŋ.m'è auŋ ti.s^hau? *pé tʒá?* *jâ ma p^hji?[?]θi*
 more durable in.order.to build give NUM.AGR must IRR be

and more durable, (we) must build (it) up.

2 ပြည်ထောင်စု စိတ်ဓာတ် တောင့်တင်း ခိုင် မာ မှသာ မိမိ တို့ ပြည်ထောင်စု
pⁱ.t^hauŋ.sû? *siêt.dât taũŋ?[?]tíŋ* *k^haiŋ ma m̄á.θa mí?[?]mí?[?] tó?* *pⁱ.t^hauŋ.sû?*
 united states spirit strong firm hard only.if one PL united states
 ကြီး ၏ နယ်နိမိတ် သည် အမြဲတမ်း တည်တံ့ ပြီး ပြည်ထောင်စု မြန်မာ
tʒí í? *ne.nə.miêt θi* *ə.m'è.tán ti.taŋ?* *pⁱ pⁱ.t^hauŋ.sû?* *m'an.ma*
 big GEN boundary TOP/SUBJ always exist finish united states Myanmar
 နိုင်ငံ တော် ကြီး သည် လည်း အစဉ် ထာဝရ တည်မြဲ နေ
naiŋ.ŋan tə tʒí θi *lé ə.sin t^ha.wə.ja?* *ti.m'è ne*
 country royal.mk big TOP/SUBJ also always forever exist.e CONT
 ver

မှာ ဖြစ်သည် ။
ma p^hji?[?]θi
 IRR be

If the spirit of unity is strengthened, the area of united (Myanmar) will exist forever, and the country of united (Myanmar) will also exist forever.

ကျေးညီနောင် Parrot Brothers

1 ရှေးသရောအခါ လက်ပံပင် ကြီး တစ် ပင် ကျေး ညီ
ʃé.θə.jə.ə.k^ha lék.pan.pin tʒí tí? naík tʃé ji
 once.upon.a.time kapok.tree big one at parrot younger.brother
 နောင် တို့ နေ ကြ လေ ၏ ။
nauŋ tó? ne tʒá? *le í?*
 older.brother PL live NUM.AGR EUPH.EXP IDIC

A long time ago, in a huge tree, lived two parrots who were brothers.

2 သူတို့ သည် အတောင် မ စုံ သေး သဖြင့် ကောင်းစွာ မ ပျံ
θu.tô? θi ə.taun mâ suon θé θa.p^hjîŋ kaúŋ.s^wa mâ p^lan
 3p TOP/SUBJ wing not complete yet because well not fly

နိုင် ကြ ချေ ။
naiŋ tʒá? tʃ^he
 be.able NUM.AGR DECL

Their wings had not completely grown feathers and they were yet unable to fly.

3 တနေ့သ၌ လေ ပြင်း မုန်တိုင်း ကျ ချိ ထို ကျေး
tə.né?θə.naík le p^líŋ muon.taíŋ tʃá? j^wé? t^ho tʃé
 one.day wind strong storm fall because that parrot

ညီ နောင် တို့ လွင့်ပါသွား ကြ ၎င်း ။
ji nauŋ tó? l^wîŋ?paa.t^wá tʒá? î?
 younger.brother older.brother PL blow.away NUM.AGR IDIC

One day the wind blew so fiercely that it threw both parrots out of the tree.

4 တစ် ကောင် မှာ ခိုးသူ တို့ နေရာ ၌ ကျ ချိ တို့ က
tí? kauŋ ma khó.θu tó? ne.ja naík tʃá? khó.θu tó? ká?
 one body TOP thief PL place at fall because PL NOM

ကောက် ယူ ကျွေး မွေး ထား ၎င်း ။
kaú? ju tʃ^wé m^wé t^há î?
 pick take feed raise keep IDIC

One of the birds landed in an area where thieves were staying. The thieves picked (it) up, fed (it) and raised (it).

5 ကျန် တစ် ကောင် မှာ ရသေ့ တို့ ၏ ကျောင်း ဝင်း အတွင်း ခြံ ကျ ချိ
tʃan tʃi? kauŋ ma ja.θé? tó? í? tʃaúŋ wín ə.t^wíŋ naík tʃá? j^wé?
 left one body TOP hermit PL GEN school yard inside at fall because

ရသေ့ တို့ က ကောက် ယူ ကျွေး မွေး ထား ၏ ။
ja.θé? tó? ká? kaú? ju tʃ^wé m^wé t^há í?
 hermit PL NOM pick take feed raise keep IDIC

The other bird landed in the school compound of hermit (monks). The hermit (monks) picked (it) up, fed (it), and raised (it).

6 တနေ့သော် ဘုရင် ကြီး တစ် ပါး သည် တောကစား ထွက်လာ ရာ
tə.né?θə bə.jin tʃí tʃi? tʃí θi tɔ.kə.sá t^hé.k.la ja
 one day king big one person.royal TOP/SUBJ royal.hunt come.out and

မောပန်း သဖြင့် ခိုးသူ တို့ ရွာ အနီး ရှိ သစ်ပင် ရိပ် တွင်
mɔ.pán θa.p^hjíŋ khó.θu tó? j^wa ə.ní jʃi? θí?pin jíék t^wiŋ
 exhausted because thief PL village near exist tree shade at

အပန်းဖြေ ၏ ။
ə.pán.p^hje í?
 rest IDIC

One day a great king had just finished a royal hunt and was very exhausted, so (he) took rest in the shade of a big tree near the village of the thieves.

7.1 ခိုးသူ တို့ မွေး ထား သော ကျေး သည် ဘုရင် ကြီး ကို မြင် လျှင်
khó.θu tó? m^wé t^há θɔ tʃé θi bə.jin tʃí ko m^liŋ lⁱiŋ
 thief PL raise keep REL parrot TP/SUBJ king big ACC see when

" ဤ သူ သတ် လော့
i θu θát lɔ?
 this 3s kill IMPER

When the parrot who had been raised by the thieves observed the great king, “Kill this man!

7.2	အဝတ်တန်ဆာ	တို့	ကို	ယူ	ကြ	ကုန်	လော့	"	ဟု	ဟစ်အော်
	<i>a.wóʔ.tan.s^ha</i>	<i>tôʔ</i>	<i>ko</i>	<i>ju</i>	<i>tʒáʔ</i>	<i>kuon</i>	<i>lôʔ</i>		<i>húʔ</i>	<i>híʔ.ɔ</i>
	garment	PL	ACC	take	NUM.AGR	all	IMPER	QUOT	shout	
	တိုက်တွန်း	လေ	၏	။						
	<i>taík.t^wún</i>	<i>le</i>	<i>îʔ</i>							
	insist	EUPH.EXP	IDIC							

Take (his) clothes and bring (them) all (to us)!” (he) cried out.

_____ (end of text represented in this paper) _____

The king said, “This place is full of dangers. I will not stay.” He quickly departed.

Then the king arrived at the hermits’ place to rest and recover. Then the parrot raised by the hermits pleasantly said, “Come Royal King! Please recover from your tiredness. Please drink this cool water. Please eat this fruit.” *

The king said to the noble parrot, “Today I met a bird not like you. He was very rude. You, on the other hand, are abundantly polite.” He said these things praising him.

“Oh Your Royal Highness, that parrot is my younger brother. We are older-brother and younger-brother to each other. The wind blew wildly and it happened that we were separated. My parrot younger brother having landed among the thieves had to become violent and harsh. But I, however, landed among the teaching hermits and I had to become of a gentle and refined disposition.” Thus said the parrot.

*Using the appropriate honorifics for royalty in Burmese.

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