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Tense, Aspect, and Mood in Shekgalagari

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1. Introduction and goals

Shekgalagari (updated Guthrie number S.31d (Maho 2003)) is a Bantu language spoken in western Botswana and parts of eastern Namibia. It is closely related to Setswana, but exhibits a number of phonological, morphological, and tonal phenomena not evident in Setswana. It has been described by Dickens (1986), but its complex Tense, Aspect, and Mood (TAM)-marking system remains largely undescribed. This paper represents an effort to initiate such a description. It is by no means complete, but I hope that it may spur further investigation and description. Data were collected in the spring semester of 2008 at the University of California, Berkeley, in consultation with Dr. Kemmonye “Kems” Monaka, a native speaker and visiting Fulbright Scholar from the University of Botswana. All errors, of course, are my own.

Data for this paper were collected as part of a study of Shekgalagari tone and downstep involving Dr. Monaka, Professor Larry Hyman of the University of California, Berkeley, and the author of this paper. Data are drawn from the notes of the author and of Professor Hyman, and from personal communications with Dr. Monaka. Because the aim of the study was not the description of the TAM system as such, a number of forms were not elicited and are missing from this document. All need further investigation in terms of their semantics, pragmatics, and range of uses. Particular areas of interest for future study are noted throughout.

1.1. Structure of paper

Section 2 gives a general introduction to tone in Shekgalagari and important tone processes, including phrasal penultimate lengthening and lowering (2.2), spreading rules including grammatical H assignment (with “unbounded spreading”; 2.3) and bounded high-tone spreading (2.4), and downstep (2.5). A basic introduction to Shekgalagari’s downstep, spreading, and lowering operations is crucial to understanding the tone of tense, aspect, and mood.

Section 3 introduces verbs in Shekgalagari, including their basic lexical tone patterns, subject markers (3.1), object markers (3.2), and final vowels. (3.3). There are at least five distinct subject marker series in Shekgalagari, with distinct forms and tone/spreading patterns. Object markers appear to be the same across all TAMs, and final vowels pattern basically according to reality status, although several categories where irrealis marking might be expected do not take an explicitly irrealis final vowel.

Section 4 gives a basic outline of tense, aspect, and mood marking in main clauses in Shekgalagari. 4.1 outlines morphologically marked distinctions of temporal distance (tense, including degrees of present and future marking). Past tense (4.1.1) also makes a clear distinction between perfective and imperfective aspect (sections 4.1.1.1 and 4.1.1.2, respectively). Present tense (4.1.2) functions as both perfective and imperfective (simple present, progressive, habitual), and includes a final morpheme not seen elsewhere in the system. The future (4.1.3) does not have as many or as clear distance or aspectual distinctions as the past.

Section 4.2 outlines further TAM distinctions. Section 4.2.1 deals with anterior (perfect) marking, which overlaps with past-tense marking. 4.2.1.1 gives a brief description of forms ending in *-ile*, a common marker of anterior aspect or past tense (among other things) across

Bantu; its semantics in Shekgalagari require further investigation. Other TAM distinctions discussed include habitual (4.2.2), persistent ('still'; 4.2.3), potential (4.2.4), imperative (4.2.5), hortative (4.2.6), and counterexpectatives (4.2.7). These sections also include discussions of some of the more complex tone patterning found with these constructions.

In section 5, conditional and counterfactual constructions are briefly presented. Section 6 briefly discusses future research and relative clauses.

1.2. Notational conventions

Notational conventions:

Numerical subscripts after subject markers (SMs) indicate the SM series number, detailed in 3.1.2. For example, SM₂ indicates that the subject marker is from series 2.

- i) Downstep that always occurs is indicated by a ^l symbol. When downstep occurs dependent on the surrounding tones, which may be H or toneless, the ^l symbol is enclosed in parentheses and followed by a subscript:
 - a. (^l₁) indicates that a syllable is downstepped if the previous syllable is H (due to H-tone spreading);
 - b. (^l₂) indicates downstep if the SM is H (see SM tables in section #).

Examples are given using the 3pl (class 2) subject marker and four-syllable toneless stem - *tutulula* 'disrespect' so that the tone patterns imposed by the TAMs are as transparent as possible; the subject marker series is also given for each subject marker that appears.

If certain forms are nonexistent in Shekgalagari, the corresponding slot in the charts is marked with an asterisk (*). Empty slots may be understood as open questions.

Glossing abbreviations are given in appendix B.

The present outline is concerned mainly with the form of Shekgalagari tense, aspect, and mood marking. Much further work is needed on the specific semantics and pragmatics of Shekgalagari TAM, which will surely prove a fruitful area of research.

2. Tone in Shekgalagari

Shekgalagari is analyzed in Crane (2009) as having a privative (H/Ø) tone system, in which only H tones play a role in tonal processes of spreading and downstep. This analysis is assumed in the present paper, and, except in a few early examples, only H tones are marked.

Vowels and moraic nasals (i.e. nasals not in onset position of a CV syllable) are tone-bearing units (TBUs) in Shekgalagari. Each syllable in Shekgalagari has exactly one TBU¹, so the words syllable and TBU may be considered interchangeable in terms of tonal processes.

Phonetically, there are a number of tone levels in Shekgalagari:

- i) H tones
- ii) Downstepped H (^lH) tones, which are lower than preceding Hs (or downstepped Hs)
- iii) Mid tones, which result when a toneless TBU occurs between two Hs (HØH → HMH)
- iv) Low tones, the phonetic realization of toneless TBUs not surrounded by H tones

¹ This is the case before penultimate lengthening and lowering occurs; see section 2.2.

- v) Falling tones, which may be HL or L¹L, occurring at the end of a phrase with penultimate lengthening and lowering (see section 2.2).

Shekgalagari has virtually no perceivable downdrift; Hs at the end of a series of Hs and toneless syllables have approximately the same pitch the series-initial Hs.

2.1. Plateauing

As noted above, a toneless syllable between two H tones is phonetically realized as a mid-level tone. This tone may optionally raise to the level of the two surrounding Hs.

- (1) shí-bal-é [shí-bā-lé] [HMH] → [shíbalé] [HHH]
CL7.OM-COUNT-FV.IRR
 ‘count it¹ (imp.)’

H-plateauing is an optional but common post-lexical process. It is not the result of spreading.

2.2. Phrasal penultimate lengthening and lowering (PLL)

Declarative phrases in Shekgalagari undergo a pervasive process of penultimate lengthening in pre-pausal position. An example of PLL is illustrated in (2), with the post-PLL form on the right. (3) shows that it is a phrase-level operation.

- (2) χopáni (ØHØ) → χòpá:nì [LH:L] / _%
 ‘iguana’
- (3) χu-bal-a χopáni → χùbàlà χòpá:nì [LLL LH:L]

In addition to penultimate lengthening, phrases ending in two like tones (HH or ØØ) lower the lengthened penultimate syllable. This is illustrated for a HH-final noun in (4).

- (4) tsítsírí (HHH) → tsítsî:rì [HF:L] / _%
 ‘bedbug’

The behavior of possible combinations of final tones with phrasal PLL is given in (5). Syllables are divided by dashes, and lengthened syllables are illustrated by the insertion of a tone-bearing unit, following Hyman and Monaka (2008), who analyze PLL as the insertion of a TBU and a L% intonational feature. Examples are given using the notation used throughout this paper.

(5) Tone patterns and PLL

FINAL TONES	WITH PLL (PHONETIC)	EXAMPLE			
Ø-Ø	L ¹ L-L	kala	‘friend’	→	kà:là
Ø-H	LL-H	tarí	‘thunder’	→	tà:rí
H-Ø	HH-L	k ^h éfi	‘poison’	→	k ^h é:fì
H-H	HL-L	nárí	‘buffalo’	→	nâ:rì

There is no PLL in non-declarative phrases such as questions and imperatives, including most hortatives. Ideophones do not participate in PLL, but do exhibit final devoicing. Additionally, declarative phrases ending in a monosyllabic word (e.g. some adverbs and

demonstratives) fail to undergo PLL. For a detailed description of PLL and its pragmatic conditioning, see Hyman and Monaka (2008).

- (5)
a.	χʊ-bôn-a
CL15(INF)-SEE-FV
'to see'	(infinitive, declarative form, PLL)
b.	χʊ-bôn-á
CL15(INF)-SEE-FV
'to see?'	(infinitive, question intonation, no PLL)
c.	bôn-a
SEE-FV
'see!'	(imperative, no PLL)
d.	á 'bá-bôn-ε
HORT 3PL-SEE-FV.IRR
'let them see'	(hortative, PLL optional)
e.	χʊ-bôn-a ʒwá
CL15(INF)-SEE-FV IN.THIS.WAY
'to see in this way'	(monosyllable-final phrase, no PLL)

Forms are given throughout this paper in their surface, PLL forms. Pre-PLL forms may be inferred using the table in (5) above.

2.3. Grammatical H assignment

Tone in Shekgalagari may be assigned both lexically and grammatically. Certain tenses, aspects, and moods assign a H tone to the second syllable of the verb root. This H tone spreads to the penultimate syllable pre-pausally:

- (6) Unbounded spreading to penult pre-pausally
- a.
tátáriéts-à
BE.INSISTENT-IMP.FV
tá tá rí é tsà
H H Ø Ø Ø
H H H H Ø | 'be insistent!' (imp), -tátarietsa, H1

INPUT TONES (GRAMMATICAL H ON 2 ND ROOT SYLLABLE)
UNBOUNDED H SPREADING TO PENULT |
|---|---|
- b.
hà-bá-tùtúlúl-è
NEG-3PL-DISRESPECT-FV.IRR
hà bá tù tú lú lè
Ø H Ø H Ø Ø
Ø H Ø H H Ø
Ø H Ø H H Ø | 'they don't disrespect' (pres. neg.), -tutulula, Ø

INPUT TONES (GRAMMATICAL H ON 2 ND ROOT SYLLABLE)
UNBOUNDED H SPREADING TO PENULT
NO BOUNDED SPREADING (BLOCKED BY OCP) |
|---|--|

Under some conditions, this H spreads to the final vowel. See Crane (2009) for a more complete description.

Some TAMs also have a final H pre-pausally. These include the hortative (7) and the negative imperative (8).

- (7) á 'bá-tútulul-é
HORT 3PL-DISRESPECT-FV.IRR
'let them disrespect'

- (8) shi-tútulul-é
NEG-DISRESPECT-FV.IRR
'don't disrespect!'

The sections below give a more detailed exposition of TAM and H assignment.

2.4. Bounded H-tone spreading (HTS)

Bounded H-tone spreading is a general, pervasive, word-internal process in Shekgalagari in which a H tone spreads one syllable to the right to an adjacent toneless syllable, unless that syllable is immediately followed by a H tone; in this case, bounded HTS is blocked. Bounded HTS is schematized in (9) and exemplified in (10) and (11).

- (9) Bounded HTS in Shekgalagari

- a. HØ → HH (10)
b. HØH → HØH (bounded HTS blocked) (11)

- (10) Bounded H spreading

- a. χù-χáqúlul-à 'to remind' (inf.) -χáqulula, H1
CL15(INF)-REMIND-FV
χù **χá** qú lù là
Ø H Ø Ø Ø INPUT TONES
Ø H H Ø Ø BOUNDED H SPREADING (FROM H-TONED ROOT)
- b. χù-bá-tútùlul-à 'to disrespect them' (inf.) -tutulula, Ø
CL15(INF)-3PL.OM-DISRESPECT-FV
χù **bá** tú tù lù là
Ø H Ø Ø Ø Ø INPUT TONES
Ø H H Ø Ø Ø BOUNDED H SPREADING (FROM H-TONED OM)

(11) Bounded H spreading blocked

bá-mù-χáqúlùl-à-χό ‘they remind him’ (pres. aff.), -χáqulula, H1

3PL-2SG.OM-REMIND-FV-XO

bá mù χά qú lù là χό

H Ø H Ø Ø Ø H

INPUT TONES

H Ø H H Ø Ø H

SM SPREADING BLOCKED BY FOLLOWING (ROOT-INITIAL) H; (BOUNDED H SPREADING FROM ROOT)

2.5. Downstep

Downstep occurs across word boundaries in some cases in Shekgalagari, when two H tones meet separated by at most one toneless syllable. An intervening toneless syllable assimilates to the following downstepped H.

(12) Downstep in Shekgalagari

a. H # H → H # ¹H (13)

b. H # ØH → H # ¹HH (14)

c. HØ #H → H¹H # H (15)

(13) H # H → H # ¹H

shì-tutúlùl-é 'tsítsírí

‘don’t disrespect the bedbug!’ (neg. imp), -tutulula, Ø

NEG.IMP-DISRESPECT-FV.NEG.IMP

BEDBUG

shì tu tú lù lé # 'tsí tsí rí

Ø Ø H Ø H # H H H

INPUT TONES (GRAMM. H ON 2ND ROOT σ AND FV)

Ø Ø H H H # H H H

UNBOUNDED H SPREADING TO PENULT

Ø Ø H H H # ¹H H H

DOWNSTEP: H # H → H # ¹H

(14) H # ØH → H # ¹HH

χù-gy-á 'χópá:nì

‘to eat an iguana’ (inf), -gyá, H1

CL15(INF)-EAT-FV 9.IGUANA

χù gyá # 'χó pá nì

Ø H # Ø H Ø

INPUT TONES

Ø H # Ø H Ø

PLL

Ø H # ¹H H Ø

DOWNSTEP: H # Ø H → H # ¹H H

- (15) H Ø # H → H ¹H # H
 χṽ-χόπύ¹l-á tsítsi:rí ‘to remember the bedbug’ (inf), -χόπυ¹la, H1
 CL15(INF)-REMEMBER-FV BEDBUG
 χυ χό πύ ¹lá # tsí tsí: ri
 Ø H Ø Ø # H H H INPUT TONES
 Ø H H Ø # H H H BOUNDED H SPREADING
 Ø H H Ø # H HL: Ø PLL
 Ø H H H ¹H # H HL: Ø DOWNSTEP: H Ø # H → H ¹H # H

Not every H(Ø)H meeting across word boundaries results in downstep

- (16) a. shì-bón-ḗ ¹kyélèlé [Ø-H-H # ¹HØH]
 NEG-LOOK-FV.NEG.IMP LARGE.INTESTINE
 ‘don’t look at the large intestine!’
 b. shì-bón-ḗ hómbé [Ø-H-H # HØH]
 NEG-LOOK-FV.NEG.IMP TODAY
 ‘don’t look today!’

This difference is related to both word class and TAM. NPs always downstep after verbs, but function words downstep only after verbs in certain tenses, aspects, and moods. Other word classes behave differently with respect to downstep according to TAM, as well. It will be seen throughout this paper, for example, that irrealis moods (including negative forms) more frequently involve downstep than do their realis counterparts. The table in (17) shows the distribution of selected tenses, aspects, and moods with regard to whether they condition downstep with following function words.

- (17) Distribution of (selected) TAMs with regard to downstep of function words

	BOUNDED SPREAD	UNBOUNDED SPREAD TO PENULT (Ø FV)	HIGH FV
NO DOWNSTEP WITH FUNCTION WORDS (“CONJUNCTIVE”)	present (Ø-toned SM) potential past (perfective) infinitive (no spread to FV before function word)	imperative (no spread to FV before function word)	<i>unbounded spread</i> : negative imperative future persistive negative (present (H-toned SM)) ² <i>no unbounded spread</i> : hortative
DOWNSTEP WITH FUNCTION WORDS (“DISJUNCTIVE”)	imperfective (spread to FV before function word)	present negative (spread to FV)	imperative with OM -ile (anterior)

² The present tense with a H-toned subject marker is a special case of spreading due to the loss of a H-toned suffix -χό. No downstep occurs. For details, see the online appendices.

Further analysis of downstep in Shekgalagari is beyond the scope of this paper, but see Crane (2009) for a detailed description and analysis of downstep conditioning in Shekgalagari in terms of minor-phrase formation. This paper follows that analysis, and analyzes constituents between which downstep may occur as separate words.

2.5.1. Lowering of downstepped syllables

Downstepped monosyllables obligatorily lower to Ø pre-pausally (18). Downstepped syllables followed by toneless syllables optionally lower to Ø (19). Throughout this paper, examples are given with downstepped Hs (¹HØ rather than ØØ) for the sake of clarity, but it should be noted that the lowered versions are possible and in some cases may be preferred to the ¹HØ alternatives.

- (18) Downstepped monosyllables obligatory lower before a pause

ha-bá-tutúlól-é ʒwa ‘they don’t disrespect in this way’ (pres. neg), -tutulula, Ø
NEG-3PL-DISRESPECT-FV.NEG
IN.THIS.WAY

ha bá tu tú lú lé # ʒwa

Ø H Ø H Ø Ø # H INPUT TONES

Ø H Ø H H H # H UNBOUNDED H SPREADING TO FV PHRASE-MEDIALY

Ø H Ø H H H # ¹H DOWNSTEP: H # H → H # ¹H

Ø H Ø H H H # Ø LOWERING: # ¹H % → # Ø

- (19) Downstepped monosyllables optionally lower before a toneless syllable

ha-bá-tutúlól-é zala:nɔ ‘they don’t disrespect friendship’ (pres. neg), -tutulula, Ø
NEG-3PL-DISRESPECT-FV.NEG
FRIENDSHIP

hà bá tu tú lú lé # za la nɔ

Ø H Ø H Ø Ø # H Ø Ø INPUT TONES

Ø H Ø H H H # H Ø Ø UNBOUNDED H SPREADING TO FV PHRASE-MEDIALY

Ø H Ø H H H # ¹H Ø Ø DOWNSTEP: H # H → H # ¹H

Ø H Ø H H H # Ø Ø Ø LOWERING: ¹HØ → ØØ

3. Shekgalagari verbs

Shekgalagari verbs fall into three tone classes:

- i) those which are underlyingly toneless (Ø roots)
- ii) those which are underlyingly H-toned and allow bounded H-toned spreading from the root to the following syllable (H1 roots)
- iii) those which are underlyingly H but do not allow bounded rightward spreading (H2 roots)

The basic tonal pattern of these verbs is illustrated with the infinitive (class 15 χu-) in (20). Surface forms are given both as if the forms were in non-phrase-final position, and with phrase-final penultimate lengthening and lowering (PLL).

(20) Shekgalagari verb tone patterns

a. Toneless root

ROOT SYLL	NON-FINAL	FINAL WITH PLL	GLOSS
1	χùkà	χù:kà	‘to mention’
2	χùbàlà	χùbà:là	‘to read, count’
3	χùhaphùlà	χùhaphù:là	‘to slap’
4	χùtùtùlùlà	χùtùtùlù:là	‘to disrespect’

b. H1 (spreading) root

ROOT SYLL	NON-FINAL	FINAL WITH PLL	GLOSS
1	χùhá	χù:há	‘to give’
2	χùbóná	χùbô:nà	‘to see’
3	χùχópúlà	χùχópú:là	‘to think, remember’
4	χùχáqúlùlà	χùχáqúlù:là	‘to remind’

c. H2 (non-spreading) root

ROOT SYLL	NON-FINAL	FINAL WITH PLL	GLOSS
1		—	—
2	χùlísà	χùlí:sà	‘to herd’
3	χùlálèzà	χùlálè:zà	‘to invite’
4	χùtùùlùlà	χùtùùlù:là	‘to cause to cease from a habit’

Most H2 verbs in Shekgalagari can be traced to Proto-Bantu roots with long vowels:

(21) Shekgalagari non-spreading H verbs and their PB counterparts

	SHEKGALAGARI	*PROTO-BANTU ³
a.	χù-lópá ⁴ ‘to request’ (H1)	*-dómb-
b.	χù-lórà ‘to dream’ (H2, no spread)	*-dóót-
c.	χù-lálèzà ‘to invite’ (H2)	*-dáádek-

It thus seems likely that spreading originally applied in these verbs, but was subsequently lost with the loss of vowel length.⁵

3.1. Subject markers

There are at least five subject marker (SM) patterns in Shekgalagari, which co-occur with various markers of tense, aspect, and mood.

³ PB roots taken from the Comparative Bantu Online Dictionary, <http://www.linguistics.berkeley.edu/CBOLD/Docs/Guthrie.html>

⁴ For the reader’s convenience, these and other forms in the table are given in their non-PLL forms

⁵ See Meeussen (1955) for an early discussion of vowel-length loss and the lack of H-tone spreading, based on a case study of #Shambala.

(22) Shekgalagari subject marker series

SERIES	1	2	3 ⁶	4	5
FORM	qà (Ø) wà (Ø) à (Ø) há (H) lá (H) bá (H)	kí (H) ú (H) í (H) hí (H) lí (H) bí (H)	ǵ ⁷ (H) ú (H) á (H) há (H) lá (H) bá (H)	kí (H) ú (H) ù (Ø) hí (H) lí (H) bá (H)	kí (H) ú (H) á (H) hí (H) lí (H) bá (H)
OCCURS WITH ⁸	pasts (incl. ant. and hort.) <i>on main verb in compound constructions:</i> pot. imm. fut.; neg hort. fut.; neg potential	imperfective	(affirmative) potential	present (incl. future aux. ⁹)	hortative; persistive (except present persistive); neg. present before neg. sháa

The SM series merit further investigation. It may be noted that there are three possible tone patterns:

- i) Singular SMs referring to persons are toneless, while plural persons (as well as all other SMs; see below) are H toned (series 1)
- ii) All SMs are H toned, except for third-person singular (as well as class 4 and 9; see below), which are toneless (series 4)
- iii) All SMs are H toned (series 2, 3, and 5).

3.1.1. Subject markers and bounded H-tone spreading

H tones from certain subject markers pattern in three ways:

- i) No spread if followed by a TAM marker
- ii) Spread one syllable rightward to adjacent root or object marker (OM)
- iii) Spread to adjacent OM but not to adjacent root.

⁶ Series 3 SMs surface as low toned before H-toned *qá* in the present potential (and other potentials formed with H-toned *qá*), and before other TAM markers in various contexts, as shown in the sections below.

⁷ Because series 3 SMs are always followed by the potential marker *qa*, the first person singular marker always surfaces as velar nasal [ŋ].

⁸ This is not meant to be an exhaustive list, but is generally representative.

⁹ e.g. present tense SM + *-da* ('come'), e.g. *bádá*

(23) Shekgalagari SMs and H-tone spreading (HTS)

SERIES	1	2	3	4	5
FORM	qà (Ø) wà (Ø) à (Ø) há (H) lá (H) bá (H)	kí (H) ú (H) í (H) hí (H) lí (H) bí (H)	ǵ (H) ú (H) á (H) há (H) lá (H) bá (H)	kí (H) ú (H) ù (Ø) hí (H) lí (H) bá (H)	kí (H) ú (H) á (H) hí (H) lí (H) bá (H)
HTS TO ROOT	N	Y	N/A	Y	Y ¹⁰
HTS TO OM	Y	Y	N/A	Y	Y

Note that all SM H-tone spreading must respect the OCP; a H tone will not spread to an adjacent toneless syllable that immediately precedes a H-toned syllable:

- (24) a. bá-ǵú-kɛ:l-a
3PL-2SG-MENTION-FV
'they mentioned you' (spread to toneless OM)
- b. bá-ǵu-bô:n-a
3PL-2SG-SEE-FV
'they saw you' (no spread to toneless OM before H1 root)

3.1.2. Subject marker series: form, spreading, and distribution properties

The following sections exemplify each of the subject marker series in turn, with one or more examples of the TAMs in which they occur. When known, non-person subject markers are given as well. Examples are given using the toneless bisyllabic stem *-bala* 'read, count', to show subject marker spreading if it occurs.

3.1.2.1. Series 1

3.1.2.1.1. Series 1: Form

Only the singular persons are toneless in series 1; all other subject markers are H toned.

¹⁰ Series 5 SM H tones often fail to spread to the verb: either they precede another TAM marker (and do not spread to it) or they precede a Ø-H sequence, which does not allow spreading. Series 5 SMs do spread in the hortative, e.g. á !bá-tútulul-é. See tables # and # in the appendix for further examples and full paradigms

(25) Series 1: Immediate past ‘*X (just now) counted*’

1sg qa-ba:la

2sg wa-ba:la

(cl 1) 3sg a-ba:la

1pl há-ba:la

2pl lá-ba:la

(cl 2) 3pl bá-ba:la

The other noun class subject markers are as follows for series 1:

(26) Series 1: non-person subject markers

CLASS SM

3 wá-

4 yá-

5 lá-

6 á-

7 shá-

8 zá-

9 yá-

10 zhá-

11 lwá-

14 zhá-

15 χá-

3.1.2.1.2. Series 1: Distribution

As noted above, series 1 subject makers occur primarily in perfective pasts (including anteriors and hortatives). They also appear on the main verb in at least the following compound constructions (exemplified in 4.2.4 and 4.2.6 below): negative potential, immediate future potential, and hortative future negative. In general, then, subject markers appear on main verbs with perfective aspect.

3.1.2.1.3. Series 1: Spreading properties

H tones on series 1 SMs fail to spread to adjacent toneless roots:

(27) há-ba:l-a

1PL-READ-FV

‘we (just now) counted’

However, they do spread to adjacent toneless object markers:

- (28) há-χú-ba:l-a
 1PL-2SG-COUNT-FV
 ‘we counted you’

3.1.2.2. Series 2

3.1.2.2.1. Series 2: Form

Series 2 subject markers are H-toned, and, with the exception of 2sg, end in í.

- (29) Series 2: Recent past imperfective ‘*X was (recently) counting*’
1sg	láábe <u>kí</u> -bá:la
2sg	láábe <u>ú</u> -bá:la
(cl 1) 3sg	láábe <u>í</u> -bá:la
1pl	láábe <u>hí</u> -bá:la
2pl	láábe <u>lí</u> -bá:la
(cl 2) 3pl	láábe <u>bí</u> -bá:la

3.1.2.1.2. Series 2: Distribution

Series 2 SMs mark imperfective aspect and occur in many constructions in which the situation described in the main verb is construed as imperfective. They generally occur with future tense constructions, as well, whether the English translation is progressive or not.

3.1.2.1.3. Series 2: Spreading properties

The H tone on all series 2 SMs spreads to adjacent roots:

- (30) láábe hí-bá:l-a
 REC.PST 1PL-COUNT-FV
 ‘we were counting (recently)’

Likewise, the H-tones spread to adjacent toneless object markers:

- (31) láábe hí-χú-ba:l-a
 REC.PST 1PL-2SG-COUNT-FV
 ‘we were counting you (recently)’

3.1.2.3. Series 3

In collected data, series 3 subject markers only appear directly adjacent to the potential marker *qa*.

3.1.2.3.1. Series 3: Form

The tonal properties of series 3 markers require further investigation. When used in the past tense, all are H-toned, and the potential marker *qa* is toneless (32). In present-tense constructions (including immediate future, when the present tense may be assumed for the future-marking

verb), series 3 SMs are toneless, while *qa* is H-toned (33). The nasal 1sg marker assimilates to the uvular stop of potential *qa*.

(32) Series 3: Today past potential ‘*X could count*’ (H-toned)

- 1sg ńde ń qa ba:la
- 2sg ńde ú qa ba:la
- (cl 1) 3sg ńde á qa ba:la
- 1pl ńde há qa ba:la
- 2pl ńde lá qa ba:la
- (cl 2) 3pl ńde bá qa ba:la

(33) Series 3: Present potential ‘*X can count*’ (toneless)

- 1sg ń qá ba:la
- 2sg ú qá ba:la
- (cl 1) 3sg a qá ba:la
- 1pl ha qá ba:la
- 2pl la qá ba:la
- (cl 2) 3pl ba qá ba:la

3.1.2.3.2. Series 3: Distribution

Series 3 SMs occur only with potential marker *qa*.

3.1.2.3.3. Series 3: Spreading properties

Because they never occur adjacent to the verb root, series 3 markers do not spread their H tone to the root:

- (34) ńde há qa ba:l-a
 TODAY.PST 3PL POT COUNT-FV
 ‘we could count’

For the same reason, they do not spread to toneless object markers:

- (35) ńde há qa χu-ba:l-a
 TODAY.PST 3PL POT 2SG-COUNT-FV
 ‘we could count you’

3.1.2.4. Series 4

3.1.2.4.1. Series 4: Form

(36) Series 4: Present (Habitual, Progressive) ‘*X counts*’

- 1sg kí-bála:-χό
- 2sg ú-bála:-χό
- (cl 1) 3sg u-bála:-yo
- 1pl hí-bála:-χό
- 2pl lí-bála:-χό
- (cl 2) 3pl bá-bála:-χό

In series 4, 3sg is the only toneless person marker. SMs of classes 4 and 9 are also toneless; all other SMs have H tone.

(37) Series 4: Non-person subject markers

CLASS SM

- 3 ú-
- 4 ɪ-
- 5 í-
- 6 á-
- 7 shí-
- 8 bí-
- 9 ɪ-
- 10 rí-
- 11 lú-

3.1.2.4.2. Series 4: Distribution

Series 4 SMs occur in the present tense. This includes cases in which they mark future auxiliary forms, which may also be assumed to have present tense, as in (38). The future auxiliary verbs may be grammaticalized from verbs that mean ‘stand’ (38a) and ‘count’ (38b).

- (38) a. bá-mets^{hí} bí-bá:l-a
 3PL-IMM.FUT 3PL-COUNT-FV
 ‘they are about to count’
- b. bá-dá χu-ba:l-a
 3PL-COME INF-COUNT-FV
 ‘they will count’

3.1.2.4.3. Series 4: Spreading properties

H tones of series 4 SMs spread to adjacent toneless roots:

- (39) hí-bál-a:-χó
 1PL-COUNT-FV-FINAL.PRES
 ‘we count’ (also: ‘we are counting’)

They also spread to adjacent toneless object markers:

- (40) hí-χú-bal-a:-χó
 1PL-2SG-COUNT-FV-FINAL.PRES
 ‘we count you’

3.1.2.5. Series 5

3.1.2.5.1. Series 5: Form

All series 5 SMs are H-toned.

- (41) Series 5: Present negative ‘*X does not count*’
 1sg ha kí-ba:lé
 2sg ha ú-ba:lé
 (cl 1) 3sg ha á-ba:lé
 1pl ha hí-ba:lé
 2pl ha lí-ba:lé
 (cl 2) 3pl ha bá-ba:lé

3.1.2.5.2. Series 5: Distribution

Series 5 subject markers have a varied distribution, but might generally be characterized as occurring in irrealis contexts. They occur immediately after the hortative marker *á*, in many negative contexts (e.g. present tense negative and before negative marker *sháa*), and with affirmative and negative persistive marker *sha* (‘still’),¹¹ except in the present tense.

3.1.2.5.3. Series 5: Spreading properties

H-toned series 5 SMs spread to adjacent toneless roots. However, the tone patterns preclude such spreading in most TAMs in which series 5 SMs occur – the toneless first syllable of the root is followed by a H tone (through unbounded spread) and bounded H-spreading cannot occur (42). Other series 5 SMs occur before another TAM marker, and do not spread to it (43). However, the hortative shows that series 5 subject markers can, in fact, spread to adjacent roots (44).

¹¹ Like potential *qa*, persistive *sha* is H toned in present tense and toneless elsewhere. Series 5 SMs do not, however, have the polar tone behavior associated with series 3 SMs in the potential.

- (42) ha hí-tútúlú:l-é
 NEG 1PL-DISRESPECT-FV.IRR
 ‘we don’t disrespect’
- (43) léé bá sha tutulú:l-a
 YEST.ST 3PL PERSDISRESPECT-FV
 ‘they still disrespected [yesterday]’
- (44) á ‘bá-tútulul-é
 HORT 3PL-DISRESPECT-FV.IRR
 ‘may they disrespect’

Series 5 markers spread their H tone to adjacent toneless object markers, as well:

- (45) ha hí-χú-ba:l-é
 NEG 1PL-2SG-COUNT-FV.IRR
 ‘we don’t count you’

3.2. Object markers

The object marker (OM) paradigms are given in (46) for persons and (47) for non-persons. Singular person object markers are toneless; all other OM, both person and non-person, are H-toned.

- (46) Shekgalagari person object markers
1sg	-N-
2sg	-χù-
(cl 1) 3sg	-m(ù)-
1pl	-hí-
2pl	-lɪ́-
(cl 2) 3pl	-bá-

(47) Shekgalagari non-person object markers

CLASS **SM**

- 3 -ú-
- 4 -í-
- 5 -lí-
- 6 -á-
- 7 -shí-
- 8 -bí-
- 9 -í-¹²
- 10 -rí-
- 11 -lú-
- 12 n/a
- 13 n/a
- 14 -bú-
- 15 -χú-
- 16 -χú-
- 17 -χú-
- 18 -χú-

3.2.1. Object markers and H-tone spreading (HTS)

Object marker H tones spread onto the following toneless syllable (48b), as long as

- i) that syllable is not a monosyllabic stem (48c), and
- ii) the OCP is not otherwise violated (49d).

- (48) a. χ_U-ba:l-a
CL15(INF)-COUNT-FV
'to count'
- b. χ_U-bá-bá:l-a
CL15(INF)-3PL-COUNT-FV
'to count them'
- c. χ_U-bá:-k-a
CL15(INF)-3PL-MENTION-FV
'to mention them'

¹² The class 9 object marker appears to have unexpected tone patterning and is a topic for future research and instrumental work.

d. χʊ-shí-mu-ná:y-a

CL15(INF)-3PL-3SG-GIVE-FV

‘to give it to him’ (no spread to second, toneless OM before H2 verb -náya)

3.2.2. Double/triple object markers

Shekgalagari verbs allow the co-occurrence of up to three object markers. OMs are contrastive for tone only in immediate pre-stem position. In all other positions, OMs have H tone, which spreads to the following toneless syllable if no OCP violations are incurred.

(49) Double/triple OMs and spreading

	1 ST OM	2 ND OM	3 RD OM	ROOT	SPREAD TO 2 ND OM	SPREAD TO 3 RD OM	SPREAD TO ROOT	EXAMPLE
a.	H	Ø	–	Ø	Y	–	–	χʊ-shí-mú-kɛ:l-a CL15(INF)-7-3SG-SHOW-FV ‘to show him it’
b.	H	H	–	Ø	–	–	Y	χʊ-shí-bá-kɛ:l-a CL15(INF)-7-3PL-SHOW-FV ‘to show them it’
c.	Ø	Ø	–	Ø	Y	–	–	χʊ-mú-χú-kɛ:l-a CL15(INF)-3SG-2SG-SHOW-FV ‘to show him to you’ ¹³
d.	H	Ø	–	H1/H 2	N	–	–	χʊ-shí-χʊ-ná:y-a CL15(INF)-7-2SG-SHOW-FV ‘to show you it’
e.	Ø	Ø	Ø	Ø	Y	Y	–	χʊ-mú-χú-ŋ-kɛl-e:l-a CL15(INF)-3SG-2SG-1SG-SHOW- APPL-FV ‘to show you me for him’

Animacy supercedes OM ordering in the interpretation of at least some double object constructions, as can be seen in (50a) and (50b), which have identical interpretations despite a reversal of OM order:

(50) a. shɪ-hí-shí-kɛl-ɛ

NEG.IMP-2PL-7-SHOW-FV.IRR

‘don’t show it to us’

b. shɪ-shí-hí-kɛl-ɛ

NEG.IMP-7-2PL-SHOW-FV.IRR

‘don’t show it to us’

The patterning and interpretation of double and triple object markers require further investigation.

¹³ This example also has the reading ‘to show you to him’.

3.3. Final vowels

The most common final vowel in Shekgalagari is toneless *-a* (which may become H due to bounded or unbounded HTS). Also occurring is a final *-ε*, which is H-toned in most of the TAMs in which it occurs, but toneless in several. It becomes *-e* when the previous root vowel is [e] and when occurring on monosyllabic auxiliary verbs. Because the contexts in which final *-ε* occurs may all be characterized as irrealis (unrealized), it is labeled as such throughout. Constructions with an irrealis final vowel are given in (51).

(51) Constructions with *-ε* in Shekgalagari

TAM CATEGORY	TAMS INVOLVED	TONE	EXAMPLE
hortative	a. verbs (main or aux) immediately following hortative	H	á 'bá-tútulu(:)l-ε 'may they disrespect'
negative	b. negative present	Ø	ha bá-tutólú:l-ε 'they don't disrespect'
	c. negative future (after conditional clause)	H	há 'bá sháa bal-ε, bá-dá χu shi qé bá-í-k ^{hy} û:ky-ε 'if they don't read, they won't learn' (H-toned FV with PLL)
	d. negative imperative	H	shi-tutólú-lé 'don't disrespect!'
	e. negative past habitual	H	see (i)
	f. negation with <i>sháa</i> ¹⁴	H	bá-dá 'χú-bé bá sháa tutólû:l-ε 'they will not be disrespecting' (H with PLL; see also (c))
imperative with OM	g.	H	bá-tutólú-l-ε 'disrespect them!'
habitual	h. past habitual	H	íye bá-da ba-tutólû:l-ε 'they used to disrespect' (H with PLL)
	i. negative past habitual	H	ha iyé 'bá-da ba-tutólû:l-ε 'they didn't [habitually] disrespect [long ago]' (H with PLL)
	j. present persistive habitual	?	bá shántsí bá-de ba-tutulu:l-ε ¹⁵ 'they still disrespect'

¹⁴ This does not include the infinitive negation with *sháa*, which occurs with final *-a*, but does include (e.g.) conditionals, the main clauses of counterfactuals, and the future negative progressive.

¹⁵ It is likely that this FV is H-toned and subsequently lowered, given that the entire verb form is lowered, as sometimes occurs with the hortative (see section 4.2.6).

Several seemingly “irrealis” constructions do take final *-a*, including future tense, the affirmative imperative (without an object marker or with a 1sg object marker) and potential constructions.

4. An outline of Tense/Aspect/Mood marking in Shekgalagari main clauses

4.1. The division of time in Shekgalagari

Shekgalagari has a nuanced system for marking temporal distance in both past and future tenses. There are at least five distinct degrees of past tense remoteness, one marked by a bare subject marker, the others with a combination of subject marker and preverbal particle. Past tense distinctions can combine with aspect and mood markers. There is a clear distinction between imperfective and perfective pasts, and temporal-distance distinctions can also be made in anterior (perfect), hortative, persistive, and other aspects and moods.

Future time is expressed through auxiliary verb constructions; there are two or three distinctions of temporal distance (immediate future, general future, and possibly “near” future, falling between the two). The perfective/imperfective distinction is far less clear in future contexts, although future progressives are possible. Other aspects and moods can occur with future tense, but in general, future tense marking is not as elaborated in its aspectual distinctions as is past tense.

The present tense is quite general, and may be used in “simple” present, present progressive, and present habitual contexts.

Specifics of temporal distinctions are given in sections 4.1.1-4.1.3 below, along with more detailed information about their possibilities for combining with other aspects and moods.

4.1.1. Past

There are at least four distinct degrees of past tense remoteness that can combine with all aspects in Shekgalagari. Past temporal distance is marked with the preverbal particles shown in (52).

(52) Degrees of past remoteness

a. recent past	láábe
b. today past	ńde
c. yesterday past	léé
d. distant past	íye

Two additional degrees of remoteness, used for “immediate” past, are available in the perfective aspect. The more common is formed with a bare series 1 subject marker. The other is formed with the series 1 subject marker and a preverbal particle *í*. See section 4.1.1.1 for more details.

The yesterday past marker *léé* appears to be related to the H2 root *-lála* ‘to sleep’:

- (53) ńde kí-lée m-buláun ʒo
 TODAY.PST 1SG.IPFV-SLEEP IN-BED DEM
 ‘I slept in this bed’ (ipfv)

The today past marker *ńde* occurs (with various tone patterns) in the anterior, as well, and the today past is at least to some degree interchangeable with the anterior aspect. See section 4.2.1 for more details about the anterior.

The perfective/imperfective distinction is clearest in past-tense contexts. Perfective and imperfective forms are presented in sections 4.1.1.1 and 4.1.1.2, respectively. Research into their particular semantic and pragmatic effects is needed.

4.1.1.1. Perfective pasts

- (54) lée bá-ba:l-a
DIST.PST 3PL-COUNT-FV
 ‘they counted [yesterday]’

As noted above, perfective pasts have the most articulated system of temporal distance distinctions, including two “immediate” past forms. The bare subject-marker form (55e) is more general, while the particle *í* (55f) conveys more immediacy and might be considered an emphatic form, perhaps similar to the (toneless) emphatic *ɪ-* prefix that may attach to imperatives (see section 4.2.5.1).

The past perfective takes the series 1 subject marker.

- (55) Shekgalagari past perfective forms – affirmative and negative

	AFF. FORM	EXAMPLE	NEG. FORM	EXAMPLE
a.	distant íye SM ₁ -ROOT-a	íye bá-tutulɔ:l-a	ha iyé (^l ₂)SM ₁ -ROOT-a	ha iyé ^l bá-tutulɔ:l-a
b.	yest. lée SM ₁ -ROOT-a	lée bá-tutulɔ:l-a	ha lée (^l ₂)SM ₁ -ROOT-a	ha lée ^l bá-tutulɔ:l-a
c.	today ńde SM ₁ -ROOT-a	ńde bá-tutulɔ:l-a	ha ńdé (^l ₂)SM ₁ -ROOT-a	ha ńdé ^l bá-tutulɔ:l-a
d.	recent láábe SM ₁ -ROOT-a	láábe bá-tutulɔ:l-a	ha láábé (^l ₂)SM ₁ -ROOT-a	ha láábé ^l bá-tutulɔ:l-a
e.	imm. II SM ₁ -ROOT-a	bá-tutulɔ:l-a	ha ɲqá (^l ₂)SM ₁ -ROOT-a	ha ɲqá ^l bá-tutulɔ:l-a
f.	imm. I í SM ₁ -ROOT-a	í bá-tutulɔ:l-a	ha ɲqá (^l ₂)SM ₁ -ROOT-a	ha ɲqá ^l bá-tutulɔ:l-a

Note that the today past form given in (#c) may represent either a simple past or an anterior; the common translation of the sentence is ‘they have disrespected’, with the possible interpretations being that the situation took place today, or that it occurred by a contextually-given time today.

The two immediate pasts have the same form in the negative. The negative present (see section 4.1.2) may be substituted for at least the imm. II form (given in (55e)).

Here, as in many other TAMs, the negative form includes downstep between the particle and the subject marker. Crane (2009) discusses this along with other downstep phenomena, and argues that it may be attributed to minor phrase formation: particles form minor phrases with the main verb in the affirmative, but belong to different minor phrases in the negative, triggering downstep at the H-H meeting across phrase boundaries.

4.1.1.2. Imperfective pasts

- (56) lée bí-bá:l-a
 YEST.PST 3PL-COUNT-FV
 ‘they were counting [yesterday]’

Shekgalagari imperfectives are formed with temporal-distance particles and series 2 subject markers. There are fewer temporal distinctions than in the perfective; there are no distinct immediate past forms in the imperfective, and it is not possible to have a bare imperfective subject marker without a preceding temporal particle.

- (57) Shekgalagari past imperfective forms – affirmative and negative

		AFF. FORM	EXAMPLE	NEG. FORM	EXAMPLE
a.	distant	íye SM ₂ -ROOT-a	íye bí-tútulu:l-a	ha iyé ¹ SM ₂ -ROOT-a	ha iyé ¹ bí-tútulu:l-a
b.	yest.	lée SM ₂ -ROOT-a	lée bí-tútulu:l-a	ha lée ¹ SM ₂ -ROOT-a	ha lée ¹ bí-tútulu:l-a
c.	today	ńde SM ₂ -ROOT-a	ńde bí-tútulu:l-a	ha ńdé ¹ SM ₂ -ROOT-a ¹⁶	ha ńdé ¹ bí-tútulu:l-a
d.	recent	láábe SM ₂ -ROOT-a	láábe bí-tútulu:l-a	ha láábé ¹ SM ₂ -ROOT-a	ha láábé ¹ bí-tútulu:l-a
e.	imm. II	*	*	*	*
f.	imm. I	*	*	*	*

4.1.2. Present

- (58) bá-bál-a:-χó
 3PL-COUNT-FV-FINAL
 ‘they are counting / they count’

The present tense has one basic form used for a variety of aspectual interpretations, including simple present, present progressive, and habitual.

- (59) Shekgalagari present forms – affirmative and negative

AFF. FORM	EXAMPLE	NEG. FORM	EXAMPLE
SM ₄ -ROOT-a-χó/yɔ	bá-tútulu:l-a:-χó	ha SM ₅ -ROOT-ε	ha bá-tutúlú:l-ε

Non phrase-final present tense verbs have a final -χó or -yɔ, the shape of which depends on the tone of the (series 4) subject marker: toneless subject markers (3sg, cl. 4, and cl. 9) take -yɔ, while H-toned subject markers (all others) co-occur with final -χó. These are shown in (60) with the toneless root -bala ‘read, count’. Toneless SMs with -yɔ are highlighted.

¹⁶ The variation ha ńdé ¹SM₂-ROOT-a (e.g. *ha ńdé ¹bí-tútulu:l-a*) may exist and needs to be tested.

(60) Present tense finals and subject markers

- 1sg kí-bál-a:-χó
- 2sg ú-bál-a:-χó
- (cl 1) 3sg u-bal-a:-yɔ
- 1pl hí-bál-a:-χó
- 2pl lí-bál-a:-χó
- (cl 2) 3pl bá-bál-a:-χó
- cl 3 ú-bál-a:-χó
- cl 4 i-bal-a:-yɔ
- cl 5 í-bál-a:-χó
- cl 6 á-bál-a:-χó
- cl 7 shí-bál-a:-χó
- cl 8 bí-bál:-a-χó
- cl 9 i-bal:-a-yɔ
- cl 10 rí-bál:-a-χó
- cl 11 ló-bál:-a-χó

As expected, final -χó blocks bounded HTS to the syllable preceding it. Example (61a) shows that spreading occurs before a toneless final. (61b) demonstrates that a H tone does not spread to the syllable immediately preceding a H-toned final, while (61c) shows that a H-toned final does not preclude bounded HTS altogether.

- (61) a. u-bón-á:-yɔ
3SG-SEE-FV-FINAL.PRES
's/he sees'
- b. bá-bón-a:-χó
3PL-SEE-FV-FINAL.PRES
'they see'
- c. bá-χópól-a:-χó
3PL-REMEMBER-FV-FINAL.PRES
'they remember'

Non-phrase-final present tense verbs lack final -χó or -yɔ. When -χó drops out, the entire verb becomes H-toned. #check what happens with ba-mU-tUtUIUla zhwa.

- (62) bá-tútúlúl-á mulimi
3PL-DISRESPECT-FV FARMER
'they disrespect the farmer'

- (63) u-tutulul-a mulimi
 3SG-DISRESPECT-FV FARMER
 ‘he disrespects the farmer’

That loss of finals is a phrase-level and not utterance-level operation is seen in the possibility of alternations such as in (64a) and (64b).

- (64) a. bá-mú-tutulul-a-χó muli:mi (use of final; PLL on second word only)
 3PL-3SG-DISRESPECT-FV-FINALPRES FARMER
 ‘they are disrespecting him, the farmer’
- b. bá-mú-tutulul-a:-χó muli:mi (use of final; PLL on both words)
 3PL-3SG-DISRESPECT-FV-FINALPRES FARMER
 ‘they are disrespecting him, the farmer’

The pragmatics distinguishing (64a) from (65b) require further investigation.

4.1.3. Future

- (65) bá-dá χu-ba:l-a
 3PL-COME CL15(INF)-COUNT-FV
 ‘they will count’

The general future is expressed with an auxiliary verb (toneless *-da*) along with an infinitive form of the main verb (66c). A more immediate future may be expressed with auxiliary *-mets^hi* (possibly related to a verb meaning ‘stand’). and either the imperfective form of the verb (immediate future, (66a)) or the infinitive (near future, (66b)). The “near” future may be understood to be less immediate than the immediate future form.

- (66) Shekgalagari future forms – affirmative and negative

	AFF. FORM	EXAMPLE	NEG. FORM	EXAMPLE
a.	imm. SM ₄ -mets ^h i SM ₂ -ROOT-a	bá-mets ^h i bí-tútulu:l-a	ha SM ₅ -mets ^h i !SM ₂ -ROOT-a	ha bá-mets ^h i !bí-tútulu:l-a
b.	near SM ₄ -da 15(INF)-mets ^h i SM ₂ -ROOT-a	bá-dá χu-mets ^h i bí-tútulu:l-a	ha SM ₅ -da 15(INF)-mets ^h i !SM ₂ -ROOT-a	ha bá-dá χu-mets ^h i !bí-tútulu:l-a
c.	today SM ₄ -da 15(INF)-ROOT-a	bá-dá χu-tutulul-a	ha íqe SM ₂ -ROOT-a	ha íqe bí-tútulu:l-a

4.1.3.1. Future and aspect

Perfective and imperfective aspects are not as clearly marked in the future as they are in the past tense. Futures often use the subject markers associated with imperfective aspect (see (66b) above), but the semantics and pragmatics still require exploration. However, it is possible to form progressive constructions in the future that contrast with the non-progressive forms in (66). Affirmative and negative future progressives are shown in (67). No distinctions for temporal distance have been found for the future progressive.

(67) Shekgalagari future progressive forms – affirmative and negative

AFF. FORM	EXAMPLE	NEG. FORM	EXAMPLE
SM ₄ -da (¹)15(INF)-bé	bá-dá ¹ χú-bé	SM ₄ -da (¹)15(INF)-bé	bá-dá ¹ χú-bé
SM ₂ -ROOT-a	bí-tútulu:l-a	SM ₅ sháa ROOT-é	bá sháa tutólû:l-ε

The affirmative form in (67) would be translated as ‘they will be disrespecting’, while non-progressive forms as in (66) are translated as ‘they will disrespect’ or ‘they are about to disrespect’.

4.2. Further TAM distinctions

In addition to the perfective/imperfective/progressive distinctions discussed above Shekgalagari has many other possibilities for expressing aspect and mood. The following sections give a basic presentation of anterior (section 4.2.1) and habitual (section 4.2.2) aspects, as well as more modal constructions like the persistive (‘still’; section 4.2.3), the potential (section 4.2.4), the imperative (section 4.2.5), the hortative (section 4.2.6), and counterexpectative forms (section 4.2.7).

Many of the TAMs presented here may combine to give extremely precise meaning distinctions, and other auxiliaries may also be introduced. For example, English continuative anteriors are translated with an auxiliary and imperfective subject markers:

- (68) sa-lí ¹bí-tútulu:l-a
 AUX 3PL-DISRESPECT-FV
 ‘they have been disrespecting’

The negative form of this sentence is quite different, and uses series 4 subject markers:

- (69) sa-lí ¹bá sháa tutólû:l-ε
 AUX 3PL NEG DISRESPECT-FV.IRR
 ‘they have not been disrespecting’

Because of the great number of combinatorial possibilities, the forms presented below should be viewed as just a sampling of the possible expressions of TAM in Shekgalagari.

4.2.1. Anterior

- (70) léé ndé ¹bá-ba:l-a
 YEST.PST ANT 3PL-COUNT-FV
 ‘they had counted [yetsterday]’

As mentioned in section 4.1.1, anterior aspectual meaning overlaps with hodiernal (today) past marking. The marker *nde* also co-occurs with markers of temporal distance to indicate that a situation occurred (and terminated, if relevant) by a contextually-given time in the general time period specified by the other tense marking. The anterior may combine with past, present, and future time marking. Note that the present anterior form (71d) is identical to that given for the hodiernal past (55d).

(71) Shekgalagari anterior forms – affirmative and negative

	AFF. FORM	EXAMPLE	NEG. FORM	EXAMPLE
	PAST			
a. dist.	íye ndé (^l ₂)SM ₁ -ROOT-a	íye ndé 'bá-tutulú:l-a	ha íyé 'ndé (^l ₂)SM ₁ -ROOT-a	ha íyé 'ndé 'bá-tutulú:l-a
b. yest.	léé ndé (^l ₂)SM ₁ -ROOT-a	léé ndé 'bá-tutulú:l-a	ha léé 'ndé (^l ₂)SM ₁ -ROOT-a	ha léé 'ndé 'bá-tutulú:l-a
c. today	nde ndé (^l ₂)SM ₁ -ROOT-a	nde ndé 'bá-tutulú:l-a	ha ndé 'ndé (^l ₂)SM ₁ -ROOT-a	ha ndé 'ndé 'bá-tutulú:l-a
	PRES			
d.	ndé SM ₁ -ROOT-a	ndé bá-tutulú:l-a	ha ndé (^l ₂)SM ₁ -ROOT-a	ha ndé 'bá-tutulú:l-a
	FUT			
e.	SM ₄ -da (^l ₁)15(INF)-bé ndé (^l ₂)SM(₁)-ROOT-a	bá-dá 'χú-bé ndé 'bá-tutulú:l-a		

#I actually extrapolated all of the negative past forms from the potentials, and I'm pretty sure they're right, but need to check for honesty's sake

It is not only *nde* that marks anterior aspect; distant past *íye* may also be used; it indicates that a situation terminated well before another time in the past, as seen here with the hortative (see section 4.2.6 for more details about the hortative mood):

- (72) á 'bá-b-e íyé 'íyé bá-tutulú(:)l-a
 HORT 3PL-BE-FV.IRR DIST.PST DIST.PST 3PL-DISRESPECT-FV
 'may they have disrespected [long before something else that occurred long ago]'

Whether the yesterday particle *léé* may also be used to mean that a situation occurred a single day before a temporal reference point should be investigated.

Temporal distance markers may even triple up in anterior contexts, although such constructions are rarely found and have a meaning that, according to my consultant, is difficult to describe. Triple marking is illustrated in a conditional context in (73) and needs further investigation. Most conditional constructions involving anterior aspect include only two markers of temporal distance; conditionals are illustrated in section 5.1.

- (73) há 'íyé 'ndé 'ndé 'bá-bal-a, íye ndé 'ndé 'bí-da χú-í-k^hyû:ky-a
 'If they had read [long ago, by a specific time], they would have learned'

Anterior aspect can combine with most, if not all, of the TAMs discussed below. Examples of anterior with other forms will be given throughout when possible, and should be developed in future investigations.

4.2.1.1. Forms with /-ile/

Shekgalagari also has an /-ile/ ending that may co-occur with verb roots having three or fewer syllables. The semantic contribution of this ending requires further study; there appears to

be at least some ambiguity between present and anterior (perfect) readings. Such ambiguity is common with reflexes of the */-ile/* marker across Bantu; see Nurse (2008) for further details.

In Shekgalagari, */-ile/* undergoes (at least) nasal harmony ($l > n$) (e.g. 74b) and sibilant harmony ($l > \text{ʃ}$) (e.g. 74j), and conditions dissimilatory root consonant mutation ($l > r ; \text{ʃ} > r$) (74g and k). Vowel-height harmony does not change the */-ile/* form but raises an */ɪ/* in the root to */i/* (74j). The forms co-occur with series 2 subject markers. Sample forms are given in (74), without specific translations. Four-syllable roots are given in parentheses to illustrate what the relevant forms would look like; use of */-ile/* with these roots is strongly dispreferred.

This marker interacts with other TAMs, but little data is available about these interactions at this time.

(74) */-ile/* forms

Toneless root					
	ROOT SYLL	<i>/-ILE/</i> FORM	PRE-PLL FORM	ROOT	
a.	1	bí-ki:lé	bí-kilé	-ka	‘mention’
b.	2	bí-barĩ:le	bí-barĩlé	-bala	‘read/count’
c.	3	bí-haphúřĩ:le	bí-haphúřilé	-haphula	‘slap’
d.	4	(bí-tutúlúřĩ:le)	(bí-tutúlúřilé)	-tutulula	‘disrespect’
H1 (spreading) root					
	ROOT SYLL	<i>/-ILE/</i> FORM	PRE-PLL FORM	ROOT	
e.	1	bí-gyĩ:le	bí-gyilé	-gyá	‘eat’
f.	2	bí-bónĩ:ne	bí-bóníné	-bóna	‘see’
g.	3	bí-χópúřĩ:le	bí-χópúřilé	-χópula	‘think/remember’
h.	4	(bí-χáqúlúřĩ:le)	(bí-χáqúlúřilé)	-χáqulula	‘remind’
H2 (non-spreading) root					
	ROOT SYLL	<i>/-ILE/</i> FORM	PRE-PLL FORM	ROOT	
i.	1	—	—	—	
j.	2	bí-lĩsĩ:ʒe	bí-lĩsĩ:ʒé	-lĩsa	‘herd’
k.	3	bí-lálérĩ:ʒe	bí-lálérĩʒé	-láleʒa	‘invite’
l.	4	(bí-túúlúřĩ:le)	(bí-túúlúřilé)		‘cause to cease from a habit’

4.2.2. Habitual

(75) íye bá-da ba-ba:l-é
DIST.PST 3PL-COME 3PL-COUNT-FV
‘they used to count’

Shekgalagari past and future habitual forms both use *-da* (likely related to the verb ‘come’) as an auxiliary. The present habitual is identical to the simple present, and the future habitual has the same form in the affirmative, but a unique negative form. Semantics and pragmatics of these forms should be investigated further.

Habitual forms are given in (76) for temporal periods for which they may be felicitously used. Past tense forms may be translated as ‘X used to ____’; present as ‘X [habitually] ____’ and future as ‘X will [habitually] ____’. What a habitual form would mean with, e.g., a marker of ‘yesterday’ time should be investigated.

(76) Shekgalagari habitual forms – affirmative and negative

	AFF. FORM	EXAMPLE	NEG. FORM	EXAMPLE
	PAST			
a.	íye SM ₅ -dá SM ₅ -ROOT-ε	íye bá-da ba-tutúlô:l-ε	ha iyé ¹ SM ₅ -da SM ₅ -ROOT-ε	ha iyé ¹ bá-da ba-tutúlô:l-ε
	PRES			
b.	SM ₄ -ROOT-a = χḡ/yḡ	bá-tútulul-a: = χḡ	ha SM ₅ -ROOT-é	ha bá-tutúlô:l-é
	FUT			
c.	SM ₄ -da 15(INF)-ROOT-a	bá-dá χu-tutulul-a	ha nqé ¹ SM ₂ -nqé ¹ SM ₂ -ROOT-a	ha nqé ¹ bí-nqé ¹ bí-tútulul-a

The final vowel on *-da* 9, at least in environments such as (76a). where it occurs between two like vowels, undergoes a non-obligatory harmony, with the following being a possible paradigm:

(77) Vowel harmony of *-da* between like vowels

1sg	íye <u>kí</u> -de <u>kí</u> -tutúlô:l-ε	1pl	íye <u>hí</u> -de <u>hí</u> -tutúlô:l-ε
2sg	íye <u>ú</u> -du <u>ú</u> -tutúlô:l-ε	2pl	íye <u>lí</u> -de <u>lí</u> -tutúlô:l-ε
3sg	íye <u>á</u> -da <u>a</u> -tutúlô:l-ε	3pl	íye <u>bá</u> -da <u>ba</u> -tutúlô:l-ε

The exact conditioning of this harmony requires further investigation. At least in some cases, my consultant prefers the harmonized versions. The lack of HTS to */-da/*, and the toneless SMs on the main verb, are likewise topics for future research. It may be that the lowering of a single downstepped H before a toneless syllable is obligatory, rather than optional (see section 2.5.1), in this case.

It is noteworthy that series 3 and series 5 are the only all-H subject marker series (with the exception of series 2, whose H-tone may be attributable to an imperfective */-í/* morpheme), and that both series 3 and series 5 alternate between being all H-toned and all toneless, depending on their position and associated tense. A detailed analysis of tone assignment to these subject markers is still needed.

4.2.3. Persistent

- (78) bá shá bál-a:-χó
 3PL PERS COUNT-FV-FINAL
 ‘they are still counting’

Persistent (‘still’) forms are formed with the particle *sha*, which is inserted between the subject marker and the main verb. Because of its particular downstep-inducing properties, it is analyzed here as an inserted word rather than a prefix, although this representation should be understood as tentative and subject to modification based on further research. Further details on the persistent particle and downstep are given in section 4.2.3.1; for a discussion of downstep and word/phrase formation see Crane 2009.

Persistent forms appear have a default progressive reading, although a habitual reading is possible given the proper context. Explicitly habitual constructions for persistent are given in (80) and (81).

- (79) Shekgalagari persistent forms – affirmative and negative

	AFF. FORM	EXAMPLE	NEG. FORM	EXAMPLE
PAST				
a. dist.	íye SM ₅ sha ROOT-a	íye bá sha tutulu:l-a	ha iyé !SM ₅ sha ROOT-a	ha iyé !bá sha tutulu:l-a
b. yest.	léé SM ₅ sha ROOT-a	léé bá sha tutulu:l-a	ha léé !SM ₅ sha ROOT-a	ha léé !bá sha tutulu:l-a
c. today	ńde SM ₅ sha ROOT-a	ńde bá sha tutulu:l-a	ha ńdé !SM ₅ sha ROOT-a	ha ńdé !bá sha tutulu:l-a
d. rec.	láábe SM ₅ sha ROOT-a	láábe bá sha tutulu:l-a	ha láábé !SM ₅ sha ROOT-a	ha láábé !bá sha tutulu:l-a
PRES				
e.	SM ₄ shá ROOT-a-χó/yó	ba sha tútulul-a- = χó	ha SM ₅ sha ROOT-a	ha bá sha tutulu:l-a
FUT				
f.	SM ₄ -da (l ₁)15(INF)-bé SM ₅ !shántsi SM ₂ -ROOT-a	bá-dá !χú-bé bá !shántsi bí-tútulu:l-a	SM ₄ -da (l ₁)15(INF)- be SM ₅ !shántsi SM ₅ sháa ROOT-é	bá-dá !χú-bé bá !shántsi bá sháa tútulô:l-ε
g.	SM ₄ -da (l ₁)15(INF)-bé !SM ₅ -sha-ROOT-a	bá-dá !χú-bé !bá-sha-tutulu:l-a		

Semantic differences between (79f) and (79g) are not known; the forms are to some extent interchangeable. Note that the *sháa* in the negative form in (f) is a negative marker, and not the persistent marker.

As noted above, these forms are generally interpreted as progressive. An explicitly habitual present persistent form would be as in (80):

- (80) bá shántsí bá-d-e ba-tutulú:l-ε
 3PL-PERS? 3PL-COME-FV.IRR (?) 3PL-DISRESPECT-FV.IRR
 ‘they still disrespect’

A habitual future persistive is as in (81):

- (81) bá shá dá χu-tutulú:l-a
 3PL PERS COME CL15(INF)-DISRESPECT-FV
 ‘they will still disrespect’

A detailed study of persistive forms, semantics, and tone patterns is still needed. The all low tone of *ba-tutulú:l-ε* in (80) is unexpected, but such an across-the-board lowering is also seen optionally in some hortative constructions (see section 4.2.6.1) and may be related. Whether the all-toneless pattern is optional or obligatory is unknown at this time.

4.2.3.1. Persistive tone patterns and downstep

It may be noted that downstep occurs across words in many of the paradigms, especially in negative and compound TAM constructions. Downstep conditioning is discussed in greater detail in Crane 2009.

TAM particles that occur between the subject marker and the stem (object marker/verb root) include the persistive *sha* and potential *qa*. Although the tone patterning of these is not identical,¹⁷ they have some important similarities:

- i) Both are H-toned in present tenses and in tenseless contexts such as the infinitive, and toneless in past tenses (82). The only elicited example of a TAM particle in a non-auxiliary future is given in (80g) above and is also toneless.
- ii) Both are involved in downstep in non-present tenses, but not in present tenses or tenseless contexts (83).
- iii) Both lengthen before H-toned monosyllables (84).

- (82) a. bá shá tútulul-a:-χó (present)
 3PL PERS DISRESPECT-FV-FINAL
 ‘they are still disrespecting’
- b. íye bá sha tutulú:l-a (past)
 DIST.PST 3PL PERS DISRESPECT-FV
 ‘they were still disrespecting [long ago]’
- (83) a. bá shá χáqúlul-a:-χó (present, H1 root)
 3PL PERS REMIND-FV-FINAL
 ‘they are still reminding’
- b. íye bá ¹shá χáqúlul-a (past, H1 root)
 DIST.PST 3PL PERS REMIND-FV
 ‘they were still reminding’

¹⁷ Most significantly, the series 3 subject markers have polar tone with respect to potential *qa*, and *qá* does not spread to adjacent toneless roots in the present tense

- c. $\chi\upsilon$ shá mú-su:p-a (infinitive, Ø root, Ø OM)
 CL15(INF) PERS 3SG-DISPLAY-FV
 ‘to still display him’
- d. $\chi\upsilon$ shá hí-sú:p-a (infinitive, Ø root, H OM)
 CL15(INF) PERS 1PL-DISPLAY-FV
 ‘to still display us’
- e. íye bá sha mú-tutulu:l-a (past, Ø root, H OM)
 DIST.PST 3PL PERS 3SG-REMIND-FV
 ‘they were still reminding him’
- f. íye bá shá hí-tútulu:l-a (past, Ø root, H OM)
 DIST.PST 3PL PERS 1PL-REMIND-FV
 ‘they were still reminding us’

(81a) shows that there is no downstep between subject markers and persistive *sha* in the present tense; (81b) shows that there is downstep in the past tense before a H1 root (see section 2.5 for details on downstep conditioning in general). (81c) and (81d) demonstrate that there is also no downstep with the infinitive, and that H-toned *shá* spreads to an adjacent toneless object marker (81d). (81e) shows that persistive *sha* is not H in past tense, because it does not spread to an adjacent toneless OM. However, it does participate in downstep before a H-toned OM (81f).

Example (84) shows some examples of lengthening before monosyllabic roots. Note that penultimate lengthening and lowering (PLL) is present in all examples, causing *sha* to lengthen in both (84c) and (84d). However, an additional mora is inserted in (84d).

- (84) a. υ shá w-a:-yɔ (present, Ø root, Ø SM)
 3SG PERS FALL-FV-FINAL
 ‘he is still falling’
- b. υ sháa gy-á:-yɔ (present, H root, Ø SM)
 3SG PERS EAT-FV-FINAL
 ‘he is still eating’
- c. íye bá sha: w-a (past, Ø root)
 DIST.PST 3PL PERS FALL-FV
 ‘they were still falling’
- d. íye bá shaa: gy-á (past, H root)
 DIST.PST 3PL PERS EAT-FV
 ‘they were still eating’

The negative marker *sháa* has similar behavior, as well, but requires further work to determine its precise distribution and tone patterning.

4.2.4. Potential

- (85) ba qá ba:l-a
 3PL POT COUNT-FV
 ‘they can count’

The potential marker *qa* can be used to describe both ability and epistemic possibility. Example (85) above also has the reading ‘they might count’. The precise semantics of *qa* need to be examined in greater detail.

Potential forms take series 3 subject markers, which have polar tone with respect to potential marker *qa* and are H toned when it is low (non-present tenses) and toneless when it is H (present tense and – not relevant to SMs – the infinitive).

- (86) Shekgalagari potential forms – affirmative and negative

	AFF. FORM	EXAMPLE	NEG. FORM	EXAMPLE
PAST				
a. dist.	íyé SM ₃ qa ROOT-a	íyé bá qa tutulu:l-a	ha íyé (^l ₂)SM ₃ qa ROOT-a	ha íyé ‘bá qa tutulu:l-a
b. yest.	léé SM ₃ qa ROOT-a	léé bá qa tutulu:l-a	ha léé (^l ₂)SM ₁ qa ROOT-a	ha léé ‘bá qa tutulu:l-a
c. today	ńde SM ₃ qa ROOT-a	ńde bá qa tutulu:l-a	ha ndé (^l ₂)SM ₁ qa ROOT-a	ha ndé ‘bá qa tutulu:l-a
d. rec.	láábe SM ₃ qa ROOT-a	láábe bá qa tutulu:l-a	ha láábé (^l ₂)SM ₁ qa ROOT-a	ha láábé ‘bá qa tutulu:l-a
PRES				
e.	SM ₃ qá ROOT-a ¹⁸	ba qá tutulu:l-a ¹⁹	ha ńqa qé (^l ₂)SM ₁ -ROOT-a	ha ńqa qé ‘bá-tutulu:l-a
FUT				
f. imm.	SM ₃ qá ‘méts ^h ₁ (^l ₂)SM ₁ -ROOT-a	ba qá ‘méts ^h ₁ ‘bá-tutulu:l-a		
g. gen.	SM ₄ -dá 15(INF)-k ^x ona 15(INF)-ROOT-a	bá-dá χu- k ^x ona χu-tutulu:l-a		

The general future form does not involve *qa*, but is literally translatable as ‘they will manage to _____’.

The negative present construction appears to involve a subjunctive/irrealis form of the potential marker (*qe*). Negative forms still need to be elicited for future potential forms.

¹⁸ See example #10 for a brief of the interactions of SM tone, the potential marker *aa*, and tense.

¹⁹ This form also means ‘they might disrespect’9

Like the persistive, the potential has interesting patterns with respect to downstep (as outlined in section 4.2.3.1) The persistive and potential pattern similarly, with the important differences that

- i) the potential co-occurs with a (series 3) subject marker with polar tone (H toned when the potential is toneless, toneless when the potential marker is H), and
- ii) the potential does not spread its H tone to adjacent toneless roots (spreading properties with respect to object markers require further investigation).

The potential may also combine with anterior aspect:

(87) Shekgalagari potential (past) anterior forms – affirmative and negative

	AFF. FORM	EXAMPLE	NEG. FORM	EXAMPLE
a. dist.	íye ndé	íye ndé	ha íyé 'ndé	ha íyé 'ndé
past	(^l ₂)SM ₃ qa ROOT-a	'bá qa tutulu:l-a	(^l ₂)SM ₃ qa ROOT-a	'bá qa tutulu:l-a
b. yest.	léé ndé	léé ndé	ha léé 'ndé	ha léé 'ndé
past	(^l ₂)SM ₃ qa ROOT-a	'bá qa tutulu:l-a	(^l ₂)SM ₃ qa ROOT-a	'bá qa tutulu:l-a
c. today	nde ndé	nde ndé	ha ndé 'ndé	ha ndé 'ndé
past	(^l ₂)SM ₃ qa ROOT-a	'bá qa tutulu:l-a	(^l ₂)SM ₃ qa ROOT-a	'bá qa tutulu:l-a

These examples have meanings such as ‘they could have disrespected (but were prevented from doing so)’. A more complete investigation of semantics and uses is called for.

4.2.5. Imperative

(88) tutúlól-a
DISRESPECT-FV
‘disrespect!’

The imperative is formed with a bare root with unbounded HTS from the second root syllable to the penult. Imperative forms do not distinguish between singular (e.g. ‘disrespect!’) and pl. (e.g. ‘you all, disrespect!’).

Toneless verbs, with the exception of toneless monosyllables, always preserve a toneless first syllable. Because the imperative H must be realized, it occurs on the only syllable of a toneless monosyllabic stem, and on the second (final) syllable of a toneless bisyllabic stem. Tone patterns in the infinitive are detailed in (20). The same tone pattern is found in the present-tense negative (see section 4.1.2).

(89) Shekgalagari imperative

a. Toneless root

STEM SYLL	IMP. FORM	TONE PATTERN	GLOSS
1	ká	H	‘mention!’
2	balá	ØH	‘read!/count!’
3	haphóla	ØHØ	‘slap!’
4	tutúlóla	ØHHØ	‘disrespect!’

b. H1 (spreading) root

STEM SYLL	IMP. FORM	TONE PATTERN	GLOSS
1	há	H	‘give!’
2	bóna	HØ	‘see!’
3	χópúla	HHØ	‘think!/remember!’
4	χáqúlóla	HHHØ	‘remind!’

c. H2 (non-spreading) root

STEM SYLL	IMP. FORM	TONE PATTERN	GLOSS
1		—	—
2	lísa	HØ	‘herd!’
3	láléza	HHØ	‘invite!’
4	túúlóla	HHHØ	‘cause to cease from a habit!’

Imperatives with object markers have the same tone pattern, plus the addition of the H-toned irrealis final vowel -é, as illustrated in (90). A full tonal paradigm of the imperative with an object marker is given in appendix A4.

(90) bá-tutúlól-é

PL-DISRESPECT-FV.IRR
‘disrespect them!’

The only object marker that does not co-occur with the irrealis FV is 1sg:

(91) n-tutúlól-a

1SG-DISRESPECT-FV
‘disrespect me!’

The negative form of the imperative are prefixed with *shi* and have the same tone pattern as imperatives with object markers (as in (91)). However, unlike imperatives with object markers, they do not condition downstep with a following function word (see section 2.5 and appendix A5).

(92) shi-tutúlól-é

NEG-DISRESPECT-FV.IRR
‘don’t disrespect!’

4.2.5.1. Emphatic commands

A toneless *ɪ*- may be prefixed to the verb stem for emphasis:

- (93) *ɪ-gy-á*
 EMPH-EAT-FV
 ‘EAT!’

4.2.6. Hortative

- (94) *á bá-tútulu(:)l-é*
 HORT 3PL-DISRESPECT-FV.IRR
 ‘may they disrespect!’

The hortative mood (‘let X _____’ / ‘may X _____’) is complex both semantically and in its tonal properties. Only a brief introduction will be given here.

The hortative marker is a H-toned *á* marker. It co-occurs with an irrealis final vowel /-ε/. The FV is H-toned only when it follows a toneless syllable, and surfaces as toneless on mono- and bi-syllabic stems (e.g. (95)). See appendix A14 for further details.

- (95) *á bá-bá(:)l-ε*
 HORT 3PL-COUNT-FV.IRR
 ‘may they count!’

The hortative marker may occur before the verb or before an overt subject NP, as shown in (96).

- (96) a. *barímú á bá-bá(:)l-ε*
 CL2.GODS HORT CL2-COUNT-FV.IRR
 ‘the gods, let them count’
 b. *á bárimú bá-bá(:)l-ε*
 HORT CL2.GODS CL2-COUNT-FV.IRR
 ‘let the gods count’

Penultimate lengthening and lowering is optional in the hortative with non-second-person subjects; second-person hortatives, which may be too “command-like” for interpretation as declaratives, do not undergo PLL (see Hyman and Monaka for an in-depth discussion of the pragmatics of declarative PLL in Shekgalagari). Because examples are given here with 3pl subjects, optional PLL is indicated by (:).

Hortative forms are given in (97) for the affirmative. Although there is a distinction of temporal distances in the past, the future hortative form can refer to all degrees of future temporal distance. An example of a negative hortative past form is given below in (98a), and other past forms are likely analogous. The negative future hortative is given in (98b).

(97) Shekgalagari hortative forms – affirmative

	AFF. FORM	EXAMPLE
	PAST	
a.	dist. á (¹)SM ₅ -be íyé (¹ ₂)SM ₁ -ROOT-a	á ¹ bá-be íyé ¹ bá-tutulu(:)l-a
b.	yest. á (¹)SM ₅ -be léé (¹ ₂)SM ₁ -ROOT-a	á ¹ bá-be léé ¹ bá-tutulu(:)l-a
c.	today á (¹)SM ₅ -be ndé (¹ ₂)SM ₁ -ROOT-a	á ¹ bá-be ndé ¹ bá-tutulu(:)l-a
d.	rec. á (¹)SM ₅ -be láábé (¹ ₂)SM ₁ -ROOT-a	á ¹ bá-be láábé ¹ bá-tutulu(:)l-a
	PRES	
e.	á ¹ SM ₅ -ROOT-é ²⁰	á ¹ bá-tútulu(:)l-é
	FUT	
f.	gen. á ¹ SM ₅ -de SM ₅ -ROOT-ε ²¹	á ¹ bá-de bá-tútulu(:)l-é

(98) Shekgalagari hortative forms – negative (sample)

	NEG. FORM	EXAMPLE
a.	dist. past á SM ₅ -be íyé ¹ SM ₅ -shí-qá (¹ ₂)SM ₁ -ROOT-a	á ¹ bá--be íyé ¹ bá-shí-qá ¹ bá-tutulu(:)l-a
b.	future á ¹ SM ₅ -shí-dé ¹ SM ₁ -ROOT-a	á ¹ bá-shí-dé ¹ bá-tutulu(:)l-a

The hortative also combines with imperfective (99), anterior (100), and other forms.

(99) Shekgalagari hortative forms – imperfective aff. (sample) – ‘may they have been ____’

	AFF. FORM	EXAMPLE
	PAST	
a.	dist. á SM ₅ -be íyé ¹ SM ₂ -ROOT-a	á ba-be íyé ¹ bí-tútulu(:)l-a
b.	yest. á SM ₅ -be léé ¹ SM ₂ -ROOT-a	á ba-be léé ¹ bí-tútulu(:)l-a
c.	today á SM ₅ -be ndé ¹ SM ₂ -ROOT-a	á ba-be ndé ¹ bí-tútulu(:)l-a

Because of the functional overlap of the today past and the anterior, as discussed in section (4.1.1), (99c) is best translated as ‘may they have been disrespecting [at a contextually relevant time, today]’.

²⁰ The final -ε in the hortative is only H when it follows a toneless syllable, surfacing as L on mono- and bi-syllabic stems, and on trisyllabic H-toned stems with spreading to the penult. See the appendix (#) for further details.

²¹ This form can reference any degree of future in the Shekgalagari hortative.

(100) Shekgalagari hortative forms – anterior aff. (sample) – ‘may they have ____’

	AFF. FORM	EXAMPLE
	PAST	
a.	dist. á (ˀ)SM ₅ -be íyé ˀíyé SM ₁ -ROOT-a	á ˀbá-be íyé ˀíyé bá-tutulɔ(:)l-a
b.	yest. á (ˀ)SM ₅ -be léé ˀndé SM ₁ -ROOT-a	á ˀbá-be léé ˀndé ˀbá-tutulɔ(:)l-a
c.	today á (ˀ)SM ₅ -be ndé ˀndé SM ₁ -ROOT-a	á ˀbá-be ndé ˀndé ˀbá-tutulɔ(:)l-a

An appropriate translation of (100a) is ‘may they have disrespected [and finished doing so, by a contextually given time, long ago]’. The apparent tonal inconsistency on the SM of the main verb requires further study.

4.2.6.1 Hortative, HTS and downstep

Downstep and HTS possibilities in the hortative mood are complex and require further study. They are dependent on at least object marker tone and root tone, as illustrated in the table in (101).

(101) Hortative tone patterns

	OM	ROOT	tone possibilities (NOT AN EXHAUSTIVE LIST)
a.	–	Ø	á ˀbá-tutulɔl-é ‘let them disrespect’
b.	–	H1/H2	á ˀbá-χáqúlɔl-é (H1, no bounded-HTS) ‘let them remind’
c.	Ø	Ø	á ˀbá-ń-tutulɔl-é á ˀba-n-tutulɔl-e *á ba-n-tutulɔl-é ‘let them disrespect me’
d.	Ø	H	á ˀbá-mu-χáqúlɔl-é á ba-mu-χáqúlɔl-é *á ba-mu-χaqulɔl-e ‘let them remind him’
e.	H	H1/H2	á ˀbá-bá-χáqúlɔl-é á ˀbá-bá ˀχáqúlɔl-é á ba-ba-χaqulɔl-e ‘let them remind them’

Interestingly, neither the hortative nor any other subjunctive mood marking occurs in contexts such as ‘X wants Y to ____’.

4.2.7. Counterexpectatives

- (102) *íye bí-da χu-tutulu:l-a*
 DIST.PST 3PL-COME CL15(INF)-DISRESPECT-FV
 ‘they were going to disrespect [long ago, but they didn’t]’

Counterexpectative forms are composed of TAM markers discussed above. For example, the example in (102) has a distant past marker, the imperfective form of future auxiliary *-da* ‘come’, and the infinitive form of the verb (much like its English counterpart). The same degrees of past temporal distance apply; for example, (103) has the expected meaning:

- (103) *ńde bí-da χu-tutulu:l-a*
 TODAY.PST 3PL-COME CL15(INF)-DISRESPECT-FV
 ‘they were going to disrespect [today]’

Counterexpectatives are negated similarly to other past tense forms, using the particle *ha*:

- (104) *ha ńdé ^hbí-da χu-tutulu:l-a*
 NEG TODAY.PST 3PL-COME CL15(INF)-DISRESPECT-FV
 ‘they weren’t going to disrespect’

(Compound) anterior counterexpectatives have at least two possible interpretations:²²

- (105) a. *ńde ńde ^hbí-da χu-tutulu:l-a*
 TODAY.PST ANT 3PL-COME CL15(INF)-DISRESPECT-FV
 ‘they were going to disrespect [by a contextually specified time, e.g. by the time you found them]’
 b. *íye ńde ^hbí-da χu-tutulu:l-a*
 DIST.PST ANT 3PL-COME CL15(INF)-DISRESPECT-FV
 ‘they would have disrespected [long ago]’

The two meanings are related: ‘would have’ (105b) implies a planned course of events somehow interrupted; the example in (105a) gives a more precise specification of the interruption.

5. Conditionals and Counterfactuals

The study of Shekgalagari tone described above did not include an in-depth analysis of tense/aspect/mood expression in non-main clauses. However, the data that were collected point to a complex and fascinating system. While they are by no means comprehensive, the examples below give a general idea of how relative clauses, conditionals, and counterfactuals are formed in Shekgalagari, and the tonal interactions involved. The segmentation of morphemes is not meant to be definitive, and morpheme-by-morpheme glosses are not given, although many of the relevant morphemes can be found in the sections above. Tone patterns are interesting, with more downstep in dependent than in main clauses. See Crane 2009 for an analysis of downstep conditioning in terms of grammatically conditioned minor phrases.

²² The elicited examples in (105a) and (105b) have different temporal frames, but are to all appearances completely interchangeable in all other respects.

Examples are given using verbs *-bala* ('read, count') and *-î-k^hyúkyā* (H1, 'learn'), the latter of which includes the H-toned reflexive prefix *-î-*.

5.1. Conditionals

Conditional clauses are formed with the marker *há*, which conditions downstep on a following element. The main clauses in conditional sentences appear to pattern the same as other main clauses.

Note that the conditional marker *há* differs from negative marker *ha* in its tone. The present tense conditional clause appears to have past-tense morphology (compare with past vs. present tense for potentials in section 4.2.4 above. However, it is not certain that the *qa* in this example is the same as potential *qa*.

(106) Shekgalagari conditionals – past perfective – affirmative

PAST		
a.	dist.	há 'iyé 'bá-bal-a, iye bá-îk ^h hû:ky-a 'if they read [long ago], they learned'
b.	yest.	há 'léé 'bá-bal-a, léé bá-îk ^h hû:ky-a 'if they read [yesterday], they learned'
c.	today	há 'ndé 'bá-bal-a, ndé bá-îk ^h hû:ky-a 'if they read [today], they learned'
PRES		
d.		há 'bá qa bal-a, bá-dá χu-î-k ^h yû:ky-a 'if they read [habitually/right now], they will learn'
FUT		
e.		há 'bá qa da bá-bal-a, nde bá shi qá 'bá-î-k ^h yû:ky-a 'if they read [in the future], they will learn'

The negative forms of realis conditionals are more complex. They employ negative marker *shi* (found also in negative imperatives and hortatives) in each clause

- (107) há 'ndé 'bá shi qá bá-bal-a, nde bá shi qá 'bá-î-k^hyû:ky-a
'if they didn't read [today], they didn't learn'

The present-tense conditional form has both habitual and simple present readings.

- (108) há 'bá qa bal-a, bá-dá χu-î-k^hyû:ky-a
'if they read [habitually/right now], they will learn'

Again, its negative form is more complex:

- (109) há ¹bá sháa bal-é, bá-dá χu shɪ qé bí-í-k^hyû:ky-a²³
‘if they don’t read, they won’t learn’

Another possible expression of the present negative conditional is given in (110). Further investigation of the differences between the forms is needed.

- (110) há ¹bá sháa bal-é, bá-dá χu shɪ qé bá-í-k^hyû:ky-ε
‘if they don’t read, they won’t learn’

Imperfective (and progressive forms) are also possible; given here are the today past imperfective negative (111a), and the affirmative present progressive (111b) and its negation (111c). Note that the present progressive conditional clause allows for a “bare” imperfective in the present tense, which is not possible in main clauses.

- (111) a. há ¹ndé bá sháa bal-é, ηqábe bá shá¹á í-k^hyû:ky-é
‘if they weren’t reading, they weren’t learning’
b. há ¹bí-bá-la, bá-í-k^hyû:ky-a-χó
‘if they are reading, they are learning’
c. há ¹bá sháa bal-é, ha-bá-í-k^hyû:ky-ε
‘if they aren’t reading, they aren’t learning’

5.2. Counterfactuals

The form and semantics of counterfactuals in Shekgalagari is an area in need of much further study; as in the above section, forms are given here with basic translations. Note that the dependent clause is identical to that of the conditional; counterfactuality is expressed in the main clause, which takes the same form as the counterexpectatives in (4.2.7). Note again the apparently (immediate) past tone pattern in the present tense.

²³ Also possible is the following tone pattern: há ba-shaa-balé; however, *há ¹bá-shaa-balé is not acceptable. Note that the series 2 subject marker on the main-clause verb is [bí], due to vowel-height assimilation with the following reflexive marker.

(112) Shekgalagari counterfactuals – affirmative

PAST		
a.	dist.	há 'íyé 'bá-bal-a, íye bí-da χu-í-k ^h yû:ky-a 'if they had read [long ago], they would have learned'
b.	yest.	há 'léé 'bá-bal-a, léé bí-da χu-í-k ^h yû:ky-a 'if they had read [yesterday], they would have learned'
c.	today	há 'ndé 'bá-bal-a, ndé bí-da χu-í-k ^h hû:ky-a 'if they had read [today], they would have learned'
d.	today	há 'láábé 'bá-bal-a, láábe bí-da χu-í-k ^h hû:ky-a 'if they had read [recently], they would have learned'
PRES		
e.		há 'bá qa bal-a, ba qá í-k ^h yû:ky-a 'if [it were the case that] they read, they would learn'

Sample negative forms of counterfactuals are given in (113).

(113) Shekgalagari counterfactuals – negative

a.	recent past	há 'láábé 'bá shí qá bá-bal-a, ha láábe 'bá-í-k ^h hû:ky-a 'if they hadn't read [recently], they would have learned'
b.	present	há 'bá sháa bal-é, ha ŋqe bí-í-k ^h yû:ky-a 'if [it weren't the case that] they read, they wouldn't learn'

Counterfactuals may also take imperfective/progressive aspect. Present imperfective counterfactual *if*-clauses combine anterior morphology with the imperfective subject marker. Given in (114) are a today past imperfective (114a), its negation (114b), and a present imperfective (114c).

(114) Shekgalagari counterfactuals – imperfective

a.	today past	há 'ndé 'bí-da χu-bé bí-bál-a, nde bí-da χu-be bí-í-k ^h yû:ky-a 'if they had been reading [today], they would have learned'
b.	today past negative	há 'ndé 'bí-da χu-bé bá sháa bal-é, nde bí-da χu-bé bá-shá'á-ík ^h yû:ky-é 'if they hadn't been reading [today], they wouldn't have learned'
c.	present	há 'ndé bí-bál-a, ŋqábe bí-í-k ^h yû:ky-a 'if they were reading, they would be learning'

Like counterexpectatives, past-tense counterfactuals may have anterior morphology, as well. Meaning and usage differences should be investigated further.

- (115) há 'léé 'ndé 'bá-bal-a, léé ndé 'bí-da χu-í-k^hyû:ky-a
'if they had read [yesterday, by a contextually-given time], they would have learned [by that time]'

The main clause of anterior counterfactuals need not have anterior aspect marking:

- (116) há 'íyé 'íyé 'bá-bal-a, íyé bí-da χu-í-k^{hy}û:ky-a
 'if they had read [yesterday, by a contextually-given time], they would have learned'

It is also grammatical to have “double” anterior marking in counterfactuals. Such constructions are rarely used, and the meaning is difficult to pin down. An example is given in (117).

- (117) há 'íyé 'ńdé 'ńdé 'bá-bal-a, íye ńdé 'ńde bí-da χu-í-k^{hy}û:ky-a
 'if they had read [yesterday, by a contextually-given time], they would have learned'

6. Future research

The above represents the very beginnings of a study of a complex tense/aspect/mood system. It is the hope of the author and others involved in the project that it may form a basis for a rich and in-depth program of research in the future, and that it may be of some use to scholars of Bantu in general, and Shekgalagari in particular, in the meantime.

There is a particular need to investigate the expression of TAM within relative clauses. Very few examples of relative clauses were collected during this study, so little can be said about the range of TAM expression they allow. However, at least the differentiation of past time seems to pattern the same as main clauses (and conditional and counterfactual clauses).

One example of a relative clause is given in (118). Relative clauses appear to require a relativizing demonstrative.

- (118) mʊlɪmi yó ńde kí-m̩-b̩:n-a
 FARMER DEM.REL TODAY.PST 1SG-3ST-SEE-FV
 'the farmer I saw'

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Appendix A: TAM Tables

This appendix gives examples of the major categories of tone patterns found across Shekgalagari TAMs. The columns give the root tone, number of syllables in the root (+FV), tone pattern pre-pausally, and the tone pattern before the function word *ɜwa*, which demonstrates downstep patterning with respect to function words: toneless *ɜwa* or a downstepped final syllable on the verb complex indicates that that construction conditions downstep with function words. For more details on downstep conditioning with regard to TAM and word class, see Crane (2009).

In the tables, only the main verbs are given in the columns, with a brief schematization of the full construction in the “tone pattern” column heading. For more information, see the relevant sections in the main body of this paper.

A1. Infinitive

ROOT TONE	# SYLL	Tone Pattern <i>χu</i> + stem	Before <i>ɜwá</i>	<i>ɜwá</i>
Ø	1	<i>χu:ka</i> Ø: Ø	<i>χuka</i> Ø Ø	<i>ɜwá</i> H
Ø	2	<i>χuba:la</i> Ø Ø:Ø	<i>χubala</i> Ø ØØ	<i>ɜwá</i> H
Ø	3	<i>χuhaphu:la</i> Ø ØØ:Ø	<i>χuhaphula</i> Ø ØØØ	<i>ɜwá</i> H
Ø	4	<i>χututulula</i> Ø ØØØ:Ø	<i>χututulula</i> Ø ØØØØ	<i>ɜwá</i> H
H1	1	<i>χu:gyá</i> Ø: H	<i>xugyá</i> Ø H	<i>ɜwá</i> H
H1	2	<i>χubô:na</i> Ø F:Ø	<i>χubóna</i> Ø HØ	<i>ɜwá</i> H
H1	3	<i>χuχópú:la</i> Ø HH:Ø	<i>χuχópú:la</i> Ø HHØ	<i>ɜwá</i> H
H1	4	<i>χuχáqúlú:la</i> Ø HHØ:Ø	<i>χuχáqúlula</i> Ø HHØØ	<i>ɜwá</i> H
H2	2	<i>χulí:sa</i> Ø H:Ø	<i>χulisa</i> Ø HØ	<i>ɜwá</i> H
H2	3	<i>χulále:za</i> Ø HØ:Ø	<i>χuláleza</i> Ø HØØ	<i>ɜwá</i> H
H2	4	<i>χutúulu:la</i> Ø HØØ:Ø	<i>χutúulu:la</i> Ø HØØØ	<i>ɜwá</i> H

A2. Infinitive - negative

ROOT TONE	# SYLL	Tone Pattern χυ+ shaa + stem	Before 3wá	3wá
Ø	1	χυ sháa: ka Ø HH: Ø	χυ sháa ka Ø HH Ø	3wá H
Ø	2	χυ sháa ba:la Ø HH Ø:Ø	χυ sháa bala Ø HH ØØ	3wá H
Ø	3	χυ sháa haphu:la Ø HH ØØ:Ø	χυ sháa haphula Ø HH ØØØ	3wá H
Ø	4	χυ sháa totulu:la Ø HH ØØØ:Ø	χυ sháa totulula Ø HH ØØØØ	3wá H
H1	1	χυ sháa: gyá Ø HØ: H	χυ sháa gyá Ø HØ H	3wá H
H1	2	χυ sháa bó:na Ø HØ F:Ø	χυ sháa bóna HØ HØ	3wá H
H1	3	χυ sháa χópú:la Ø HØ HH:Ø	χυ sháa χópúla Ø HØ HHØ	3wá H
H1	4	χυ sháa χáqúlú:la Ø HØ HHØ:Ø	χυ sháa χáqúlúla Ø HØ HHØØ	3wá H
H2	2	χυ sháa lí:sa Ø HØ H:Ø	χυ sháa lísa Ø HØ HØ	3wá H
H2	3	χυ sháa lálé:3a Ø HØ HØ:Ø	χυ sháa lálé3a Ø HØ HØØ	3wá H
H2	4	χυ sháa túulu:la Ø HØ HØØ:Ø	χυ sháa túulula Ø HØ HØØØØ	3wá H

A3. Imperative

ROOT TONE	# SYLL	Tone Pattern bare stem	Before 3wá	3wá
Ø	1	ká H	ká H	3wa Ø
Ø	2	balá ØH	balá ØH	3wá H
Ø	3	haphúla ØHØ	haphúla ØHØ	3wá H
Ø	4	tutúlúla ØHHØ	tutúlúla ØHHØ	3wá H
H1	1	gyá H	gyá H	3wa Ø
H1	2	bóna HØ	bóna HØ	3wá H
H1	3	χópúla HHØ	χópúla HHØ	3wá H
H1	4	χáqúlúla HHHØ	χáqúlúla HHHØ	3wá H
H2	2	lísa HØ	lísa HØ	3wá H
H2	3	lálé3a HHØ	lálé3a HHØ	3wá H
H2	4	túúlúla HHHØ	túúlúla HHHØ	3wá H

A4. Imperative with object marker

ROOT TONE	# SYLL	Tone Pattern OM + stem	Before 3wá	3wá
Ø	1	báké H H	báké H H	3wa Ø
Ø	2	bábalé H ØH	bábalé H ØH	3wa Ø
Ø	3	báhaphúlé H ØHH	báhaphúlé H ØHH	3wa Ø
Ø	4	bátutúlúlé H ØHHH	bátutúlúlé H ØHHH	3wa Ø
H1	1	báhé H H	báhé H H	3wa Ø
H1	2	bábóné H HH	bábóné H HH	3wa Ø
H1	3	báχópúlé H HHH	báχópúlé H HHH	3wa Ø
H1	4	báχáqúlúlé H HHHH	báχáqúlúlé H HHHH	3wa Ø
H2	2	bálísé H HH	bálísé H HH	3wa Ø
H2	3	bálálézé H HHH	bálálézé H HHH	3wa Ø
H2	4	bátúúlúlé H HHHH	bátúúlúlé H HHHH	3wa Ø

A5. Imperative - negative

ROOT TONE	# SYLL	Tone Pattern shr + stem	Before 3wá	3wá
Ø	1	shiké Ø H	shiké Ø H	3wá H
Ø	2	shíbalé Ø ØH	shíbalé Ø ØH	3wá H
Ø	3	shíhaphúlé Ø ØHH	shíhaphúlé Ø ØHH	3wá H
Ø	4	shítutúlúlé Ø ØHHH	shítutúlúlé Ø ØHHH	3wá H
H1	1	shigyé Ø H	shigyé Ø H	3wá H
H1	2	shíbóné Ø HH	shíbóné Ø HH	3wá H
H1	3	shríχópúlé Ø HHH	shríχópúlé Ø HHH	3wá H
H1	4	shríχáqúlúlé Ø HHHH	shríχáqúlúlé Ø HHHH	3wá H
H2	2	shílísé Ø HH	shílísé Ø HH	3wá H
H2	3	shílálézé Ø HHH	shílálézé Ø HHH	3wá H
H2	4	shítúúlúlé Ø HHHH	shítúúlúlé Ø HHHH	3wá H

A6. Present- toneless subject marker

ROOT TONE	# SYLL	Tone Pattern SM + stem + yO	Before 3wá	3wá
Ø	1	uka:yó Ø Ø: Ø	uka Ø Ø	3wá H
Ø	2	ubala:yó Ø ØØ: Ø	ubala Ø ØØ	3wá H
Ø	3	uhaphula:yó Ø ØØØ: Ø	uhaphula Ø ØØØ	3wá H
Ø	4	ututulula:yó Ø ØØØ: Ø	ututulula Ø ØØØ	3wá H
H1	1	ugyá:yó Ø H: Ø	ugyá Ø H	3wá H
H1	2	ubóná:yó Ø HH: Ø	ubóna Ø HØ	3wá H
H1	3	uxópúla:yó Ø HHØ: Ø	uxópúla Ø HHØ	3wá H
H1	4	uxáqúlula:yó Ø HHØØ: Ø	uxáqúlula Ø HHØØ	3wá H
H2	2	ulísa:yó Ø HØ: Ø	ulísa Ø HØ	3wá H
H2	3	uláléza:yó Ø HØØ: Ø	uláléza Ø HØØ	3wá H
H2	4	utúulula:yó Ø HØØØ: Ø	utúulula Ø HØØØ	3wá H

A7. Present - H-toned subject marker

ROOT TONE	# SYLL	Tone Pattern H SM + stem + XO	Before 3wá	3wá
Ø	1	báka:χó H Ø: H	báká H H	3wá H
Ø	2	bábála:χó H HØ: H	bábálá H HH	3wá H
Ø	3	báháphúla:χó H HØØ: H	báháphúlá H HHH	3wá H
Ø	4	bátútulula:χó H HØØØ: H	bátútúlúlá H HHHH	3wá H
H1	1	bágya:χó H Ø: H	bágyá H H	3wá H
H1	2	bábóna:χó H HØ: H	bábóná H HH	3wá H
H1	3	báháphúla:χó H HHØ: H	báháphúlá H HHH	3wá H
H1	4	báxáqúlula:χó H HHØØ: H	báxáqúlúlá H HHHH	3wá H
H2	2	bálísa:χó H HØ: H	bálísá H HH	3wá H
H2	3	báláléza:χó H HØØ: H	bálálézá H HHH	3wá H
H2	4	bátúulula:χó H HØØØ: H	bátúúlúlá H HHHH	3wá H

A8. Present- Negative

ROOT TONE	# SYLL	Tone Pattern ha + (H)SM ²⁴ + stem	Before 3wá	3wá
Ø	1	habá:ke Ø H: Ø	habáké Ø H H	3wa Ø
Ø	2	habába:lé Ø H Ø:H	habábálé Ø H ØH	3wa Ø
Ø	3	habáhaphú:le Ø H ØH:Ø	habáhaphúlé Ø H ØHH	3wa Ø
Ø	4	habátutúlú:le Ø H ØHH:Ø	habátutúlúlé Ø H ØHHH	3wa Ø
H1	1	habá:gye Ø H: Ø	habágyé Ø H H	3wa Ø
H1	2	habábó:ne Ø H H:Ø	habábóné Ø H HH	3wa Ø
H1	3	habáχópú:le Ø H HH:Ø	habáχópúlé Ø H HHH	3wa Ø
H1	4	habáχáqúlú:le Ø H HHH:Ø	habáχáqúllé Ø H HHHH	3wa Ø
H2	2	habálí:se Ø H H:Ø	habálisé Ø H HH	3wa Ø
H2	3	habálálé:3e Ø H HH:Ø	habálálézé Ø H HHH	3wa Ø
H2	4	habáχáqúlú:le Ø H HHH:Ø	habáχáqúllé Ø H HHHH	3wa Ø

²⁴ In the present negative, the 3sg SM is optionally toneless before Ø stems.

A9. Past - immediate (perfective)

ROOT TONE	# SYLL	Tone Pattern SM ²⁵ + stem	Before 3wá	3wá
Ø	1	a:ka Ø: Ø	aka Ø Ø	3wá H
Ø	2	aba:la Ø Ø:Ø	abala Ø ØØ	3wá H
Ø	3	ahaphu:la Ø ØØ:Ø	ahaphula Ø ØØØ	3wá H
Ø	4	aɣaɣu:la Ø ØØØ:Ø	aɣaɣulula Ø ØØØØ	3wá H
H1	1	aa:gyá Ø: H ¹	aagyá ØØ H	3wá H
H1	2	abô:na Ø F: Ø	abóna Ø HØ	3wá H
H1	3	aɣópú:la Ø HH:Ø	aɣópúla Ø HHØ	3wá H
H1	4	aɣáqúlu:la Ø HHØ:Ø	aɣáqúlula Ø HHØØ	3wá H
H2	2	alí:sa Ø H:Ø	alísa Ø HØ	3wá H
H2	3	alále:3a Ø HØ:Ø	alále3a Ø HØØ	3wá H
H2	4	atóulu:la Ø HØØ:Ø	atóulula Ø HØØØ	3wá H

²⁵ These examples use a toneless SM (3sg), but a H-toned SM would not result in any different patterns.

A10. Past - recent (imperfective)

ROOT TONE	# SYLL	Tone Pattern (láábè) SM + stem	Before 3wá	3wá
Ø	1	bí:ka H: Ø	bí ¹ ká H ¹ H	3wá H
Ø	2	bíbá:la H H:Ø	bíbá ¹ lá H H ¹ H	3wá H
Ø	3	bíhápɸu:la H HØ:Ø	bíhápɸula H HØØ	3wá H
Ø	4	bítótulula H HØØ:Ø	bítótulula H HØØØ	3wá H
H1	1	bí:gyá HØ: H	bíngyá HØ H	3wa Ø
H1	2	bíbô:na H F:Ø	bíbóná H HH	3wa Ø
H1	3	bíχópú:la H HH:Ø	bíχópú ¹ lá H HH ¹ H	3wá H
H1	4	bíχáqúlú:la H HHØ:Ø	bíχáqúlula H HHØØ ¹	3wá H
H2	2	bílí:sa H H:Ø	bílí ¹ sá H H ¹ H	3wá H
H2	3	bílále:za H HØ:Ø	bíláleza H HØØ	3wá H
H2	4	bítóulú:la H HØØ:Ø	bítóulula H HØØØ	3wá H

A11. Potential - present

ROOT TONE	# SYLL	Tone Pattern SM + qá + stem	Before 3wá	3wá
Ø	1	ba qá: ka Ø H: Ø	ba qá ka Ø H Ø	3wá H
Ø	2	ba qá ba:la Ø H Ø:Ø	ba qá bala Ø H ØØ	3wá H
Ø	3	ba qá haphu:la Ø H ØØ:Ø	ba qá haphula Ø H ØØØ	3wá H
Ø	4	ba qá tutulu:la Ø H ØØØ:Ø	ba qá tutulula Ø H ØØØØ	3wá H
H1	1	ba qáa: gyá Ø HØ: H ¹	ba qáa gyá Ø HØ H	3wá H
H1	2	ba qá bô:na Ø H F:Ø	ba qá bóna Ø H HØ	3wá H
H1	3	ba qá χópú:la Ø H HH:Ø	ba qá χópúla Ø H HHØ	3wá H
H1	4	ba qá χáqúlú:la ØH HHØ:Ø	ba qá χáqúlula Ø H HHØØ	3wá H
H2	2	ba qá lí:sa Ø H H:Ø	ba qá lísa Ø H HØ	3wá H
H2	3	ba qá lále:za ØH HØ:Ø	ba qá láleza Ø H HØØ	3wá H
H2	4	ba qá tóulú:la ØH HØØ:Ø	ba qá tóulula Ø H HØØØ	3wá H

A12. Potential (today past)

ROOT TONE	# SYLL	Tone Pattern (áǵǵè) + SM + qa + stem	Before 3wá	3wá
Ø	1	bá qa: ka H Ø: Ø	bá qa ka H Ø Ø	3wá H
Ø	2	bá qa ba:la H Ø Ø:Ø	bá qa bala H Ø ØØ	3wá H
Ø	3	bá qa haphu:la H Ø ØØ:Ø¹	bá qa haphula H Ø ØØØ	3wá H
Ø	4	bá qa tutulu:la H Ø ØØØ:Ø	bá qa tutulula H Ø ØØØØ	3wá H
H1	1	bá qaa: gyá H ØØ: H	bá qaa gyá H ØØ H	3wa Ø
H1	2	bá ¹qá bô:na H ¹H F:Ø	bá ¹qá bóna H ¹H HØ	3wa Ø
H1	3	bá ¹qá xópú:la H ¹H HH:Ø	bá ¹qá xópúla H ¹H HHØ	3wá H
H1	4	bá ¹qá xáqúlú:la H ¹H HHØ:Ø	bá ¹qá xáqúlúla H ¹H HHØØ	3wá H
H2	2	bá ¹qá lí:sa H ¹H H:Ø	bá ¹qá lísa H ¹H HØ	3wá H
H2	3	bá ¹qá lále:3a H ¹H HØ:Ø	bá ¹qá lále3a H ¹H HØØ	3wá H
H2	4	bá ¹qá túulu:la H ¹H HØØ:Ø	bá ¹qá túulula H ¹H HØØØ	3wá H

A13. -ile (anterior?)

ROOT TONE	# SYLL	Tone Pattern SM + stem + /ile/	Before 3wá	3wá
Ø	1	bíki:lé H Ø:H	bíkilé H ØH	3wa Ø
Ø	2	bíbari:le H ØF:Ø	bíbarilé H ØHH	3wa Ø
Ø	3	bíhaphúri:le H ØHF:Ø	bíhaphúrilé H ØHHH	3wa Ø
Ø	4	(bítotúlúri:le) H ØHHF:Ø	(bítotúlúrilé) H ØHHHH	3wa Ø
H1	1	bígyi:le H F:Ø	bígyilé H HH	3wa Ø
H1	2	bíbóni:ne H HF:Ø	bíbóniné H HHH	3wa Ø
H1	3	bíhópúri:le H HHF:Ø	bíhópúrilé H HHHH	3wa Ø
H1	4	(bíxáqúlúri:le) H HHHF:Ø	(bíxáqúlúrilé) H HHHHH	3wa Ø
H2	2	bílisi:3e H HF:Ø	bílisi3é H HHH	3wa Ø
H2	3	bíláléri:3e H HHF:Ø	bílálérizé H HHHH	3wa Ø
H2	4	(bítúúlúri:le) H HHHF:Ø	(bítúúlúrilé) H HHHHH	3wa Ø

A14. Hortative

ROOT TONE	# SYLL	Tone Pattern á # SM + stem	Before 3wá	3wá
Ø	1	á 'báke / á 'bake H 'H Ø / H Ø Ø	á 'báke / á 'bake H 'H Ø / H Ø Ø	3wá H
Ø	2	á 'bábále H 'H HØ	á 'bábále H 'H HØ	3wá H
Ø	3	á 'báháphulé H 'H HØH	á 'báháphulé H 'H HØH	3wá H
Ø	4	á 'bátútululé H 'H HØØH	á 'bátútululé H 'H HØØH	3wá H
H1	1	á 'bágye / á bagye H 'H Ø / H Ø Ø	á 'bágye / á bagye H 'H Ø / H Ø Ø	3wá H
H1	2	á 'bábóne H 'H HØ	á 'bábóne H 'H HØ	3wá H
H1	3	á 'báχópulé H 'H HØH	á 'báχópulé H 'H HØH	3wá H
H1	4	á 'báχáqululé H 'H HØØH	á 'báχáqululé H 'H HØØH	3wá H
H2	2	á 'bálíse H 'H HØ	á 'bálíse H 'H HØ	3wá H
H2	3	á 'bálálezhé H 'H HØH	á 'bálálezhé H 'H HØH	3wá H
H2	4	á 'bátúululé H 'H HØØH	á 'bátúululé H 'H HØØH	3wá H

A15. Persistent - future - negative

ROOT TONE	# SYLL	Tone Pattern SM-da ()xu-be SM- shántsɿ... SM + sháa + stem	Before 3wá	3wá
Ø	1	bá shaáa: ké H HØ: H	ba shá'á ké H H'H H	3wá H
Ø	2	bá sháa ba:lé H HØ Ø:H	bá sháa balé H HØ ØH	3wá H
Ø	3	bá sháa haphû:le H HØ ØF:Ø	bá sháa haphúlé H HØ ØHH	3wá H
Ø	4	bá sháa tutúlû:le H HØ ØHF:Ø	bá sháa tutúlúlé H HØ ØHHH	3wá H
H1	1	bá sháa: hé H HØ: H	bá shá'á hé H H'H H	3wá H
H1	2	bá shá'á bôn:ne H H'H F:Ø	bá shá'á bóné H H'H HH	3wá H
H1	3	bá shá'á χópû:le H H'H HF:Ø	bá shá'á χópúlé H H'H HHH	3wá H
H1	4	bá shá'á χáqúlû:le H H'H HHF:Ø	bá shá'á χáqúlúlé H H'H HHHH	3wá H
H2	2	bá shá'á lí:se H H'H F:Ø	bá shá'á lísé H H'H HH	3wá H
H2	3	bá shá'á lálê:3e H H'H HF:Ø	bá shá'á lálézé H H'H HHH	3wá H
H2	4	bá shá'á túúlû:le H H'H HHF:Ø	bá shá'á túúlúlé H H'H HHHH	3wá H

Appendix B: Glosses and other abbreviations

-	morpheme boundary
#	word/minor phrase boundary
%	(major) phrase boundary
:	lengthened mora
3PL	3 rd person plural
ANT	anterior (≈perfect)
CL15	noun class 15 (for example)
COP	copula
DEM	demonstrative
DIST.PAST	distant (far) past
DS	downstep
EMPH	emphatic marker
F	falling (HL) tone
FINAL	final morpheme (on phrase-final present tense affirmative forms)
FV	final vowel
H	H-toned mora
H2	(bounded) spreading-H verb root type vverb verb
H2	non-spreading H-toned verb root type
HORT	hortative
HTS	H-tone spreading
IMP	imperative
INF	infinitive
IPFV	imperfective
IRR	irrealis
M	mid-level tone (phonetic)
NEG	negative marker
Ø	toneless mora (or verb root)
OM	object marker
PERS	persistive (“still”) marker
PLL	penultimate lengthening and lowering
POT	potential
PRES	present
REC.PAST	recent past
REL	relativizing marker
SM	subject marker
TAM	tense/aspect/mood
TODAY.PST	today (hodiernal) past
YEST.PAST	yesterday past