VERB TONE IN IL-KEEKONYOKIE MAA

by

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A THESIS

Presented to the Department of Linguistics
and the Graduate School of the University of Oregon
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Master of Arts

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The tone of verbs in Il-Keekonyokie Maa is discussed following an overview of tone in Maa and literature relevant to Maa and Nilo-Saharan phonology. Having placed Maa within a typology of tone languages and described the basic morphological structure of the Maa verb, an analysis of the tone in bound argument pronouns is given. For two of the major tone classes within the argument pronouns, one that results in an initial high word pitch pattern and the other an initial low pitch pattern, it is found that only that with the initial low pitch bears a lexical (i.e., Low) tone. The argument pronouns that give initial high word pitch patterns are argued to derive that high pitch through spreading from suffix High tone. This analysis is followed by five appendices which give data which has been carefully checked for tone, but not included in the analysis. This data is given in the hope that it will aid future research into Maa verb tone.
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to the glory of God
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CHAPTER I

This part may be conveniently omitted by those not interested in tones, but it should be
realized that the opportunities for ambiguity in speaking the language
are endless, unless tone is taken into account.

—A. N. Tucker and J. Tompo Ole Mpaayei
Introduction to A Maasai Grammar: With Vocabulary (1955)

INTRODUCTION

While tone has been “conveniently omitted” by many in the study and writing of Maa, this thesis is part of an attempt to provide a comprehensive account of tone in Maa, and therefore reduce some of the “opportunities for ambiguity”, at least for those interested in the whole system of Maa sounds.

The next chapter delineates the scope of the thesis, as well as gives the conventions to be used throughout the thesis. Chapter III provides a context for this thesis in the other literature about Maa and Nilotic tone in general. Chapter IV places Maa within Hyman’s (to appear) typology of tonal languages, describing what kind of tone language it is. Chapter V overviews the segmental phonology of Maa, leaning heavily on
Wallace (1981), though adding significant modifications to that analysis. Chapter VI presents the body of the novel analysis, showing the systematic nature of Maa argument pronouns, and arguing for particular underlying forms. Chapter VII then summarizes the analysis, pointing to places to look for answers in future work.

The last part of the thesis is composed of five lengthy Appendices, four of which contain the data that are either 1) not yet been included in the analysis (i.e., Appendixes A, C, and D) or 2) covered by the analysis, but not needed to prove the analysis in chapter VI (i.e., Appendices B and D). The fifth and final appendix presents data which should be useful for those dealing with problems in orthography, including tonal minimal pairs and homophones.
## ABBREVIATIONS

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<td>DSCN</td>
<td>discourse marker k-, etc.</td>
</tr>
<tr>
<td>NEG</td>
<td>negative</td>
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<tr>
<td>II</td>
<td>Class II prefix</td>
</tr>
<tr>
<td>DIS</td>
<td>discourse marker</td>
</tr>
<tr>
<td>INCEP</td>
<td>inceptive</td>
</tr>
<tr>
<td>CAUS</td>
<td>Class I causative</td>
</tr>
<tr>
<td>MID</td>
<td>middle</td>
</tr>
<tr>
<td>MID3</td>
<td>dynamic middle</td>
</tr>
<tr>
<td>DAT</td>
<td>dative applicative</td>
</tr>
<tr>
<td>INST</td>
<td>instrumental applicative, class II causative</td>
</tr>
<tr>
<td>AWAY</td>
<td>motion away/trans-locative</td>
</tr>
<tr>
<td>VENT</td>
<td>ventive/cis-locative</td>
</tr>
<tr>
<td>APAS</td>
<td>antipassive suffix</td>
</tr>
<tr>
<td>IMP</td>
<td>imperative</td>
</tr>
<tr>
<td>Nominal</td>
<td>Morphology</td>
</tr>
<tr>
<td>FSG</td>
<td>feminine singular</td>
</tr>
<tr>
<td>MSG</td>
<td>masculine singular</td>
</tr>
<tr>
<td>FPL</td>
<td>feminine plural</td>
</tr>
<tr>
<td>MPL</td>
<td>masculine plural</td>
</tr>
<tr>
<td>AGT</td>
<td>agent</td>
</tr>
<tr>
<td>DUP</td>
<td>reduplication</td>
</tr>
<tr>
<td>P</td>
<td>preposition.</td>
</tr>
<tr>
<td>REL</td>
<td>relativizer</td>
</tr>
<tr>
<td>SG</td>
<td>singular</td>
</tr>
<tr>
<td>CONN</td>
<td>discourse marker n-, etc.</td>
</tr>
<tr>
<td>PF</td>
<td>perfect aspect</td>
</tr>
<tr>
<td>NPF</td>
<td>non-perfect aspect (morphologically unmarked)</td>
</tr>
<tr>
<td>BAP</td>
<td>bound argument pronoun</td>
</tr>
<tr>
<td>ISG</td>
<td>infinitive singular</td>
</tr>
<tr>
<td>1SG</td>
<td>first person singular</td>
</tr>
<tr>
<td>1PL</td>
<td>first person plural</td>
</tr>
<tr>
<td>2</td>
<td>second person subject</td>
</tr>
<tr>
<td>3</td>
<td>third person subject</td>
</tr>
<tr>
<td>3&gt;1</td>
<td>third person subject acting on first person singular</td>
</tr>
<tr>
<td>3&gt;2&gt;1</td>
<td>third person subject acting on second person singular</td>
</tr>
<tr>
<td>1&gt;2</td>
<td>first person singular acting on second person singular</td>
</tr>
<tr>
<td>IMP</td>
<td>imperative</td>
</tr>
<tr>
<td>FOC</td>
<td>focus</td>
</tr>
<tr>
<td>SUBJ</td>
<td>subjunctive</td>
</tr>
<tr>
<td>PR</td>
<td>possessor</td>
</tr>
<tr>
<td>PSD</td>
<td>possessed</td>
</tr>
<tr>
<td>F</td>
<td>feminine</td>
</tr>
<tr>
<td>M</td>
<td>masculine</td>
</tr>
<tr>
<td>TH</td>
<td>theme</td>
</tr>
<tr>
<td>PRN</td>
<td>pronoun</td>
</tr>
<tr>
<td>NMZR</td>
<td>nominalizer</td>
</tr>
<tr>
<td>DEM</td>
<td>demonstrative</td>
</tr>
<tr>
<td>PL</td>
<td>plural</td>
</tr>
</tbody>
</table>
CHAPTER II

SCOPE AND CONVENTIONS

2.1. Scope

A complete analysis of Maasai verb tone has proven to be beyond the scope of an M.A. thesis, so this work will address only a portion of that task. This chapter lays out the scope of this thesis, that is, what area of the tonal analysis for Maa verbs the thesis seeks to analyze. It also gives a description of the data I have available, the focus of this analysis and the domains in which the data should be trusted. At various points of the thesis I will allude to extensions into other domains that seem to fit this analysis. However, my highest degree of confidence in this analysis extends only to the scope outlined in this chapter.

2.1.1. Il-Keekonyokie Maa

Maa is spoken over a vast area, by a number of peoples who see themselves as distinct in some ways from one another, e.g., the Samburu, Chamus, and Maasai. The Maasai are themselves divided into semi-geographic "sections", each with somewhat
distinct history and culture (Schnitzer 2002). Because these divisions are more political than linguistic, they don't necessarily represent dialectal differences, though there are some acknowledged differences between how most sections speak. Because the divisions were based on geography, they can serve as a rough approximation of dialects, though there is need for much more study before dialectal lines can be well drawn.

That being said, the data from this paper come from speakers of Maa from the Il-Keekonyokie Maasai, so they probably represent one major dialect, in the center of Maasailand, around Nairobi, Kenya. I would not want to claim that either this description or the analysis that follows from it holds true for all the Maa speakers, or even all Maasai, though it probably covers most of the Il-Keekonyokie Maasai.

In at least one way the data I have collected differs from that published for other Maa dialects. Levergood writes of Low (L) ‘Raising’ in Arusha. She describes the phenomenon in the following manner: “the first L vowel in these sequences, L1, is intermediate in pitch between the pitch of the preceding H or simplified Fall, H1, and L2” (p. 54).

(1) Staircase pattern of L tone vowels (from Levergood 1983, number (9))

```
(1)  H1  L1  L2  …  Ln  (H2)
    [  ˥  ˧  ˧  …  ˧  ˥  ]
```

Among others, she gives the following word as an example of this tone pattern.

(2) ɔl-árràbàl  ‘fight’ (Arusa)

```
(2)  [  ˥  ˧  ˧  ]
```

In Il-Keekonyokie Maa, on the other hand, this Low Raising is not observed.

(3) ɔl-árràbàl  ‘quarrel, battle, etc.’ (Il-Keekonyokie)

```
(3)  [  ˥  ˧  ˧  ]
```
There is, however, the phonetic lowering of a spread High (H) tone when phrase final, which I have called ‘Spread-High Assimilation’ (Rasmussen and Payne, in review). This effect is shown in the following data, given in Il-Keekonyokie Maa, compared with the same data in Levergood (1983):

(4) ṑökëtë ᵉlkëpok ‘fat cow’ (Il-Keekonyokie)

(5) ṑökëtë ᵉlkëpok ‘fat cow’ (Arusa)

As can be seen in (5), this effect is not seen in Arusa Maa. For a fuller treatment of this phonetic effect, see Rasmussen and Payne (2001).

To simplify the terminology, this thesis will simplistically use the term "Maa" for the language spoken by the Il-Keekonyokie Maasai, though without the claim that this analysis extends to the entire community who identify their language as Maa.

2.1.2. Data Collection: Focused on Tone

Most of the data used in this thesis were collected for the sake of a tonal analysis, continuing the work initiated by Tucker and Mpaayei (1955; hereafter TM). Thus, in areas where the data and analysis of TM seem clear on segmental issues, I assume their analysis, and at times used it to guide transcription of the data (e.g., as in using morphophonemic alternations to determine the ATR value of a given word when the phonetic vowel contrasts are not clear to my American English ear). With regards to the
relative pitch of any given mora, however, I am highly confident of the objective accuracy of these data.

This confidence of relative pitch is gained through a methodology with several checks on the perception and transcription. In addition to the perception of relative pitch in a given utterance, utterances were elicited in frames, often followed by táátá ‘today’. Utterances are also whistled by the speaker, whenever the relative pitch remains at all unclear. Finally, the Maasai consultants were trained in the phonetic transcription of their language, and contributed their own understanding of a disputed transcription. That is, most of the data were elicited on more than one occasion, in more than one context, and checked whenever there was discrepancy of transcription.

Though I have confidence in the relative pitches of these data, I would caution against using these data for ATR studies, as ATR values are not nearly so clear to my ears as relative pitch. Given this difficulty, and the lack of immediate relevance to the present study, I have at times assumed regularity when faced with the uncertainty of any given ATR value.

In sum, aspects of the data not immediately relevant to the question at hand should be used with greater care than those that were foremost to the problem of tone during the collection. While I have tried to take every care with transcription of vowels and consonants, including all ATR contrasts, I have not checked and rechecked the data for those features to the same extent as I have the relative pitch.
2.1.3. Aspect

I will focus on forms in a single aspect, which TM call 'present tense' (1955:53). This is the morphologically most unmarked, and is called 'non-perfective' by Christa König (1993, see also Payne 1995); there is some indication that the aspect König calls 'perfective' includes perfect readings as well (Mitsuyo Hamaya, personal communication), at least in Il-Keekonyokie and Il-Wuasinkishu Maa. For the sake of having a consistent label, I will refer to the morphologically unmarked aspect as 'non-perfect,' and the marked aspect as 'perfect.'

2.2. Conventions of Orthography

The orthography in this paper follows TM, with four exceptions: I use 1) ë, ê, ç, and ù for the -ATR vowels; 2) tone marking (i.e., à – high; à – low) on all vowels, with ‘â’ for Downstepped High (TM’s ‘mid’) tone, 3) ñ for the palatal nasal (TM’s ‘ny’), 4) ww and yy for strong w and y, and 5) ñ and w for non-moraic ñ/ñ and w/w. While the last convention loses ATR information, it preserves moraic structure, which is essential for understanding tone; ATR is generally predictable from surrounding vowels.

Throughout the text capitalized High/Low or H/L is used when referring to phonemic tones, and lowercase high/low is used when referring to surface pitch patterns.
CHAPTER III

REVIEW OF PREVIOUS WORK ON MAA VERB TONOLOGY

Much work has already been done on the Maa language. This chapter lays out some of the work that has already been done in the analysis of Maa verb tone. It will also discuss other relevant works, as in Maa nominal tone work, and Nilotic tone work in general.

There has been very little work done on Maa tone, particularly in verbs. Few works even consistently give tone data. We are indebted to Tucker and Mpaayei (1955, hereafter TM) for clearly and consistently marking and categorizing tone in their grammar and word list, though they did not attempt any analysis of the tone system. It is my hope that this thesis will make a major contribution to the work that eventually does complete the tonal analysis of Maa.

3.1. Maa Tonology

Two scholars who have come close to publishing attempts at an analysis of Maa tone. The first is Barbara Wallace, who published an analysis of verb morphophonemics (1981). This article lays out very clearly the segmental interactions in the Maa verb. However, she gives a footnote which reads “In Wallace 1979 I discussed nominal tone. I
have not as yet attempted to analyze verbal tone and I will therefore leave the tonology of
the verbal complex to a later paper” (p. 87). In her conclusion, however, there is a note
saying “Clearly part of what is needed for getting closer to a solution [of the
morphophonemics] is a tonological analysis.” No further publications have been
forthcoming from her. Wallace 1979, given at the 10th Annual Conference on African
Linguistics in Urbana, IL, attempts to analyze the nominal tone system of Maa, though it
does not satisfy all the difficulties posed by Maa tonology. The author is aware of no
published attempts at an analysis of the verb tone system.

By far the most significant contributor to the discussion on Maa verbal tonology
is Barbara Levergood, who did much work on phonology in the Arusa Maa dialect.
Among other topics, she established the mora as the tone bearing unit (or TBU) (1990),
described phrasal tone effects (1987), and began an analysis of verb tone (1986).
Unfortunately, her last paper (Levergood 1986) on the subject was not published. Most
of the analysis is a description and categorization of the data, leading to the conclusion
that tones associate to the first, second, or third from last mora, and which occurs when
seems mainly stipulative (i.e., lexicalized). Most of her data, in addition to being from a
different dialect area, are in the negative, subjunctive, or “n tense” (TM p. 61), all of
which are found only tangentially in my data.

One conclusion she reaches, which has been confirmed in my data, is that
phonemic “High tone placement” for verbs, similar to my “stem tone,” is limited to three
positions: the ultimate, pentultimate, and antepenultimate mora. That is, there are no five
mora verbs where a High tone is spread from the second (i.e., fourth from the last) mora.
One issue she raises is whether there is “independent evidence for metrical structure in a tone language” (p13). This is, in fact, a question raised in my own analysis, which is unfortunately unresolved for Maa. For now these statements will stand as a summary of Levergood’s work, though where relevant to this thesis, Levergood's description and analysis of Arusha Maa tone will be contrasted with that found by the author in Il-Keekonyokie Maa.

This thesis was begun with the desire to continue on the work started by these colleagues, and eventually provide a complete analysis of the Maa verb tone system, though the scope of the problem is beyond this work as well. The author’s public contribution to the problem so far is limited to two papers. Rasmussen and Payne (under review) deals with downstep in Il-Keekonyokie Maa. In this dialect downstep operates somewhat differently than in the Arusa dialect described by Levergood. The other paper is Rasmussen (in press), which deals with the problem of person-marking tone, and which is also treated in chapter VI of this work. So, while work has been done to identify a system for Maa verb tone, the work is far from done.

3.2. Other Maa Work

This section briefly notes work done on Maa which are not directly related to tone, but which have been important in the development of scholarship in Maa, and provide an important background to this work.

The earliest publication on Maa is Hollis (1905), which presented tales of the Maa, as well as other grammatical information. This publication began the now widely
held tradition of not marking tone or all vowel contrasts, i.e., Advanced Tongue Root (ATR) contrasts, thus leaving the data useless for tonal analysis, and for any syntactic, etc., analysis that depends on tone (e.g., case). Greenberg (1959) shows the historical origin of the Maa impersonal passive to be in third person plural morphology.

Among works done on Maa not directly related to tone is an extensive encyclopedic dictionary by Father Franz Mol (1978, 1996). The 1996 work does occasionally include tone and all vowel contrasts, though neither thoroughly nor reliably.

More recent works include those by Doris Payne, who has published several articles on Maa Syntax and Semantics, looking into voice and inverse (with Hamaya and Jacobs 1994), possessor raising (1997), gender (1998), and lexicography (2001). Other work on Maa syntax includes Hamaya (1993), and Barshi and Payne (1996). Allan (1989) also gives us an article on Maa discourse.

One article on Maa phonetics includes Austin Bush's baccalaureate thesis on ATR. While this thesis did not establish the articulatory basis of ATR, it did establish that the ATR contrast is not equivalent to a difference in either or both of tongue height and or backness alone.

While these more recent works do not directly bear on the issue of Maa tonology, they do all represent Maa tone and vowel contrasts, which is a helpful departure from the undifferentiating tradition begun in Hollis (1905). The tradition remains alive in other works however, including most publications of stories and cultural material, such as Kipury (1983), and in the 1991 translation of the Bible. To show the value of writing tone even in practical or non-technical works, Appendix E includes several problems that
arise in Maa which are resolved by writing tone (in addition to the ability to distinguish nominal case, as described in TM 1955).

3.3. Nilotic Tonology

Work on Nilotic tone systems beyond Maa include Creider and Creider (1989) and Dimmendaal (1983), grammars of Nandi (Southern Nilotic) and Turkana (Eastern Nilotic), respectively, which include much tonal detail. An analysis of Bari (Eastern Nilotic) tone is given in Yokwe (1988), and there is a good description of Shilluk (Western Nilotic) phonology in Gilley (1992). Regarding phrasal tonology, there is an excellent article on downstep and downdrift in Luo, Tucker and Creider (1975).
CHAPTER IV

TYPOLOGY OF MAA TONE

There have been several descriptions of the range of possibilities for how languages use pitch to convey information (Hyman, in press, Beckman 1986, Pulleyblank 1986). Among other characteristics, these typologies describe certain systems with more or less free pitch units (i.e., Tone), as opposed to others where the unit which determines pitch is more or less bound, limited, or culminative, as in having a single major stress per word (i.e., stress/pitch accent).

While many of these typologies agree on many of these points, it is useful at this point to hold up Maa to just one of these typologies, and show where it fits in that typology. The typology used in this chapter is Hyman (in press), which has set out a four-way typology for tone in languages. The characteristics of this typology are: phonological contrasts relevant to the tone system, function of tone, tone rules, and character of the system (i.e., dominantly tone vs. stress). In this chapter I will briefly describe Hyman’s typology, and identify where Il-Keekonyokie Maa fits within this typology. Because the final parameter in Hyman’s typology is the broadest in determining the character of the tone system, I will treat it first.
4.1. Tone vs. Stress

The final parameter in Hyman’s typology of pitch behavior is the character of the system. For languages where it is clear that pitch indicates phonological contrast, it may not be clear what kind of contrast it indicates. In some languages, pitch is said to act as an independent unit attached to a syllable or mora, while in others it is a word level contrast, like stress. Hyman describes four types of languages we might expect, with both tone and stress either playing a role or not.

TABLE 1: Hyman’s Four Way Typology of Pitch in Languages

<table>
<thead>
<tr>
<th>Type 1: [+tone, -stress]</th>
<th>e.g., Yoruba, Igbo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type 2: [-tone, +stress]</td>
<td>e.g., English, Russian</td>
</tr>
<tr>
<td>Type 3: [-tone, -stress]</td>
<td>e.g., Korean, Berber, Gafat [Ethiopia]</td>
</tr>
<tr>
<td>Type 4: [+tone, +stress]</td>
<td>e.g., Fasu, Swedish, Palantla Chinantec [Mexico]</td>
</tr>
</tbody>
</table>

Hyman sees these four language types being best described by two prototypical system types, i.e., Type 1 (tone) and Type 2 (stress), with Type 3 not having word level pitch contrasts, and Type 4 (pitch-accent) sharing properties of both Types 1 and 2.¹ He then outlines the various properties that would define Types 1 and 2. These properties, given in Table 2, also give us the metric for determining where a language might fit on a continuum between types 1 and 2, as we observe which of these features is found in a given language. Where Maa fits into Hyman’s typology will be addressed, one of the eight characteristics at a time.
Table 2: Hyman’s Characteristics of Type 1 and Type 2 Languages

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Type 1 (Tone)</th>
<th>Type 2 (Stress)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Distribution</td>
<td>free</td>
<td>culminative</td>
</tr>
<tr>
<td>2 Lexical domain</td>
<td>morpheme</td>
<td>word</td>
</tr>
<tr>
<td>3 Function</td>
<td>distinctive (pardigmatic)</td>
<td>demarcative (syntagmatic)</td>
</tr>
<tr>
<td>4 Realization</td>
<td>pitch (F₀)</td>
<td>complex</td>
</tr>
<tr>
<td>5 Effect on phonology</td>
<td>self-contained (tones affect tones)</td>
<td>non-contained (affects many other features of phonology)</td>
</tr>
<tr>
<td>6 Effect from Phonology</td>
<td>affected by consonant types</td>
<td>affected by syllable weight</td>
</tr>
<tr>
<td>7 Interactions with grammar</td>
<td>compositional (morphemic)</td>
<td>integrated (phrase structure)</td>
</tr>
<tr>
<td>8 Rule types</td>
<td>similar to segmental features</td>
<td>no assimilation to features</td>
</tr>
</tbody>
</table>

The distribution of Maa tones is free (i.e., made of independent units), as shown by a simple statistical test. Because there is no more than one major stress/accent in a given word, one would expect no more than n+1 different pitch patterns for primary accent in a pitch accent/stress system, n being the number of pitch bearing units in a word (Pulleyblank 1986). This is because the main accent/stress can either be on one of the pitch bearing units (n possibilities), or on none of them (another 1), but not on more than one, or a combination thereof, as in a free system. Among the following three mora (n=3) words with near identical segments, we have 7 (more than 3+1=4) tone patterns:

(6)

a. èydonj’ó ‘They will beat each other.’
b. èydonjò ‘He/she/it/they is/are beaten.’
c. éydonjó ‘He/she/it beat it.’
d. éydonjò ‘They beat it.’
e. áydôŋô  ‘I beat him.’
f. kěydôŋ'ô  ‘They will beat each other.’
g. kěydôŋô  ‘He/It/They is/are beaten.’

There are other tone patterns on other three mora words. The following patterns bring the total up to 14 different tone patterns over 3 mora, many more than expected from an accent system (3+1=4).

(7)

a. ká’ádô  ‘I am tall.’
b. kíntûkû  ‘We will wash it.’
c. kědûŋû  ‘He/she/they/it will cut it off off/from there.’
d. ènîŋû  ‘He/she/they/it will understand/hear.’
e. êshômô  ‘They went.’
f. áábârn  ‘He/She/They will shave me.’
g. êtâbâ  ‘He became/reached it.’

This data shows that the behavior of pitch active in Maa today is more “free” than we would expect from a system based on accent, allowing separate contrast on essentially each mora, indicating a tone system.

A related issue is the domain of the contrast, the second line on Table 2, being either the morpheme or the word. As can be seen from kědûŋû, above, it is possible to have more than one locus of high pitch per word, and with êydôŋô we have more than one locus of low pitch per word, so the domain of phonological pitch contrast must be smaller than the word, again indicating a tone system.

Hyman’s third criterion for distinguishing between tone and stress/accent is the function of the tone, being either distinctive, with a particular value on a given pitch bearing unit (for tone), or demarcative, marking the edges of various phonological domains (for stress/accent). While there are some syntactic effects on the tone of a word (see Appendix D), the tone of a word generally does not depend on the phrasal
environment. Most of the tonal alternations seem to distinguish a word from another word with different morphology, rather than showing where that word is in a sentence. Nevertheless, one example of demarcative tone function in Maa is the placement of non-automatic downstep, which occurs only phrase finally. Maa tone is not as distinctive as some systems Hyman describes (i.e., Asian tone languages), though Hyman’s typology does indicate that agglutinative morphology generally rules out highly distinctive tone systems.

Hyman’s fourth criterion, complexity of phonetic realization, indicates that pitch is generally the sole indication of tone, while it combines with other factors (e.g., length, volume, phonology) to indicate stress/accent. Without any phonetic studies of Il-Keekonyokie Maa pitch and stress/accent, or even anecdotal evidence relating length, volume, etc. and pitch, I must remain silent regarding the complexity of the phonetic realization of stress. I know of no case where other aspects of the phonology interact with pitch, though this has not been thoroughly studied.

Hyman’s fifth criterion for distinguishing tone and stress/accent involves the level of effect on the rest of the phonology. Tones affect tones, while stress can affect just about anything (e.g., pitch, vowel quality, phonological reduction). Again, there is little evidence of interaction between pitch and the rest of the phonology, though this has not been thoroughly studied.

The sixth criterion involves the affect of the phonology on pitch. Tones, according to Hyman (in press), may be affected by consonant types, whereas
stress/accent may be affected by syllable weight. I have found no evidence whatsoever of either kind of affect on pitch patterns, so this is again inconclusive.

Hyman’s seventh criterion, interaction with the grammar, indicates a tonal analysis for Maa. There is also no evidence of pitch being affected by the grammar of the sentence, except perhaps with subjunctive verbs, though this may well be the effect of a tonal morpheme. The downstep, in addition to only being phrase final, is only found on declarative sentences (Levergood 1987), or at least not on interrogative sentences. With the exception of these two cases, the grammar has no known affect on the tone.

The final criterion for determining the character of a pitch system is the type of rules. Tones, unlike stress, “are affected by the same kind of assimilatory and dissimilatory rules to which segmental features are submitted.” (p16) The tone system of Maa does show assimilation of one feature to another, as in Spread High Assimilation, as well as Non-Automatic Downstep (Rasmussen and Payne, under review).

For each criterion which indicates one or the other type of system, then, the system active in Il-Keekonyokie Maa fits Hyman’s description of a tonal system. For each area where we have conclusive data, and there is no serious suggestion from data to the contrary. Being fairly confident, then, what kind of a tone system Maa has, we look to Hyman’s other typological parameters to see what kind of tone system it is.
Hyman (in press) also gives several types of phonological contrasts by which we can distinguish the various tone language types. He categorizes several possible phonological contrasts relevant to tone languages in the following ways:

1. mora vs. syllable as the Tone Bearing Unit (TBU)
2. contour vs. register tones (or contour vs. tone cluster)
3. discrete vs. terrace-level (i.e., automatic downstepping)
4. other effects: Non-automatic downstep, floating tones, tone sandhi, tone to accent attraction, tone and non-tone interactions

Regarding the first point, tone systems can be based on either the mora or syllable. This is particularly relevant when dealing with long vowels, which may be two TBU’s under the mora system, but only one under the syllable system. Levergood (1990) has established the mora as the TBU in Arusa Maa, and this conclusion is confirmed in Il-Keekonyokie Maa where I have checked.

For the second point, tone systems can vary in the pitch contrasts on a single TBU. Contour systems, generally found in Asia, may have a number of different pitches in a single tonal unit. Register tone systems, on the other hand, generally show a contrast between a small number of “registers”, with each TBU generally having one level pitch. The tones of Maa, like most African tone systems, are register tones. Maa has two phonemic level tones. That is, any given mora can be said to be associated to either a High tone or a Low tone, or else one of a limited number of other possibilities, such as the composite High-Low tone. There is no evidence for phonemic contours, that is, a
contour that contrasts with the High and Low in all environments. There is a single falling pitch pattern, which starts high and goes low, over single moras. Although this is phonetically a contour, it only occurs word finally, indicating that it is not an independent phonemic unit.

Hyman’s third point refers to the absolute frame of tone patterns. Discrete systems have essentially the same pitch for each High tone, while terrace systems have each successive High tone realized at a lower pitch, also known as automatic downstep. Automatic downstep has been confused with downdrift (as in TM:170-1). This distinction is drawn in Tucker and Creider (1975), between a gradual drop in pitch over time (downdrift), and a regular drop in pitch at each successive High tone (automatic downstep). That is, downdrift is a phonetic drop in pitch relative only to time (regardless of the number and value of tones), while automatic downstep is a drop in pitch that has been phonologized to coincide with each High tone (regardless of the amount of time between them). While it is not well documented, there is some description of Il-Keekonyokie Maa (TM:170-1) that matches automatic downstep, which matches my own perceptions. There is no conclusive indication that there is a drop in pitch over time independent of the drop in pitch at each High tone, though this has not been ruled out either.

Hyman’s fourth point, categorizes languages according to other, more idiosyncratic rules. Maa also has non-automatic downstep, which is a phonemic (i.e., unpredictable) drop in register, but so far evidence of Hyman’s other phenomena has not
been shown. There is no anecdotal evidence nor an acoustic investigation into upsweep, as found in the Western Nilotic language Luo (Tucker and Creider 1975).

4.3. Function of Tone

Hyman (in press) says that tone systems function essentially eitherlexically (i.e., distinguishing lexical morphemes) or grammatically (i.e., distinguishing lexical morphemes, or “in the inflectional morphology of the nominal or verbal paradigms” p.7). Il-Keekonyokie Maa verb tone is dominantly grammatical. Nominal case is determined by tone alone, as are certain distinctions in verb inflection, as I show in Chapter IX. Further, while all lexical items bear tone, there are only a couple lexical morphemes that are minimally distinct from another by tone alone. There are more words that are minimally distinct for tone, but they all include morphological derivation or inflection. While nouns have been sorted into several groups for tone, there are only two of what might be called tone classes in Maa verbs, and these are also distinguished by segmental morphology, as shown in the following paragraphs.

It can be argued that Maa verb roots are not themselves distinguished by tone. There are two morphological classes of verbs; Tucker and Mpaayei refer to these as Class I and Class II. At times the two classes bear different tone, but the tonal distinction may be attributed to the fact that Class II stems bear an obligatory prefix (/G2C/). Though verb roots may eventually prove to contribute to the tone of a verb form, the prima facie assumption is that they are toneless. One example of consistency across roots is seen in the derivation with the Antipassive suffix, which is given in (8)–(9):
(8) Antipassive derivations with various roots with third person subject (initial low pitch)

a. 3-(II-) root -APAS translation
b. ë- ăpît -išhō ‘He is fond of respecting.’
c. ë- dám -išhō ‘He will think.’
d. ë- đưŋ -išhō ‘(The child) is able to cut without using anything.’
e. ë- dás -išhō ‘He will milk by the mouth.’
f. ë- gör -išhō ‘He will strangle.’
g. ë- léj -išhō ‘He is a liar.’
h. ë- y- bón -išhō ‘He will foretell.’
i. ë- y- dón -išhō ‘He pounds.’
j. ë- y- gër -išhō ‘He writes.’
k. ë- y- kën -išhō ‘He is closing.’
l. ë- y- nòs -išhō ‘He will eat.’
m. ë- y- ṇọl -išhō ‘He is the person who stirs.’

(9) First and second person forms (initial high pitch)

a. 1SG/2-root -APAS translation
b. á- án -išhō ‘I wait.’
c. á- ăpît -išhō ‘I respect (people).’
d. á- dás -išhō ‘I am milking.’
e. á- gör -išhō ‘I strangle.’ not ‘angry’
f. á- nìŋ -išhō ‘I can hear.’ / ‘I am awake.’
g. í- gör -išhō ‘You.SG strangle.’

Here the data is consistently high over the last TBU of the root, and Downstepped High over the two suffixal morae. Comparing (8) and (9) shows that morae to the left of the last TBU of the root, wether that root is one mora (e.g., (8)e ë-dás-ı̂šhō vs. (9)d á-dás-ı̂šhō or two morae (e.g., (8)b ë-ăpît-ı̂šhō vs. (9)c á-ăpît-ı̂šhō), alternate according to a ‘High/Low’ split, which will be described in chapter VI.

The data in (8)–(9), along with others like them, lead to the conclusion that if there is some contribution by the root to the tone of a verb, it is the same contribution
from each root (with one possible exception, discussed in the next paragraph). This analysis will assume, then, to say that verb roots are toneless, allowing for some minimal contribution of a High tone which might come from aspect or mood. There is therefore no distinction between lexical verb roots with regard to tone, and the tonal alternations we will see are grammatical, that is, according to the inflection of the verb.

A note is in order here, however, regarding a morphological classification common to all Nilotic languages. Class II is distinguished by an obligatory \( r \)-prefix.

This Class II prefix is not synchronically analyzable in Maa: it is obligatory on Class II roots, is unacceptable on Class I roots, and does not have any transparent component of meaning (e.g., \( a\text{-sój} 'to follow' \) vs. \( a\text{-y-sój} 'to wash' \)). The two classes also take different tone patterns in certain derivations (see Rasmussen, in progress, for details), though this may be attributable to the Class II prefix \( r \). Because this is the only variation from the kind of consistent tone pattern, regardless of root shown in (8) and (9), and it is attached to the class II prefix \( (r) \), which does not have an analyzable component of meaning, the function of Maa verb tone is entirely grammatical, and is not used to distinguish between lexical items.

4.4. Tone Rules

Hyman makes a broad contrast between assimilation and dissimilation rules. These include phonological spreading of a tone, as well as surface phonetic relationships between tones. Tone in Maa spreads ("assimilates horizontally", in Hyman’s terms) leftward, to the beginning of the word, though such spreading does not extend to the
gender prefix on nouns. This is shown in the association of the discourse marker *k*- to the leftmost mora, which does not further spread to TBU’s on its right (Rasmussen and Payne 2001).

With regard to other assimilation processes in Maa, there is a surface phonetic assimilation of a single High mora toward a following Low tone, when it is the last mora of a domain of morae associated to a single High tone (Rasmussen and Payne 2001).

The only dissimilation process is downstep, as described in Rasmussen and Payne (2000). So far polar tones, “a common phenomenon in tone systems where a morpheme appears as H when adjacent to a L-tone, and as L when adjacent to a H-tone” (Pulleyblank 1986:203), are not shown to play a role in the Maa tone system.

There is only one case that might appear like the spreading of tone from one word to another, though it is not clear that they remain distinct phonological words. TM describe an effect of tone permanence accompanying the elision of word-final vowels (with non-high vowel quality; high vowels /i, i, u, o/ form glides /y/ and /w/ rather than being elided). When a word final vowel is elided in favor of the following word initial vowel, the tone of the first vowel remains on the second vowel, though without further spreading.

(10) i-m-pòt-ó ɔl-àyyóñì      [impòtìlàyyóñì]
 2-II-call-IMP ‘Call the boy!’ (TM:172)

The only affect of tone from one word to another without this elision is non-automatic downstep, where separate words bring together two High tones, adjacent at the end of a phrase, and are separated tonally by downstep (Rasmussen and Payne 2001).
This non-automatic downstep occurs in declaratives only, as shown by the following data, which are questions, and lack the downstep found in their indicative counterparts:

(12)  
  a. k-é-bík  
      DSCN-3-stay  
      ‘Will he stay?’  
  b. k-é-b’ík  
      DSCN-3-stay  
      ‘They will stay.’  
  c. é-ki-dámó  
      DSCN-3>2>1-remember  
      ‘Will you remember me?’ or ‘…they/he/she/it … you?’  
  d. é-k’í-dámó  
      DSCN-3>2>1-remember  
      ‘You will remember me.’ or ‘They/she/he will remember you.’

These two effects (elision joining words and downstep) can combine, as in (13), where ‘the cow,’ with pitch pattern lhh, follows a vowel-final word, whose final vowel is glided.

(13) è-àr-ó     èn-kítéŋ     [èərwéŋk’ítéŋ]  
     3-beat-VENT     FSG-cow.ACC  
  ‘He will beat the cow this way.’

Otherwise, there is no regular spreading of tones from one mora onto another which is already associated to a tone in Il-Keekonyokie Maa. Aside from these few processes, the surface tone can be read more or less directly from the tone orthography used in this thesis.³
I will assume that tone association and spreading operate from right to left, iterative to empty TBU’s. While this remains an assumption, there is some reason for it, as in the following data.

(14) ádúnjókí. [adunjóki]⁴ ‘I will cut for him.’

We see in this example, as in many others, that the pitch to the left is level, while the pitch to the right is somewhat complex. While there are words that are level to the end of the word, there are none that begin low, and then are level to the end of the word.

(15) 

Thus, any evidence of spreading over a number of mora is either on the left of the word only, or across the whole word. If tone were spread to the right, one would expect at least some evidence that the right edges of words have spread tone, of which I have so far found none.
4.5. Notes

1 This is not to say that all languages with both tone and stress are pitch accent, but when the acoustic realization of those two systems both affect fundamental frequency (i.e., pitch). Note that this is not necessarily the definition of ‘pitch accent’ used in any other given author’s work.

2 These words are all in the non-perfect form. As the least (morphologically) marked form, the meaning is also the least marked, and can in various contexts can have a future, habitual/timeless present, etc. sense.

3 The roughly phonemic orthography used in this thesis describes the surface tone patterns of words, without making claim to the underlying tones associated to any given morpheme.

4 This notation is given to show the finer phonetic effects which are neither phonemic nor conveniently displayed in the chosen orthography.
CHAPTER V

MAA MORPHOLOGY

The basic structure of Maa segmental morphology has been fairly well laid out (TM, Wallace 1981). This chapter proposes certain modifications to that laid out in Wallace 1981\(^1\), however, and provides a schematic for the organization of the various verbal morphemes in Maa. Having laid out the basic ordering of the morphology, this chapter then gives other notes on verb structure not spoken to by that basic structure. The chapter ends with some notes on Maa phonology necessary for the identification of certain verbal morphemes.

5.1. Basic Verb Structure

The following chart is given for reference in the discussion of this section. It is modified significantly from that given in Wallace 1981, according to my own observations. The curly brackets indicate that one from the list of morphemes can be chosen, and the parentheses indicate that the presence of such a choice is optional. Note the list of abbreviations following Chapter I (p. 3).
Figure 1: My Version of Wallace’s Verb Generation Rule

\[ V \rightarrow (DIS)(\{\text{NEG}_{\text{SUBJ}}\})\text{BAP} \left\{ \begin{array}{c} \text{II} \\ \text{CAUS} \\ \text{PF} \\ \text{IMP} \\ \text{SUBJ} \end{array} \right\} (DUP)\text{BASE} \left\{ \begin{array}{c} \text{VENT} \\ \text{AWAY} \\ \text{DAT} \\ \text{PROG}^* \end{array} \right\} \left\{ \begin{array}{c} \text{APAS} \\ \text{MID} \end{array} \right\} \left\{ \begin{array}{c} \text{INCEP} \\ \text{PF} \\ \text{IMP}^b \\ \text{PASS}^b \end{array} \right\} \]

A few notes to be made that do not fit in a chart of this type:

a – If PROG is chosen, then APAS, MID and INST may not be chosen.
b – If PASS is chosen, then IMP may not also be chosen.
c – The type of base (e.g., stative, active, intransitive) may impose further restrictions.

5.1.1. Variety of Morphology

The first thing to notice from Figure 1 is that there is a wide variety of morphology available in the Maa verb. There are only two required slots, the bound argument pronoun (BAP) and the root (BASE), but there is potential for multiple suffixes, in addition to a prefix before and after the bound argument pronoun.

(16)

a. k-á-y-búk-ór-ǐ-yé
   DSCN-1SG-II-pour-AWAY-MID^3-INST
   ‘I will use it to make it be poured out.’

b. áá-sùj-úŋ-yék-ǐ  èn-káy  árrí
   3>1-follow-VENT-INST  FSG-other car
   ‘I will be followed using another car.’

c. k-é-y-tūk-w-ǒkǐn-ʒ
   DSCN-3-II-wash-VENT-DAT-MID
   ‘They will wash for each other.’
d. k-é-ytà-bòrèy-ákʾín-í
   DSCN-3-CAUS-fill-DAT-PASS
   ‘They will fill it for him.’

e. áà-ytù-duŋ-ĩshó-y
   3>1-CAUS-cut-APAS-PASS
   ‘People will make me cut.’

f. k-é-y-ɡíš-ĩshó-rè-kì
   DSCN-3-II-carve-APAS-INST-PASS
   ‘It will be used to carve.’

5.1.2. Prefixes

Note also that there are three inflections that are indicated both by a prefix and a
suffix: Perfect (PF), Imperative (IMP), and Subjunctive (SUBJ). The morpheme pairs for
each of these inflections are nearly identical in segmental form, though for each the
prefix (-IV) and suffix (-a/o) are different.  

(17)

a. tá-lăm-à
   IMP-avoid-IMP
   ‘Avoid him/it!’ (inferred, TM:73)

b. é-tá-lám-á
   3-PF-avoid-PF
   ‘He avoided him/it.’ (inferred, TM:73)

c. m-è-tá-lăm-à
   SUBJ-3-SUBJ-avoid-SUBJ
   ‘That he would avoid him/it.’ (inferred, TM:73)

Note in (17) that, for the same root vowel, the forms of each prefix are the same,
as for the suffixes, though the whole word tone is distinct for each word.

For Class I roots, these PF, IMP, and SUBJ (hereafter “PF, etc.”) inflections are
all marked by both prefixes and suffixes, as in (17) and (18)a. However, if the Class II
prefix (II) \( \tau \) is present (e.g., (18)b), they are marked by a suffix only. In this way, II is in complementary distribution with the prefixes for PF, etc.

(18)

a. \( \text{é-tú-sój-á} \)  
   3-PF-follow-PF  
   ‘He followed him.’

b. \( \text{é-y-sój-á} \)  
   3-II-wash-PF  
   ‘He washed it.’

The Class II \( \tau \) prefix is also in complementary distribution with the \( \text{ita} \)-causative prefix (CAUS). This, along with the fact that Class I verb roots with CAUS conjugate as Class II verb stems (TM:146) point to a possible historical and functional relationship between II and CAUS.

Because there is never co-occurrence between CAUS and II, or between either of them and any of the PF, etc. prefixes, there is no principled reason to separate the paradims, so I have put all five prefixes in the same paradigm in Figure 1. Given the segmental homophony and the similarity in distribution, a common origin for the three PFV, etc. morphemes (and perhaps CAUS and II as well?) might seem likely, though it has not yet been shown.

5.1.3. Suffixes

This section will cover a few modifications to the arrangement of suffixes given in Wallace (1981).
5.1.3.1. INST and CAUSII

INST and CAUSII have the same form (-ye).

(19) á-duŋ-yè (ènk-álé)m
1SG-cut-INST FSG-knife
‘I cut it with (a knife).’ (TM:140)

(20) á-y-lép-yè
1SG-II-rise-CAUSII
‘I (shall) raise it.’ (TM:147)

This forces a decision between homonymy and polysemy. That is, the language has either two distinct morphemes with identical form, or a single morpheme with more than one function. While this distinction might be made on purely theoretical grounds (starting from one’s definition of a morpheme, and how one determines when two morphemes are “the same”), it would be good to note the structural similarities and differences, in order to ground such a decision empirically.

Wallace put the INST and CAUSII morphemes not only in adjacent paradigms, but placed the PF, etc. suffix paradigm between them. This would seem a difficulty for the hypothesis that INST and CAUSII are just different functions of a single morpheme, but let us consider evidence for placement of each of these morphemes in relation to the PF, etc. suffixal paradigm.

Each of the PF, etc. suffixes normally occurs with a prefix, as in (17). However, INST and PF, etc. suffixes do not co-occur. Thus, when INST is present the only segmental indication of the PF, etc. aspect/modality is the prefixal portions of the PF, etc. ambifixes. This can be seen in the following examples, where (21) and (22) show verb forms for INST and PF, respectively, and (23) shows the verb form with both.
Both examples (22) and (23) have the perfect prefix tV- (the vowel quality is due to vowel harmony with the root – TM:56), but while (22) has both the prefix and the suffix, (23) lacks the PF suffix. That is, it is possible to get both instrumental and perfect readings at the same time, though not both suffixes together. While there might be several explanations for this pattern, one is that the INST and PF, etc. suffixes are in the same paradigm. Because the INST and PF, etc. suffixes do not cooccur, there is no evidence that they are in adjacent paradigms, as given in Wallace (1981). Since they do not co-occur when a given word has both elements of meaning, as in (23), I have put INST in the same paradigm as the PF suffix.

In the same way as with INST on Class I forms, CAUSII -ye does not cooccur with PF, etc. suffixes (TM:147).
This co-occurrence restriction makes the perfect morphology a bit more difficult to see, however, because the PF, etc. prefixes are never present on Class II forms, as in (18)b and (24). This double co-occurrence restriction makes the PF, etc. prefixes (because of II) and suffixes (because of CAUSII) both absent in (26), though the form is clearly perfective. In first and second person Class II verb forms, the PF and non-perfect (NPF) forms are identical (TM:147), though in the third person they are distinguished by tone, as in (25) and (26).7

So INST and CAUSII are alike in that both exclude the PF, etc. suffixes. Further, INST and CAUSII do not occur with each other. These facts, together with their identity in form indicate that the apparent distinction is the result of a semantic shift on the part of -ye when it occurs on Class II verbs, to cover both instrumental and causative meanings.

The only evidence I have seen in TM and Wallace (1981) of a distinction between INST and CAUSII for Class II roots is that INCEP -o(n) and INST clearly do not belong to the same paradigm.

(27) á-pír-ùŋ-yè kòlé
1SG-fat-INCEP-INST milk
‘I will get fat on milk.’ TM:158.

If it is true that INCEP and CAUSII are in the same paradigm (as in the Wallace 1981 analysis), then (27), which shows that INCEP and INST may co-occur, could be argued to provide evidence that INST and CAUSII have to be considered different morphemes. Interestingly, Wallace (1981) does not herself present evidence for putting
INCEP and CAUSII in the same paradigm (though TM give no examples of them co-occuring, and Wallace’s analysis is based on TM’s data). Class I roots do not carry CAUSII, so there is no way to compare INCEP and CAUSII on Class I roots.

Because INST and CAUSII are formally identical in every way I have seen, and because of the functional similarity between causation and the use of instruments, I will assume that they are a single morpheme which is has arguably become polysemic on Class II roots, rather than independent morphemes that coincidentally have the same form. From this point onward, I will use the gloss “INST” for both readings, and drop the use of “CAUSII” altogether, unless there is a particular need to distinguish the two readings.

5.1.3.2. INCEP and FUT

TM describe both an “extra future tense” (p. 62) and an “inceptive form” (p140). Wallace’s glosses “FUT” and “INCEP” seems to reflect this distinction, but I drop her “FUT”, as I have no evidence that there is a “future” tense/aspect morphologically distinct from the -\(u(n)\) inceptive (INCEP). This situation is similar to that of INCEP and CAUSII, above, though there is a lot less in TM about -\(u(n)\) “extra-future” vs. -\(u(n)\) INCEP.

(28) á-pórr-ù
1SG-love-INCEP (TM’s “Extra Future tense”, p62)
‘I shall love.’

(29) á-rók-ù
1SG-be.black-INCEP
‘I shall be black.’ (inferred, TM:141)
While there is some semantic difference between “Extra Future tense” and inceptive, it could be argued that the future reading is a metaphorical extension from the inceptive, and not otherwise distinct. Because there is no formal distinction, and they seem to never contrast semantically (there may be different readings on different roots, but never on the same root), I will drop the use of “FUT”, and use “INCEP” to cover both readings.

5.1.3.3. Other Observations on Maa Verb Morphological Combinations

This section gives a few pieces of data showing other places where I depart from the organization of affixes in the analysis in Wallace (1981).

Wallace’s note (a) claims that the -tta progressive (PROG) suffix can only co-occur with the Class I Causative -tta- prefix. If the PROG suffix is an aspectual marker, there could be functional reason why it does not occur with -tn(i) inceptive (INCEP) and the ambi-fixed tense/aspect/modality markers PF, IMP, and SUBJ. Regarding the remainder of the morphemes, I have found that the -t passive (PASS) and the -ak/oki dative (DAT) in fact can co-occur with PROG.

(30) PROG and PASS:
è-niŋ-it’ó-y
3hear-PROG-PASS
‘He is being heard.’

(31) DAT and PROG:
áâ-y-sòj-àk-ìtâ
3>1-II-wash-DAT-PROG
‘He is washing for me.’
This second example, with PROG and DAT, was not allowed by Il-Keekonyokie Maa speakers, though it was given by an Il-Purko of Kajiado Maa speaker. Where (31) is valid, it necessitates a change in the verb formation rule, as PROG and DAT were given in the same paradigm in Wallace (1981).

It is not clear if the /G2C-/G03 Class II (II) prefix and reduplication (DUP) were intended to be excluded from co-occurrence with PROG, but they clearly can co-occur with it.

(32) PROG and II:
å-y-kén-ítò
1SG-II-close-PROG
‘I am shutting it.’

(33) PROG and DUP⁹:
i-o-rrág-ítá-tá
2-II-lie.down-PROG-DUP
‘You (pl) are lying down.’

So it remains that PROG cannot occur -ye instrumental (INST), -ışho antipassive (APAS), and -alo middle (MID)¹⁰.

Wallace’s note (b), claims that MID and PASS cannot co-occur, unless accompanied by INST. This does not fit my data at all, as MID and PASS can co-occur without INST.

(34) è-dúŋ-ó-y
3-cut-MID-PASS
‘People will cut each other/be cut.’

This is in part because the Maa passive is impersonal (Greenberg 1959), with a third person plural unspecified “they/people” subject, so what might appear to be two detransitivizing suffixes do not pose a problem.

Contrary to the rule given in Wallace (1981), MID and INCEP are not in the same paradigm, but can co-occur.
Also, APAS and CAUSII are also not in the same paradigm, as they also co-occur.

(36) k-á-y-bá-íshyò-ré  ‘I will make him hate.’
DSCN-1SG-II-hate-APAS-CAUSII

This concludes my adaptations to Wallace’s verb structure in general, leading to the modified verb formation rule given in Figure 1.

5.2. Inflectional Morphology

Other morphemes relevant to the structure of Maa verbs include the bound argument pronouns, which were not included in the rule of Wallace (1981). The paradigm of bound argument pronouns with third person objects is given in (37) – (42), with the verb stem ybɔr, ‘be white’. The third person singular and plural forms are identical (with prefix ́), except in the perfect, which has a tonal difference for plurality. Similarly, the second person forms have the same argument prefix (ɛ), with number of subject only distinguished by reduplication in the plural stem (e.g., (33), above). In contrast, the first person forms have entirely different prefixes for the plural (kɛ-) and the singular (a-). Other bound argument pronouns compose an inverse system (i.e., kɛ:3>2>111, âa:3>1, and âa:2>1), which is triggered whenever a speech act participant (first or second person singular) is the grammatical object of the clause (see Payne, et al. 1994 for a complete analysis).
Discourse markers (DIS) appear before the bound argument pronouns. The behavior of discourse marker \( k \)- has been described in Rasmussen and Payne (under review). The discourse marker \( n \)- has been described in König (1993). Either of these, as well as the negative or subjunctive \( m \)-, may precede the bound argument pronouns in the verb form.

5.3. Maa Phonology in General

A few phonological processes that will be relevant to identifying Maa morphology in subsequent chapters will be introduced here.

While the form of the Class II prefix is \( t \)-, it becomes /\( n \)/ after another \( t \) (i.e., \( /t/ \rightarrow /n/ / t+\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. \) This is shown in the second person singular (38), first person plural (40), and second person plural (41) forms of the following paradigm. This alternation also holds true for 3>2>1 (\( k \)) forms, not given here.

(37) \( á-y-bórr-ù \)
   1SG-II-be.white-INCEP
   ‘I become white’ (TM:140)

(38) \( í-m-bórr-ù \)
   2-II-be.white-INCEP
   ‘You (SG) become white’ (inferred, TM:140)

(39) \( è-y-bórr-ù \)
   3-II-be.white-INCEP
   ‘He becomes white’ (inferred, TM:140)

(40) \( kí-m-bórr-ù \)
   1PL-II-be.white-INCEP
   ‘We become white’ (inferred, TM:140)
(41) í-m-bórr-ú-rrù
   2-II-be.white-INCEP-DUP
   ‘You (PL) become white’ (inferred, TM:140)

(42) ë-y-bórr-ù
   3-II-be.white-INCEP
   ‘They become white’ (inferred, TM:140)

In another process, certain morpheme-final nasals are elided before most
continuants and nasals, i.e., m, n, p, q, r, rr, l, w, ww, y, yy, and vowels\(^{13}\) (TM:xv-xvii, 55).\(^{14}\) The result of this rule can be seen with a nasal in a diferent morpheme (the
feminine form of nouns), where the nasal is elided from the prefix en- before continuants
and non-low vowels.

(43) Nasals Retained Before Stops and the Low Vowel
   a. èn-âyórrà ‘migration’ (TM:242)
   b. èm-báè ‘arrow, matter, affair’ (TM:245)
   c. en-cán ‘rain’ c.f. à-shá ‘to rain’ (TM:246)
   d. èn-dáà ‘food’ (TM:247)
   e. èn-gámátá ‘gripping’ (TM:249)
   f. en-jyán ‘swelling’ (TM:257)
   g. èn-kàñáràí ‘phlegm’ (TM:258)
   h. èm-pìján ‘sharpness, courage’ (TM:271)
   i. èn-tàán’ì ‘nearness’ (TM:278)

(44) Nasals Lost (or Merged) Before Continuant Consonants, Nasals and Other Vowels
   a. è-ìlátá ‘fat, dripping’ (TM:251)
   b. è-léénòrè ‘reconnaissance’ (TM:262)
   c. è-màñishò ‘settlement’ (TM:263)
   d. è-nàñàrò ‘wrestling’ (TM:266)
   e. è-ñàmátá ‘notch’ (TM:267)
   f. è-ðrèt ‘broom’ (TM:270)
   g. è-ràpátá ‘singing, dancing’ (TM:273)
   h. è-sàààì ‘plate’ (TM:274)
   i. è-ùnòtò ‘the establishing ceremony for warriors’ (TM:280)
   j. è-wàlátá ‘answer’ (TM:280)
   k. è-yyàñártè ‘slaughter’ (TM:281)
These two processes, the nasalization of the high front vowel/glide, and the dropping of the nasal before certain segments, lead to the dropping entirely of the segmental content of the class II morpheme in certain cases, where the bound argument pronoun is either 2, 3>2>1 or 1PL, and when the root begins with a non-continuant consonant, as in (45).

(45) i-φ-sōj (from ā-y-sōj ‘to wash’)
   2-II-wash
   ‘You (sg) will wash it.’

Note that the class II form in (45) remains tonally distinct from the similar Class I form in (46).

(46) i-sōj
   2-follow
   ‘You (sg) will follow him.’
5.4. Notes

1 Wallace (1981) gives the following rule for the Maasai verbal complex (not including bound argument pronouns or discourse markers), adapted to the abbreviations used in this thesis. Following the rule are four notes (a-d) she gives regarding the rule.

Wallace’s Verb Generation Rule

\[
V \rightarrow \begin{cases} 
II^d \\
(CAUS^a) \left( \begin{array}{c}
PF \\
IMP^c \\
SUBJ \\
\end{array} \right) \right) (DUP)BASE \left( \begin{array}{c}
VENT \\
AWAY \\
DAT \\
PROG^a \\
\end{array} \right) \ldots \\
\begin{array}{c}
APAS \\
MID^b \\
INCEP \\
CAUSII^d \\
\end{array} \left( \begin{array}{c}
PF \\
IMP^c \\
SUBJ \\
FUT \\
\end{array} \right) \right) \left( \begin{array}{c}
INST^b \\
(PASS^b,c) \\
\end{array} \right)
\end{cases}
\]

(Wallace’s) Notes:

a – If PROG is chosen, then only the CAUS prefix also may be chosen.
b – If MID is chosen then PASS may also be chosen only if INST is chosen.
c – If PASS is chosen, then IMP may not also be chosen.
d – The CAUSII suffix is chosen only if the II prefix has also been chosen.

2 Theoretically up to five, though there are constraints on affix combinations. I don’t have examples with more than three suffixes.

3 This allomorph of MID is found only following AWAY, and the combination is likely more portmanteau (and less analyzable) than my parsing indicates.

4 See TM:56 for forms of the prefix and suffix, which vary according to quality of root vowel.

5 Because much of TM’s data is presented in paradigms, with a free translation for only one of the listed forms, the free translations of the remaining forms in any paradigm must be inferred.
6 The gloss “CAUSII.PF” is an attempt to communicate the perfect reading into the morphological parsing. Obviously autosegmental morphemes, such as tone, do not fit in a linear parsing of morphemes like these. The indication “.PF” is given, then, to indicate the non-linear effect of the perfect aspect, and is not meant to imply any particular relationship with the CAUSII suffix.

7 This double blocking of the PF, etc. prefixes by II, and PF, etc. suffixes by INST/CAUSII, leads to some interesting tonal minimal pairs, given in Appendix E.

8 While TM do list the Inceptive and their “Extra-Future Tense” separately, p. 141 includes the following text under section 190, The Inceptive: “The present tense is identical in shape, and very similar in function, with the “Extra Future Tense” mentioned in section 68.” The distinction is further difficult to accept in that I found the perfect form of the Inceptive given on no root other than the one they gave, which questions the productivity of that supposed paradigm.

9 Example (33) shows the reduplication of the suffix, not the base, as the base is not reduplicated in forms with suffixes (Rasmussen 1998). If Wallace’s intention was to exclude co-occurrence of PROG with base reduplication only, then her statement fits my data well, in that every suffix (including PROG) excludes base reduplication.

10 The last two of these suffixes can have aspectual qualities, either habitual (APAS) or stative (MID).

11 Fuller glosses for the Inverse set of bound argument pronouns follow, though the first two are not included in the bulk of the analysis in Chapter VI. 3>2>1(kê-): Third person subject acting on second person singular, or second person subject acting on first person singular; 3>1 (âê-): third person subject acting on first person singular; 1>2 (âa-): first person singular subject acting on second person singular.

12 While this rule is well attested, there is no apparent motivation for it, except for the dissimilation of the two morphemes, which would seem ironic in the cases where the nasal is then dropped anyway.

13 Except /l/, and perhaps /ʃ/.

14 These nasals are not elided before sh [ʃ] because this segment becomes non-continuant c [tʃ] after a set of consonants which includes at least [n] and [l] (TM:55,246). Also, the process before nasals is more likely coalescence than elision, as length not phonemic for Maa nasals, resulting in a single nasal phoneme.
CHAPTER VI

A TONAL SPLIT IN MAA BOUND ARGUMENT PRONOUNS

This chapter now examines the verb tone system in Maa, focusing on the bound argument prefixes. The tone of suffixes, both individually and in combination, are given in appendices, with the full analysis of their lexical tone patterns awaiting another work.

6.1. Overview

Rasmussen (2001) describes and models a tonal split between bound argument prefixes of Maa verbs with (apparently) High and Low tone. Data with the tonal split was given, followed by an analysis showing that the apparent High tone must be lexically unspecified for the first person singular and second person prefixes. This analysis is required because a true lexical High prefix tone in certain verbs would cause downstep, but downstep is not observed in these cases. Rather, the word-initial apparent High tone is spread from the stem tone, while the third person Low is indeed a lexical Low. In some contexts there is neutralization of the tone split; the data were presented and modeled in an analysis for each of the two morphological verb root classes. This chapter will not reproduce that paper in full, but will review the arguments in Rasmussen (2001), placing them in the context of the whole verb tone analysis.
6.2. Discourse Marker *k*

Previous work on Maa has shown the marker *k*, which precedes the bound argument pronouns, to bear a lexical High tone (Rasmussen and Payne, under review). This analysis is relevant to the issue of bound argument pronoun tone because in certain cases the tone from *k-* neutralizes the tonal split discussed in this chapter, as in (47)c.

(47)

a. á-gór'-íshó  ‘I will strangle.’
   1SG-strangle-APAS

b. è-gór'-íshó  ‘He will strangle.’
   3-strangle-APAS

c. k-é-gór'-íshó  ‘He will strangle.’
   DSCN-3-strangle-APAS

The tone from *k-* also has the effect of causing downstep when there is only one other tone in the word, because two High tones are adjacent phrase finally ([p]), as in (49)b.

(48) Downstep (Rasmussen and Payne, under review)

\[ H \rightarrow !H / H_\text{p} \]

(49)

a. á-dûŋ-yé  ‘I will use it to cut.’
   1SG-cut-INST

b. k-á-dûŋ-yé  ‘I will use it to cut.’
   DSCN-1SG-cut-INST

Because of the occasional effects on the tone of the rest of the word, the remainder of the data bearing this morpheme is included only in Appendix D.
6.3. Overview of Argument Pronoun Analysis

A tonal split between first and second persons verb forms, on the one hand, and third person verb forms on the other, has been observed in all three branches (Western, Eastern, and Southern) of the Nilotic languages (Rasmussen, in press). Describing this split in Maa and providing a coherent analysis will be the purpose of this chapter. I first show data that evidences the split. I then show several analyses with lexical forms that might account for the split, and show the superior one to be that which analyzes the apparently High prefixes (e.g., first person singular) to be lexically unspecified for tone. After showing data which evidences a neutralization of this split, I show that the scope of the split does not include two-mora words, though for at least two independent reasons.

For presentation of this argument, I use the term ‘morphologically complex’ to cover those verb forms which have at least one morpheme which is not a root, bound subject pronoun, or class II prefix (\(\_\_\)). This distinction between morphologically complex and simple (i.e., not complex) will be used to sort the data to see the tone patterns.

6.3.1. The Split, and Neutralization, in Maa

The split seen in several Nilotic languages (Rasmussen in press) is also seen in Maa verb forms, as in (50)–(52):

(50) á-gőr-\(^{-}\)ışhó  
1SG-strangle-APAS  
‘I strangle.’

(51) í-gőr-\(^{-}\)ışhó  
2-strangle-APAS  
‘You(SG) strangle.’

(52) è-gőr-\(^{-}\)ışhó  
3-strangle-APAS  
‘He will strangle.’
In this data the contrast is seen on the first mora, with surface high on the first person singular and second person forms, and low on the third person form.

There is some difficulty, however, in seeing this split in the whole system of Maa, because the simplest forms of almost all verbs neutralize the split. For example, TM:72 gives the variety of bound argument pronouns for Maa, reproduced here in Table 3. In their table, first and second person singular, as well as third person are tonally alike.

Table 3: Bound Argument Pronouns with à-lám ‘to Avoid’

<table>
<thead>
<tr>
<th>object: him, her, it, them</th>
<th>thee (2SG)</th>
<th>me (1SG)</th>
</tr>
</thead>
<tbody>
<tr>
<td>subject sing.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 lí-lám</td>
<td>àá-lám</td>
<td>--</td>
</tr>
<tr>
<td>2 í-lám</td>
<td>--</td>
<td>kí-lám</td>
</tr>
<tr>
<td>3 é-lám</td>
<td>kí-lám</td>
<td>áà-lám</td>
</tr>
<tr>
<td>pl.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 kì-lám</td>
<td>kí-lám íyíé</td>
<td>--</td>
</tr>
<tr>
<td>2 í-lámílámà</td>
<td>--</td>
<td>kí-lámílámà</td>
</tr>
<tr>
<td>3 é-lám</td>
<td>kí-lám</td>
<td>áà-lám</td>
</tr>
</tbody>
</table>

Neutralization of the tonal contrast can be seen in the first, second, and third person singular forms with third person objects, all of which are High in tone on both syllables. However, the pattern shown on these forms in Table 3 is not the unmarked tone pattern for Maa verbs generally, but it is a phonologically conditioned neutralization of a lexical split in tone between the first and second person singulars and third person bound argument pronouns (see section 6.6).

The pattern of person marking seen in Table 3 holds true only for simple non-perfect forms, though in essentially all roots. Recall that the bound argument pronouns do not distinguish plurality for second and third persons. Notice also that the two rightmost columns of Table 3 compose an inverse system, as described in Chapter V.
6.3.2. Overview of Tonal Contrasts by Person Marking

Maa verb person marking can be sorted into essentially three groups according to tone. The first has verbs beginning high in pitch, and is the most populous. In addition to the first (a-) and second person (e-) singular subjects, this first group may also include two other prefixes: 1>2, as in áá-lám, which has a second person singular object and first person subject, and 3>2>1, as in kí-lám, which has either a second person singular object and a third person subject, or a first person singular object and a second person subject (Payne, et al. 1994). According to available data, verbs with these two prefixes (1>2 and 3>2>1) bear the same tone as those with first or second singular subjects only (i.e., a- or e-). The second group of person markings begins low, and includes only the third person subject prefix (e-). This chapter will primarily present data demonstrating the contrast using first person singular and third person prefixes, only occasionally including data with second person subjects and these inverse prefixes.

The third category of prefix, which is ignored entirely here, includes the third person acting on first person singular prefix (áá-lám) and the first person plural (kí-lám), both of which may eventually be shown to have an initial High-Low tone contrast on the prefix.

Remember also that in Maa, there are two morphological classes of verbs, with Class II forms distinguished by an obligatory e- prefix.
6.3.3. Person Tone vs. Stem Tone

Because this chapter investigates the tonal split in argument prefixes, I take here an admittedly naïve view to the tone in the lexical representations of non-argument verb morphology. I assume that several factors may contribute to the tone of a given word, among them being person, class prefix, root, aspect, mood, and valence morphology. In this chapter, I consider the surface tone to result from either person prefixes, or from some combination of the rest of the morphemes which I refer to as the “stem” for sake of simplicity. For now I assume that there is a contribution of a non-perfect/indicative High tone for verb forms that have no apparent lexical source of High tone, since every available non-perfect/indicative verb form has at least one High tone in the word, regardless of the stem morphology. I take the “stem tone” to be the portion of the surface form that does not vary between first person singular and third person forms. I use this stem tone as the input for the derivations in this chapter. For example, in (53), the arguments are indicated by the prefixes a- (1SG) and e- (3), so the non-argument (i.e., stem) morphology includes

_yta-bel-ishɔ:_

(53)

a. á-ytá-bél-ˈɪshɔ. (HHH¹HH)  
   1SG-CAUS-break-APAS  
   ‘I will make people break.’

b. े-ytè-bél-ˈɪshɔ. (LLH¹HH)  
   3-CAUS-break-APAS  
   ‘He will make people break.’

What I call the “stem tone” in this chapter, then, is the word final H¹HH, as the first two morae alternate between HH and LL.
6.4. The Tonal Split: Morphologically Complex Forms

The morphologically complex forms in this section show a split between an initial high pitch for first person singular – and an initial low pitch for third person (again recall that second person singular (57) and inverse prefixes 1>2 (58) and 3>2>1 (59) pattern like first person singular). This contrast is spread over a variable number of initial TBU’s: over the first mora only, as in (54); the first two morae, as in (55); or the first several, as in (56).

(54) High/Low contrast on the first mora

a. á-níŋ-‘ishó.
   1SG-hear-APAS
   ‘I can hear.’

b. è-níŋ-‘ishó.
   3-hear-APAS
   ‘He can hear.’

c. á-y-súj-yè.
   1SG-II-wash-INST
   ‘I used/will use it to wash it.’

d. è-y-súj-yè.
   3-II-wash-INST
   ‘He will use it to wash it.’

e. á-dúŋ-ò.
   1SG-cut-MID
   ‘I am cut (in my flesh).’

f. è-dúŋ-ò níŋè/níncè.
   3-cut-mid him/them.NOM
   ‘He/they is/are cut.’ (or each other)

g. á-ytó-níŋ.
   1SG-CAUS-cut
   ‘I will make him hear it.’

h. è-ytó-níŋ.
   3-CAUS-cut
   ‘He will make him hear it.’

(55) High/Low contrast on the first two morae

a. á-dúŋ-ókì.
   1SG-cut-DAT
   ‘I will cut for him.’

b. è-dúŋ-ókì.
   3-cut-DAT
   ‘He will cut it for him.’

c. á-ytá-gól-‘ókì.
   1SG-CAUS-be.strong-DAT
   ‘I will make it strong for him.’

   d. è-ytá-gól-‘ókì.
   3-CAUS-be.strong-DAT
   ‘She will make it strong for him.’
e. á-y-dôŋ-ôkîŋ-yé. or á-y-dôŋ-ôkîŋ-yè.
1SG-II-beat-DAT-INST
‘I will use it to pound for him.’

f. è-y-dôŋ-ôkîŋ-yé. or è-y-dôŋ-ôkîŋ-yè.
3-II-beat-DAT-INST
‘She will use it to pound for him.’

g. á-dûŋ-yé.
1SG-cut-INST
‘I will use it to cut.’

h. è-dûŋ-yé.
3-cut-INST
‘He will use it to cut.’

i. á-á-r-o èn-kítêŋ àjî.
1SG-beat-VENT FSG-cow house
‘I will beat the cow into the house.’

j. è-á-r-o.
3-beat-VENT
‘He will bargain.’

(56) High/Low contrast on the first several morae (non-perfect minimal pairs unavailable)

a. á-ytô-rôk-âk’á.
1SG-CAUS-be.black-DAT.PF
‘I made it black for him.’

b. è-ytô-rôk-âk’á.
3-CAUS-be.black-DAT.PF
‘He made it black for him.’

c. á-tå-dâm-îsh’è.
1SG-PF-think-APAS.PF
‘I thought.’

d. è-tå-dâm-îsh’è.
3-PF-think-APAS.PF
‘He thought.’

e. á-tå-gôr-ôkîn-è.
1SG-PF-strangle-DAT-MID.PF
‘I became angry at him.’

f. è-tå-gôr-ôkîn-è.
3-PF-strangle-DAT-MID.PF
‘He became angry at him/her.’

In (54) – (56), the members of each pair (e.g., (54)a and (54)b) are segmentally minimally different for the bound argument pronoun. The column on the left has first person singular subject forms, and the column on the right has the third person subject forms. The contrast in tone, however, may extend beyond the mora of the bound argument prefix. The tonal contrast can spread to the second mora, either the root (e.g., (55)a and (55)b) or another prefix (e.g., (53)a and (53)b). The contrast can spread as far as the third or fourth mora, covering at least a prefix and the root (e.g., (56)a and (56)b), potentially including even a
suffix mora (e.g., (56)e and (56)e). The spreading of a single tone over (potentially) several TBU is strongly implied, since the tonal split can extend over several morae, though the two forms differ only by the single mono-moraic argument morpheme.

It should be noted that (54)–(56) include a large variety of verbal affix combinations. In fact, this tonal split holds true for all non-perfect morphologically complex verb forms. (The split also holds for most perfect verb forms, c.f. (56), but a complete description of the perfect aspect is beyond the scope of this thesis.) The only verb forms in the non-perfect aspect that do not show this split are certain morphologically simple forms, such as those shown in Table 3, which will be dealt with in section 6.6 of this chapter. For the remainder of this paper, the tone split in (54)–(56) between first singular and third persons will be referred to as the “High/Low” split.

As mentioned earlier, the above split is likely between third person and several argument prefixes, rather that just the first person singular. The following data shows the same pattern for the bound argument prefixes other than the first person singular prefix:

(57) 2SG
   a. í-níŋ-ókî  
      2-listen-DAT  
      ‘You will agree with him.’
   b. è-níŋ-ókî  
      3-listen-DAT  
      ‘He will agree with him.’
   c. í-ntó-ñorr  
      2-CAUS-love  
      ‘You will make him love it.’
   d. è-ytó-ñorr  
      3-CAUS-love  
      ‘He makes him love it.’

(58) 1>2
   a. áá-tá-gór-ókîn-è  
      1>2-PF-strangle-DAT-MID.PF  
      ‘I became angry at you(SG).’
   b. è-tá-gór-ókîn-è  
      3-PF-strangle-DAT-MID.PF  
      ‘He became angry at him/her.’
The data in (57)–(59), while not conclusive, does point toward including these other bound argument prefixes in the analysis presented in this chapter.

6.5. Possible Analyses of the High/Low Split

The preceding section showed that the Maa bound argument pronouns evidence a High/Low split. The question then arises as to the nature of that split lexically. Is there a High tone on the first singular prefix and a Low tone on the third person prefix in the lexicon? Or is the contrast based on more complex lexical representations (e.g., HL for 1SG vs. H for 3, H for 1SG vs. LH for 3, etc.) or more simple (e.g., H for 1SG vs. ø for 3)? In this section I outline three main analyses that might be proposed to account for the contrast between first person singular and third person argument forms. These three analyses consider the contrast to be between 1) two fully specified lexical tones on the prefixes; 2) lexical High tone on the first singular prefix vs. the third person tone underspecified and supplied by rule; and 3) lexical Low tone on the third person prefix
vs. the first person singular tone underspecified. The following sections will lay out these possibilities, and explore their implications, showing the third to be the superior analysis.

Because the High/Low split is neutralized in all short forms (section 6.7), and because I have very few morphologically simple long forms, the following sections will show derivations with morphologically complex forms, though with only one derivational affix. The lexical entries given in the first step of the derivations (e.g., (61)a and e) show lexical forms before the application of certain phonological rules, such as vowel harmony (which includes /a/ → /o/ allomorphy for +ATR environments) and word-final affixal consonant loss (Levergood 1987 and Wallace 1981, 1983).

6.5.1. Full Specification Analysis

The full specification analysis assumes that the underlying representations for both first person singular and third person bear a tone which is fully specified in the lexical form of the prefix, as in (60):

(60) Lexical entries for bound argument prefixes (full specification analysis)

\[
\begin{array}{ll}
H & L \\
\text{a-} & \varepsilon- \\
\text{1SG} & 3
\end{array}
\]

This would lead to a derivation like (61), which compares (55)a with (55)b (recall from Chapter IV that association and spreading appear to proceed from right to left in Maa and that Class I verb roots are assumed to be toneless)\(^5\):
(61) Full specification analysis of (55)a and (55)b: ‘I/He will cut for him.’

a. \[ \begin{array}{cccc}
     & H & L & (lexical entries) \\
    a- & duŋ & -akı(n) & & \varepsilon- & duŋ & -akı(n) \\
    1SG & cut & DAT & & 3 & cut & DAT \\
\end{array} \]

b. \[ \begin{array}{cccc}
     & H & L & (association: RtoL) \\
    a- & duŋ & -oki & & \varepsilon- & duŋ & -oki \\
    1SG & cut & DAT & & 3 & cut & DAT \\
\end{array} \]

c. \[ \begin{array}{cccc}
     & H & L & (spreading: RtoL) \\
    a- & duŋ & -oki & & \varepsilon- & duŋ & -oki \\
    1SG & cut & DAT & & 3 & cut & DAT \\
\end{array} \]

d. á-duŋ-ókî. (surface forms) 

e. L & H & L

f. \[ \begin{array}{cccc}
     & L & H & L \\
     & duŋ & -oki & & duŋ & -oki \\
    3 & cut & DAT & & 3 & cut & DAT \\
\end{array} \]

g. \[ \begin{array}{cccc}
     & L & H & L \\
     & duŋ & -oki & & duŋ & -oki \\
    3 & cut & DAT & & 3 & cut & DAT \\
\end{array} \]

h. è-duŋ-ókî.

‘I will cut for him.’ ‘He will cut for him.’

The primary difficulty of the full specification analysis is that for some first person singular forms it would predict downstep, when downstep does not actually occur in the surface form. Recall that downstep in Maa operates when adjacent High tones are phrase final (48). There is no problem where the adjacent High tones are not word-final, because the High tones would never be in the phrase-final environment. Word-finally, however, one would expect downstep if a High tone from the first person were adjacent to the High tone of the stem, as in *(62)c; but no downstep occurs in the correct form (á-duŋ-yé).
Derivations with instrumental suffix: ‘I/He will use it to cut.’

a. H H (Lexical entries) e. L H
   a- duŋ -ye(k)
   1SG cut INST

b. H H (association: RtoL) f. L H
   a- duŋ -ye
   1SG cut INST

   L H
   e- duŋ -ye
   3 cut INST

c. a- duŋ -ye (spreading: RtoL) g. 3 cut INST
   1SG cut INST

   * (downstep)

   (downstep)

d. *á-duŋ-ye. (surface forms) h. è-duŋ-ye.

‘I will use it to cut.’ ‘He will use it to cut.’

The instrumental suffix is hypothesized to have a High tone due to the final High third person tone pattern, as in (55)h. Thus, in (62)c, the High tone from the instrumental suffix would be adjacent to the High tone from first person singular bound argument pronoun, as well as word final, causing downstep. However, the correct first person singular form, given in (47)a, does not have downstep, but is High and level in tone.

The ventive suffix, as in (55)i and (55)j, would require an analysis tonally identical to that given in the (62) for the instrumental. Both morphemes have a single High tone in the third person forms, and both have a high and level pitch, without downstep, in the first person forms. If the first person singular prefix adds any lexical
tone to the word tone pattern, then the high and level pitch on the first person singular form would be taken to be at least as complex tonally as the low-high pattern of the third person form. Given that the first person forms in (47)a and (55)i have fewer surface tonal contrasts than the third person forms in (55)h and (55)j, it is perhaps simpler to admit the lack of lexical tone on the first person singular bound argument pronoun. Given these instrumental and ventive data, the full specification analysis cannot work. The only way to make such an analysis work would require a rule merging the adjacent High tones in phrase-final position, but such a rule is not otherwise needed and would undermine the understanding of downstep in Maa presented in Rasmussen and Payne (under review).

6.5.2. Third Person Underspecification with Default Low

Stevick (1969) has argued that proto-Bantu should be described as a one-tone language, with TBU’s not associated to such a tone ‘normal’ in pitch, rather than Low in tone. This underspecification analysis allows for a simpler description of a language that doesn’t require two independent lexical tones to explain its pitch contrasts. This thesis has been put forth for particular Bantu languages, e.g., Chichewa (Meyers 1998), and has been proposed in a more limited form, positing a ‘default’ tone in certain cases, as opposed to across the whole tone system. A default tone has phonological validity, but is added by rule, rather than being lexically specified (Clark 1989, Pulleyblank 1986, Snider 1999).

A ‘third person underspecification’ analysis could be proposed for Maa. Such an analysis would assume a similar tone geometry for Maa as proposed for at least certain
Bantu languages, with the third person bound argument pronoun (ɛ-) lexically unspecified for tone and the Low tone supplied by a default tone rule. The lexical representations of the prefixes would be as in (63), leading to a derivation something like either (64) or (65).

(63) Lexical Entries for Bound Argument Prefixes (Third Person Underspecification Analysis)

H

a- ɛ- ISG 3

As the following derivations show, the need for both a default Low assignment rule and spreading causes a conflict. The derivation in (64) assumes ordering of spreading before default tone association:

(64) Third Person Underspecification Analysis of ‘I/He Will Cut for Him.’ (Spreading Before Default Low Tone Assignment)

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<tbody>
<tr>
<td>64</td>
<td>H</td>
<td>H</td>
<td>L</td>
<td>(lexical entries)</td>
</tr>
<tr>
<td>a-</td>
<td>duŋ</td>
<td>-aki(n)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ISG</td>
<td>cut</td>
<td>DAT</td>
<td>3</td>
<td>cut</td>
</tr>
</tbody>
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b. |   |   |   |   |   |
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<tbody>
<tr>
<td>64</td>
<td>H</td>
<td>H</td>
<td>L</td>
<td>(association:RtoL)</td>
</tr>
<tr>
<td>a-</td>
<td>duŋ</td>
<td>-oki</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ISG</td>
<td>cut</td>
<td>DAT</td>
<td>3</td>
<td>cut</td>
</tr>
</tbody>
</table>
This derivation gives the correct form for the first person, but not for the third person form, since spreading occurs before the default Low tone is assigned.

The third person form can be derived correctly by reversing the order of default tone assignment and spreading, giving the derivation in (65):

(65) Third Person Underspecification Analysis of ‘I/He Will Cut for Him.’ (Default Assignment Before Spreading)

```
a. H     H L     (lexical entries)   e. H L
   a-   duŋ   -akî(n)             e-   duŋ   -akî(n)
 1SG  cut  DAT         3  cut  DAT

b. H     H L     (association:RtoL)  f. H L
   a-   duŋ   -oki              e-   duŋ   -oki
 1SG  cut  DAT         3  cut  DAT
```
With this ordering the third person form is correct, but the first person form is not, because an empty TBU was available for a default tone to be assigned in (65)c. This default tone assignment then doesn’t allow the spreading of the High onto the leftmost TBU in (65)d, leaving the initial TBU incorrectly Low.

The problem for the default Low analysis is that the spreading rule and the default assignment rule use the same input (an unassociated TBU), but the two rules need to operate in different cases. For the first person forms, the correct surface form can only be achieved by ordering spreading first, leaving no unassociated TBU’s for default tone assignment. The third person forms, however, would need the opposite ordering, with the default Low tone assigned before the suffix tone spread onto the empty TBU’s.

We now turn to a third analysis, which also uses underspecification, but assumes no default tone assignment.
6.5.3. First Person Singular Underspecification (with Spreading)

A third possibile analysis would have the tone of the first person singular prefix unspecified, assuming lexical representations as in (66).

(66) Lexical entries for bound argument prefixes (High underspecification analysis)

\[
\begin{array}{c|c|c}
L & a- & \varepsilon- \\
1SG & 3 & \\
\end{array}
\]

Under this analysis, the High tone in the first person singular forms (54)–(56) doesn’t come from the prefix, but is spread from the stem. For third person forms, the Low tone from the prefix associates after the stem tones (67)f, and spreads to empty TBU’s on its left (because it is the last tone on the left – (67)g). The association of the Low tone from the third person prefix blocks the spreading from any suffixal High’s, which associated further to the right. For the first person singular forms, there is no prefix tone, so the suffix High tone is the leftmost, which then spreads to the empty TBU’s on its left, as shown in (67)c:

(67) High Underspecification analysis of ‘I/He will cut for him.’

\[
\begin{array}{c|c|c|c|c|c}
\text{a.} & \text{H} & \text{L} & \text{L} & \text{H} & \text{L} \\
& a- & duŋ & -akĩ(n) & \varepsilon- & duŋ & -akĩ(n) \\
& 1SG & cut & DAT & 3 & cut & DAT \\
\end{array}
\]

\[
\begin{array}{c|c|c|c|c|c}
\text{b.} & \text{H} & \text{L} & \text{L} & \text{L} & \text{H} & \text{L} \\
& a- & duŋ & -okĩ & \varepsilon- & duŋ & -okĩ \\
& 1SG & cut & DAT & 3 & cut & DAT \\
\end{array}
\]

\[
\begin{array}{c|c|c|c|c|c}
\text{f.} & \text{H} & \text{L} & \text{L} & \text{H} & \text{L} \\
& a- & duŋ & -okĩ & \varepsilon- & duŋ & -okĩ \\
& 1SG & cut & DAT & 3 & cut & DAT \\
\end{array}
\]

\[
\begin{array}{c|c|c|c|c|c}
\text{e.} & \text{L} & \text{H} & \text{L} & \text{L} & \text{H} & \text{L} \\
& \varepsilon- & duŋ & -akĩ(n) & \text{L} & \text{H} & \text{L} \\
& 3 & cut & DAT & 3 & cut & DAT \\
\end{array}
\]
According to this analysis, the suffixal High spreads to the beginning of the word in the first person singular form, while the association of the prefixal Low tone in (64)f blocks spreading of the suffixal High tone in the third person form. It produces the correct forms for both first person singular and third person, and doesn’t cause conflicts with other aspects of the analysis, unlike the full specification analysis (section 6.5.1).

Given the data in (54)–(56), the best analysis for the alternation between first person singular and third person forms is underspecification of the first person singular prefix, as exemplified in this section. The initial High tone seen on the first person argument prefix is spread from the suffix leftward to the beginning of the word.

### 6.6. The Exception: Morphologically Simple Forms

The preceding sections have shown data which evidence a tonal split between Maa bound argument pronouns. In this section, data which evidences a neutralization of that split is shown, beginning with morphologically simple forms.

While Maa verbs may take a large amount of morphology, e.g., (54)–(56), they are minimally composed of a root preceded by a bound argument pronoun, which may
compose an entire clause, as in (68)–(76). Here I use the term ‘morphologically simple’
to refer to those inflected forms with only an argument pronoun and an unanalyzable
stem, including the Class II prefix i- for Class II roots (though these stems may be argued
to contain some default or unmarked aspect value).

‘High and Level’ Tone Patterns (Class I Roots)

(68) á-ló.                     (71) í-ló.                     (74) é-ló.
1SG-go                       2-go                            3-go
‘I will go.’                  ‘You.SG will go.’              ‘He will go.’

(69) á-ŋórr.                   (72) í-ŋórr.                   (75) é-ŋórr.
1SG-love                     2-love                        3-love
‘I love (him).’              ‘You.SG love it.’             ‘They/he/she loves.’

(70) á-bík.                    (73) í-bík.                    (76) é-bík.
1SG-stay                     2-stay                        3-stay
‘I will stay here.’          ‘Will you stay here?’         ‘He will stay.’

Unlike the data in sections 6.4 and 6.5, i.e., (54)–(59), the tone in (68)–(76) is the
same for all listed word forms, regardless of which bound argument pronoun is prefixed
to the stem. This high and level tone pattern is seen with these bound argument pronouns
on all morphologically simple Class I verb forms, except for nine forms given in (92),
below, which I address in section 6.7.1. The same tone patterns across the forms in (68)–
(76) might imply an hypothesis that the bound arguments are tonally identical (though
the data in section 6.4 clearly contradict it):

(77) Splitless Analysis
    The first person singular, second person, and third person bound argument prefixes
    bear an identical (probably High) lexical tone.

This analysis would also account for the morphologically simple class II forms in
(78)–(85), where the tone pattern is again the same for all word forms given, regardless
of bound argument pronoun. Here, however, the tone pattern is High-Low, as class II stems are involved, rather than the high and level tone pattern for short morphologically simple verbs with Class I stems. The second person forms in (81) and (82) show the regular phonological rules discussed in Chapter V, dissimilating bimorphemic high front vowels and dropping a nasal before a sibilant, etc.

High-Low Tone Patterns (Class II Roots)

(78) á-y-kèn.
1SG-II-shut
‘I will shut it.’

(81) í-n-kèn.
2-II-shut
‘You.SG will shut it.’

(83) é-y-kèn.
3-II-shut
‘He will close it.’

(79) á-y-sòj.
1SG-II-wash
‘I will wash it.’

(82) í-ø-sòj.
2-II-wash
‘You.SG will wash it.’

(84) é-y-sòj.
3-II-wash
‘They/he/she will wash it.’

(80) k-á-y-bèl.
DSCN-1SG-II-rock
‘I will rock from side to side.’

(85) (k)é-y-bèl.
3-II-rock
‘He will rock from side to side.’

The data in (78)–(85), by itself, could be accounted for with the Splitless Analysis, along with the assumption that Class II stems, either in the Class II prefix or the root, bear a lexical Low tone. The data in (86)–(89) suggest that this analysis works regardless of root shape: CVC, CV, or VC:

First person singular subjects with Class I roots

a. á-ból. ‘I hold/twist the cow’s mouth.’
b. á-tón. ‘I will stay/sit here.’
c. á-år ēn-kitéŋ. ‘I will beat the cow.’
d. á-yá ēn-kíří. ‘I will take the meat.’

Third person subjects with Class I roots

a. é-ból. ‘He will open the cow’s mouth.’
b. é-tón. ‘He will sit.’
c. é-år. ‘He beats / kills it.’
d. é-yá ēn-gárrí. ‘The car will take it.’
(88) First person singular subjects with Class II roots
   a. á-y-gís. ‘I will jump.’
   b. á-y-kāsh. ‘I am better than him.’

(89) Third person subjects with Class II roots
   a. é-y-gís. ‘He will jump’
   b. é-y-kāsh. ‘He is better than him.’

As mentioned earlier, the data in (68)–(76) vs. (78)–(85) show a tonal distinction between Class I and Class II verb roots in the morphologically simple derivation, which also holds for the data in (86)–(89). So, the Splitless Analysis (77) could account for the morphologically simple forms in (68)–(89). But with addition of any other morphology on a verb, the Splitless Analysis fails. All of the morphological combinations given in section 6.4 showed a tonal contrast between first person singular and third person. Because the pairs of verbs that are minimally different for subject are also minimally different for tone, an hypothesis that first singular, second person, and third person are tonally identical is untenable.

Given, then, that the Splitless Analysis cannot account for the tonal split observed in section 6.4, the next section will resolve these two bodies of data into a single analysis by showing how the split observed in section 6.4 is neutralized in the data in (68)–(89).

6.7. Resolving the Split and Neutralized Data

In this section, I propose that the High/Low tone split from section 6.4 is a lexical tonal contrast, according to the analysis in section 6.5. That lexical contrast is neutralized in a specific environment, as found in both the high and level Class I and high-low Class II tone patterns of (68)–(89).
It has already been stated that the forms in (68)–(89) are morphologically simpler than those in (54)–(56); it should be noted that the forms in (68)–(89) are also entirely words with only two morae. Either length or morphological complexity might prove useful in understanding a morphophonemically conditioned split. But I show that the number of morae, rather than morphological simplicity, conditions the difference between the forms with the split, i.e., (54)–(56), and those without it, i.e., (68)–(89).

For reasons that will become clear, I address Class I and Class II roots independently. Section 6.7.1 considers a rule to account for the neutralization seen with Class I roots, making the initial assumption of length as the conditioning environment. Section 6.7.1.1 gives nine roots that are lexical exceptions to that rule, which also show the High/Low split. Section 6.7.1.2 presents further data which show that length, and not morphological simplicity, is the conditioning environment for neutralization. Neutralization in verbs with Class II roots is treated in section 6.7.2.

6.7.1. Class I Roots

One could hypothesize that the first person singular and second person forms in (68)–(73) work the same as the first person singular forms in (54)–(56), with the first person singular prefix associated to a stem High in all cases. The simple third person forms in (74)–(76) could then be accounted for by assuming the third person prefix is lexically Low, which would account for the third person forms in (54)–(56), with the following delinking and spreading rule. This is shown with the data from (74):
Two-mora High Spread (TMHS)

\[
\begin{array}{c}
\text{L} \quad \text{H} \\
\text{V} \quad \text{V} \\
\text{^} \quad \text{^} \\
\text{^} \quad \text{^} \\
\# \quad \# \\
\end{array}
\]

e.g., \text{/élo} \rightarrow \text{[élo]} \quad \text{‘He will go.’}

This rule claims that a High tone delinks a Low tone on a preceding vowel, and is conditioned to apply when the only morae in the word are those two morae that are involved in the rule. The phonetic motivation for this rule might be related to the difficulty of raising the pitch over a period as short as two morae, which is not a problem for longer words (Section 6.7.1.2).

Given these assumptions, then, TMHS (90) accounts for the neutralization of the split on the verb forms in (68)–(76) according to the derivations in (91). The tone associates and spreads normally (i.e., right to left) onto the first person argument prefix, which is lexically unspecified for tone. In the third person form, on the other hand, the stem High tone delinks the prefixal Low tone, giving a high and level tone pattern. The underlying forms are given according to the assumptions laid out in section 6.5.3, with the High tone coming from aspect/mood.

Derivation of TMHS neutralization of tone patterns (‘I/He will go.’)

(91) Derivation of TMHS neutralization of tone patterns (‘I/He will go.’)

\begin{align*}
a. & \quad \text{H} & \quad \text{(lexical forms)} & \quad \text{f.} & \quad \text{L} & \quad \text{H} \\
& \quad \text{a-} & \quad \text{lo} & \quad \epsilon- & \quad \text{lo} \\
& \quad \text{1SG} & \quad \text{go} & \quad 3 & \quad \text{go} \\
\end{align*}

\begin{align*}
b. & \quad \text{H} & \quad \text{(association:RtoL)} & \quad \text{g.} & \quad \text{L} & \quad \text{H} \\
& \quad \text{a-} & \quad \text{lo} & \quad \epsilon- & \quad \text{lo} \\
& \quad \text{1SG} & \quad \text{go} & \quad 3 & \quad \text{go} \\
\end{align*}
6.7.1.1. Lexical Exceptions to TMHS (90)

TMHS (90) predicts that there will not be a Low-High tone pattern on any 2-mora verb. It should be noted, however, that there are at least a few verbs that do not undergo this rule\(^7\), and are pronounced low-high over only two morae. I exhaustively list those that I have found here:

(92) Lexical exceptions to Two-mora High Spread

a. è-dó. ‘It is red.’
b. è-dwá. ‘He is bitter.’
c. è-góél Ǫ-sóít. ‘The stone is hard.’
d. è-ykó. ‘He will do that.’
e. è-yró. ‘He will speak.’
f. è-yshú. ‘He is alive.’

g. 1SG go (spreading: RtoL)
h. —no empty TBU’s—
i. L H
j. 3 go

‘I will go.’
‘He will go.’
g. è-ò ḥl-máysùrí láy. ‘My banana has already ripened.’ / ‘My banana is ready.’

h. è-pír ḥn-tárè ḏnòńó. ‘Your sheep are fat.’

i. è-shá. ‘It will rain.’ / ‘It rains.’

With any additional morphology, however, the roots in these verbs behave tonally like other Maa verb roots, e.g., (55)c and (55)d for gol ‘be hard, strong, expensive’ (92)c with the Class I causative (CAUS) and dative (DAT), repeated here as (93)a and b.

(93)

a. á-ytà-gół-ˈókí.

1SG-CAUS-be.strong-DAT

‘I will make it strong for him.’

b. è-ytà-gół-ˈókí.

3-CAUS-be.strong-DAT

‘She will make it strong for him.’

If the roots in (92) bore different lexical tone from other roots, one would expect to see the impact of that lexical tone contrast throughout the derivations involving that root, or at least in several derivations. These roots, however, are only exceptions in the simplest form, given in (92). This lack of further exceptionality suggests that they are lexically marked to disallow Two-mora High Spread (90), rather than being lexically distinct from other roots for tone. If these roots were taken to be tonally distinct in the lexicon, then one would have serious questions about the nature of these supposed derivations, and whether or not they are at all related to the tone of the individual morphemes in any given verb.

Further, the first person singular inflections for the verbs in (92) are High and level in (94), like the simple first person singular forms with all other roots—c.f., (68)–(70).
(94) First person singular forms
   a. á-gol. ‘I am strong.’
   b. á-yshú. ‘I am alive.’
   c. á-pír. ‘I am fat.’

This means that the tonal distinction for these roots only affects the third person inflection, as the verbs in the first person singular inflection are tonally identical to verbs with other roots. Also, the forms in (92) and (94) show the same High/Low tonal split seen in (54)–(56).

The ‘exceptions’ to Two-mora High Spread in (92) are thus further evidence for a regular High/Low split between first person singular and third person. These roots, being excepted from the neutralization in (90), have the same argument prefix split as do the forms in (54)–(56). In other words, the forms in (92) are exceptions to Two-mora High Spread (90), but fall into the regular High/Low pattern, as in (54)–(56). This confirms that there really is just one pattern of High/Low split for 1SG vs. 3 subjects, and that there is a specific rule (90), with a specific phonological context (two morae), with specific lexical exceptions (92), that accounts for all exceptions to that split.

6.7.1.2. Longer Roots

TMHS (90) claims that length alone, and not morphological simplicity, is the environment that conditions the neutralization of argument prefixes in verbs with Class I stems. This is difficult to test with the available data, since most Maa verb roots in the available data have a (n)CVC structure, and few are longer – so morphological simplicity and short length generally go together. To conclusively prove the environment for
TMHS (90), we need (a) verb forms which are longer than two morae, yet morphologically simple, as well as (b) verb forms that are only two morae, yet morphologically complex. If we find both (a) and (b), we might expect only one of them to neutralize the split, and which one does would indicate the correct environment for TMHS (90).

While there are not many (b) verb forms (short but complex), there are a few (a) verb forms which are longer but not apparently more complex, as shown in (95). Those familiar with Nilotic morphology may question the morphological simplicity of some of these pairs, such as c/d, which may historically have the ventive -\( \alpha \), and e/f, which looks like it has the middle, though it has a different tone pattern from the normal middle form (which is High-Low on the final two morae— as in (54)e and f). At least a/b, g/h, and i/j however, have no apparent synchronic or diachronic analysis:

(95) Longer morphologically simple Class I forms:

a. á-ádó.
   1SG-be.tall
   ‘I am tall.’

b. è-ádó.
   3-be.tall
   ‘He is/they are tall.’

c. á-dámó.
   1SG-remember
   ‘I remember.’

d. è-dámó.
   3-remember
   ‘They/he/she remembers.’

e. á-lálá.
   1SG-be.wide
   ‘I am wide.’

f. è-lálá.
   3-be.wide
   ‘It is wide.’

g. á-mórát.
   1SG-circumcise
   ‘I will circumcise him.’

h. è-mórát.
   3-circumcise
   ‘He will circumcise him.’
As (90) predicts, the high and level pattern in (68)–(76) breaks down for longer Class I roots, as seen in b, d, f, h, and j. The tone pattern for longer simple third person forms is Low initially, then High on the final mora, while the first person forms are High and level. In fact, these longer roots show the same High/Low split found in (54)–(56), only here on morphologically simple roots. Since these roots have no evidence of morphological complexity and do not undergo neutralization, it cannot be maintained that morphological simplicity is the conditioning factor for the neutralization in (68)–(76).

In sum, the fact that the data in (95) show the same High/Low split as in (54)–(56) indicates that it is not morphological simplicity, but length, which is the environment that conditions the high and level neutralization in (68)–(76), and that there is, again, a single High/Low split pattern.

To establish length as the conditioning factor in (90) the only question left concerns the presence of (b) verbs: two-mora morphologically complex forms. Do these forms show neutralization of the split? The following data is at least diachronically morphologically complex, though the synchronic complexity is uncertain. But it is the only minimal pair of verbs available with both no more than two morae and also (potentially) morphologically complex:

(96)

<table>
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<tr>
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<th>á-bá-w.</th>
<th>é-bá-w.</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>á-bá-w. 1SG-reach-VENT</td>
<td>é-bá-w. 3-reach-VENT</td>
</tr>
<tr>
<td></td>
<td>‘I will arrive.’</td>
<td>‘He will arrive.’</td>
</tr>
</tbody>
</table>
The data in (96) show the neutralization of the High/Low split, unlike the ventive data in (55)i and j, which has a Low-High contrast in the third person form. This neutralization of the expected contrast may provide evidence that morphological simplicity does not condition the neutralization of that split. It is not clear, however, whether what is clearly the ventive morpheme diachronically is synchronically distinct from the root, or if they have become lexicalized into a single morpheme. Unfortunately other short but complex forms are unavailable at this time.

The data in (95), then, show that with more than two morae, morphologically simple verbs with Class I stems do not show neutralization, but rather the High/Low split. It is not entirely clear yet, but there is some evidence in (96), that morphological simplicity is not required for neutralization of the High/Low split. So verbs with only two morae exhibit neutralization of the High/Low split, with or without morphological simplicity, and verbs with more than two morae do not. Thus length, and not morphological complexity, is established as the conditioning factor for TMHS (90).

6.7.2. Class II Roots

Section 6.7.1 showed that the ‘splitless’ tone pattern for Class I roots in (68)–(76) can be seen as a neutralization of the High/Low split, conditioned by length. Similarly, the high-low simple Class II pitch pattern in (78)–(85) can be seen as a neutralization conditioned by length, though in a slightly different manner. Rather than a lexical phonological rule that eliminates the split, this neutralization would be the result of the association of one tone to each TBU.
Looking at the stem tones (i.e., those that don’t alternate for argument prefix --
recall section 6.3.3) in the data so far presented, one notices a fairly limited set of
patterns. Depending on the derivation of the stem, the stem has a certain number of
tones: either one (e.g., (55)g vs. (55)h), two (e.g., (54)e vs. (54)f), or three (e.g., (55)c vs.
(55)d). These tones associate right to left, filling TBU’s including the ultimate,
penultimate, and antepenultimate, respectively. Assuming stem tones, being on the right,
associate before argument tones, which are on the left, the number of stem tones will
determine where the argument tones associate.

According to this way of looking at the data, the simple Class I roots (section
6.7.1) have one stem tone, so the High tone spreads from the ultimate mora in the first
person singular forms, leftward to the beginning of the word. The third person Low tone,
and thus the split in argument prefix tone, is realized on the penultimate mora, as in (95).
The penultimate mora is also the first mora on two mora words (92), though this is
neutralized in most forms by TMHS (90), as in (68)–(76).

Class II roots, on the other hand, have two stem tones, so these tones associate
with the ultimate and penultimate TBU’s (78)–(85). Because the stem tones completely
fill the TBU’s, the third person argument prefix Low tone cannot associate (and is
presumably deleted), so the High/Low split does not surface. The derivations are given
in (97):

(97) Analysis of simple Class II neutralization

\[
\begin{array}{ccc}
H & L & \text{a-ygts} \\
1SG-jump & & \\
\end{array}
\quad
\begin{array}{ccc}
L & H & L \\
\varepsilon-ygts & & \\
3\text{-jump} & & \\
\end{array}
\]

Lexical entries: d. 3-jump
With longer words, however, the antepenultimate tone associates to the antepenultimate mora, so the High/Low split is again realized on the surface, as in (98):

(98) Simple Class II verb forms with three morae
   a. á-y-nínŋ. b. è-y-nínŋ.
      1SG-II-listen.DUP 3-II-listen.DUP
      ‘I will listen.’  ‘He is listening’ (And we want him to.)
   
   c. á-y-rówà. d. è-y-rówà.
      1SG-II-be.hot 3-II-be.hot
      ‘I am hot.’  ‘It is hot.’
   
   e. á-y-térrè. f. è-y-térrè.
      1SG-II-faint 3-II-faint
      ‘I will faint.’  ‘He will faint.’
   
   g. á-y-rórà. h. è-y-rórà.
      1SG-II-sleep 3-II-sleep
      ‘I am asleep’  ‘He is/they are asleep.’

The additional TBU allows the prefix tone to associate, allowing the High/Low split to surface, as in (99):

(99) Analysis of simple Class II non-neutralization
This analysis neutralizes the High/Low split for verb forms with class II roots that have just two morae, but accounts for the split occurring on longer words.

The analysis presented in this section for verbs with Class II stems accounts for the neutralization of the High/Low split in an entirely different way than the Two-Mora High Spread (90), which accounted for the neutralization in verbs with Class I stems (68)–(76). Because the analyses for verbs in each of these two classes of stems differ, we might expect the neutralizations to have differing properties. And this is what we find: unlike Two-mora High Spread (90), which is a phonological rule with several lexical exceptions, i.e., the roots in (92), the analysis in (99) has no room for lexical exceptions, as there is no rule which might be susceptible to lexical specification. The neutralization analysis in (99) is merely a matter of the relationship of the number of tones to the number of TBU’s in a given verb. This prediction of an exceptionless split is met by the lack of exceptions (so far) to the simple class II High-Low tone pattern over two morae verbs, regardless of root.9

6.8. Unspecification of Apparently High Prefixes

The analysis presented in this chapter claims that every tone after (and including) the first High tone on the third person forms is due to the stem, indicating that the same
tones are also due to the stem in the first person singular forms. Consider the
first of the two forms given in each of (55)e and (55)f:

(100)

<table>
<thead>
<tr>
<th>argument tones</th>
<th>stem tones</th>
</tr>
</thead>
<tbody>
<tr>
<td>á-y-dón-ókíny-íé.</td>
<td>1SG-II-beat-DAT-INST</td>
</tr>
<tr>
<td>'I will use it to pound for him.'</td>
<td></td>
</tr>
<tr>
<td>è-y-dón-ókíny-íé.</td>
<td>3-II-beat-DAT-INST</td>
</tr>
<tr>
<td>'She used/will use it to pound for them.'</td>
<td></td>
</tr>
</tbody>
</table>

In (100), the stem tones are viewed as the same, since the pair of words is
minimally different for subject, and identical in stem. The initial High tone in the first
person singular form, then, is contiguous with a High tone from the stem. One could
claim that there are two distinct High tones in the first person singular forms, which are
not distinguished on the surface, but it would be simpler to just say that there are no more
High tones in the first person singular forms than in the third person forms, with adjacent
high morae considered to be associated to the same High tone, in accordance with the
OCP, which assumes that “sequences of identical autosegments are prohibited”
(Pulleyblank 1986:191):

(101)

\[
\begin{align*}
\text{á-y-dón-ókíny-íé.} & = \text{two high tones} \\
\text{è-y-dón-ókíny-íé.} & = \text{two high tones}
\end{align*}
\]
Thus, if one were to claim that there is a lexical High tone on the first person singular prefix, one would also need to claim that there is merger of adjacent High’s in each and every verb with an initial High tone. This would be the case because the initial surface tone is not distinguished phonetically from the stem High tone; the word tone is high and level from the beginning of the word to the same mora which is the leftmost High tone in the third person form (i.e., the first stem tone).

Put differently, the domain of morae associated to the leftmost High tone in the first person singular forms always includes one mora (the rightmost – before the vertical line in (102)) which is also High in the same derivation with a third person subject, as throughout (54)–(56).

\[(102)\]

\[
\begin{array}{c}
\text{initial H} \\
\text{á-y-dóŋ-ókíny-íé.} \\
\text{è-y-dóŋ-ókíny-íé.}
\end{array}
\]

In other words, the first and third person forms share at least one High-toned mora, which is contiguous with the word initial High tone in the first person singular forms of (54)–(56). If one were to claim that the tone to the left of the vertical line in (102) were due to the argument prefix for first person singular, one would also need to say that the third person tone is Low-High – unless there is some reason that the high tone on -ókí should come from the argument prefix in the first person singular form, but from the stem in the third person form.
Alternatively, one might defend full specification by saying that the stems exhibit tonal allomorphy for each of the argument prefixes, with one fewer High tone after first person singular forms, though this gains nothing over the analysis in section 6.5.3, but only adds complexity.

Thus, there is no clear empirical evidence that the High tone on first person singular, second person, etc. forms comes from those prefixes, as opposed to being spread from the stem. Requiring full specification of tone also increases the complexity of the analysis unnecessarily and without any apparent benefit.

Beyond any considerations of economy, when the instrumental and ventive data discussed in section 6.5.1 are considered, it is clear that a lexically independent tone on the first person singular prefix is untenable.

6.9. Conclusion

The first person singular underspecification analysis may or may not match analyses proposed for other Nilotic person marking systems. The only published analysis including a bound-pronominal split, for any Nilotic language, is Dimmendaal’s (1983) analysis of Turkana. His analysis for Turkana seems essentially the same as my Full Specification Analysis as given in 6.5.1 above. While Full Specification may work for Turkana (and perhaps for other Nilotic languages), claiming a lexically specified High tone for the first person singular bound argument pronoun is not ideal for a synchronic analysis of Maa.
We have seen that for both class I and class II roots, the tonal alternation between first and third person is neutralized over only two morae. I propose that this neutralization occurs, on the one hand, by a spreading rule (90) that delinks the third person Low tone in most two-mora words with Class I roots, and on the other hand by having fewer TBU’s in the word than tones in the word tonal melody for Class II roots, as in (99).

Given this analysis, then, we can say that there is a lexical split between first and third persons. Surface ‘High’ prefixes (1SG, 2, etc.) are lexically unmarked for tone and the ‘Low’ prefix (3) is lexically marked Low. Lexically toneless morae then receive tone by spreading from the stem on the right. All deviations from this split have been accounted for in Section 6.7.

While this chapter has focused on the contrast between the first person singular and the third person bound argument prefixes, it is likely that the the first person singular prefix is tonally identical to the second person prefix (i.e., í-lám from Table 3), as well as to the first person singular acting on second person singular prefix (i.e., áá-lám from Table 3), and to the third person acting on second person singular or second person acting on first person singular prefix (i.e., kí-lám from Table 3).
6.10. Notes

1. This environment is admittedly not well defined. It includes at least utterance-final position, and may well include other phrasal boundaries.

2. I thank Gerrit Dimmendaal for this observation.

3. Unfortunately, I do not have carefully checked data available to prove this analysis for all these prefixes, though all the data I have with them is in accordance with the analysis presented in this paper, so it is likely a matter of collecting and presenting the data before they, too, will submit to this same analysis. What data I do have with these prefixes is included in Appendix A.

4. Forms are given in Appendix A.

5. One variation of this analysis has the prefix tone associating at a later stage than suffix tones, and in a left to right manner, followed by left to right spreading. This would differ from (61), above, in that for b and f, the prefixal tone would associate to the leftmost TBU (i.e., the prefix) then spread rightward to the root in c and g. Either analysis arrives at the same surface forms.

6. This will probably ultimately be generalized to the following:

\[
\begin{array}{c}
L \\
H \\
\$ \quad / \quad \{ \# \} \\
V \\
V
\end{array}
\]

\[
\begin{array}{c}
H
\end{array}
\]

\[
\text{e.g., } /\text{èdùŋəkìnù} \Rightarrow [\text{èdùŋók'ìnù}] \text{ ‘He will be cut for.’}
\]

7. It is difficult to find a phonetic motivation for these exceptions, though it is interesting to note that these roots are almost entirely CV or CVC roots. Those that are CVC have /l/ and /r/ as their final consonants. These do not constitute a phonological conditioning, however, as roots with these same environments undergo the rule, e.g., lo in (74). Another place to look for physiological motivation would be in frequency effects. While I don’t have any data on this, my anecdotal perception is that do, gol, and pir are fairly common, while yko, yro, and yshu are fairly uncommon – so frequency effects seem unlikely as a motivation, though it hasn’t been empirically tested at this point.
8 I do not argue for or against this hypothesis at this point. See my comments in Chapter VII for my thought on where analysis of Maa verb tone might need to go to get answers.

9 The roots in (92)c and (92)d, above, however, may prove to be Class II, in which case they would seem exceptional. However, I don’t have data with these roots in other derivations, so I am not sure if they are Class II stems. There is data indicating that (92)e is not a class II root. It is an interesting coincidence that they both have rCV stem structure, unlike the rCVC forms in (78)–(85) and (98).

10 While a fully specified pronominal tone split is given in Dimmendaal (1983), it is clearly not a focal point of the 1983 work, and it is not clear whether underspecification of any of those pronouns was considered. Thus, it may be of little consequence if Maa requires a different analysis.
CHAPTER VII

CONCLUSIONS

This thesis has investigated the bound argument pronoun tone system of Il-Keekonyokie Maa, and has established that the opposition between the apparent High and Low prefixes is in fact between Low and unspecified tone. The remainder of my data have not yet been resolved into a system, and so are appended to the body of this thesis.

A complete analysis of a verb tone system may be relatively simple for some languages, but it has proved to not be so for Maa. While the whole system remains currently out of reach, this work has set the stage for a comprehensive analysis of the whole verb argument prefix system of Maa, by presenting an analysis of the tones of the prefix system, along with appendices that contain data on the remainder of the verb tone. This combination should allow the interactions between the rest of the morphology on verbs to be studied.

It should be noted that a strictly synchronic analysis of this tone system ultimately may not succeed. The author is the third researcher to his knowledge (with Barbara Wallace-Gadsden and Barbara Levergood before me), who has tried unsuccessfully to resolve Maa verb tone to a system.
It may be, however, that the answer to this puzzle lies in history, and that the ‘system’ is not currently as systematic as we might hope. To investigate this hypothesis, we need more investigation into dialectal variation, with reliable tone transcription. Also, as our theory of the mind develops, we may come to believe that memorization of each form in what appear to be synchronic derivations is more reasonable than we had once thought.

When we look into tonal reconstructions of Proto-Maa, one place to start looking for the answer to the Maa tone system question is in the relationship between tone and accent. The synchronic tone pattern is one where a High tone reliably (except in a few cases) falls on the ultimate, penultimate, or antepenultimate mora. Also, when there is a High tone on the antepenultimate mora, there is almost always a High tone on the ultimate mora. This might be seen as suspiciously close to some kind of stress system, particularly since the words with longer suffixes have that High tone farther from the end – indicating a link between the number of morae in the suffixes and the number of tones in the tone melody.

For those interested in pursuing this matter, the following appendixes contain a majority of the remainder of my data, both for the remainder of the bound argument pronouns, and for the combinations of the various suffixes.
APPENDIX A

OTHER BOUND ARGUMENT PRONOUNS

This appendix includes bound argument pronouns that were not included in the analysis of Chapter IV. That is, they do not behave according to the High/Low split. The first two prefixes, 1PL and 3>1, seem to have a similar effect on word tone, which is something like a High-Low prefix tone pattern, though this has not been completely worked out. They are included here, though, for the sake of completeness. Regarding the other three sets of bound argument pronouns, I don’t have anything more to say than what has already been said, so I will simply present some data which may be helpful to future researchers. The data is given according to various suffix combinations (though with aspect markings mixed in to each group), which may help in sorting the various tone patterns.

For each of the prefixes in this appendix, there seems to be some kind of “whole word” tone effect, where the tone indicated by the prefix overrides the tone one might expect from the suffixes in a given word. Again, this has not yet been worked out.
A.1. 1PL

The first person plural prefix has the segmental form *k*-#. The following first
person plural forms have something like a two place contrast, something like either High-
Low-High or Low-High-Low.

A.1.1. Class I Causative (CAUS), Middle (MID) and Plural Perfect (PF.PL)

ki-tà-gòr-òt-è  ‘We used it to strangle ourselves.’
1PL-CAUS-strangle-PF.PL-MID.PF

ki-ntò-nìŋ-òt-è  ‘We made each other hear.’
ki-ntò-pɔr-r-át-è  ‘We made each other love.’
ki-ntò-nɔr-r-át-è  ‘We made each other loving.’

A.1.2. Class I Causative (CAUS) and Perfect (PF)

ki-ntò-nìŋ-ò  ‘We made him/them hear.’

A.1.3. Motion Away (AWAY) and Plural Perfect (PF.PL)

ki-tà-ŋòr-ò-yt-yè  ‘We threw (a spear, away)’

A.1.4. Ventive (VENT)

ki-n-tùk-ù  ‘We will wash it.’

A.1.5. Antipassive (APAS) and Perfect (PF)

ki-tà-gòr-ìsh-òt-è  ‘We strangled.’
ki-tà-ràŋ-ìsh-òt-è  ‘We did singing.’
A.1.6. Dative (DAT)

kí-dùŋ-òkí

‘We will cut for him.’

A.1.7. Dative (DAT) and Plural Perfect (PF.PL)

kí-tù-duŋ-òk-ìt-ò

‘We cut for him (already)’

A.1.8. Dative (DAT) and Middle (MID)

kí-dùŋ-òkín-ìó

‘We will cut for each other.’

A.1.9. Middle (MID)

kí-dàmón-ìó

‘We remember each other.’
kí-dùŋ-ó

‘We are cut.’
kí-gòr-ó

‘We will strangle each other.’

A.1.10. Middle (MID) and Perfect (PF)

kí-tà-dàmùn-ót-è

‘We remembered each other.’
kí-tà-gòr-ót-è

‘We became angry/were angry.’

kí-tù-ŋòrr-át-è

‘We have loved each other.’
kí-tò-rikín-ót-è

‘We forgot.’
kí-tò-ŋòrr-óŋ-òt-è

‘We will love each other.’

A.1.11. Simple Non-perfect Forms

kí-bàrn

‘We will shave.’
kí-bòl

‘We will open it.’
kí-ból

‘We will open it.’
kí-bòytá

‘We are together.’
kì-dò

‘We are red.’
kì-dōl ‘We will see.’
kì-gōr ‘We will strangle(someone)’
kì-n-kēn ‘We will shut it.’
kì-m-pīd ‘We jump (up and down)’
kì-rrāg ‘We will lie down.’
kì-sūj ‘We will wash it.’
kì-kwēt ‘We run with each other/together.’
kì-nīŋ ‘We (will) hear.’
kì-pīk ‘We will put it...’
kì-pīr ‘We are fat.’
kì-pvō ‘We will go.’
kì-sūj ‘We will follow him.’
kì-shūk ‘We will return (it)’
kì-yēr ‘We will cook it.’
kì-ādō ‘We are tall.’
kì-ŋā ‘Shall we eat?’
kì-rūrā ‘We are asleep.’

A.1.12. Simple Perfect Forms

kì-tā-bōl-ō ‘We opened it.’
kì-tō-dōr-ō ‘We became red.’
kì-tā-gōr-ō ‘We strangled someone.’
kì-n-kēn-ō ‘We shut it.’
kì-rrāg-ā ‘We lay down.’
kì-sūj-ā ‘We washed it.’
kì-tā-lēp-ō ‘We milked it.’
kì-tō-nīŋ-ō ‘We heard.’
kì-tō-ŋōr-ā ‘We have loved him/her/them.’
kì-tū-sūj-ā ‘We followed him.’
kì-shōmō ‘We went.’ (1PL-go.PF)
kì-tō-dōr-īt-ā ‘We became red (and still are...).’

A.1.13. Simple Progressive (PROG) Forms

kì-bōl-ītō ‘We are opening it.’
kì-n-kēn-ītō ‘We are shutting it.’
kì-lēp-ītō ‘We are milking it.’
kì-nīŋ-ītō ‘We are hearing.’
kì-pvō-ytō ‘We are going.’
kí-sùj-ìtà ‘We are following him.’


kídòrú ‘We will become red.’

A.2. 3>1

The following 3>1 forms also have tone that is almost always High-Low on the first two morae, with a High again on the ultimate more in most cases, or with another High-Low contrast, or with no other contrast at all (e.g., instrumental, ventive). Because there is no change for the tone patterns for forms with k-, the forms will be listed together. Non-perfect and perfect, singular and plural, will be given together.

A.2.1. Combinations with the Class I Causative (CAUS)

A.2.1.1. CAUS only

Non-perfect forms

áà-ytè-bèl ‘He will make me break it.’
3>1-CAUS-break
áà-ytù-duŋ ẹlpáyyàn ènkítok ǐnkírì ‘The man will make my wife cut the meat.’ ‘He will make me cut’
áà-ytè-góṛ ‘He will make me angry.’
áà-ytò-nǐŋ-ò ‘He made me hear it.’
áà-ytù-nùŋ-ò ‘He made me cut.’
áà-ytò-súj ‘She will force me to follow.’
áà-ytò-sùj-á ‘He made it follow after me.’
áà-ytò-nìŋ ‘They will make me hear it.’
áà-ytè-shèt ‘They will make me plait(hair)/build(house).’
Perfect forms

áà-ytut-dùŋ-ô ‘He made me cut’
3>1-CAUS-break-PF
áà-ytut-gôr-ô ‘He has caused me to strangle.’
áà-ytut-lép-ô ‘He made me milk it.’
áà-ytut-dâm-ût-w-â ‘They made me think.’
áà-ytut-gôr-ô ‘They caused me to strangle.’
áà-ytut-shêt-â ‘They made me plait(hair)/build(house).’
k-áà-ytut-dùŋ-ô ‘He made me cut.’
k-áà-ytut-yỳë-r-â ‘He made me cook.’

A.2.1.2. CAUS and AWAY

áà-ytut-pëj-ôô ‘He will make me burn (e.g., trash that is piled up).’
áà-ytut-shêt-â ‘He will make me plait(hair)/build(house) (one at a time).’
áà-ytut-dùŋ-ôô ‘He will make me cut it away from myself.’ ‘He will become an obstacle to me accomplishing something.’
k-áà-ytut-pàrr-â ‘He will make me agree with that person.’
k-áà-ytut-pëj-ôô ‘He will make me burn (e.g., trash that is piled up).’
k-áà-ytut-sôt-ôô ‘He will make me gather them one at a time.’
k-áà-ytut-shêt-â ‘He will make me plait(hair)/build(house) (one at a time).’
k-áà-ytut-shôl-â ‘He will make me melt (e.g. fat) one at a time.’
k-áà-ytut-dùŋ-ôô ‘He will make me cut it away from myself.’ ‘He will become an obstacle to me accomplishing something.’

A.2.1.3. CAUS and AWAY (PF)

áà-ytut-pòrr-áyyè ‘He used it to make(force) me like it.’
áà-ytut-pòrr-áyyè ‘He made me agree with that person.’
áà-ytut-pëj-ôyyè ‘He made me burn (e.g., trash that is piled up).’
áà-ytut-sôt-ôyyè ‘He made me gather them one at a time.’
áà-ytut-shêt-áyyè ‘He made me plait(hair)/build(house) (one at a time).’
áà-ytut-shôl-áyyè ‘He made me melt (e.g. fat) one at a time.’
áà-ytè-bèl-ò ‘He will make me break it off.’
3>1-CAUS-break-VENT
k-áà-ytè-bèl-ò ‘He will make me break it off.’
k-áà-ytè-bòl-ò ‘She will make me grow (by feeding me, etc.)’
k-áà-ytè-dòt-ò ‘He will make me pull it out.’
k-áà-ytè-kèd-ò ‘He will make me climb (to something)’
k-áà-ytè-mát-ò ‘He will make me drink (to finish it).’
k-áà-yè-pík-ò ‘He will make me remove it.’
k-áà-ytè-sùj-ò ‘She will force him to follow after me.’
k-áà-ytè-rèm-ò ‘He will make me remove (e.g., the medicine from a bottle with a syringe).’

A.2.1.5. CAUS and VENT (PF)

áà-ytè-bèl-w-á ‘He did make me break it off.’
áà-ytè-bòl-w-á ‘She did make me grow (by feeding me, etc.).’
áà-ytè-dòt-w-ò ‘He made me pull it out.’
áà-ytè-kèd-w-ò ‘He did make me climb (to something)’
áà-ytè-mát-w-á ‘He did make me drink (to finish it).’
áà-ytè-pík-w-á ‘He did make me remove it.’
áà-ytè-sùj-w-á ‘She forced him to follow after me.’
áà-ytè-rèm-w-ò ‘He made me remove (e.g., the medicine from a bottle with a syringe).’
k-áà-ytè-sùj-w-á ‘She forced him to follow after me.’
k-áà-yè-pík-w-á ‘He did make me remove it.’
k-áà-ytè-sùj-ò ‘She will force him to follow after me.’
A.2.1.6. CAUS and VENT (PL.PF)

áá-ytè-bôl-ùt-w-à  ‘They made me grow (by feeding me, etc.).’
áá-ytè-dôt-ùt-w-ò  ‘They made me pull it out.’
áá-ytè-kèd-ùt-w-ò  ‘They did make me climb (to something)’
áá-ytè-pòk-ùt-w-à  ‘They did make me remove it.’
k-áá-ytè-pìk-ùt-w-à  ‘They did make me remove it.’

A.2.1.7. CAUS, VENT and INST

áá-ytè-dôt-ùn-yè  ‘He will make me pull it out (using it2).’
áá-ytè-dôt-ùn-yè  ‘He made me pull it out (using it2).’

A.2.1.8. CAUS and APAS

áá-ytè-dàm-ìshò  ‘He/she/they make me think.’
áá-ytè-lèp-ìshò  ‘He/she/they will make me milk.’
áá-ytè-dàm-ìshé  ‘he made me think’  ‘He/she/they/it made me think.’
áá-ytè-lèp-ìshé  ‘He made me milk.’
áá-ytè-nìŋ-ìshè  ‘He made me able to hear.’  ‘He woke me up.’
áá-ytè-dàm-ìsh-òt-è  ‘They made me think’
áá-ytè-lèp-ìsh-òt-è  ‘They made me milk.’
k-áá-ytè-lèp-ìshò  ‘He/she/they will make me milk.’

A.2.1.9. CAUS, APAS and PASS

áá-ytè-dùŋ-ìshò-y  ‘People will make me cut.’
?áá-ytè-lèp-ìshèk-ì  ‘I was made to milk.’ (APAS.PF-PASS)
?k-áá-ytè-lèp-ìshèk-ì  ‘I was made to milk.’

A.2.1.10. CAUS and DAT

áá-ytè-pìr-òkì ènkítèŋ  ‘He will fatten the cow for me.’
áá-ytè-nòrr-ìky-á  ‘He made me agree with that person.’
?áá-ytè-nòrr-ákì  ‘He will make me agree with that person.’
### A.2.1.11. CAUS and INST

<table>
<thead>
<tr>
<th>Phrase</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>áà-ytà-dòt-yè</td>
<td>‘He will use it to make me pull it out.’</td>
</tr>
<tr>
<td>áà-ytà-pòr-yè</td>
<td>‘He/she will use it to make me like it.’</td>
</tr>
<tr>
<td>áà-ytà-tòp-yè</td>
<td>‘He will make me sit using it.’</td>
</tr>
<tr>
<td>áà-ytà-yyér-yè èŋúdị.</td>
<td>‘He/they will use a stick to make me cook.’</td>
</tr>
<tr>
<td>?áà-ytà-súj-yè</td>
<td>‘They will use it to make it follow me.’</td>
</tr>
<tr>
<td>áà-ytà-dùŋ-yè</td>
<td>‘He/they will make me cut using it.’</td>
</tr>
<tr>
<td>áà-ytà-dòl-yè</td>
<td>‘He made me see using it.’</td>
</tr>
<tr>
<td>áà-ytà-dòt-yè</td>
<td>‘He used it to make me pull it out.’</td>
</tr>
<tr>
<td>áà-ytà-dùŋ-yè</td>
<td>‘He made me cut using it.’</td>
</tr>
<tr>
<td>áà-ytà-pòr-yè</td>
<td>‘He/she used it to make me like it.’</td>
</tr>
<tr>
<td>áà-ytà-tòp-yè</td>
<td>‘He made me sit using it.’</td>
</tr>
<tr>
<td>áà-ytà-yyér-yè èŋúdị.</td>
<td>‘He/they used a stick to make me cook.’</td>
</tr>
<tr>
<td>áà-ytà-dùŋ-yè</td>
<td>‘They made me cut using it.’</td>
</tr>
<tr>
<td>áà-ytà-pòr-yè</td>
<td>‘They used it to make me like it.’</td>
</tr>
<tr>
<td>?áà-ytà-súj-yè</td>
<td>‘They used it to make it follow me.’</td>
</tr>
</tbody>
</table>

### A.2.1.12. CAUS, INST, and PASS

<table>
<thead>
<tr>
<th>Phrase</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>k-áà-ytà-pòr-yè</td>
<td>‘He/she will use it to make me like it.’</td>
</tr>
<tr>
<td>k-áà-ytà-tòp-yè</td>
<td>‘He will make me sit using it.’</td>
</tr>
<tr>
<td>k-áà-ytà-yyér-yè èŋúdị.</td>
<td>‘He/they will use a stick to make me cook.’</td>
</tr>
<tr>
<td>?k-áà-ytà-súj-yè</td>
<td>‘They will use it to make it follow me.’</td>
</tr>
<tr>
<td>k-áà-ytà-dùŋ-yè</td>
<td>‘He/they will make me cut using it.’</td>
</tr>
</tbody>
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</tr>
<tr>
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<td>‘A stick will be used to make me follow it’</td>
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<td>‘I will be made to use the calabash to milk the cow.’</td>
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</tbody>
</table>
A.2.1.13. CAUS and PASS

Non-perfect forms

áà-ỳtè-bèl-ì  ‘They will make me break it.’
áà-ỳtò-dèr-ì  ‘I will be made red.’
áà-ỳtù-dùŋ-ì  ‘They will make me cut.’
áà-ỳtà-gòr-ì  ‘I will be made angry.’
áà-ỳtò-pìr-ì  ‘I will be made fat.’
áà-ỳtò-sùj-ì  ‘I will be made to follow.’
áà-ỳtè-shèt-ì  ‘I will be made to plait(hair)/build(house).’

k-áà-ỳtè-bèl-ì  ‘They will make me break it.’
k-áà-ỳtò-dèr-ì  ‘I will be made red.’
k-áà-ỳtà-gòl-ì  ‘I will be made strong.’
k-áà-ỳtà-gòr-ì  ‘I will be made angry.’
k-áà-ỳtò-pìr-ì  ‘I will be made fat.’
k-áà-ỳtò-sùj-ì  ‘I will be made to follow.’
k-áà-ỳtè-shèt-ì  ‘I will be made to plait(hair)/build(house).’

Perfect forms

áà-ỳtè-bèl-àkì  ‘They made me break it.’
áà-ỳtò-dèr-àkì  ‘I was made red.’
áà-ỳtù-dùŋ-òk-ì  ‘They made me cut.’
áà-ỳtà-gòl-òk-ì  ‘I was made strong.’
áà-ỳtà-gòr-òk-ì  ‘I was made angry.’
áà-ỳtò-nèrr-àkì  ‘I was made to love.’
áà-ỳtò-pìr-òk-ì  ‘I was made fat.’
áà-ỳtò-sùj-àkì  ‘I was made to follow.’
áà-ỳtè-shèt-àkì  ‘I was made to plait(hair)/build(house).’
*áà-ỳtò-dèr-òt-àk-ì  ‘I am being made red.’

A.2.1.14. CAUS and PROG

áà-ỳtù-dùŋ-ìtò  ‘He is making me cut it.’
A.2.2. Combinations with Motion Away (AWAY)

A.2.2.1. AWAY only

áà-dùŋ-óò  ‘He will cut me away.’
k-áà-y-bùŋ-áà  ‘He will support me (along the way).’

áà-tà-bòl-óy-yè  ‘He has opened it for me’
áà-tù-dùŋ-óy-yè  ‘He cut me away.’
áà-y-bùŋ-áy-yè  ‘He caught (i.e., supported) me (all the way)’
áà-y-kèn-óy-yè  ‘He shut it on me (who am outside).’
áà-y-kèn-ò-yt-yè  ‘They shut it on me (who am outside).’

A.2.2.2. AWAY and INST

áà-dùŋ-òr-yè  ‘He will use it to cut me away (i.e., eliminate me).’
áà-tù-dùŋ-òr-yè  ‘He used it to cut me away (i.e., eliminate me).’

A.2.2.3. AWAY and PASS

áà-y-kèn-òr-í  ‘The door will be closed against me (who am outside).’
k-áà-y-kèn-òr-í  ‘The door will be closed against me (who am outside).’
áà-y-kèn-òyyók-í  ‘The door was closed against me (who am outside).’

A.2.3. Combinations with Ventive (VENT)

A.2.3.1. VENT only

Non-perfect forms

áà-bèl-ó òlàlày (tèŋúddi)  ‘He will knock my teeth out (with a stick).’
áá-dûŋ-ú tôłcháňí  ‘He/she will cut me from the tree.’
áá-y-bôŋ-ú  ‘He will catch (i.e., support) me’
áá-y-pík-ó  šláláy  ‘My teeth will project (more than others).’
áá-y-pôt-ú  ‘He will call me.’
áá-y-shîr-ú  ‘He will call me (by crying).’
áá-y-tûk-ú  ‘He will wash me.’
áá-sûj-ú tôŋkáj árrî  ‘He will follow me using the other car’
áá-shûk-ú  ‘He will return me.’
áá-yyêr-ó  ênkêrây îlkêek  ‘My child will cook the medicine out of the herbs.’
áá-y-pâr-ú  ênkêrây îmbáà  kûmôk  ‘My child will ask many questions.’
áá-y-kûm-ú (têŋûďi)  ‘He will snatch me out (i.e., of a group that doesn’t want him to enter -- with a stick).’
k-áá-bêl-ó  šláláy (têŋûďi)  ‘He will knock my teeth out (with a stick).’
k-áá-dûŋ-ú tôłcháňí  ‘He/she cut me from the tree.’
k-áá-y-bôŋ-ú  ‘He will catch (i.e., support) me’
k-áá-y-pâr-ú  ênkêrây îmbáà  kûmôk  ‘My child will ask many questions.’
k-áá-y-pík-ó  šláláy  ‘My teeth will project (more than others)’
k-áá-y-pôt-ú  ‘He will call me.’
k-áá-y-shîr-ú (têmôwwó)  ‘He will call me (with a horn)’
k-áá-y-tûk-ú  ‘He will wash me.’
k-áá-sûj-ú tôŋkáj árrî  ‘He will follow me using the other car’
k-áá-shûk-ú  ‘He will return me.’
k-áá-yyêr-ó  ênkêrây îlkêek  ‘My child will cook the medicine out of the herbs.’
k-áá-y-kûm-ú (têŋûďi)  ‘He will snatch me out (i.e., of a group that doesn’t want him to enter -- with a stick).’

Perfect forms

áá-tê-bêl-w-á  šláláy  ‘He broke my teeth off.’
áá-tû-dûŋ-w-ó tôłcháňí  ‘He/she cut me from the tree.’
áá-y-bôŋ-w-á  ‘He caught (i.e., supported) me’
áá-y-kûm-w-ó  ‘He did snatch me out (i.e., of a group that didn’t want him to enter)’
áá-y-mîn-w-á  ênkêrây  ‘My child got lost.’  ‘My child went and reached his destination, but didn’t know where he was going.’
áá-y-pîk-w-á  šláláy  ‘My teeth projected out (more than others)’
áá-y-pôt-w-ó  ‘He called me.’
áá-y-shîr-w-á  ‘He called me (by crying)’
áá-y-tûk-w-ó  ‘He washed me.’
áá-tû-shûk-w-ó  ‘He did return me.’
áá-tê-bêl-ôt-w-á  šláláy  ‘They broke my teeth off.’
áá-y-mîn-ôt-w-á  înkêrâ  ‘My children got lost.’  or  ‘My children went and reached their destination, but didn’t know where they were going.’
k-áá-tè-bèl-òt-w-á ̄̄láláy  ‘They broke my teeth off.’

A.2.3.2. VENT and DAT

k-áá-y-tùk-w-òkī  ‘He will wash something for me.’

A.2.3.3. VENT and INST

áá-bèl-ùŋ-ýè ̄̄láláy èŋúðí  ‘He will use the stick to knock my teeth out.’
áá-y-kúm-ùŋ-ýè èŋúðí  ‘He will snatch me out (i.e., of a group that didn’t want him to enter) with a stick.’
áá-y-shùk-ùŋ-yè èmòwò ̄̄ ‘He will call me with a horn.’
áá-shùk-ùŋ-yè ènkárri èŋè  ‘He will use his car to return me.’
k-áá-bèl-ùŋ-ýè ̄̄láláy èŋúðí  ‘He used a stick to knock my teeth out.’
k-áá-y-kúm-ùŋ-ýè èŋúðí  ‘He will snatch me out (i.e., of a group that didn’t want him to enter) with a stick.’
k-áá-y-shùk-ùŋ-yè èmòwò ̄̄ ‘He will call me with a horn.’
k-áá-tè-bèl-ùŋ-yè èláláy èŋúðí  ‘He will use his car to return me.’
áá-y-šùk-ùŋ-yè ènkárri èŋè  ‘He used a stick to knock my teeth out.’
áá-y-kúm-ùŋ-yè èŋúðí  ‘He did snatch me out (i.e., of a group that didn’t want him to enter) with a stick.’
áá-y-shùk-ùŋ-yè èmòwò ̄̄ ‘He called me with a horn.’
áá-tù-shùk-ùŋ-yè ènkárri èŋè  ‘He did use his car to return me.’
áá-y-shùk-ùŋ-yè èmòwò ̄̄ ‘They called me with a horn.’
áá-sùj-ùŋ-yèk-í ènk’ài árrí  ‘I will be followed using another car’

A.2.3.4. VENT and PASS

Non-perfect forms

áá-bèl-òn-í ̄̄láláy  ‘I will be broken off in the teeth.’
áá-y-bùŋ-òn-í  ‘I will be caught (i.e., supported)’
áá-y-kúm-ùn-í  ‘I will be hit/snatched out of a group.’
áá-y-pùŋ-ùn-í  ‘I will be hit (how?)’
áá-shùk-ùn-í  ‘I will be returned.’
k-áá-bèl-òn-í ̄̄láláy  ‘I will be broken off in the teeth.’
k-áá-y-bùŋ-òn-í  ‘I will be caught (i.e., supported)’
k-áá-y-bùŋ-òn-í  ‘I will be caught (i.e., supported)’
k-áá-y-kúm-ùn-í  ‘I will be hit/snatched out of a group.’
A.2.4. Combinations with Antipassive (APAS)

A.2.4.1. APAS only

áá-dúŋ-ìshó énkéráy ‘My child is able to cut.’
káá-níŋ-ìshó énkí’tén ‘My cow can hear.’
áá-níŋ-ìshó énkéráy ‘My child is awake.’ ‘My child can hear.’
áá-tó-níŋ-ìshé énkéráy ‘My child has woken up from sleep.’ ‘My child is now obedient.’

A.2.4.2. APAS and INST

áá-dúŋ-ìshó-rè énkéráy énkálém ‘My child will cut with the knife.’
áá-y-pòt-ìshó-rè ‘He made me call’
áá-y-pòt-ìshó-rè ‘He will make me call’
áá-y-súl-ìshó-rè ‘He will make me be an excellent person’
áá-y-shòp-ìshó-rè énkéráy ïrópiání ‘My child will use money to dress.’
áá-y-túk-ìshó-rè énkéráy énkéráy ‘My child will use the basin to wash.’
ënúdí áá-màn-ìshó-rè énkéráy ‘My child will walk around with a stick.’

káá-dúŋ-ìshó-rè énkéráy énkálém ‘My child will cut with the knife.’
káá-y-pòt-ìshó-rè ‘He will make me call’
káá-y-súl-ìshó-rè ‘He will make me be an excellent person’
káá-y-shòp-ìshó-rè énkéráy ïrópiání ‘My child will use money to dress.’
k-áá-y-tük-íshó-rè ènkèrày ènkèrày ‘My child will use the basin to wash.’

áá-tú-dùŋ-íshó-rè ènkèrày ènkálém ‘My child cut with the knife.’
áá-y-sùl-ìshó-rè ‘He made me be an excellent person’
áá-y-sùl-ìshó-rè ‘He made me be an excellent person’
áá-y-shòp-ìshó-rè ènkèrày ɪròpìánì ‘My child used money to dress.’
áá-y-tük-íshó-rè ènkèrày ènkèrày ‘My child used the basin to wash.’

A.2.4.3. APAS, INST and PASS

áá-y-sùl-ìshó-rèkí ‘I was made to be an excellent person’
k-áá-y-sùl-ìshó-rèkí ‘I was made to be an excellent person’
áá-y-sùl-ìshó-rèkí ‘I will be made to be an excellent person’

A.2.5. Combinations with Dative (DAT)

A.2.5.1. DAT only

Non-perfect forms

áá-y-pàr-ákì ‘He will question for me.’
áá-bá-ákì ‘He will heal him for me.’
áá-bùl-òkì ‘he will pierce it for me.’
áá-dàñ-ákì èŋkèŋò ‘He will break an eye for me.’
áá-dùŋ-òkì ‘They/he will cut for me.’
áá-y-bòn-òkì ‘He will foretell for me.’
áá-y-gèr-òkì ‘He/they will write for me.’
áá-y-kèn-òkì ‘He/they will shut for me.’
áá-y-kèn-ákì ‘He/They will count for me.’
áá-y-kùm-òkì ‘He will hit for me’
áá-y-lèp-ákì ‘He will climb for me.’
áá-y-pùd-òkì ‘He will jump for me.’
áá-y-pùŋ-òkì ‘He will go out for me.’
áá-y-pòt-ákì ‘He will fill it up for me.’
áá-y-pòt-ù-pòt-ákì ‘He will fill it up for me a little at a time.’
áá-y-rìs-òkì ‘He will pierce someone for me.’
áá-y-sòj-ákì ‘He will wash for me.’
áà-y-shùr-ákì  ‘He/they will cry for me.’
áà-lèj-ákì  ‘He will lie, cheat for me.’
áà-lèp-òkì  ‘He will milk it for me.’
áà-mòr-ákì  ‘He will plaster for me’
áà-pèj-òkì  ‘He will burn it for me.’
áà-pùr-òkì  ‘He will steal for me’
áà-ràŋ-ákì  ‘He will sing for me’
áà-rùm-òkì  ‘He will prod someone for me.’
áà-rùm-ákì  ‘He will visit a sick person for me.’
áà-sòr-òkì  ‘He will paint for me’
k-áà-àr-ákì mày-bòŋ-áy èldê tọ̀njáni  ‘He will force me to support this person.’
k-áà-bà-ákì  ‘He will heal him for me.’
k-áà-bèl-ákì  ‘He will break it for me.’
k-áà-bùl-òkì  ‘he will pierce it for me.’
k-áà-dàŋ-òkì èŋkèŋò  ‘He will break an eye for me.’
k-áà-dỳà-ákì  ‘He will curse/insult for me.’
k-áà-dùŋ-òkì  ‘They/he will cut for me.’
k-áà-dòt-ákì  ‘Someone will choose for me’
k-áà-y-brà-òkì  ‘He will foretell for me.’
k-áà-y-èr-òkì  ‘He/they will write for me.’
k-áà-y-èn-òkì  ‘He/they will shut for me.’
k-áà-y-èn-ákì  ‘He/They will count for me.’
k-áà-y-kùm-òkì  ‘He will hit for me’
k-áà-y-lèp-ákì  ‘He will climb for me.’
k-áà-y-pàr-ákì  ‘He will question for me.’
k-áà-y-pìd-òkì  ‘He will jump for me.’
k-áà-y-pùr-ànì  ‘he will face someone for me.’
k-áà-y-pùŋ-òkì  ‘He will go out for me.’
k-áà-y-rùs-òkì  ‘He will pierce someone for me.’
k-áà-y-shùr-ákì  ‘He will cry for me.’
k-áà-lèj-ákì  ‘He will lie, cheat for me.’
k-áà-lèp-òkì  ‘He will milk it for me.’
k-áà-pèj-òkì  ‘He will burn it for me.’
k-áà-pùt-ànì  ‘He will keep close to something on my behalf.’
k-áà-pùr-òkì  ‘He will steal for me’
k-áà-rùm-òkì  ‘He will prod someone for me.’
k-áà-sòr-òkì  ‘He will paint for me’

Perfect forms

áà-tù-duŋ-òk-ó  ‘He has given/cut part of it for me.’
áà-ń-ńl-ák-á  ‘He broke it for me.’
áà-y-brà-òk-ó  ‘He foretold for me.’
áà-y-gèr-òk-ò ‘He did write for me.’
áà-y-gis-òk-ò ‘He jumped for me.’
áà-y-kèn-òk-ò ‘He did shut for me.’
áà-y-kèn-àk-à ‘He did count for me.’
áà-y-kùm-òk-ò ‘He did hit me’
áà-y-lèp-àk-à ‘He did climb for me.’
áà-y-pàr-àk-à ‘He did question for me.’
áà-y-pìd-òk-ò ‘He did jump for me.’
áà-y-pùn-òk-ò ‘He did go out for me.’
áà-y-shùr-àk-à ‘He did cry for me.’
áà-tè-lèj-àk-à ‘He did lie, cheat for me.’
áà-tà-lèp-òk-ò ‘He did milk it for me.’
áà-tì-mùr-àk-à ‘He plastered for me’
áà-tà-pèj-òk-ò ‘He did burn it for me.’
áà-tù-pùrr-òk-ò ‘He did steal for me’
áà-tì-sìr-àk-à ‘He did paint for me’
áà-tà-gòr-òk-ò ‘He/she strangled for me.’

Plural perfect forms
áà-tù-duŋ-òk-ìt-ò ‘They have cut for me.’
áà-tì-gùl-àk-ìt-à ‘They broke it for me.’
áà-tà-gòr-òk-ìt-ò ‘they strangled for me’
áà-y-gèr-òk-ìt-ò ‘They did write for me.’
áà-y-gìs-òk-ìt-ò ‘They jumped for me.’
áà-y-kèn-òk-ìt-ò ‘They did shut for me.’
áà-y-kèn-àk-ìt-à ‘They did count for me.’
áà-y-shùr-àk-ìt-à ‘They did cry for me.’

A.2.5.2. DAT and INST

áà-duŋ-òkíŋ-yè ọ̀lpáyìàì àìnkírí èìnkáìlém ‘The man will use the knife to cut meat for me.’
áà-y-lèp-àkíŋ-yé ‘He has used it to climb it for me.’
áà-tù-duŋ-òkíŋ-yè ‘He has cut for me using ...’
áà-y-lèp-àkíŋ-yè ‘He will use it to climb it for me.’

A.2.5.3. DAT and MID

k-áà-y-bèl-òkíŋ-ò ọ̀lcháì ‘The tree will fall onto me.’
áà-tà-gòr-òkíñ-è  ‘He became angry at/for me.’
áà-y-bèl-òkíñ-è ñchánì ‘The tree fell onto me.’
áà-tà-gòr-òkíñ-òt-è ‘They became angry at/for me.’

A.2.5.4. DAT and PASS

Non-perfect forms

áà-dùŋ-òkíñ-i ènkìñŋjó ‘The meat will be cut for me.’
áà- gái-òkíñ-i ñlpáékì ‘The maize will be broken for me.’
áà-gòr-òkíñ-i ènkìné ‘The goat will be strangled for me.’
áà-y-gís-àkíñ-i ñlpánk’á ‘My knife will be cut/sliced.’
áà-y-kúm-òkíñ-i èngümótó tènàùñìr. ‘He will make a hole for me with a sharp post’
k-áà-dùŋ-òkíñ-i ènkìñŋjó ‘The meat will be cut for me.’
k-áà- gái-òkíñ-i ñlpáékì ‘The maize will be broken for me.’
k-áà-gòr-òkíñ-i ènkìné ‘The goat will be strangled for me.’
k-áà-y-gís-àkíñ-i ñlpánk’á ‘My knife will be cut/sliced.’
k-áà-y-kúm-òkíñ-i èngümótó tènàùñìr. ‘He will make a hole for me with a sharp post’

Perfect forms

áà-tù-duŋ-òk-òk-ì ‘I was cut(i.e., something was cut for me)’
áà-tí-gîl-àk-àk-ì ñlpáékì ‘The maize was broken for me.’
áà-tà-gòr-òk-òk-ì ‘It was strangled for me.’
áà-y-gís-àk-àk-ì ñlpánk’á ‘My knife was cut/sliced.’
áà-y-kúm-òk-òk-ì èngümótó tènàùñìr. ‘He made a hole for me with a sharp post’
k-áà-y-gís-àk-àk-ì ñlpánk’á ‘My knife was cut/sliced.’
k-áà-y-kúm-òk-òk-ì èngümótó tènàùñìr. ‘He made a hole for me with a sharp post’

A.2.6. Combinations with Instrumental (INST)

A.2.6.1. INST only

Non-perfect forms

áà-sùj-yè ènkáy árrì ‘He will follow me using the other car’
áà-bà-yè ‘He last saw me.’
áà-dùn-yè táátá ‘The man will use the knife to cut today.’
áà-dùt-yè īlkūlik’āy ‘Someone will choose me compared to the others.’
áà-y-gèr-yè ‘He will make me write.’
áà-y-kèp-yè ‘He will make me shut it.’
áà-y-kèp-yè ‘He will make me count it.’
áà-y-lèp-yè ‘He will make me climb’
áà-y-rràg-yè ‘He will lay me down’
áà-y-shīr-yè ‘He will make me cry.’
áà-pèt-yè ‘He will keep close to something for me.’

káà-bà-yè ‘He last saw me.’
káà-y-gèr-yè ‘He will make me write.’
káà-y-kèp-yè ‘He will make me shut it.’
káà-y-kèp-yè ‘He will make me count it.’
káà-y-lèp-yè ‘He will make me climb’
káà-y-rràg-yè ‘He will lay me down.’
káà-y-shīr-yè ‘He will make me cry.’
káà-sùj-yè ēnkày árri ‘He will follow me using the other car’
máà-bà-yè ‘He has not seen me yet.’

Perfect forms

áà-tà-bòl-yè ‘He used it to open me’  ‘He used me to open it.’
áà-tù-dùn-yè ‘He cut me using it.’
áà-tà-gòr-yè ‘He/et al. strangled me (using/for ...).’
áà-tà-gòr-yè ोłgòsòy ‘She strangled me using the rope.’
áà-y-gèr-yè ‘He made me write.’
áà-y-kèp-yè ‘He did make me shut it.’
áà-y-kèp-yè ‘He did make me count it.’
áà-y-lèp-yè ‘He did make me climb’
áà-y-rràg-yè ‘he laid me down’
áà-y-shīr-yè ‘He did make me cry.’
áà-tò-pòrr-yè ‘He/she loved me because of ...’ / ‘He/she used something to love me.’
áà-tà-gòr-yè ‘They strangled me (using/for ...).’
áà-y-gèr-yè ‘They made me write.’
áà-y-kèp-yè ‘They did make me shut it.’
áà-y-kèp-yè ‘They did make me count it.’
áà-y-lèp-yè ‘They did make me climb’
áà-y-shīr-yè ‘They did make me cry.’
áà-tò-pòrr-yè ‘They loved me because of ...’
A.2.6.2. INST and MID

k-áá-ăr-à-ré  ‘He will fight with me.’
k-áá-wواس-ارة-ةَنَّى ‘The girl is proud of me.’
áá-dùn-ò-re ènjàlé ‘My knife was used to make the meat cut.’
áá-tá-dá-á-rè ‘He played with me.’

A.2.6.3. INST and PASS

áá-dùn-yèk-ì ènjàlé ‘The knife will be used to cut me.’
áá-gôr-yèk-ì ‘Someone will use it to strangle me.’
k-áá-dùn-yèk-ì ènjàlé ‘The knife will be used to cut me.’
k-áá-gôr-yèk-ì ‘Someone will use it to strangle me.’
k-áá-shèt-yèk-ì ‘I (i.e., my hair) will be plaited with it.’
áá-tù-dùn-yèk-ì ènjàlé ‘The knife was used to cut me.’
áá-tá-gôr-yèk-ì ‘I was used to strangle.’
áá-tè-pèt-yèk-ì ‘I was kept close to.’
áá-tù-sùj-yèk-ì ènjà árrí ‘They followed me using the other car.’

A.2.7. Middle (MID)

áá-màn-á ‘I live ....'(i.e., ...here)’
k-áá-dip-á ènkèrày ‘My child is dependable/helpful.’
áá-dùn-ò ènkèrày/inkéřá ‘My child/ren is/are cut.’
áá-gôr-ò ènkènè/ènkènèjì ‘My goat/s is/are (being) strangled.’
áá-tà-gôr-é ènkèrày ‘My child became/was angry.’
áá-tò-řikín-è ‘I forgot.’ (lit. it/they forgot me)’
áá-tù-dùn-é ènkèrày ‘My child has become cut.’ (on the flesh, completely or split into two)’
áá-tà-gôr-ót-è ‘My children were/became angry.’
áá-tò-řikín-ót-è ‘They have forgotten me.’
A.2.8. Passive (PASS)

Non-perfect forms

áá-ăr-ì ènkìnè ‘(They) will kill my goat.’
áá-dámò̀n-ì ‘I will be remembered.’
áá-gòr-ì ènkìnè táysè̀ ‘My goat will be strangled tomorrow.’
áá-nò̀rr-ì ‘People love me.’
áá-yá-y ‘I will be taken.’ / ‘I will be married.’
áá-tòn-ì ‘(e.g. My cows) will stay.’
k-áá-tâ-y ‘I am there.’
k-áá-yà-ytâ-y ‘I’m being had/owned.’
k-áá-dâmò̀n-ì ‘I will be remembered.’
k-áá-gòr-ì ‘I will be strangled.’
k-áá-yìn-ì ‘I will be born.’
k-áá-tùm-ì ‘They will get me (e.g., I’m lost, and someone is looking for me)’

Perfect forms

áá-tà-bà-àk-ì ‘I was healed.’
áá-tù-bùl-òk-ì ‘I was pierced.’
áá-tà-dámw-àk-ì ‘I was remembered.’
áá-tà-dàp-àk-ì ènkòǹò ‘My eye was broken’
áá-tù-duǹ-òk-ì ‘I was cut.’
áá-tà-gòr-òk-ì ‘I was strangled.’
áá-y-àr-àk-ì ‘I was questioned.’
áá-y-ùs-òk-ì ‘I was pierced.’
áá-y-sùj-àk-ì ‘I was washed.’
áá-tù-nìǹ-òk-ì ‘I was heard.’
áá-tà-nò̀rr-àk-ì ‘I was loved.’ / ‘People have started loving me.’
áá-tù-rùm-òk-ì ‘I was prodded.’
áá-tù-ròm-àk-ì ‘I was visited (while sick).’
k-áá-tè-dyà-àk-ì ‘I was cursed/insulted.’
k-áá-tù-dùt-àk-ì ‘I was chosen.’
k-áá-y-ùr-àk-ì ‘I was faced.’

áá-nìn-ìtò-y ‘I am being heard. (PROG)’ ‘People are hearing me.’
áá-nò̀rr-òn-ì ‘(They) will love me.’ (but maybe don’t now)
A.2.9. Perfect (PF)

áá-tà-bà-á ‘He healed me.’
áá-tà-dàmw-á ‘He/she has remembered me.’
áá-tò-dòr-ò ënkërây ‘My child has become red.’
áá-tù-duŋ-ò yyéyyóó ‘My mother cut me.’
áá-tà-gòr-ò ‘He has strangled me.’
áá-y-kâš-á ënkërây ‘My child became/is better.’
áá-y-mùn-á ënkërây ‘My child is lost.’
áá-y-rùt-ò ënkërây ‘My child was frightened.’
áá-tò-nüŋ-ò ‘He/she has heard me.’
áá-tò-nòrr-á ‘He/she have loved me.’
k-áá-tà-gòl-ó ënkâlém ‘My knife became hard’
áá-tà-gòr-ò ënkërây ñlmâŋûntá ‘The child has strangled my enemy.’
áá-tà-gòr-ò ’nkérâ ‘My children have strangled ...’
áá-táá ënkînë ònkîrì ‘My goat has become meat.’ (3>1-be.PF)
áá-tà-dàm-òt-w-á ‘They have remembered me.’
áá-tò-dòr-ùt-à ònkër’á ‘My children became red.’
áá-tù-duŋ-ò ‘The warriors cut me.’
áá-y-sùj-à ‘They washed me.’
áá-tò-nüŋ-ò ‘They have heard me.’
áá-tò-nòrr-á ‘They have loved me.’
k-áá-tò-nüŋ-ò ‘They have heard me.’

A.2.10. Progressive (PROG)

áá-bàk-ìtà ‘He is making me heal.’
áá-duŋ-ìtò ënkërây ‘The child is cutting me.’
áá-y-rùt-ìtò ënkërây ‘My child is frightened now.’
áá-y-rùt-ìtò ënkërây ‘He is following me.’
k-áá-duŋ-ìtò ënkërây ‘The child is cutting me.’
k-áá-màn-ìtà ënkërây ‘My child is moving about.’

A.2.11. Inceptive (INCEP)

áá-dòr-ù ënkërây ‘My child will become red.’
áá-y-kâš-ù ënkërây ‘My child will become more better.’
áá-y-lâsh-ù ënkërây ‘My child will become proud.’
áà-y-mûn-û ènkèrày ‘My child will get lost (on the way).’
k-áà-gôl-û ènkàlèm ‘My knife will become hard’
k-áà-y-kâsh-û ènkèrày ‘My child will become (more) better.’
k-áà-y-làsh-û ènkèrày ‘My child will become proud.’
k-áà-pîr-û ènkèrày ‘My child will become fat.’
k-áà-rôk-û ènkèrày ‘My child will became black.’
áà-þòrr-û ‘They started loving me (i.e., but don’t yet)’
k-áà-dôr-û ènkîlànì òlèn ‘My clothes will become very red.’
k-áà-þòrr-û ‘They started loving me (i.e., but don’t yet)’

A.2.12. Data with Morphologically Simple Stems

k-áà-y-shû ènkèrày ‘My child is alive.’
áà-ákkû ènkèrày ènkîtèn ‘My child will become a cow.’
áà-á-rè ènkìnè ‘The goat will kill me.’
áà-bàrn ‘He/she will shave me.’ or ‘The child will shave my head.’
áà-dô ènkèrày ‘My child is red.’
áà-dûn ènkèrày ènkîrînò ‘My child will cut the meat.’
áà-dûn ọlmòrrànì ọlchànì ‘My warrior will cut the tree.’
áà-gîrà àyèbèl ‘He is making me break it.’
áà-gîrà àytùdùn ‘He is making me cut.’
áà-y-kàsh ènkèrày ‘My child is better.’
áà-y-mûn ènkèrày ‘My child will be lost.’
áà-y-rût ènkèrày ‘My child will become frightened.’
áà-y-rrâg ènkàyná ‘My arm is lying down.’
áà-kwèt ènkîtèn ‘My cow will run.’
áà-mù ènkàyná ànj. ‘My arm hurts.’
áà-tùm ‘He will meet me.’
k-áà-bîk èmpùús têné ‘My cat will stay here.’
k-áà-dîl ‘He will see me.’
áà-dùtâ ‘Someone will choose me’
k-áà-y-mûn ènkèrày ‘My child will be lost.’
k-áà-y-nèpò ‘He will meet me.’
k-áà-y-sôm ‘He will make me read (i.e., using his money)’
k-áà-y-ù ‘She will give birth to me.’
k-áà-tùm ‘He will meet me.’
k-áà-yyèr ‘He will cook me.’
áà-ádô ènkèrày ‘My child is tall.’
áà-ákkû ènkèrày ènkîtèn ‘My child will become a cow for my benefit.’
áà-úî ènkàjì èmbátà ólkhèjó ‘My home is by the river.’
áà-bàrn ‘They will shave me.’
k-áà-bàrn ‘They will shave me.’
áà-ämp 'He will refuse me.'
áà-dàmò ‘They/he/she (will) remember me.’
áà-y-stú ènkerày ‘My child is alive.’
áà-nôr ‘They/he/she loves me.’
k-áà-àkó nànù ‘He will become me.’
k-áà-dàmò ‘They/he/she (will) remember me.’
áà-pîr ñtärè ‘My sheep are fat.’

A.3. Second Person Plural

These forms almost all have a tone pattern which is high up to the last mora, which is low. The penult High mora is depressed to a phonetic mid pitch before a word final Low, when it occurs phrase finally (Rasmussen and Payne, in review). There are other tone patterns for second person plural verbs, though, and it is not clear what drives the consistency of the tone patterns we find (i.e., with penultimate mid pitch), and what allows for exceptions.

A.3.1. With Class I Causative (CAUS)

éki-ntá-dám-îshô-shô ‘You (pl) will make me think.’
i-ntá-gôr-ô-rô ‘You (pl) will use it to strangle yourselves.’
i-ntô-nôrr-à-rrà ‘You (pl) will make each other love.’
i-ntô-nîn-ôt-ê ‘You (pl) made each other hear it.’
i-ntô-nôrr-àt-ê ‘You (pl) made each other love something.’
i-ntô-nôrr-í-nôrr-ê ‘You (pl) will make him love.’
éki-ntô-nîn-í-nîn-ê ‘You (pl) will make me hear it.’
éki-ntô-nôrr-í-nôrr-ê ‘You (pl) will make me like/love it.’
kî-ntá-kwêp-ê ‘You (pl) made me laugh.’
kî-ntô-nôrr-’ê ‘You (pl) have made me love it.’

A.3.2. Motion Away (AWAY)

í-bwáy-â-yà ‘You (pl) go on shouting.’
í-púá-yá-yá  ‘You (pl) will go roaming around aimlessly.’
í-tá-ŋór-ó-yt-yè  ‘You (pl) threw (a spear, away)’

A.3.3. Ventive (VENT)

í-ŋórr-á-yú-yú  ‘You (pl) are lovable.’ or
í-ŋórr-á-yú-yú

A.3.4. Antipassive (APAS)

í-bám-íshó-shò  ‘You (pl) will shave.’
í-gór-íshó-shò  ‘You (pl) strangle.’
í-ŋórr-íshó-shò  ‘You (pl) will love.’
í-tá-ráŋ-ísh-ôt-è  ‘You (pl) did singing.’

A.3.5. With Dative (DAT)

í-duŋ-ókí-ki  ‘You (pl) will cut for him.’
í-gór-ókín-ó-nò  ‘You (pl) will be angry at...’
ki-duŋ-ókín-yé-nyè  ‘You (pl) will cut for me using...’
í-duŋ-ókín-ó-nò  ‘You (pl) will cut for each other.’
í-tá-gór-ókín-ôt-è  ‘You (pl) became angry at him.’

A.3.6. Instrumental (INST)

í-bá-yé-yè  ‘You (pl) last sighted them.’ (non-perfect form)
i-bá-yé-yè  ‘You (pl) last sighted us.’ (non-perfect form)
ē-kí-bá-yé-yè  ‘You (pl) last sighted me.’ (non-perfect form)
kí-tá-gór-yé  ‘You (pl) strangled me using/for...’

A.3.7. Middle (MID)

í-år-årà  ‘You (pl) will fight (reciprocal)’
i-bám-år-nà  ‘You (pl) will shave yourself/be shaved.’
i-dámón-år-nò  ‘You (pl) will remember each other.’
1-gôr-ô-rò  ‘You (pl) will strangle each other.’ / ‘You (pl) become angry (habitual)’
1-rikîn-ô-nô  ‘You (pl) will forget.’
1-shîp-á-p’á  ‘You (pl) are happy today.’
1-tâ-gôr-ô-tê  ‘You (pl) became angry.’ / ‘You (pl) strangle each other.’
1-rûr-âtê  ‘You (pl) are (already) asleep.’
1-tô-nôrr-âtê  ‘You (pl) have loved each other.’
1-tô-rikîn-ôtê  ‘You (pl) forgot.’
1-nôrr-á-yû-yû  ‘You (pl) will love each other.’

A.3.8. Perfect (PF)

kî-tâ-dâm-ôt-w-â  ‘You (pl) have remembered me.’
ki-tâ-gôr-ô  ‘You (pl) strangled me.’
i-sûj-á  ‘You (pl) washed it.’
kî-sûj-á  ‘You (pl) washed me.’
i-tô-nîñ-ô  ‘You (pl) have heard.’
i-tô-nôrr-á  ‘You (pl) have loved.’
i-tô-sûj-á  ‘You (pl) followed him.’
êkî-sûj-á  ‘You (pl) washed me.’

A.3.9. Progressive (PROG)

î-bôl-ôtô  ‘You (pl) are opening it.’
i-rrâg-ítâ-tà  ‘You (pl) are lying down.’
i-nîñ-ôtô  ‘You (pl) are hearing.’
i-sûj-ítâ-tà  ‘You (pl) are following him.’

A.3.10. Inceptive (INCEP)

î-ádôr-û-rû  ‘You (pl) will become tall.’
î-nôrr-ô-rû  ‘You (pl) will become loving.’
êkî-nôrr-û-rû  ‘You (pl) will love me.’

A.3.11. Roots Only

î-ádô-dô  ‘You (pl) are tall.’
Infinitive forms in Maa can be described as verbs that are not inflected for person of subject or object, though they still vary for number of the subject, and they may still take other affixes. Infinitive tone has been described clearly by TM, with singular having “the same shape as the 1st person sing. of the Present Tense (non-perfect aspect), except that its high tone is on the last syllable.” (p217) and plural having a long prefix ád-, which has a high-low pitch, with the remainder of the word being low (p218). These infinitive forms are also the citation forms of the verbs.

à-gór          ‘to strangle’
à-ákò          ‘to become’
à-dàm-ìshò      ‘to think’
à-dùng-ìshò     ‘to be able to cut’
à-gòr-ìshò      ‘to strangle’
à-nìn-ìshò-yú   ‘to learn a lesson’
áà-dùŋ-ù-dùŋ ‘to cut into pieces’

Infinitives may also follow an inflected auxiliary/serial verb (Hamaya 1993, TM:96-102).

áàŋgírá á-ŋtè-bél ‘He is making me break it.’
áŋgírá á-ðùŋ-yè ènkálém ‘I’m using the knife to cut it.’
ègírá á-gòr-yè ‘He is using it to strangle.’
ègírí‘áy áà-dùŋ-yè ènkálém ‘The knife is being used to cut it.’
ègírí‘áy áá-shèt-yè ṭì́ŋàpètà ‘The posts are being used to build.’
áàŋgírá á-ŋtí-dùŋ ‘He is making me cut.’
áyètèr‘wá á-nòrr-ò ‘I have started loving.’
áyètèr‘wá á-ńíŋ-íshò-yú ‘I have started hearing.’ (i.e., can now hear)’
áyètèr‘wá á-ńíŋ ‘I’ve started learning.’
áyèdípà á-tò-ńòrr-à ‘I finished loving.’

A.5. Imperatives

For imperatives, I have no insights past what TM have already said (pp73-77, etc.), though I do have the following data.

é-ntà-gòr-öttó ‘You strangle each other!’
é-ntà-dàmótó ‘You (pl) remind him/her/them/us!’
í-ntà-dàmò ‘You.SG remind him/her/them/us!’
í-ntù-dùŋ-ò ènkálém òlchànì ‘You cause the knife to cut the tree!’
é-ntù-dùŋ-ò ènkálém òlchànì ‘(You all) make the knife cut the tree!’
é-ntà-gòr-yék-ì ‘(2pl) Strangle me using...!’
tí-ɡírá-yú ‘Keep silent!’
é-ntù-dùŋ òlchànì ‘Cut the tree!’
APPENDIX B

NON-PERFECT TONE PATTERNS BY AFFIX

Chapter VI took an admittedly naïve view toward the suffixal contribution to the tone of the words, focusing instead on the variation by person prefix. This appendix gives data showing tone on the remainder of the word, with tone patterns for forms with each of the affixes when not in combination with other affixes. Rather than make many firm hypotheses at this time about underlying forms (which would only have to be retracted in the face of the data in Appendix C), this appendix merely lists the data that I have collected and checked, with a minimum of commentary.

Due to the difficulty emerging from the combination of affixes for the tone analysis, the following data is limited to that with no more than one suffix or the Class I causative (CAUS), and is grouped into sections by those affixes. The heading of each section gives the name and gloss of the affix, followed by the stem tone pattern found on verb forms with just that affix. The stem tone pattern given will be the stem tone, i.e., the tone which is constant in both first and third person forms (from Chapter VI). Where the distinction between morphological Class I and Class II affects the whole word tone, the words are given in two distinct sections.
Within each section, data are arranged into two groups. The first group includes those with third person subjects. The next group includes those with subject prefixes on initial-high verbs, that is, those subject prefixes that are lexically unspecified (Chapter VI), given according to the bound argument pronoun. For the sake of simplicity, the remaining person prefixes are not included in this appendix (see Appendix A for some data). In each section of verb forms that differ only by root, the first is parsed and glossed, while the remainder is parsed only. Each has its own free translation.

B.1. The Class I Causative (CAUS)

The Class I Causative stem tone pattern is High-Low. The form of the prefix is -ṭV, according to the vowel harmony described in TM:56,146. Recall from Chapter V that the Class I Causative prefix derives a Class II stem. It would thus seem reasonable that the stem tone pattern on stems with only the causative is like that on simpler Class II stems: High-Low.

B.1.1. Third person subject (3) forms:

<table>
<thead>
<tr>
<th>Verb</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>è-ytá-dål</td>
<td>'He will make him play.'</td>
</tr>
<tr>
<td>3-CAUS-play</td>
<td></td>
</tr>
<tr>
<td>è-ytá-dò</td>
<td>'He will make him red.'</td>
</tr>
<tr>
<td>è-ytá-dûŋ</td>
<td>'He will make him cut it.'</td>
</tr>
<tr>
<td>è-ytá-gîr</td>
<td>'He will make him silent.'</td>
</tr>
<tr>
<td>è-ytá-gòr</td>
<td>'He will make him angry.'</td>
</tr>
<tr>
<td>è-ytá-lâl</td>
<td>'He will make it wide.'</td>
</tr>
<tr>
<td>è-ytá-lûb</td>
<td>'He will make him greedy.'</td>
</tr>
<tr>
<td>è-ytá-mêr</td>
<td>'He will make him drunk.'</td>
</tr>
<tr>
<td>è-ytá-nâŋ</td>
<td>'He will make it soft.'</td>
</tr>
<tr>
<td>è-ytó-nîŋ</td>
<td>'He will make him hear it.'</td>
</tr>
</tbody>
</table>
è-ytò-ʃòr  'He makes him love (habitual)'
è-ytì-ŋâd  'He will make him proud.'
è-ytì-sìlp  'He will make him happy.'
è-ytá-wwàs  'He will make him proud.'

exception:
è-ytò-rík’ínó  'He will make him forget.'

B.1.2. Non-third Person Forms with Initial Surface High:

á-ytò-nìŋ  ‘ıntáy  'I will make you (pl) hear it.'
1SG-CAUS-hear  you.pl
í-ntò-ʒòrr  'You will make him love it.'
2-CAUS-love
í-ntò-ʃéò  'You will make him tall.'

exceptions:
á-ytá-d’ámó  ‘ıntáí  'I will remind you (pl).'
1SG-CAUS-remember
áá-ytá-d’ámó  'I will remind you (sg).'
1>2-CAUS-remember

B.2. The Motion Away Suffix (AWAY) -- Class I

The stem tone pattern for -áá-/óó AWAY, which includes meanings of both
motion away from the speaker and iterative action, is High-Low for Class I roots. This
data would lead to an initial hypothesis of a HL tone pattern for this affix.
B.2.1. Third Person Subjects

è-bèl-áà  'She will break them (one at a time).'
3-break-AWAY
è-dèl-áà  'He will play going away.'
è-duŋ-óò ènkèrāi ìnkújit  'The child will cut the grass.' (04.161)
è-ǧir-áà élóytō  'He will be silent as he goes.'
è-nîŋ-óò  'He will hear it, wherever it is.'
è-ŋɔrr-áà  'He/she accepts it/will accept it.'
è-ņud-áà  'He will be proud while going.'
è-nàn-áà  'They are soft, one after another.'

B.2.2. Non-third Person Forms with Initial Surface High:

á-ŋɔrr-áà  'I will agree with it.'
1SG-love-AWAY
á-dás-áà kòná kíshú  'I will milk those cows (one at a time).'
í-bárn-áà  'You go around shaving people.'
2-shave-AWAY
í-bá-yá  'You (sg) will arrive there.'

B.3. The Motion Away Suffix (AWAY) -- Class II

Class II roots with AWAY have a High-Downstepped High stem tone pattern. This data might lead to an initial hypothesis of a $H^1H$ (i.e., two distinct H's in succession) tone pattern for this affix, though clearly there is some interaction from the Class II stems (see Section B.17).

B.3.1. Third Person Subjects

è-y-bük-ó'ó  'He will pour it out.'
3-II-pour-AWAY
è-y-dòn-ố'ó
He will beat them one at a time.
è-y-gèr-ố'ó
He will write them one at a time.
è-y-kèn-ố'ó
He will close it against the outside.
è-y-nòs-á’á
He will eat it as he goes.
è-y-rrít-á’á
He/they will look after cows as they go.
è-y-tûkw-ố'ó
He will wash them, one at a time.

B.3.2. Non-third Person Forms with Initial Surface High:

á-y-rrág-á’á
'I will sleep from one house to the next.'
1SG-II-sleep-AWAY
á-y-rrít-á’á
'I will look after them (cows) as they go.'
í-ô-súd-ố’ó (kèwán)
'You will hide (yourself).'
2-II-hide-AWAY (self)
í-íd-á’á
'You will jump from place to place.'

B.4. The Ventive Suffix (VENT) – Class I

Class I roots with the Ventive -ô(n) have a High stem tone pattern. That is, there is a final High tone for third person verbs, and a high and level tone pattern in 1SG forms, where the one High tone is spread to adjacent empty TBU’s (see Chapter VI, examples 55i and 55j). This data would lead to an initial hypothesis of a H stem tone pattern for this affix.

B.4.1. Third Person Subjects

è-bàrn-ô
'He will shave.'
3-shave-VENT
è-bûk-ú
'He will pour it out.'
è-dàl-ô
'He will play coming.' or 'It is sunny/hot out.'
è-dûn-ú ènkèràí ènûdî ... 'The child will cut a stick from ...'
è-lôt-ú
'My goat will come to bleat.'
è-lûb-ú èlôtú
'He will pierce it as he is coming.'
è-nǐŋ-ú  'He will understand.'
è-ŋįd-ó  'He will be proud when coming.'
è-wwàs-ó è-lôt-ú  'He will become proud as he was coming.'

B.4.2. Non-third Person Forms with Initial Surface High:

á-ár-ó ènkítēŋ ǎği
1SG-beat-VENT
'i will beat the cow into the house.'
á-bá-w
'i will arrive.'
á-sůj-ó
'i will follow him.'
á-yyěr-ó
'i will cook (herbs) to get the medicine out of them.'

B.5. The Ventive Suffix (VENT) – Class II

The Ventive suffix for Class II roots also has the segmental form -ά(ή), but the stem tone pattern is High-Low. There is some variation among the few first person forms in Class II (not all were sufficiently clear to be included here), so there is not sufficient data to be sure of this surface form, though the present data might lead to an initial hypothesis of a HL stem tone pattern for this affix on Class II stems.

B.5.1. Third Person Subjects

è-y-bál-ó
3-II-be.visible-VENT
'it will be visible as it comes.'
è-y-döŋ-ú
'He will beat it off.'
è-y-gěr-ú
'He will write it from (e.g., from a reference or photocopying).''
è-y-kěn-ú
'He will close them in this diretion.'
è-y-nōs-ú
'He will eat it coming.'
è-y-pōt-ú
'He will call him to come.'
è-y-tūk-ú
'He will wash it.'
è-y-rrit-ú ̀̊înkīshú
'He/they will look after cows as they come.'
B.5.2. Non-third Person Forms with Initial Surface High:

á-y-pár-ò
ISG-II-wash-VENT

áá-y-túk-ù
1>2-II-wash-VENT

'I will ask many questions.'

'I will wash you.'

B.6. The Antipassive Suffix (APAS)

The Antipassive -\textit{tsh}o(r) stem tone pattern is High-Downstepped High-Downstepped High for both Class I and Class II verbs. This data would lead to an initial hypothesis of a H!H tone pattern for this affix, with the word-final H lexically associated to the \textit{i} (penultimate mora, with the tone then spread to the ultimate mora).

B.6.1. Third Person Subjects

è-àŋt-\textit{t}ishó
3-respect-APAS

'He is fond of respecting.'

è-dám-\textit{t}ishó

'He will think.'

è-dás-\textit{t}ishó

'He will milk by the mouth.'

è-dúŋ-\textit{t}ishó ènkèrây

'The child is cutting / able to cut without using anything.'

è-gór-\textit{t}ishó

'He will strangle.'

è-y-bón-\textit{t}ishó

'He will foretell.'

è-y-dón-\textit{t}ishó

'He pounds.'

è-y-gér-\textit{t}ishó

'He writes.'

è-y-kén-\textit{t}ishó

'He is closing.'

è-y-mán-\textit{t}ishó

'He always walks around.'

è-y-nós-\textit{t}ishó

'He will eat.'

è-y-ŋúl-\textit{t}ishó

'He is the person who stirs.'

è-y-ŋór-\textit{t}ishó

'He will look.'

è-y-pót-\textit{t}ishó ţlpáyyànî

'The men will call.'

è-y-rřít-\textit{t}ishó

'He is good at looking after cows.'

è-łéj-\textit{t}ishó

'He is a liar.'

è-núŋ-\textit{t}ishó

'He can hear.' 'He is awake.'

è-núŋ-\textit{t}ishó

'He is awake.'
è-řikín-ìshó  'He/it is forgettable.' (NOT ‘forgetful’)

**B.6.2. Non-third Person Forms with Initial Surface High:**

á-dás-ìshó  'I am milking. (...with a calabash)'
1SG-milk-APAS
á-gór-ìshó  'I strangle.'
á-nín-ìshó  'I can hear.'  'I am awake.'
á-áp-ìshó  'I wait.'
á-áńit-ìshó  'I respect (people)'

í-gór-ìshó  'You (sg) strangle.'
2-milk-APAS

**B.7. The Dative Suffix (DAT) – Class I**

Certain roots (e.g., *la* 'miss') take the suppletive form -ìki for the Dative, rather than the more common -ak/-oki. The stem tone pattern with the Dative suffix is High-Low for Class I roots. This data would lead to an initial hypothesis of a HL tone pattern for this affix.

**B.7.1. Third Person Subjects**

è-lá-ykì  'He will miss it for him.'
3-miss-DAT
è-nín-ókì  'He will agree with him.'
è-wwàs-akì  'He will become proud on behalf of him.'
è-bèl-akì  'She will break it(stick) for him.'
è-bùk-ókì  'He will pour it into it.'
è-dál-ákì  'He will play for him.'
è-dùn-ókì ènkéráy ...  'He will cut it for him.'
è-gúl-ókì  'She will break it for him.'
è-gór-ókì  'He will strangle for him.'
è-lùb-ókì  'He will be greedy on his behalf.'
è-ńgér-ákì  'She will tear it for him.'
è-ńjéá-ókì  'He is proud because of him.'
è-tôn-íkì  'He will sit for someone.'

B.7.2. Non-third Person Forms with Initial Surface High:

á-dùn-ókì  'I will cut for him.'
1SG-cut-DAT
á-gör-ókì  'I will strangle for him.'
á-níń-ókì  'I will agree with him.'

í-níń-ókì  'You will agree with him.'
2-hear-DAT

kí-dùn-ókì  'You (sg) will cut for me.'
3>2>1-cut-DAT
kí-ból-ókì  'He will open it for you.'

B.8. The Dative Suffix (DAT) – Class II

With Class II roots, the Dative stem tone pattern is a High-Downstepped High-Downstepped High. This data would lead to an initial hypothesis of a H'H tone pattern for this affix. I have no data with initial High forms.

B.8.1. Third Person Subjects

è-y-bál-¹ákì  'He will reveal it to him.'
3-II-reveal-DAT
è-y-dón-¹ókì  'He will pound (the grain) for him.'
è-y-ńgér-¹ókì  'She will write it for him.'
è-y-ńjéá-¹ókì  'She will close it for him.'
e-y-ńjéá-¹ókì  'She will climb it for him.'
è-y-ńjéá-¹ákì  'He will look after cows for the man.'
è-stdin-¹ákì  'The woman will jump onto the/that rock.'
e-stdin-¹ákì  'The woman will jump onto the/that rock.'
B.9. The Instrumental Suffix (INST) – Class I

The Instrumental -ie(k) stem tone pattern is High for Class I roots. First and second person forms in Class I are high and level. This data would lead to an initial hypothesis of a H tone pattern for this affix.

B.9.1. Third Person Subjects

è-bèl-yé  'He will use it to break it.' 3-break-INST
è-bà-yé  àlpáyyàn ènkítók  The man last sighted the woman.’
è-bò-yé  'He will use it to remove the front lower teeth.'
è-bòl-yé  'He will use it to open it.'
è-búl-yé  'He will use it to pierce it.'
è-dùn-yé  àlpáyyàn INKIRI  'The man will use it to cut the meat.'
è-gòr-yé  'I will use it to strangle.'
è-lèp-yé  ènkúkúùì ènkítéŋ  'He will use the calabash to milk the cow.'
è-níŋ-yé  'He will hear him with it.'
è-shèt-yé  'He will use it to build.'
è-shúk-yé  'He will use it to fold it.'

B.9.2. Non-third Person Forms with Initial Surface High:

á-dól-yé  înkíshú  'I see the cows with (i.e., using) it.' 1SG-see-INST
á-bá-yé  'I last saw him/her/it/them.'
á-dùŋ-yé  'I will use it to cut.'
á-góř-yé  'I will use it to strangle.'
á-lép-yé  ènkúkúùì ènkítéŋ  'I will use the calabash to milk the cow.'
ènjúdí  á-lóť-yé  'I will walk with a stick.'
áá-bá-yé  'I last saw you.' 1>2-reach-INST
B.10. The Instrumental Suffix (INST) – Class II

The instrumental stem tone pattern is High-Low for Class II roots. This data would lead to an initial hypothesis of a HL tone pattern for this affix.

B.10.1. Third Person Subjects

è-y-bál-yè                      'He will make it visible.'
3-II-reveal-INST
è-y-bél-yè                      'He will use it to roll it.'
è-y-bók-yè                      'He will use it to hinder him.'
è-y-búŋ-yè                      'He will use it to support him.'
è-y-díŋ-yè                      'It will make it crowded.'
è-y-dóŋ-yè                      'He will use it to pound (grain).'
è-y-duŋ-yè                      'He will use it to migrate.'
è-y-gér-yè                      'He will use it to write.'
è-y-kén-yè                      'He will use it to close it.'
è-y-súj-yè                      'He will use it to wash it.'
è-y-shúr-yè                      'She will make it overcooked.'
è-y-rráŋ-yè ènkàyná             'My arm is lying down.'
è-y-rrít-yè                      'He will use it to look after cows.'

B.10.2. Non-third Person Forms with Initial Surface High:

á-y-súj-yè                      'I will use it to wash it.'  'I used it to wash it.'
1SG-II-wash-INST

B.10.3. Exceptions:

è-y-térr'ê-yè                   'He will make/made him faint.'
è-y-shú'î-yè                    'He is alive because of (food)'
è-y-rrít'á-yè                    'He used it to look after cows (as they went?).'
B.11. The Middle Suffix (MID)

For Class I roots the non-perfect middle stem tone pattern is High-Low. Note that this form includes the dynamic middle (reciprocal and reflexive) as well as resultant state semantics for Class I roots. In Class II roots, dynamic middle readings are only available for a different form, given in section B.12. For Class II roots, the form in the present section only refers to stative readings. This data would lead to an initial hypothesis of a HL stem tone pattern for this affix.

B.11.1. Third Person Subjects

è-ár-à  'He is beaten.'
è-ás-à 'inà  'This is done/already done, complete, finished.'
è-bárn-à táátá  'They are shaving each other.'
è-ból-ó kíšómbí  'The gate was opened; the gate is opened (right now).
è-bór-à  'He/they is/are injured.'  'They will injure each other.'
è-dál-à  'He will play.'
è-dás-à èndá kitéŋ  'That cow is (already) milked.'
è-dyá-à  'He is cursed.(condition)'
è-duŋ-ô  'He/they is/are cut.'  'They will cut each other.'
è-dóà-à  ýlpáyyànní  'The men see each other.'
è-ɡír-à  'He will be silent.'
è-ɡór-ô  'It was strangled.'  '/He becomes angry.'  'They will strangle each other.'
è-y-bál-à  'It is visible.'
è-y-bó-ô  'They/He are/is hindered.'
è-y-díŋ-à  'It is crowded.'
è-y-dóŋ-ô  'He/It/They is/are beaten.'
è-y-géř-ô  'It/they is/are written/employed.'
è-y-gís-à  'They/It are/is carved/sliced.'
è-y-kén-ô èmílängô  'It/they is/are closed.'
è-y-mál-à èná kítôk  'She is given to (you can see her cows).'
è-y-mán-à 'He drags himself due to laziness.'
è-y-nós-à èndáá 'It/they is/are eaten.'
è-y-nól-à 'It is stirred.'
è-y-nótr-à 'She/They is/are looked at.'
è-y-pár-à 'He/They is/are questioned.'
è-y-pósh-à 'He will wander off due to (stressful) problems.'
è-y-pót-ò 'He/They is/are called.' 'They will call each other.'
è-y-rósh-à 'It is thick.'
è-y-rúr-à 'He is asleep.' 'They are asleep.' (may just be in bed)
è-y-rít-à 'INKISHU 'He/they will look after them (cows)'
è-y-sís-à 'He/They is/are praised.'
è-y-sój-à 'He will wash himself.' 'She/They is washed.' 'He/They is/are bathing.'
è-lá-à 'It is tied off.'
è-lép-ò 'It is milked.'
è-lú-à 'It is spread.' 'He has spread it out.'
è-lúb-ò 'He is/they are greedy.'
è-méz-à 'The man is busy drinking./He is (being) drunk.'
è-níñ-ò 'He/it is heard.'
è-nórr-à nínè 'He is loved.'
è-nórr-à nícê 'They loved each other.'
è-níd-à 'He is proud.'
è-shét-à 'He is plaited. /They will plait each other.'
è-ship-à 'He etc. are happy.'
è-túm-ò 'They meet/they gather.'
è-wwás-à 'He is proud.'

B.11.2. Non-third Person Forms with Initial Surface High:

á-dúng-ò 'I am cut (in my flesh).'</p>
1SG-cut-MID
á-gór-ò 'I will become angry (habitual).'</p>
á-y-dóñ-ò 'I am beaten.'
á-y-rúr-à 'I am asleep.'
á-y-sój-à 'I am washed (but don't know who did it).'
á-níñ-ò 'I am heard.'
á-ship-à tátá 'I am happy today.'
á-ship-à taisér é 'I'll be happy tomorrow (and am happy now, too).'

í-bárm-à 'You (sg) will shave (yourself/be 'Shaved.')'
2-cut-MID
í-gór-ò 'You are strangled./You are angry.'
í-shíp-á táátá 'You are happy today.'

B.11.3. exceptions:

é-y-mán-à 'He draggs himself (from laziness).'</n
è-y-rrábál-á 'He will lie on his stomach.'</n
é-áp-á 'She is pregnant before circumcision.' (condition)
è-ás-1 á èsíáy táátá 'The work is done today.'
è-nán-á 'It is soft.' (This may be just a long root).
è-rikín-1 ó 'They/he/she forgets.' 'He will forget him.'
ì-rikín-1 ó 'You (sg) will forget.'

B.12. The Dynamic Middle Suffix (MID3) – Class II

This form, referred to in the last section, indicates reciprocal or reflexive action on Class II stems. The stem tone pattern is High-Downstepped High. This form is not available for Class I forms, where the semantics of the dynamic middle are included in the other middle form. This data would lead to an initial hypothesis of a H'H tone pattern for this affix.

B.12.1. Third Person Subjects

è-y-kén-1 ó 'It/They will be closed.'
3-II-close-MID3 'He is questioned.'
è-y-pár-á nincè 'It (might be) overcooked.' (or a little, but not completely).
è-y-shór-á 'They will hinder each other.' (*himself)
è-y-bó-ó nincè 'They will beat each other.'
è-y-dón-ó 'They will employ each other.'
è-y-gé-r-ó ̀îlpaáyaní 'They will carve each other.'
è-y-gís-á nincè 'They will give each other's wives cows.'
è-y-mál-á 'They will eat each other.'
è-y-nós-á ̀ɪlñojñàá 'They will look at each other.' 'He will look at himself.'
è-y-ṳór-á 'They will question each other.'
è-y-pár-á nincè
B.13. The Passive Suffix (PASS)

Forms with the Passive -į (which derives historically from a 3rd person plural subject suffix; Greenberg 1959), have a High stem tone pattern. Because passive forms always have a third person plural grammatical subject, the inverse forms are used for clauses involving first and second person patients, who remain the grammatical objects. Thus, there are no forms with both PASS and ą- or ę-bound argument pronouns prefixes. Based on extrapolation from available data involving the inverse kr- (3>2>1), however, it can be assumed that the first and second person singular forms would be high and level, as with the other initial High forms in section B.13.2 and in Appendix D. This data would lead to an initial hypothesis of a High tone pattern for this affix.

B.13.1. Third person (acting on third person) subjects

è-bòr-į  'He will be injured.'

3-injure-PASS
è-duŋ-į nípę  'It/He will be cut.'
è-y-dòŋ-į  'It will be beat.'
è-y-kèn-į kótókàjì.
è-y-kòd-į  'He will be decorated.'
è-y-lèp-į shómátá  'Up is go-able /will be ascended to. We will go to heaven.'
è-y-nòr-į  'He will be looked at.'
è-y-pàr-į  'He will be questioned.'
è-y-pùm-į  'He will be measured.'
è-y-rít-į inkishù  'The cattle must/will be looked after.'
è-lèj-į  'He will be lied to.'
è-mùr-į  'He will be chased.'
è-nòrr-į  'He is loved.'
B.13.2. Forms with Non-third Person Patients, with Initial Surface High:

?ki-bwák-í \[You will be shouted (by many).\] (said to 'noise')
?ki-áp-í \[You will be conceived by a girl.\] (said to a fetus)

The majority of the passive forms with initial high pitch contain the ekt- prefix, and are given in the Appendix D.

B.13.3. Exceptions

è-àkón-í \[People become elders.\]
3-become-PASS
è-áp’ít-í \[(The old man) is respected.\]
è-dámón-í \[People are remembered.\]
è-mùràt-í \[He will be circumcised.\]
è-gúr’á-y áábáw \['Arriving is happening.' / 'They are arriving.'\]

B.14. Forms with the Progressive (PROG) Suffix Only

The progressive suffix is -\textit{ita/-ito}. For the following progressive forms, the stem tone pattern is High-Low. This data would lead to an initial hypothesis of a HL tone pattern for this affix.

B.14.1. Third Person Subjects

è-ból-ítò \[He/they is/are opening it.\]
è-dùŋ-ítò \[He is cutting.\]
è-gòr-ítò ènkèráy établájíntá \[The child is strangling the enemy.\]
è-y-ñíñŋ-ítò \[He is listening.\] (And we want him to)
B.14.2. Initial Surface High Forms

è-y-pàr-ítà  ‘He is questioning him.’
è-y-pòt-ítò  ‘He is calling someone.’
è-y-sùj-ítà  ‘He is washing it.’
è-y-gèr-ítò èlò  ‘He is writing as he goes..’
è-y-dòŋ-ítò  ‘They/he are/is beating it.’
è-y-ráŋ-ítà  ‘They/He is lying down.’
è-lèp-ítò  ‘He is milking it.’
è-lèp-ítò  ‘He is milking it.’
è-lòt-ítò  ‘He is going.’
è-sùj-ítà  ‘He is following him.’
è-níŋ-ítò  ‘They are hearing.’

á-ból-ítò  ‘I am opening it.’
á-dɔl-ítà  ‘I am seeing the woman..’
á-dùŋ-ítò  ‘I am cutting.’
á-y-kén-ítò  ‘I am shutting it.’
á-y-sùj-ítà  ‘I am washing it.’
á-lòt-ítò  ‘I am going.’
á-níŋ-ítò  ‘I am hearing’ (now).’
á-pét-ítà  ‘I am going near (the post).’
á-pík-ítà  ‘I am putting it.’
á-sùj-ítà  ‘I am following him.’
á-ɔtuk-ítò  ‘I am washing it (now).’

í-ból-ítò  ‘You (sg) are opening it.’
í-n-kén-ítò  ‘You (sg) are shutting it.’
í-ráŋ-ítò  ‘You (sg) are lying down.’
í-lèp-ítò  ‘You (sg) are milking it.’
i-lòt-ítò  ‘You (sg) are going.’
i-wé-ítò  ‘You are bleeding.’

B.15. Forms with Inceptive (INCEP) Only

The inceptive suffix is -u(n). The following inceptive forms, with no other
morphology, have a High-Low stem tone pattern. From the first paradigm in TM140,
there doesn't seem to be a Class I/II distinction, but I don't have any Class II data myself.

This Class I data would lead to an initial hypothesis of a HL tone pattern for this affix.

B.15.1. Third Person Forms

è-dór-ù  ‘It will become red.’
è-gól-ù  ‘It will become hard.’
è-lá-ù  ‘He will miss it (try to borrow it, but it’s unavailable).’
è-nórr-ù  ‘They/he/she will love.’
*è-lá-yù  *‘He is strandable.’ *‘He will become (more) stranded.’

B.15.2. Initial Surface High Forms

á-dór-ù  ‘I will become red.’
á-náúr-ù  ‘I will be tired.’
á-nórr-ù  ‘I will love.’
i-nórr-ù  ‘You (sg) will love.’
ékí-nórr-ù  ‘You (sg) will love me, etc.’

B.16. Forms with Class I Roots Only

This section is essentially redundant with Chapter VI, except that it lays out the rest of the data, where Chapter VI presented only a portion of this data. Note again that there is some source of High tone evident here, as there is no form without at least a single High mora. The stem tone pattern is High, with that tone spread across the word in all cases with only two morae (as in Chapter VI).
B.16.1. Third Person Subjects

é-bárn  'They will shave.'
3-shave
é-áp
'é-ár àòőkí  'He beats it / kills it intentionally.'
é-bík  'He will stay.'
é-ból  'He will open the cow's mouth.'
é-bwák  'He will bark/shout.'
é-dúŋ  'He will cut.'
é-kéd  'He will climb.'
é-ló  'He will go.'
é-ló
'é-ló  'He will spread it out.'
é-lúá  'He will spread it out.'
é-máŋ .... èně  'The cattle/elephants/etc. will settle here.'
é-mí ènkàyná ín ū.  'His arm hurts.'
é-níŋ  'They/he/she hear.' 'They/he/she will hear.'
é-ńá  'He will eat.'
é-ńórr  'They/he/she loves.'
é-pwó  'They will go.'
é-tón  'He will sit.'
é-yá èngárrí...  'The car will take it.'
é-yyér  'They/he/she will cook it.'

B.16.2. Non-third Person Forms with Initial Surface High:

á-ádó  'I am tall.'
1SG-be.tall
á-áp
á-ár ènkítēŋ  'I will beat the cow.'
á-bárn  'I will shave (someone else)'
á-bárn níncé  'I will shave them.'
á-bík  'I will stay here.'
á-ból  'I will open it.'
á-bólı  'I hold/twist the cow by the mouth.'
á-bul
á-dámó  'I remember.'
á-dól  'I see them/him.'
á-duŋ  'I will cut a person.'
á-duŋ  ñiþòŋáŋů  'I will cut a person.'
á-gól  'I am strong.'
<table>
<thead>
<tr>
<th>Place Name</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>á-gór</td>
<td>'I will strangle.'</td>
</tr>
<tr>
<td>á-yshú</td>
<td>'I am alive.'</td>
</tr>
<tr>
<td>á-jút</td>
<td>'I will wipe/rub him (e.g., with a cloth)'</td>
</tr>
<tr>
<td>á-lálá</td>
<td>'I am wide.'</td>
</tr>
<tr>
<td>á-ló</td>
<td>'I will go.'</td>
</tr>
<tr>
<td>á-máŋ</td>
<td>'I will settle.'</td>
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<tr>
<td>á-mí</td>
<td>'I feel pain.'</td>
</tr>
<tr>
<td>á-mír ţnkíshú</td>
<td>'I chase/sell the cows.'</td>
</tr>
<tr>
<td>á-mórá́t</td>
<td>'I will circumcise (him).'</td>
</tr>
<tr>
<td>á-níŋ</td>
<td>'I hear / I will hear.'</td>
</tr>
<tr>
<td>á-nó́r</td>
<td>'I love.' (habitual)</td>
</tr>
<tr>
<td>á-péť</td>
<td>'I go near (the post).'</td>
</tr>
<tr>
<td>á-pík</td>
<td>'I will put it/can I put it?'</td>
</tr>
<tr>
<td>á-píř</td>
<td>'I am fat.'</td>
</tr>
<tr>
<td>á-rá</td>
<td>'I am one.'</td>
</tr>
<tr>
<td>á-rrúgúm</td>
<td>'I will make him vomit.'</td>
</tr>
<tr>
<td>á-tún</td>
<td>'I will stay here/sit here.'</td>
</tr>
<tr>
<td>á-úřé</td>
<td>'I'm afraid.'</td>
</tr>
<tr>
<td>á-yá ţnkíří ...</td>
<td>'I will take it.'</td>
</tr>
<tr>
<td>á-yyěř</td>
<td>'I will cook it.'</td>
</tr>
<tr>
<td>í-ból</td>
<td>'You (sg) will open it.'</td>
</tr>
<tr>
<td>í-dámó</td>
<td>'You (sg) remember (him/her/it).’</td>
</tr>
<tr>
<td>í-ló</td>
<td>'You (sg) will go.'</td>
</tr>
<tr>
<td>í-qórr</td>
<td>'You (sg) love it.'</td>
</tr>
<tr>
<td>í-bík</td>
<td>'Will you stay here?’</td>
</tr>
<tr>
<td>í-píř</td>
<td>'You are fat?'</td>
</tr>
<tr>
<td>áá-bárn</td>
<td>'I will shave you.'</td>
</tr>
<tr>
<td>1&gt;2-shave</td>
<td></td>
</tr>
<tr>
<td>áá-dámó</td>
<td>'I remember you.'</td>
</tr>
<tr>
<td>áá-náŋ</td>
<td>'I will carry you.'</td>
</tr>
<tr>
<td>kí-bárn</td>
<td>'He will shave you (sg).’</td>
</tr>
<tr>
<td>3&gt;2&gt;1-shave</td>
<td></td>
</tr>
<tr>
<td>kí-ból</td>
<td>'He will open you.'</td>
</tr>
<tr>
<td>kí-duŋ</td>
<td>'You (sg) will cut me.'</td>
</tr>
<tr>
<td>kí-mé</td>
<td>'You(r arm) is hurt.'</td>
</tr>
<tr>
<td>kí-píř ţntárē</td>
<td>'Your sheep are fat.'</td>
</tr>
</tbody>
</table>
B.16.3. Exceptions

This section gives the remainder of the data I have to prove the various potential exceptions discussed in Chapter VI.

B.16.3.1. With Class II tone:

è-ákò ʾiłtōŋānák ʾınkǐshú  'People will become cows.'
è-átā ʾòmóm  'He will be/was lucky.'
è-bóytá ʾınkǐlàní  'The clothes are together.'
è-gírā ʾáadāmò  'They are remembering.'
è-kwèt ʾınkǐshù ...  'The cows will run ...'
á-ákò ʾènkítēŋ  'I will become a cow.'
á-dáā  'I, who am goat, am eating.'
á-gírā ʾàdùŋyé ʾènkálèm  'I'm using the knife to cut it.'
á-kwèt  'I run (habitual)'
á-ó  'I will bleed.'
ì-ákò  'You (sg) will become...'
ì-kwèt  'You will run.'
ì-wò  'You will bleed.'

B.16.3.2. Other Exceptions:

è-bá ʾn’ánnó  'Is he the same as me?'
è-là  'He will be stranded.'
è-ți’á ʾāji  'It is in the house.'
á-ți’í ʾèmbátá ʾiskèjó  'I am by the river.'

B.17. Forms with Class II Roots Only

Synchronic Class II roots have a now-frozen prefix i-. The stem tone pattern is High-Low, as discussed in Chapter VI.
B.17.1. Third Person Subjects

é-y-bèl  'He will rock from side to side.'
3-II-rock
é-y-bòk  'He will hinder it.'
é-y-dòn  'He will beat it.'
é-y-gìs  'He will jump.'
é-y-kàsh  'He is better than him.'
é-y-kèn  'He will close it.'
é-y-kèn  'He will count.'
é-y-níni  'He is listening.' (and we want him to)
é-y-pòsh  'It will make him wander off due to (stressful) problems.'
é-y-ròwùà  'It is hot.'
é-y-rùq  'He will bend him over.'
é-y-rràg  'They will lie down.'
é-y-sòj  'They/he/she will wash it.'
é-y-tèrrè  'He will faint.'

B.17.2. Potential exceptions – class uncertain:

èykò  'He will do that.'
éyrò  'He will speak.'
éyshù  'He is alive.'

B.17.3. Initial Surface High forms

á-y-dòn kèwàñ  'I will beat myself.'
1SG-II-beat self
á-y-gìs  'I will jump.'
á-y-gìs  'I carve/slice.'
á-y-kàsh  'I am better than him.'
á-y-kèn  'I will shut it.'
á-y-lèp  'I will go up/climb the hill.ACC.'
á-y-níni  'I will listen.'
á-y-nòr  'I will watch over (something), using my eyes.'
á-y-pàñ  'I will go out.'
á-y-pìd  'I jump (nothing)'
á-y-ròwùà  'I am hot.'
á-y-rràg  'I will lie down.'
<table>
<thead>
<tr>
<th>Arabic</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>á-y-sùj</td>
<td>'I will wash it.'</td>
</tr>
<tr>
<td>á-y-shīr</td>
<td>'I will cry.'</td>
</tr>
<tr>
<td>á-y-tērrè</td>
<td>'I will faint.'</td>
</tr>
<tr>
<td>í-n-cù</td>
<td>'You are alive.'</td>
</tr>
<tr>
<td>2-II-be.alive</td>
<td>'You (sg) will wash it.'</td>
</tr>
<tr>
<td>í-ø-sùj</td>
<td>'I will wash you.'</td>
</tr>
<tr>
<td>áá-y-sùj</td>
<td>'You (sd) will wash you.'</td>
</tr>
<tr>
<td>1&gt;2-II-wash</td>
<td>'I will wash you.'</td>
</tr>
</tbody>
</table>
APPENDIX C

MORPHOLOGICALLY COMPLEX FORMS

The last appendix laid out the stem tone patterns of each of the affixes when not in combination with another stem affix. Up to that point, lexical representations of affix tone could be (somewhat naively) assumed to be read off the surface form directly. Once suffixes are combined, however, some unexpected stem tone patterns result. While there are many hypotheses concerning an analysis of this data, it has not yet been resolved into a unified system. Thus this appendix is limited to presenting the data with the surface tone patterns, without having a thorough and consistent analysis worked out.

As with the data in the last appendix, major tone divisions exist between third person forms and initial high forms, and the data has been laid out accordingly. For third person forms, the presence of $k$- gives a change in stem tone pattern, so these forms are listed separately. The forms with $k$- are listed together with the forms without $k$- for the initial high forms, unless there is some change in tone for these forms.
C.1. Combinations with Class I Causative (CAUS)

C.1.1. CAUS and Perfect Aspect

The following singular perfect forms, with the class I causative (CAUS) $tV$- only, have a high-downstepped high-high stem tone pattern. Some cases have non-CVC syllables, such as $gu$ ‘be smelly, rotten’ and $la$ ‘be stranded’, and don’t have two downstepped high moras.

C.1.1.1. Third Person Forms

è-ytá-d'áll-á 'He made him play.'
3-CAUS-play-PF
è-ytá-d'árr-ó 'He made it red.'
è-ytá-d'úní-ó 'He made him cut it.'
è-ytá-g'ír-á 'He made him silent.'
è-ytá-g'ór-ó 'He has made him angry.'
è-ytá-l'á 'He made him stranded.'
è-ytá-l'ál-á 'He made it wide.'
è-ytá-l'úb-ó 'He made him greedy.'
è-ytá-m'ér-á 'He made him drunk.'
è-ytá-n'án-á 'He made it soft.'
è-ytá-n'ín-ó 'He/she made him/them hear.'
è-ytá-p'órr-á 'He made him love it.'
è-ytá-n'íd-á 'He made him proud.'
è-ytá-n'sh'-p-á 'He made him happy.'
è-ytá-w'w'-áss-á 'He made him proud.'
*k-e-yta-ba 'He made him reach.'
C.1.1.2. Initial Surface High Forms

á-ytó-5d'ór-5 èn-kèrây ‘I made the child tall.’
1SG-CAUS-be.tall-PF FSG-child
á-ytú-úŋ-ó ènkálém òlchâń ‘I caused the knife to cut the tree.’
á-ytó-n’n’in-ó ‘I made him hear it.’ sounds the same as nPF mid.
áá-ytó-n’n’in-ó ‘I made you hear(by showing).’
á-ytó-ŋ’ɔrd-á ‘I made him/them love food.’
á-ytó-ŋ’w-à ‘I made it smelly/rotten.’
i-ntó-5d’ór-5 ‘You made him tall.’
i-ntó-5d’ór-5 ‘You made him tall.’
i-ntó-n’n’in-ó ‘You made him hear it.’
i-ntó-n’n’in-ó kèwán ‘You made yourself hear it.’
kí-ntó-ŋ’ɔrd-á ‘You.SG have made me love it.’
kí-ntó-ŋ’ɔrr-á ‘You made me love.’
kí-ntá-kw’éŋ-á ‘You.SG made me laugh.’

C.1.1.3. Exceptions

è-ytâ-bórèy-à ‘He filled it.’
kí-ntó-n’n’in-ó ‘You made me hear it.’ ‘He made you hear it.’

C.1.2. CAUS and Perfect Aspect (Plural)

The plural perfect verbs with CAUS show two tone patterns. First is the pattern seen on many other plural perfect forms, which is high and level, followed by a falling tone (or downstepped high). On some forms, including some in this section, the initial mora is low. The second form has a high-low-falling stem tone pattern. The variation on the first TBU in the first (high-falling) forms is possibly the product of dialect or speaker variation. I don't think I have ever had a minimal difference show up in this variety (i.e., initial high contrasting with initial low), however, and have been in situations where a speaker was unable to tell the variant forms apart. The tone pattern on the second form is
essentially invariant, and comes with the plural perfect -it morpheme. This morpheme appears to break up otherwise unanalyzable suffix combinations (see AWAY.PF, DAT.PF), and roots (e.g., e-ta-yyól-it-ō ‘They have known (i.e., come to know.’). I have all third person forms.

é-ytá-bóréy-á
3-CAUS-be.full-PF.Pl
é-ytá-dál-á
é-ytá-dál-it-á
é-ytá-dór-á
é-ytí-gír-á
é-ytí-gír-it-á
é-ytá-l-á
é-ytá-là-yt-á
é-ytá-lál-it-á
é-ytí-lúb-ó
é-ytí-lúb-it-ó
é-ytí-mér-it-á
é-ytá-nán-it-á
é-ytó-ninj-ó
é-ytí-njíd-á
é-ya-njíd-it-á
é-ytí-shíp-á
é-ytí-shíp-it-á
é-ytá-wwás-it-á
*é-ya-ríkín-it-ó
*é-ya-wwás-á
*é-ytá-lál-á
*é-ya-mér-á


C.1.3. CAUS and Motion Away (AWAY)

The following non-perfect forms with CAUS and AWAY have a high-downstepped high stem tone pattern.
C.1.3.1. All Third Person Forms

è-ytà-dàl-á’dá  ‘He will make him play going away.’
3-CAUS-play-AWAY
è-ytù-dùŋ-ó’ó  ‘He will make him cut it off.’
è-ytù-gül-á’dá  ‘He will make him break it off.’

C.1.3.2. Forms with k-

k-è-ytë-bël-á’dá  ‘He will make him break them one at a time.’
DSCN-3-CAUS-play-AWAY
k-è-ytà-dàl-á’dá  ‘He will make him play going away.’
k-è-ytù-dùŋ-ó’ó  ‘He will make him cut it off.’
k-è-ytù-gül-á’dá  ‘He will make him break it off.’

C.1.4. CAUS and Motion Away (AWAY), Perfect Aspect

The follow perfect forms with CAUS and AWAY have a high-low stem tone pattern.

C.1.4.1. Third Person Forms

è-ytë-bël-áyyè  ‘He made him break them one at a time.’
3-CAUS-play-AWAY.PF
è-ytà-dàl-áyyè  ‘He made him play going away.’
è-ytù-dùŋ-óyyè  ‘He made him cut it off.’

C.1.4.2. Initial Surface High Forms

áá-ytò-pórr-áyyè  ‘I used it to make(force) you to like it.’
1>2-CAUS-love-AWAY.PF
C.1.5. *CAUS and Ventive (VENT)

For the following, with CAUS and VENT, I only have one initial high form.

áá-ytō-sój-w-á’á  ‘I made him follow you.’
1>2-CAUS-follow-VENT-PF
*a-ytu-buk-u  ‘I will make him pour it out.’
*k-a-ytu-buk-u  ‘I will make him pour it out.’

C.1.6. CAUS and Antipassive (APAS)

The following non-perfect forms, with CAUS and APAS, have a high-
downstepped high-high stem tone pattern. There is one first person singular form that
doesn’t seem to fit the pattern.

C.1.6.1. Third Person Forms

è-ytê-bêl-îshô  ‘He will make people break.’
3-CAUS-break-APAS
è-ytâ-dál-îshô  ‘He makes people play.’
è-ytî-gîr-îshô  ‘He makes people be silent.’
è-ytâ-gôr-îshô  ‘He is the kind of person who made people angry.’
è-ytâ-l-îshô  ‘It will make stranded.’
è-ytê-lêj-îshô  ‘He is the kind of person who makes people lie.’
è-ytâ-nân-îshô  ‘It will make things soft.’
è-ytô-nîn-îshô  ‘People hear (e.g., by opening people’s ears).’
è-ytî-nîd-îshô  ‘He makes people happy/proud.’
è-ytô-rîkîn-îshô  ‘He will make him forgettable.’
è-ytî-shîp-îshô  ‘He is the kind of person who always makes people happy.’
è-ytâ-wwâs-îshô  ‘He makes people proud.’
è-ytô-nîr-îshô  ‘He/she/they make people like (it)’/’He/she/they will make
him/them love.’
*è-ytô-lûb-îshô  ‘He makes him greedy.’
C.1.6.2. Forms with k-

k-é-ytè-léj-́ishó  
DSCN-3-CAUS-lie-APAS  
k-é-ytè-léj-́ishó  
k-é-ytè-rikín-́ishó  
‘He is the kind of person who makes people lie.’

C.1.6.3. Initial Surface High Forms

á-ýtá-bél-́ishó  
1SG-CAUS-break-APAS  
á-ýtá-gór-́ishó  
á-ýtá-nín-́ishó  
á-ýtá-rr-́ishó  
k-á-ýtá-léj-́ishó  
‘I will make people break.’

C.1.7. CAUS and Antipassive (APAS), Perfect Aspect

The following singular perfect forms, with CAUS and APAS, have a high-
downstepped high stem tone pattern

C.1.7.1. Third Person Forms

è-ýtá-bél-́ishé  
3-CAUS-break-APAS.PF  
è-ýtá-dáí-́ishé  
è-ýtí-gír-́ishé  
è-ýtá-gór-́ishé  
è-ýtá-léj-́ishé  
è-ýtá-nán-́ishé  
è-ýtá-nín-́ishé  
è-ýtí-újd-́ishé  
è-ýtá-rikín-́ishé  
‘He made people break.’
‘He made people play.’
‘He made people be silent.’
‘He was the kind of person who made people angry.’
‘It made stranded.’
‘He was the kind of person who made people lie.’
‘It made things soft.’
‘He woke people up.’
‘He made people happy/proud.’
‘He made him forgettable.’
è-ytī-shīp-īsh’ē  ‘He was the kind of person who always makes people happy.’ 
è-ytā-wwās-īsh’ē  ‘He made people proud.’ 
è-ytō-ŋōrr-īsh’ē  ‘They/she/he made people like it’/’They/he/she made him/them love.’ 
*è-ytū-lūb-īsh’ē  ‘He made people greedy.’

C.1.7.2. Initial Surface High Forms

á-ytō-ŋōrr-īsh’ē  ‘I used it to make him be a loving person.’ 
1SG-CAUS-break-APAS.PL

C.1.8. CAUS and Antipassive (APAS), Perfect Aspect (Plural)

The following plural perfect forms, with CAUS and APAS, have a high-low-low stem tone pattern. I have all third person forms.

è-ytē-bēl-īsh-ōt-ē  ‘They made people break.’ 
3-CAUS-break-APAS-PL.PF-APAS.PF
è-ytā-dāl-īsh-ōt-ē  ‘They made people play.’
è-ytī-gīr-īsh-ōt-ē  ‘They made people be silent.’
è-ytō-gōr-īsh-ōt-ē  ‘They were the kind of people who made people angry.’
è-ytā-l-īsh-ōt-ē  ‘They (inanimate) made stranded.’
è-ytē-lēj-īsh-ōt-ē  ‘He was the kind of person who made people lie.’
è-ytā-nān-īsh-ōt-ē  ‘They made things soft.’
è-ytō-nūj-īsh-ōt-ē  ‘He made them hear.’
è-ytō-ŋōrr-īsh-ōt-ē  ‘They made people loving.’
è-ytī-ŋīd-īsh-ōt-ē  ‘They made people happy/proud.’
è-ytō-ŋīkīn-īsh-ōt-ē  ‘They made him forgettable.’
è-ytī-shīp-īsh-ōt-ē  ‘They were the kind of people who always made people happy.’
è-ytā-wwās-īsh-ōt-ē  ‘They made people proud.’
The following non-perfect forms, with CAUS and DAT, have a high-downstepped high-high stem tone pattern.

C.1.9.1. Third Person Forms

è-ytà-dór-áðí ‘He will make it red for him.’
3-CAUS-be.red-DAT
è-ytà-gól-óðí ‘She will make it strong for him.’
è-ytà-nán-áðí ‘He will make it soft for him.’
è-ytà-ʔjíd-áðí ‘He will make him proud for someone.’
è-ytò-púr-óðí ‘He will fatten it for him.’
è-ytò-rók-áðí ‘He will make it black for him.’
*è-ytà-l-áðí ‘He will make him stranded on behalf of someone.’

C.1.9.2. Forms with k-

k-é-ytà-bòréy-áðí ‘He will fill it for him.’
DSCN-3-CAUS-be.full-DAT
k-é-ytà-dór-áðí ‘He will make it red for him.’
k-é-ytà-nán-áðí ‘He will make it soft for him.’
k-é-ytò-púr-óðí ‘He will fatten it for him.’
k-é-ytò-rók-áðí ‘He will make it black for him.’

C.1.9.3. Initial Surface High Forms

á-ytà-gól-óðí ‘I will make it strong for him.’
1SG-CAUS-be.strong-DAT
á-ytò-púr-óðí ‘I will fatten it for him.’
á-ytò-rók-áðí ‘I will make it black for him.’
k-á-ytò-púr-óðí ‘He will fatten it for him.’
k-á-ytà-gól-óðí ‘I will make it strong for him.’
k-á-ytò-rók-áðí ‘I will make it black for him.’
C.1.10. CAUS and Dative (DAT), Perfect Aspect

The following perfect forms, with CAUS and DAT, have a high-downstepped high stem tone pattern.

C.1.10.1. Third Person Forms

è-ยก-Lòr-y-ýk’á  ‘He filled it for him.’  
3-CAUS-be.full-DAT.PF
è-ยก-Lòr-y-ýk’á  ‘He made it red for him.’
è-ยก-Gòl-ók’ó  ‘He made it strong for him.’
è-ยก-Nàn-ýk’á  ‘He made it soft for him.’
è-ยก-[d]ûd-ýk’á  ‘He made him proud for someone.’
è-ยก-pûr-ók’ó  ‘He fattened it for him.’
è-ยก-rûk-ýk’á  ‘He made it black for him.’
*è-ยก-l-ýk’á  *‘...on behalf of someone.’

C.1.10.2. Initial Surface High Forms

á-ยก-rûk-ýk’á  ‘I made it black for him.’
1SG-CAUS-be.black-DAT.PF

C.1.11. CAUS and Dative (DAT), Perfect Aspect (Plural)

The following plural perfect forms, with CAUS and DAT, have a high-low-falling stem tone pattern. I have all third person forms.

è-ยก-Lòr-y-ýk-it-ô  ‘They filled it for him.’
3-CAUS-be.full-DAT.PF.PL-DAT.PF
è-ยก-Gòl-ók-it-ô  ‘They made it strong for him.’
è-ยก-Nàn-ýk-it-ô  ‘They made it soft for him.’
è-ยก-[d]ûd-ýk-it-ô  ‘They made him proud for someone.’
è-ยก-pûr-ók-it-ô  ‘They fattened it for him.’
è-ยก-rûk-ýk-it-ô  ‘They made it black for him.’
C.1.12. CAUS and Dative (DAT), Middle (MID)

For plural perfect words with CAUS, DAT, and MID, the stem tone pattern is high-low-low. I have one third person form.

è-ytà-l-àkín-òt-è      ‘They made each other stranded.’
3-CAUS-miss-DAT-PL.PF-MID.PL
*è-ytà-l-àkín-ò   ‘He made himself stranded.’

C.1.13. CAUS, Dative (DAT), and Passive (PASS)

I have one third person form (with k-).

k-è-ytà-bòrèy-ák’ín-í      ‘They will fill it for him.’
DSCN-3-CAUS-be.full-DAT-PASS

C.1.14. CAUS and Instrumental (INST)

For non-perfect and singular perfect words with CAUS and INST, the stem tone pattern is high-downstepped high-high.

C.1.14.1. Third Person Forms

è-ytè-b’él-yé      ‘He used/will use it to make him break it.’
3-CAUS-break-INST
è-ytè-sh’ét-yé    ‘He used/will use it to build for him.’
è-ytò-t’óp-yé    ‘He did/will use it to make him sit.’
è-ytá-d’ál-yé    ‘He did use it to make him play.’
e-ytú-d’úŋ-yé    ‘He used it to make him cut it.’
e-ytí-g’ir-yé ̀lpáyyàn ènkítok èŋjúdì.      ‘The man made the woman quiet with a stick.’
e-ytá-g’ór-yé    ‘He used it to make him strangle.’
e-ytá-k’éd-yé    ‘He used it to make him climb.’
è-ye-tá-n’áŋ-yé  ‘He used it to make it soft.’
è-ye-tó-ŋ’ór-r-yé  ‘she/he used it to make him/her like it.’
è-ye-tí-šíp-yé  ‘He used it to make him happy.’
è-ye-tá-l’ép-yé  ‘He used/will use it to milk it.’
è-ye-tá-ww’ás-yé  ‘He used/will use it to make people proud.’
*è-ye-tú-l-yé  ‘He used/will use it to make him happy.’
*è-ye-tú-lúb-yé  ‘He used/will use it to make him greedy.’
*è-ye-tó-řikíp-yé  ‘He used/will use it to make people forget.’
*è-ye-tí-ŋíd-yé  ‘He used/will use it to make people proud.’

C.1.14.2. Forms with k-

k-è-ye-tá-d’ál-yé  ‘He will use it to make him play.’
k-è-ye-tí-š’íp-yé  ‘He will use it to make him happy.’
k-è-ye-tá-n’áŋ-yé  ‘He will use it to make it soft.’
k-è-ye-té-b’él-yé  ‘He used/will use it to make him break it.’
k-è-ye-tú-d’úŋ-yé  ‘He will use it to make him cut it.’
k-è-ye-tá-g’ór-yé  ‘He will use it to make him strangle.’
k-è-ye-tá-k’éd-yé  ‘He will use it to make him climb.’
k-è-ye-tó-ŋ’ór-r-yé  ‘He will use it to make him like it.’
k-è-ye-té-sh’ét-yé  ‘He used/will use it to build for him.’
k-è-ye-tó-t’óŋ-yé  ‘He did/will use it to make him sit.’
k-è-ye-tá-ww’ás-yé  ‘He will use it to make people proud.’
k-è-ye-tí-g’ír-yé  ‘He made her quiet with it.’
k-è-ye-tá-l’ép-yé  ‘He will use it to milk it.’

C.1.14.3. Initial Surface High Forms

á-ye-tú-d’úŋ-yé  ‘I used it to make him cut it.’
1SG-CAUS-break-INST
á-ye-tá-g’ór-yé  ‘I used it to make him strangle.’
á-ye-tó-ŋ’ór-r-yé  ‘I used it to make him like it.’
k-á-ye-tú-d’úŋ-yé  ‘I will use it to make him cut it.’
k-á-ye-tó-ŋ’ór-r-yé  ‘I will use it to make him like it.’
áá-ye-tó-nórr’-yé ṭiyé  ‘I used it to make you.SG like it.’
C.1.15. CAUS and Instrumental (INST), Perfect Aspect (Plural)

For plural perfect forms with CAUS and INST, the stem tone pattern is high-high-downstepped high. I have all third person forms.

è-ytè-bél-́yé
3-CAUS-break-INST
‘He used it to make him break it.’

è-ytè-dál-́yé
‘They used it to make him play.’

è-ytè-dúñ-́yé
‘They used it to make him cut it.’

è-ytì-gír-́yé
‘They used it to make him silent.’

è-ytá-kéd-́yé
‘They used it to make him climb.’

è-ytá-lép-́yé
‘They used it to milk it.’

è-ytå-náp-́yé
‘They used it to make it soft.’

è-ytó-pórr-́yé
‘They used it to make him/her like/love it.’

è-yté-shét-́yé
‘They used it to build for him.’

è-ytå-shíp-́yé
‘They used it to make him happy.’

è-ytå-tóp-́yé
‘They used it to make him sit.’

è-ytå-wwås-́yé
‘They used it to make people proud.’

C.1.16. CAUS and Middle (MID)

For third person words with CAUS and MID, the stem tone pattern is high-downstepped high.

C.1.16.1. Third Person Forms

è-ytè-bél-́á
3-CAUS-break-MID
‘They will make each other break.’  *‘He …himself’

è-ytè-dál-́á
‘They will make each other play.’

è-ytè-dúñ-́ó
‘They will make each other cut.’

è-ytì-gír-́á
‘They will make each other silent.’

è-ytå-gól-́ó
‘They will make each other strong.’

è-ytá-l-́á
‘They will make each other stranded.’

è-ytè-léj-́á
‘They will make each other lie.’

è-ytå-lúb-́ó
‘They will make each other greedy.’

è-ytå-nán-́á
‘They will make each other soft.’
è-ytò-níñ-’ó  ‘They will make each other hear.’
è-ytò-nòrr-ár’ó ‘each of them will make the other like it.’ (AWAY.MID)
è-ytò-nòrr-á ‘They make each other love something else (habitually).’
*‘He will make himself love.’
è-ytò-níd-’á ‘They (known) will make each other proud.’
è-ytò-ríkín-’ó ‘They will make each other forget.’
è-ytò-shét-’á ‘They will make each other build/plait.’
è-ytò-ship-’á ‘They will make each other happy.’
è-ytò-shük-’ó ‘They will make each other fold/bend.’
è-ytò-wwás-’á ‘They will make each other proud.’

C.1.16.2. Forms with k-

k-è-ytè-béí-l’á  ‘They will make each other break.’ *‘himself’
k-è-ytò-dál-’á ‘They will make each other play.’
k-è-ytè-gír-’á ‘They will make each other silent.’
k-è-ytò-gól-’ó ‘They will make each other strong.’
k-è-ytò-lí-’á ‘They will make each other stranded.’
k-è-ytè-leí-’á ‘They will make each other lie.’
k-è-ytò-lúb-’ó ‘They will make each other greedy.’
k-è-ytò-nán-’á ‘They will make each other soft.’
k-è-ytò-níñ-’ó ‘They will make each other hear.’
k-è-ytò-nòrr-’á ‘They make each other love something else.’ *‘himself’
k-è-ytò-níd-’á ‘They (known) will make each other proud.’
k-è-ytè-ship-’á ‘They will make each other happy.’
k-è-ytò-shük-’ó ‘They will make each other fold/bend.’
k-è-ytò-wwás-’á ‘They will make each other proud.’
*k-è-ytò-mir-’á ‘They will make each other chase.’

C.1.16.3. Initial Surface High Forms

For these two first and second person words with CAUS and MID, the stem tone pattern is high-downstepped high-high.

á-ytò-n’íñ-ó  ‘I will make myself listen.’
i-ntò-n’íñ-ó ‘You will make yourself listen.’
C.1.16.4. Third Person Perfect Forms

*è-ytè-bèl-è  *‘He made himself break.’
*è-ytè-dàl-è  *‘He made himself play.’
*è-ytú-gîr-è  *‘He made himself be silent.’
*è-ytè-gòl-è  *‘He made himself strong.’
*è-ytè-lèj-è  *‘He made himself lie.’
*è-ytò-lúb-è  *‘He made himself be greedy.’
*è-ytà-nán-è  *‘He made himself soft.’
*è-ytò-nîn-è  *‘He made himself hear it.’
*è-ytò-rîkîn-è  *‘He made himself forget.’
*è-ytè-shêt-è  *‘He made himself build/plait.’
*è-ytù-ship-è  *‘He made himself happy.’
*è-ytà-wwâs-è  *‘He made himself be proud.’

C.1.16.5. Initial Surface High Perfect Forms

á-ytò-n’ în-è  ‘I made them hear.’

C.1.17. CAUS and Middle (MID), Perfect Aspect (Plural)

The following plural perfect words with CAUS and MID have a high-low-low stem tone pattern. I have all third person forms.

è-ytè-bèl-át-è  ‘They made each other break.’
3-CAUS-break-PF.PL-MID.PF
è-ytè-dàl-át-è  ‘They made each other play.’
è-ytú-gîr-át-è  ‘They (known) made each other be silent.’
è-ytè-gòl-ôt-è  ‘They made each other strong.’
è-ytè-l-át-è  ‘They made each other stranded.’
è-ytè-léj-át-è  ‘They made each other lie.’
è-ytè-léj-át-è  ‘They lied to each other.’
è-ytù-lúb-ôt-è  ‘They made each other greedy.’
è-ytà-nán-ôt-è  ‘They made each other soft.’
è-ytò-nîn-ôt-è  ‘They made each other hear it.’
è-ytò-șôrr-át-è  ‘They made each other love it.’
è-ytú-ņîd-ât-è  ‘They made each other proud.’
è-ytò-rîkîn-ôt-è  ‘They made each other forget.’
è-ytè-shét-ât-è  ‘They made each other build/plait.’
è-ytè-shîp-ât-è  ‘They made each other happy.’
è-ytè-shûk-ôt-è  ‘They made each other fold/bend.’
è-ytè-wwâs-ât-è  ‘They made each other proud.’

C.1.18. CAUS and Middle (MID), Passive (PASS)

Non-perfect verbs with CAUS, MID and PASS have a high-downstepped high stem tone pattern. I have all third person forms.

è-ytè-duŋ-î-y  ‘People will make each other cut.’
3-CAUS-cut-MID-PASS
è-ytè-ŋid-â-y  ‘They (unknown) will make each other proud.’
è-ytè-wwâs-â-y  ‘People will make each other proud.’

C.1.19. CAUS and Middle (MID), Passive (PASS), Perfect Aspect

Perfect verbs with CAUS, MID and PASS have the stem tone pattern high-low-high. I have all third person forms.

è-ytè-ŋir-ât-ê-kî  ‘They (unknown) made each other be silent.’
3-CAUS-cut-PF.PL-MID-PASS
è-ytè-l-ât-ê-kî  ‘People made each other stranded.’
è-ytè-ŋid-ât-ê-kî  ‘They (unknown) made each other proud.’
è-ytè-rikîn-ôt-ê-kî  ‘They (unknown) made each other forget.’
è-ytè-wwâs-ât-ê-kî  ‘People made each other proud.’

C.1.20. CAUS and Passive (PASS)

Non-perfect verbs with CAUS and PASS have a high-downstepped high-high stem tone pattern. Exceptions are bore and la, which have vowel final stems, and lose a downstepped high mora.
C.1.20.1. All Third Person Forms

è-ytà-bór'é-y ‘Someone will/did fill it.’
3-CAUS-be.full-PASS
è-ytà-ww'ás-i ‘He will be made proud.’
è-ytà-5d'ór-i ‘it will be made long/tall.’
è-ytà-d'ál-i ‘He will be made to play.’
è-ytà-d'úŋ-i ‘He will be made to cut it.’
è-ytí-g’úr-i ‘He will be made silent.’
*è-ytà-l-i *ètyál’í ‘He will be made stranded.’
è-ytà-l’á-y ‘He will be made stranded.’
è-ytí-l’úb-i ‘He will be made greedy.’
è-ytí-n’án-i ‘It will be made soft.’
è-ytí-n’íd-i ‘He will be made proud.’
è-ytí-p’úr-i ‘He will be made fat.’
è-ytí-rík’in-i ‘(He) will make him be forgotten.’
è-ytí-r’5k-i ‘He will be made black.’
è-ytà-sh’ám-i ‘He will be made to love it.’
è-ytí-sh’ét-i ‘He will be made to build.’
è-ytí-sh’íp-i ‘He will be made happy.’

C.1.20.2. Forms with k-

k-é-ytà-bór’é-y ‘Someone will/did fill it.’
k-é-ytà-rík’in-i ‘He will make him be forgotten.’
k-é-ytà-5d’ór-i ‘it will be made long/tall.’
k-é-ytà-d’úŋ-i ‘He will be made to cut it.’
k-é-ytí-g’úr-i ‘He will be made silent.’
k-é-ytà-l’úb-i ‘He will be made greedy.’
k-é-ytà-n’án-i ‘It will be made soft.’
k-é-ytí-n’íd-i ‘He will be made proud.’
k-é-ytí-r’5k-i ‘He will be made black.’
k-é-ytà-sh’ám-i ‘He will be made to love it.’
k-é-ytí-sh’ét-i ‘He will be made to build.’
k-é-ytí-sh’íp-i ‘He will be made happy.’
C.1.21. CAUS and Passive (PASS), Perfect Aspect

Perfect verbs with CAUS and PASS have a high-low-high stem tone pattern.

C.1.21.1. Third Person Forms

è-ytà-àdór-àk-í  ‘They were made tall.’
3-CAUS-be.tall-PF-PASS
è-ytà-bòrèy-àk-í  ‘Someone filled it.’
è-ytà-dál-àk-í  ‘He/they was/were made to play.’
è-ytà-dór-àk-í  ‘They were made to become red.’
è-ytà-duñ-òk-í  ‘He was made to cut it.’
è-ytà-gìr-àk-í  ‘He was made to be silent.’
è-ytà-gór-òk-í  ‘They were made angry.’
è-ytà-l-àk-í  ‘He was made stranded.’
è-ytà-lúb-òk-í  ‘He was made greedy.’
è-ytà-nán-àk-í  ‘It was made soft.’
è-ytà-pórr-àk-í  ‘He was made to love it.’
è-ytà-ŋìd-àk-í  ‘He was made proud.’
è-ytà-púr-òk-í  ‘They/he were/was made fat.’
è-ytà-ríkìn-òk-í  ‘He made him be forgotten.’
è-ytà-ròk-àk-í  ‘He was made black.’
è-ytà-sháìm-àk-í  ‘He was made to love it.’
è-ytà-shéò-àk-í  ‘He was made to build.’
è-ytà-shìp-àk-í  ‘He/they was/were made happy.’
è-ytà-wwàs-àk-í  ‘He was made proud.’

C.1.21.2. Initial Surface High Forms

kí-ntú-duñ-òk-í  ‘You were caused to cut it.’
kí-ntò-pórr-àk-í  ‘You.SG were made to love (food).’
C.1.22. CAUS and Passive (PASS), Progressive (PROG)

Progressive verbs with CAUS and PASS have a high-downstepped high stem tone pattern. I have all third person forms.

- è-yyù- dùŋ-ìt’ò-y ‘He is being made to cut it.’
- 3-CAUS-cut-PROG-PASS
- è-yyò- pìr-ìt’ò-y ‘He is being made fat.’
- è-yyò- ròk-ìt’á-y ‘He is being made black.’
- è-yyà-shàm-ìt’á-y ‘He is being made to love it.’
- è-yyè- shèt-ìt’á-y ‘He is being made to build.’

C.2. Forms with MOTION AWAY (AWAY)

C.2.1. *AWAY and Antipassive (APAS)

Forms with APAS and AWAY seem to be not permissable.

- *è- dùŋ-ìsh’òyó ‘He is a cutter (away, iterative).’

C.2.2. AWAY and Instrumental (INST)

The following forms, with INST and AWAY, have a high-downstepped high stem tone pattern.

C.2.2.1. Third Person Forms

- è-òèl-ár-yé ‘He will use it to break them (one at a time.).’
- 3-break-AWAY-INST
- è-òùg-ór-yé ‘He will use it to cut it off.’
- è-gòr-ór-yé ‘He will use it to strangle them (one at a time.).’
è-y-ḅ̀k-ọ́r'-yé  ‘He used it to pour it out.’  
‘He will make/made him pour it out.’
è-y-dọ̀ŋ-ọ́r'-yé  ‘He will use it to pound them one at a time.’  also have
è-y-겁-ọ́r'-yé  ‘He will use it to write them one at a time.’  also have
e-y-gér-ọ́r'-yé  ‘He used/will use it to eat as he went.’
e-y-nős-άr'-yé  ‘He will use it to milk cows, one after the other.’
ed-ẹ̀p-ọ́r-́yé  ‘He will use a stick to walk around, away from his home.’
ed-ẹ̀shèt-άr'-yé  ‘He will use it to build them (one house at a time.).’
ed-ètèm-άr'-yé  ‘They will use it to test one person at a time.’

c.2.2.2. Forms with k-

k-é-bèl-άr'-yé  ‘He will use it to break them (one at a time.).’
k-é-dùŋ-ọ́r'-yé  ‘He will use it to cut it off.’
k-é-y-ḅ̀k-ọ́r'-yé  ‘He will use it to pour it out.’
k-é-y-dọ̀ŋ-ọ́r'-yé  ‘He will use it to pound them one at a time.’
k-é-y-gér-ọ́r'-yé  ‘He will use it to write them one at a time.’
k-é-y-nős-άr'-yé  ‘He will use it to eat as he goes.’
k-é-y-ŋòl-άr'-yé  ‘He will use it to stir up (waters), one after the other.’

c.2.2.3. Initial Surface High Forms

á-dùŋ-ọ́r'-yé  ‘I will use it to cut it off.’
á-y-ḅ̀k-ọ́r'-yé  ‘I will make him pour (it out).’  
‘I used it to pour.’  
‘I made him pour (it out).’
á-shèt-άr'-yé  ‘I will use it to build them (one house at a time.).’
k-á-dùŋ-ọ́r'-yé  ‘I will use it to cut it off.’
k-á-y-ḅ̀k-ọ́r'-yé  ‘I will make him pour.’  
‘I will use it to pour.’
k-á-y-ŋòl-άr'-yé  ‘I will use it to stir up (waters), one after the other.’
k-á-y-ŋòl-άr'-yé  
k-á-y-ŋòl-άr'-yé  ẹ̀nùdu i'mùshàkwènì  ‘I will use a stick to beat the corn cob off.’
k-á-y-ŋòl-ọ́r'-yé  ẹ̀nùdu i'mùshàkwènì  
en-kùkùrí á-dàs-άr'-yé kùnà kishù  ‘I will milk those cows one at a time with a calabash.’
C.2.2.4. Third Person Perfect Forms

The perfect forms of the AWAY and INST are identical to the non-perfect forms, except for PF prefix.

è-tè-bèl-ár-’yé  ‘He used it to break them (one at a time.).’
3-PF-break-AWAY-INSTR
è-tù-duŋ-óð-’yé  ‘He used it to cut (away).’
è-tà-gòr-óð-’yé  ‘He used it to strangle them (one at a time.).’
è-y-kèn-óð-’yé  ‘He used it to close it against someone leaving.’
è-y-kèn-Óð-’yé
è-y-lèp-ár-’yé (èŋúdì)  ‘He used (a stick) to climb up.’
è-y-ŋòl-ár-’yé  ‘He used it to stir up (waters), one after the other.’
è-tà-lèp-óð-’yé  ‘He used it to milk cows, one after the other.’
èŋúdì è-tà-màn-ár-’yé  ‘He has used a stick to walk around, away from his home.’
è-tè-shèt-ár-’yé  ‘He used it to build them (one house at a time.).’

C.2.2.5. Forms with k-

k-é-y-kèn-óð-’yé  ‘He used it to close it against someone leaving.’
k-è-y-kèn-Óð-’yé

C.2.2.6. Initial Surface High Perfect Forms

á-tú-duŋ-óð-’yé  ‘I used it to cut it off.’
á-y-dòŋ-óð-’yé èŋúdì وبة ”  ‘I used a stick to beat the corn cob off.’
á-y-dòŋ-Óð-’yé èŋúdì وبة ”
á-y-ŋòl-ár-’yé  ‘I used it to stir up (waters), one after the other.’
á-y-ŋòl-Óð-’yé
á-tè-shèt-ár-’yé  ‘I used it to build them (one house at a time.).’
C.2.3. AWAY and Instrumental (INST), Perfect Aspect (Plural)

Plural perfect forms with INST and AWAY have a high-falling stem tone pattern.

I have two Third Person Forms.

é-tú-dűń-őr-yè  ‘They used it to cut (away).’
é-y-bűk-őr-yè  ‘They made him pour it out.’

C.2.4. AWAY and Instrumental (INST), Middle (MID)

This form, with INST, MID and AWAY, has a high-low-high stem tone pattern. I have one initial high form.

k-á-y-bűk-őr-įy-yè  ‘I will use it to make it poured out.’
DSCN-1SG-II-pour-AWAY-MID-INST

C.2.5. AWAY and Middle (MID)

The following forms, with MID and AWAY, have a high-low stem tone pattern.

C.2.5.1. Third Person Forms

è-y-bűk-őr-į (nįpě) (nölé)  ‘It became poured (yesterday).’
3-II-pour-AWAY-MID
e-y-bűk-őr-į tẽnákàtá  ‘It will be poured now.’
e-y-soj-ář-į ‘inkilänį  ‘It will be washed away.' (not by anyone - maybe the rain).’
e-dűń-őr-į ẽlpáyyàn  ‘The man will cut himself off.’
  ‘It will be cut off.’
e-bèl-ář-į kùlórik’án  ‘The chairs will be broken one at a time.’
  ‘The chairs will be broken off.’
e-tù-dűń-őr-į  ‘He cut himself off.’
  ‘He became cut off.’
e-tè-bèl-ář-į nįpě/nįncè  ‘He/They broken himself off.’ ’...is cut off.’
*è-y-dűń-őr-į nįpě  ‘beat’
*è-y-pôt-őr-į  ‘call’
*è-y-gèr-ó̂r-í èmpàlá nípè  ‘write’

C.2.5.2. Forms with k-

k-è-y-sùj-ár-í  ‘It will be washed off.’
k-è-duŋ-ór-í èndá kër  ‘That goat will be cut off.’
k-è-wwàs-ár-í èlòyòtó  ‘He will become proud as he goes.’
  ‘He will walk proudly.’

C.2.5.3. Initial Surface High Forms

í-súd-ó̂r-í  ‘You hide yourself.’

C.2.6. AWAY and Middle (MID), Perfect Aspect (Plural)

The following plural perfect form, with MID and AWAY, has a high and level stem tone pattern. This apparently has something of a stative reading, as well as the perfect. I have all third person forms.

é-tè-bél-ár-í níncè (*nípè)  ‘They broke themselves off.’ or ‘…is cut off.’
3-PF-break-AWAY-MID they (*he)
é-y-súj-ár-í kúldò lpáyyàní  ‘Those men washed themselves off.’ or ‘…are….’

C.2.7. AWAY and Middle (MID), Inceptive (INCEP)

The following inceptive form, with MID and AWAY, has a high-low-high stem tone pattern. I have all third person forms.

è-y-bùk-ó̂r-òy-ú  ‘It is pourable.’
C.2.8. *AWAY and Middle (MID), Passive (PASS)

Apparently MID and AWAY cannot co-occur with PASS.

*è-y-sùj-áà-k-í ‘People get washed away.’

C.2.9. AWAY and Dynamic Middle

The following forms, with the Dynamic Middle and AWAY, have a high-downstepped high stem tone pattern.

C.2.9.1. All Third Person Forms

è-àr-áà-1ó ‘He has been chased away.’
3-beat-AWAY-MID
e-dùŋ-ór-1ó ‘He has been cut off.’
e-bèl-áà-1ó ‘It is broken off.’
e-dùŋ-ór-1ó ñòlè ‘He was cut off yesterday.’
‘Yesterday he became cut off.’
e-y-bùk-ór-1ó (ñòlè) ‘It is poured (out).’
‘It became poured out.’
e-dùŋ-ór-1ó tāísèrè (*ñòlè) ‘People will cut each other (one at a time) tomorrow.’
e-dùŋ-ór-1ó òlpaàyàñ/ìlpàyyàní ‘The men will cut each other off (or one at a time).’
‘The man/men has/have been cut off.’
e-y-dòn-ór-1ó ‘He/they is/are beaten as he goes.’
‘They will beat each other as they go.’
e-y-pòt-ór-1ó nùnè/nùncè bò ‘He/They is/are called outside.’ (i.e., stative - he is.).’
‘They will call each other outside.’
e-y-sùj-áà-1ó ènkìlàñì ‘It is washed away.’
‘They will wash each other away.’
‘The clothes are/will be washed one at a time.’
‘They will wash each other one at a time.’
è-y-gèr-ór-ò èpwò (*èlò) ‘They will employ each other as they go.’
e-bùrùkòsh-áà-1ó ‘Their legs are dislocated.’
*è-y-sùj-áà ‘It is washed away.’
*è-tè-bèl-áà-1ó ‘It is broken away.’
C.2.9.2. Form with $k$-

k-é-y-dôñ-ór-¹ó ‘They will beat each other as they go.’
‘one at a time.’

C.2.10. AWAY and Passive (PASS)

The following forms, with PASS and AWAY, have a high-downstepped high stem tone pattern.

C.2.10.1. All Third Person Forms

è-y-pòt-ór-¹i ‘He will be called out.’
3-II-call-AWAY-PASS ‘People will break the chairs off.’
è-bèl-ár-¹i kûldó őrikán ‘It will be opened out.’
è-bôl-ór-¹i ‘It will be chased away.’
è-mîr-ár-¹i ‘It will be cut from.’ ‘People will cut it off.’
è-dùŋ-ór-¹i ‘It is/will be poured out.’
è-y-bûk-ór-¹i nîpê ‘He became beaten.’
è-y-dôñ-ór-¹i nîpê ‘It will be closed out (i.e., against the outside.).’
è-y-gêr-ór-¹i ëmpâlây ëpòytôy. ‘The letter will be written as he goes.’
è-y-gîs-ár-¹i ‘They will be carved one at a time.’
è-y-kên-ór-¹i ‘It will be closed out (i.e., against the outside.).’
è-y-nôs-ár-¹i ‘It will be eaten as we go.’
è-y-sùj-ár-¹i inkîlân’î ‘It will be washed away.’ (by someone).’
è-nôrr-ár-¹i ‘He will be loved/accepted.’
*è-tù-dûŋ-ór-¹i ‘cut’
*è-të-bèl-ár-¹i nîpê/nîncê ‘break’

C.2.10.2. Forms with $k$-

k-é-bôl-ór-¹i ‘It will be opened out.’
k-é-dûŋ-ór-¹i ‘It will be cut from.’
k-é-gîl-ár-¹i ‘It will be broken from.’
k-é-y-bûk-ór-¹i ‘It will be poured out.’
k-é-y-gis-ár-³i ‘They will be carved one at a time.’
k-é-y-kèn-ór-³i ‘It will be closed out (i.e., against the outside.).’
k-é-y-nòs-ár-³i ‘It will be eaten as we go.’
k-é-mir-ár-³i ‘It will be chased away.’

C.2.11. AWAY and Passive (PASS), Perfect Aspect

The following perfect forms, with PASS and AWAY, have a high-low-high stem tone pattern. I have all third person forms.

è-tà-ból-óyök-í ‘It was opened out (i.e., for someone to leave.).’
3-PF-open-AWAY.PF-PASS
è-tù-duŋ-óyök-í ‘It was cut from.’
è-tì-qìl-áyök-í ‘It was broken from.’
è-y-bùk-óyök-í ‘It was poured out.’
è-y-gis-áyök-í ‘They were carved one at a time.’
è-y-kèn-óyök-í ‘It was closed out (i.e., against the outside.).’
è-y-nòs-áyök-í ‘It was eaten as we went.’
è-y-sùj-áyök-í ‘It was washed away.’
è-tì-mìr-áyök-í ‘It was chased away.’

C.2.12. AWAY and Perfect Aspect

The following perfect forms, with AWAY, have a high-low stem tone pattern.

C.2.12.1. Third Person Forms

è-tè-bèl-áyyè ‘She broke them (one at a time.).’
3-PF-break-AWAY.PF
è-tà-ból-óyyè ‘He has opened it for him.’
è-tà-dál-áyyè ‘He played going away.’
è-tù-duŋ-óyyè ‘He went about cutting.’ ‘He cut it off.’
è-tì-qìl-áyyè ‘He broke it away(stick-like).’
è-tì-ńír-áyyè élòytò ‘He was silent as he went.’
è-y-bál-áyyè ‘He became visible as he went.’
è-y-don-óyyè  ‘He went around beating.’
‘He beat it off.’
è-y-kèn-óyyè  ‘He shut it (against the outside.).’
è-y-nòs-áyyè  ‘He at a bit at a time (as on a journey.).’
è-y-rírt-áyyè  ‘He looked after cows as they went.’
è-tà-màn-áyyè tèŋùdi  ‘He has walked around using a stick (away from his home.).’
è-tò-núŋ-óyyè  ‘He must have heard it, wherever he was.’
è-tò-ŋërr-áyyè  ‘He has agreed.’
è-tì-ŋid-áyyè  ‘He was proud while going.’
è-tà-ŋòr-óyyè  ‘He threw (a spear, away).’
è-ũ-šíp-áyyè élóytò  ‘He became happy while coming.’
è-tà-wwàs-áyyè élóytò  ‘He became proud as he went.’
è-tà-dàl-á-ýt-yè  ‘They played going away.’
è-tù-dùŋ-ó-ýt-yè  ‘They went about cutting.’
è-tù-dùŋ-ó-ýt-yè  ‘They cut it off.’
è-ũ-gíl-á-ýt-yè  ‘They broke it away (stick-like).’
è-ũ-ŋúr-á-ýt-yè élóytò  ‘They was silent as he went.’
è-ũ-bál-á-ýt-yè  ‘They became visible as they went.’
è-ũ-dùŋ-ó-ýt-yè  ‘They went around beating.’
è-ũ-dùŋ-ó-ýt-yè  ‘They beat it off.’
è-ũ-dùŋ-ó-ýt-yè  ‘They shut it (against the outside.).’
è-ũ-nòs-á-ýt-yè  ‘They at a bit at a time (as on a journey.).’
è-ũ-rírt-á-ýt-yè  ‘They looked after cows as they went.’
è-ũ-tèrr-ýt-yè  ‘They fainted.’
è-ũ-ŋúd-á-ýt-yè  ‘They were proud while going.’
è-tà-ŋòr-ó-ýt-yè  ‘They threw (a spear, away).’ or
è-tà-ŋòr-ó-ýt-yè  ‘They became happy while coming.’
è-ũ-šíp-á-ýt-yè épóytò  ‘They became proud as they went.’
*è-l-áyyè  ‘be stranded’
*è-lúb-óyyè  ‘be greedy’
*è-tà-nàn-óyyè  ‘be soft’

C.2.12.2. Forms with k-

k-é-y-kèn-óyyè  ‘He closed it against the outside.’
k-é-tò-ŋërr-áyyè  ‘Has he/she accepted it?.’
k-é-tà-bày-yè òshí òtáà tà ì própúní nàábàyà nàíròbī tèkàrèn?
* ‘How much is the fare nowadays from Karen to Nairobi?.’
*k-é-ŋìk-óyyè  ‘forget’
C.2.12.3. Initial Surface High Forms

á-y-dóŋ-óyyè ɨmùshâkwènì təŋúɗi  ‘He beat the corn cob off with a stick.’
á-y-pút-áyyè  ‘I filled (several things) one at a time (i.e., several containers of water or milk.).’
á-tá-ŋór-óyyè  ‘I threw (a spear, away).’
í-tó-ŋórr-áyyè  ‘You have agreed.’
i-tá-ŋór-óyyè  ‘You threw (a spear, away).’

C.3. Forms with Venteive (VENT)

C.3.1. *VENT and Antipassive (APAS)

The following forms, with APAS and VENT, are apparently not possible.

*ě-dùŋ-wíshò *ě-dùŋ-įshòrù  ‘He cuts toward himself.’

C.3.2. VENT and Dative (DAT), Middle (MID)

The following forms, with VENT, DAT, and MID, have a high-downstepped high stem tone pattern.

C.3.2.1. Third Person Form

è-y-túk-w-òkín-’ó  ‘They will wash for each other.’
C.3.2.2. Form with k-

k-é-y-tûk-w-ôkîn-’ô ‘They will wash for each other.’

C.3.3. VENT and Instrumental (INST)

The following forms, with VENT and INST, have a high-low stem tone pattern for Class I forms, and a high-low-low stem tone pattern for class II forms.

C.3.3.1. Third Person Forms

è-dûn-ûn-yè ‘He will use it to cut it.’
3-cut-VENT-INST
è-bël-ûn-yè ‘He will use it to break it from (e.g., a tree.).’
è-jîp-ûn-yè ‘He will use it to wedge it from something.’
è-bûk-ûn-yè ‘He will use it to pour them from something.’
è-bûl-ûn-yè ‘He will use it to pierce it toward something.’
è-këd-ûn-yè ‘He will use it to climb towards something.’
è-nîn-ûn-yè ‘He will use it to hear him coming.’
è-nër-ûn-yè ‘He will use it to tear it out.’
è-shûk-ûn-yè ‘He will use it to return it.’
‘He will come back.’
è-y-gér-’ûn-yè ‘He will use it to write from something.’
è-y-nôs-’ûn-yè ‘He will use it to eat as he comes.’
è-y-tûk-’ú-yyè ‘He will use it to wash.’
‘He used it to wash.’

C.3.3.2. Forms with k-

k-é-bël-ûn-yè ‘He will use it to break it from (e.g., a tree.).’
k-é-nîn-ûn-yè ‘He will use it to hear him coming.’
k-é-nër-ûn-yè ‘He will use it to tear it out.’
k-é-y-dôn-’ûn-yè ‘He will use it to pound it off.’
k-é-y-gér-'úŋ-yé ‘He will use it to write from something.’
k-é-y-nós-‘úŋ-yé ‘He will use it to eat as he comes.’
k-é-y-pót-úŋ-yé ‘He will use it to call him to come.’ or
k-é-y-pót-úŋ-yé
k-é-y-rít-úŋ-yé ūnkishú èŋúdi. ‘He will look after cows as they came with a stick.’
k-é-y-shír-‘úŋ-yé ‘He will use it to call for help.’
k-é-y-túk-‘úŋ-yé ‘He will use it to wash.’

C.3.3.3. Initial Surface High Forms

á-búk-úŋ-yè ‘I will use it to pour from something.’
á-dúŋ-úŋ-yè ‘I will use it to cut it this way.’
á-súl-úŋ-yè ‘I will use it to make it fall over (straight down) this way.’
á-úr-úŋ-yè ‘I will use it to knock it over (e.g., a cliff) this way.’
á-y-nós-úŋ-’yé ‘I will use it to eat as I come.’
k-á-y-shír-‘úŋ-yé ‘I will use it to call for help.’

C.3.4. VENT and Instrumental (INST), Perfect Aspect

The perfect forms with VENT and INST are a bit more confusing, with variation between high-low-high and high-downstepped high-high for both Class I and II verb stems.

C.3.4.1. Third Person Forms

è-tè-bél-úŋ-yè ‘He used it to break it from (e.g., a tree.).’
3-PF-break-VENT-INST
è-tù-búl-úŋ-yè ‘He used it to pierce it toward himself.’
è-y-rít-’úŋ-yé ūnkishú èŋúdi. ‘He looked after cows with a stick as they came.’
è-y-shír-’úŋ-yé ‘He used it to call for help.’ or
è-y-shír-úŋ-yè or
è-y-shír-úŋ-yè
è-ú-jíp-úŋ-yè ‘He used it to wedge it from something.’
è-tà-kéd-úŋ-yè ‘He used it to climb towards something.’ or
C.3.4.2. Initial Surface High Forms

á-y-shíř-úŋ-yé èmòwwó ‘I called for help with a horn.’
k-á-ytá-bárñ-úŋ-yé níŋé ‘I will use him to shave (hairs.).’

C.3.5. VENT and Instrumental (INST), Perfect Aspect (Plural)

The following plural perfect forms, with VENT and INST, have a high-falling/downstepped high stem tone pattern. I have all third person forms.

é-tá-kèd-úŋ-ɣyé or ‘He used it to hear him coming.’
è-tò-níŋ-úŋ-yè ‘He used it to tear it out.’
è-tè-ŋèr-úŋ-yè or
è-tù-shúk-úŋ-yè ‘He used it to return it.’
è-y-dóŋ-úŋ-yè ‘He used/will use it to pound it off.’ or
è-y-póñ-úŋ-yè ‘He used/will use it to call him to come.’ or
è-y-póñ-úŋ-yè or
è-y-póñ-úŋ-yè
è-tà-kèd-úŋ-yè ‘He used it to break it from (e.g., a tree.).’
è-tú-búl-úŋ-ɣyè ‘They used it to pierce it toward themselves.’
è-y-rrít-úŋ-ɣyè ‘They looked after cows as they came with a stick.’
è-tí-jíp-úŋ-ɣyè ‘They used it to wedge it from something.’
è-tá-kèd-úŋ-ɣyè ‘They used it to climb towards something.’
è-tò-níŋ-úŋ-ɣyè ‘They used it to hear him coming.’
è-tè-ŋèr-úŋ-ɣyè ‘They used it to tear it out.’
C.3.6. VENT and Middle (MID)

The following non-perfect forms with VENT and MID have a high-downstepped high stem tone pattern. One exception is ọsu, which seems to have middle semantics, but the combination of VENT and MID gives a different form (i.e., ọsọ).

C.3.6.1. Third Person Forms

è-àr-ùn-° ènkítèn (àjì)  ‘The cow is beaten this way (into the house.).’
3-beat-VENT-MID
è-bèl-ùn-°  ‘It is broken off.’
è-y-bùk-ùn-°  ‘It/they is/are poured (from).’
è-y-dòŋ-ùn-°  ‘It is beaten off.’
è-y-mòn-ùn-°  ‘They will beat each other as they come.’
è-y-sòj-ùn-°  ‘They/he is beaten as he comes.’
è-y-nòs-ùn-° èlòmòn  ‘The news has already been narrated.’
è-y-pòt-ùn-°  ‘He is called. (i.e., that's why he's here.).’
è-y-tùkw-°  ‘It is (already) washed.’
è-y-tùkw-°  ‘He has washed.’
è-lùb-ùn-°  ‘It is pierced (in).’
è-sùh-k-ùn-°  ‘It is returned.’
è-yà-ùn-°  ‘It has been brought.’
è-qìl-ùn-°  ‘It is broken off.’
è-nòr-rìn-°  ‘They will love each other.’
è-y-tùkw-°  ‘He/They is washing himself.’
*è-y-dòŋ-ùn-°  ‘beat’
*è-ì-ùn-°  ‘be stranded’
*è-ŋjìd-ùn-°  ‘be proud’
*è-wàwàs-ùn-°  ‘be proud’
*kè-è-rìkìn-ùn-°  ‘forget’
è-y-sòj-° èòò  ‘He will wash himself off.’

C.3.6.2. Forms with k-

k-è-yà-ùn-°  ‘It has been brought.’
k-é-ár-úŋ-’ó  ‘They will beat each other as they come.’
k-é-y-túkč-’ó  ‘They will wash each other.’

C.3.7. VENT and Middle (MID), Perfect Aspect

The following singular perfect forms with VENT and MID have a high-low stem tone pattern.

C.3.7.1. Third Person Forms

e-ṭè-bèl-úŋ-è  ‘It was broken off from.’
3-PF-break-VENT-MID.PF
e-ṭè-šèk-úŋ-è  ‘It will be/became beaten off.’
e-ṭè-šèk-úŋ-è  ‘He washed himself.’
e-ṭè-šèk-úŋ-è  ‘He became washed.’
e-ṭè-šèk-úŋ-è  ‘He came back.’
e-ṭè-šèk-úŋ-è  ‘It is poured out.’
e-ṭè-šèk-úŋ-è  ‘They are playing as they come.’
e-ṭè-šèk-úŋ-è  ‘He played coming.’
*’e-ṭè-šèk-úŋ-è  ‘wash’
*’e-ṭè-šèk-úŋ-è  ‘be stranded’
*’e-ṭè-šèk-úŋ-è  ‘be soft’
*’e-ṭè-šèk-úŋ-è  ‘be proud’
*’e-ṭè-šèk-úŋ-è  ‘be soft’

C.3.7.2. Forms with k-

k-é-shèp-úŋ-è  ‘It will make him happy as he comes.’
*’e-ṭè-šèk-úŋ-è  ‘forget’

C.3.7.3. Initial Surface High Forms

á-dúŋ-úŋ-è  ‘I will cut myself off of something bigger.’
á-y-nós-úŋ-è  ‘I will eat myself (i.e., become gradually annoyed) in this direction.’
C.3.8. VENT and Middle (MID), Perfect Aspect (Plural)

The following plural perfect forms with VENT and MID have a high-falling (or with a final downstepped high) tone pattern. One exception is *ituku, probably because VENT, if it is there, doesn't behave the same as in other words. I have all third person forms.

á-súl-úŋ-è ‘I will fall over (straight down) this way.’
á-úŋ-úŋ-è ‘I will fall over (e.g., a cliff) this way (on my own.).’

C.3.9. VENT and Middle (MID), Inceptive (INCEP)

The following inceptive forms, with VENT and MID, have a high-low-high stem tone pattern.

C.3.9.1. All Third Person Forms

è-bük-ún-ò-yú ‘It is pourable.’
è-bük-un-ò-yú ‘It is pourable (from.).’
è-y-bun-un-ò-yú ‘He is supportable.’
è-y-tük-w-ò-yú ‘It is washable.’
C.3.9.2. Form with k-

k-é-bùk-ún-ò-yú ‘It is pourable.’

C.3.10. VENT and Middle (MID), Instrumental (INST)

The following form, with VENT, MID and INST, has a high-low-high stem tone pattern. I have one third person form.

è-shùk-ún-ò-ré ‘He will use it to come back.’

C.3.11. VENT and Passive (PASS)

The following non-perfect forms, with VENT and PASS, have a high-downstepped high stem tone pattern

C.3.11.1. Third Person Forms

è-àr-ún-ì èn-kítèn àjì ‘The cow will be beaten into the house.’
3-beat-VENT-PASS
è-bòl-ún-ì ‘It will be opened for someone inside (i.e., to go out.).’
è-bùk-ún-ì kòlè tènkìkòmpè ‘The milk will be poured from the glasses.’
e-mìr-ún-ì ‘It will be chased home.’
e-y-bùn-ún-ì ‘It will be caught (i.e., supported).’
e-nòrr-ún-ì ‘He will be loved.’
e-y-kèn-ún-ì ‘It will be closed in (i.e., against the outside.).’

C.3.11.2. Forms with k-

k-é-y-nòs-ún-ì ‘It will be eaten as we come.’
k-é-bòl-ún-ì ‘It will be opened for someone inside (i.e., to go out.).’
k-é-dùn-ún-ì ‘They will be cut off off from..’
C.3.12. VENT and Passive (PASS), Perfect Aspect

The following perfect forms, with VENT and PASS, have a high-low-high stem tone pattern. I have only Third Person Forms.

è-tè-bèl-w-àk-í
3-PF-beat-VENT-PF-PASS
‘It was broken this way.’

è-tà-ból-w-òk-í
‘It was opened for someone inside (i.e., to go out.).’

è-tù-búk-w-òk-í kòlé tènkíkòmpè
‘The milk was poured from the glasses.’

è-tù-dùn-w-òk-í
‘They were cut down.’

è-tí-gíl-w-àk-í
‘It was broken from.’

è-y-búŋw-àk-í
‘It was caught (i.e., supported).’ or

è-y-bùŋ-w-àk-í

è-y-dóŋ-w-òk-í küldó páék tòmùshàkwènì
‘This corn was hit off of the maize cob.’

è-y-nós-w-àk-í
‘It was eaten as we came.’

è-y-túk-w-òk-í
‘It was washed.’

è-tú-mír-w-àk-í
‘It was chased home.’

è-tù-shúk-w-òk-í
‘He was returned.’

C.3.13. VENT and Perfect Aspect

For singular perfect forms with VENT, the stem tone pattern is high-downstepped high.

C.3.13.1. Third Person Forms

è-tà-bàrn-w-à
3-PF-shave-VENT-PF
‘He has shaved off.’

è-tù-búl-w-ó
‘He pierced it (toward himself).’

è-tà-dáł-w-à
‘He played coming.’

è-tù-dúŋ-w-ó
‘He cut it from ..’
C.3.13.2. Initial Surface High Forms

á-y-té-r-w-á ànínj  ‘I’ve started learning.’
á-y-túk-w-ó  ‘I washed it.’

C.3.13.3. exceptions

ë-y-pár-w-à ènkèrày i姆bàà kúmòk  ‘The child asked many questions.’
á-y-pót-w-à ìròpìàmì  ‘I filled the money a bit at a time (i.e., saving to buy something).’

C.3.14. VENT and Perfect Aspect (Plural)

For plural perfect forms with VENT, the stem tone pattern is high-low-falling. I have all third person forms.

ë-tà-bá-út-w-à  ‘They have reached ..’
3-PF-reach-PL.PF-VENT-PF
e-tù-búl-út-w-ó  ‘They pierced it (toward themselves).’
è-tà-dál-ût-w-â  ‘They played coming.’
è-tù-dùŋ-ût-w-ô  ‘They cut it from ..’
è-fî-ŋîr-ût-w-â èpònû  ‘They were silent as they came.’
è-y-bál-ût-w-â  ‘They became visible as they came.’
è-y-ŋîŋ-ût-w-ô  ‘They beat it towards themselves.’
è-y-kèn-ût-w-ô  ‘They closed them in this direction.’
è-y-pîk-ût-w-â nîncè  ‘He projected (up).’
è-y-rît-ût-w-â  ‘They looked after cows as they came.’
è-tô-nîŋ-ût-w-ô  ‘They understood.’
è-fî-nîð-ût-w-â  ‘They were proud when coming.’
è-fî-shîp-ût-w-â èpònû  ‘They became happy while coming.’
è-tà-wwâs-ût-w-ô èpònû  ‘They became proud as they came.’

C.4. Forms with Dative (DAT)

C.4.1. DAT and Perfect Aspect

For perfect forms with DAT, the stem tone pattern is high-downstepped high.

C.4.1.1. Third Person Forms

è-tè-bèl-âk-’à  ‘She did break it(stick) for him.’
è-tà-bîl-ôk-à  ‘He opened it for him.’
è-tà-dâl-âk-à  ‘He played for him.’
è-tù-dùŋ-ôk-à  ‘He cut it for him’ / ‘He gave it to him.’
è-ô-ŋîl-âk-à  ‘She broke it for him.’
è-tà-gôr-ôk-à  ‘He strangled for him.’
è-y-bâl-âk-à  ‘He revealed it to him.’
è-îd-âk-à  ôsòît  ‘He jumped onto the rock.’
è-y-dôn-ôk-à  ‘He beat for him.’
è-y-gîr-ôk-à  ‘She did write it for him.’
è-y-kèn-ôk-à  ‘She did close it for him.’
è-y-lêp-âk-à  ‘She did climb it for him.’
è-y-rrît-âk-à  ‘He looked after cows for him.’
è-tù-lûb-ôk-à  ‘He was greedy on his behalf.’
è-tò-nïŋ-ók-’ó  ‘He heard for him.’
è-tò-p‘ərr-ák-’á  ‘He did agree with him.’
è-tè-ŋər-ák-’á  ‘She did tear it for him.’
è-tù-shùk-ók-’ó  ‘He returned it for him.’
è-tà-wwàs-ák-’á  ‘He became proud on behalf of him.’
*è-tù-gûr-ák-’á  ‘be silent’
*è-tà-l-ák’á  ‘be stranded’
*è-tà-l-ák-ít-á  ‘be soft’
*è-nà-n-ák-íá  ‘be proud’
*è-tù-ŋànd-ák-’á  ‘forget’
*è-tò-ŋëkën-ók-’ó  ‘be happy’

C.4.1.2. Initial Surface High Forms

á-té-bël-ák-’á  ‘I did break it(stick) for him.’
á-tí-gïl-ák-’á  ‘I broke it for him.’
á-tá-gór-ók-’ó  ‘I strangled for him.’
á-y-dôn-ók-’ó  ‘I pounded (the grain) for him.’
á-y-gër-ók-’ó  ‘I did write it for him.’
á-té-ŋër-ák-’á  ‘I tore it for him.’

C.4.2. DAT and Perfect Aspect (Plural)

For plural perfect forms with DAT, the stem tone pattern is high-low-falling. I have all third person forms.

è-tè-bël-ák-ít-á  ‘They did break it(stick) for him.’
3-PF-break-DAT-PF.PL-DAT.PLF
è-tà-ból-ók-ít-ó  ‘They opened it for him.’
è-tà-dal-ák-ít-á  ‘They played for him.’
è-tù-duŋ-ók-ít-ó  ‘They cut it for him.’
è-tì-gïl-ák-ít-á  ‘They broke it for him.’
è-tà-gór-ók-ít-ó  ‘They strangled for him.’
è-y-dôn-ók-ít-ó  ‘They beat for him.’
è-y-gër-ók-ít-ó  ‘They wrote it for him.’
è-y-kën-ók-ít-ó  ‘They closed it for him.’
e-num-b-ák-ít-á  ‘They climbed it for him.’
è-y-rît-äd-kt-åå  \textquotesingle\textquotesingle They looked after cows for him.\textquotesingle\textquotesingle
è-y-rît-äd-kt-åå  \textquotesingle\textquotesingle They looked after cows for him.\textquotesingle\textquotesingle
è-tû-lûb-ök-åt-òò  \textquotesingle\textquotesingle They were greedy on his behalf.\textquotesingle\textquotesingle
è-tû-nûg-ök-åt-òò  \textquotesingle\textquotesingle They heard for him.\textquotesingle\textquotesingle
è-tû-pûrr-äd-kt-åå  \textquotesingle\textquotesingle They agreed with him.\textquotesingle\textquotesingle
è-tû-nûr-äd-kt-åå  \textquotesingle\textquotesingle They tore it for him.\textquotesingle\textquotesingle
è-tû-shûk-ök-åt-òò  \textquotesingle\textquotesingle They returned it for him.\textquotesingle\textquotesingle
è-tà-wwàs-äd-kt-åå  \textquotesingle\textquotesingle They became proud on behalf of him.\textquotesingle\textquotesingle
*è-tû-ùjîd-äd-kt-åå  \textquotesingle be proud\textquotesingle

C.4.3. *DAT and Antipassive (APAS)

The following form, with DAT and APAS, is apparently not valid.

*è-åƞ-ökîn-îsh\'òò  \textquotesingle He cuts for him.\textquotesingle
*è-åƞ-îshôr-ökî

C.4.4. DAT and Instrumental (INST)

The following forms, with DAT and INST, have a variety of stem tone patterns, from high-low-high to high-downstepped high-high, to high-low. In these examples, the several forms seem not to be distinguished in the non-perfect readings, and aspect seems to not be distinguished on Class II forms (see \textit{yday}). Perhaps stem tone patterns that used to be distinct have become confused (see TM Class I/II patterns.)

C.4.4.1. Third Person Forms

è-bèl-ákîn-å  \textquotesingle He will use it to break it for them.\textquotesingle or
è-bèl-åkîn-å  \textquotesingle He will use it to break it for them.\textquotesingle
3-break-DAT-INST
è-åƞ-ökîn-åå  \textquotesingle He will use it to cut it for them.\textquotesingle or
è-åƞ-ökîn-åå (*st) or
è-åƞ-ökîn-åå
è-gôr-ökîn-åå  \textquotesingle He will use it to strangle it for them.\textquotesingle or
C.4.4.2. Forms with \( k \)-

\begin{align*}
\text{k-è-bèl-ákïn-yè} & \quad \text{‘He will use it to break it for them.’ or} \\
\text{k-è-bèl-ák'ïn-yè} & \quad \text{or} \\
\text{k-è-gèr-ókîn-yè} & \quad \text{‘He will use it to strangle it for them.’ or} \\
\text{k-è-gèr-ókîn-yè} & \quad \text{or} \\
\text{k-è-lèp-ókîn-yè} & \quad \text{‘He will use it to milk for him.’ or} \\
\text{k-è-lèp-ókîn-yè} & \quad \text{or} \\
\text{k-è-shèt-ákîn-yè} & \quad \text{‘He will use it to build for him.’ or} \\
\text{k-è-shèt-ákîn-yè} & \quad \text{or} \\
\end{align*}
k-é-shët-ák’íŋ-yë  ‘He will use it to return it to him.’ or
k-é-shùk-ókíŋ-yë  or
k-é-shùk-ókíŋ-yë

k-é-y-dòŋ-ókíŋ-yë  ‘She will use it to pound for them.’ or
k-é-y-dòŋ-ókíŋ-yë
k-é-y-gèr-ókíŋ-yë  ‘He will use it write it for him.’ or
k-é-y-gèr-ókíŋ-yë
k-é-y-kèn-ókíŋ-yë  ‘She will use it to close it for him.’ or
k-é-y-kèn-ókíŋ-yë

k-é-y-kòd-ókíŋ-yë  ‘He used it to decorate for him.’

C.4.4.3. Initial Surface High Forms

á-y-dòŋ-ókíŋ-yë  ‘I used it to pound for him.’ or
á-y-dòŋ-ókíŋ-yë  ‘I will use it to pound for him.’ or
á-y-dòŋ-ókíŋ-yë
k-á-y-dòŋ-ókíŋ-yë  ‘I will use it to pound for him.’ or
k-á-y-dòŋ-ókíŋ-yë

C.4.5. DAT and Middle (MID)

The following non-perfect forms, with DAT and MID, have a high-downstepped high stem tone pattern.

C.4.5.1. Third Person Forms

è-là-ykín’ó  áshóm’ó  ‘He won’t be able to go.’
3-break-DAT-MID
è-bà-ykín’ó  ‘The child was visited/reached (where in the hospital).’
è-bùk-ókín’ó  ‘It is poured into.’
è-gùr-àkíŋ’ó  ‘He (Leonard) is keeping silent to him (Keswe.).’
è-id-àkín’ó  ósòít  ‘The rock has been jumped onto.’
è-dàl-àkín’ó  ‘They will play for each other.’
è-dùn-òkin'ò ‘They will cut for each other.’
è-gùl-òkin'ò ‘They will be greedy for each other.’
è-lùh-òkin'ò ‘They will be strong for each other.’
è-ñd-àkín'ò ‘They will be proud for each other.’
è-pèj-òkin’ò ‘They will burn it for each other.’
è-r̃p-àkín’ò ‘They will sew for each other.’
è-sír-àkín’ò ‘They will paint for each other.’
è-sht-àkín’ò ‘They will build for each other.’
è-ship-àkín’ò ‘They will be happy for each other.’
è-tùn-k’ò ‘They will stay for each other.’
è-yàn-òkín’ò ‘They will slaughter for each other.’
è-rüt-òkín’ò ‘They will collect honey for each other.’
è-bà-yàkín’ò ‘They visit/reach one another’/it is reachable.’
è-wùsâ-òkín’ò ‘They will become proud for each other.’
è-y-bònh-òkín’ò ‘They will help each other (i.e., join together for some success).’
è-y-dùn-òkín’ò ‘They will pound (e.g., grain) for each other.’
è-y-gèr-òkín’ò ‘They will write for each other.’
è-y-gús-òkín’ò ‘They will carve for each other.’
è-y-nôs-òkín’ò ‘They will eat for each other.’
è-y-pàr-òkín’ò ‘They will question for each other.’
è-y-pèr-òkín’ò ‘Ilkêk ilkûlîk’ay. ‘The wood will be split onto the other.’

C.4.5.2. Forms with k-

k-é-dùn-òkín’ò ‘They will cut for each other.’
k-é-mùr-òkín’ò ‘They will sell/chase for each other.’
k-é-gûl-òkín’ò ‘They will be strong for each other.’
k-é-gôr-òkín’ò ‘They will become angry at him.’
k-é-y-bònh-òkín’ò ‘They will help each other (i.e., join together for some success).’
k-é-y-dùn-òkín’ò ‘They will pound (e.g., grain) for each other.’
k-é-y-gèr-òkín’ò ‘They will write for each other.’
k-é-y-nôs-òkín’ò ‘They will eat for each other.’
k-é-y-ŋûr-òkín’ò ‘They will look after each other’s cows.’
k-é-y-pàr-òkín’ò ‘They will question for each other.’
k-é-y-r̃r-òkín’ò ‘They will look after each other’s cows.’
k-é-r̃p-òkín’ò ‘They will be greedy for each other.’
k-é-ñd-àkín’ò ‘They will be proud for each other.’
k-é-pèj-òkín’ò ‘They will burn it for each other.’
They will sew for each other.’
They will collect honey for each other.’
They will paint for each other.’
They will stay for each other.’
They will slaughter for each other.’

C.4.5.3. Initial Surface High Forms

‘I will be angry at..’
‘I will jump into it.’
‘I will be angry at..’

C.4.6. DAT and Middle (MID), Perfect Aspect

The following perfect forms with DAT and MID have a high-falling stem tone pattern.

C.4.6.1. Third Person Forms

‘He (Leonard) kept silent to him (Keswe.).’
‘The branch is broken, and will fall onto the other one.’
‘He became angry at him/her.’
‘The door is closed into the other.’
‘The bottle is pushed into the other one, making it hard to remove.’
‘The stick is pounded into the hole, such that it is difficult to remove.’
‘The girl is showing off to the other.’
‘The house sunk into the other one. (i.e., an upper storey collapsed into a lower one.).’
‘He doubts whether he will do it.’
‘The water is stirred (to become dirty) and directed into the other.’
‘The wood is split onto the other one. (i.e., falls into the other one as it is split.).’
è-tà-là-ỳkì̀-è ástó’m’ó ’He is unable to walk.’
è-tù-lùb-òkì̀-è ’He became angry to him.’
è-rù-jàd-àkì̀-è ’He was proud to him.’
è-tà-jàb-òkì̀-è ̀̀ìlcó̞má ̀ìfì̀kày. ’The one iron is burnt to the other one (i.e., to join them.)’
è-rù-rìp-òkì̀-è èmòò ̀ìnkày. ’The pot is stuck into the other (so it can’t be removed easily.)’
è-tù-sùk-òkì̀-è ’He came back to him (on his own.)’
è-wwàs-àkì̀-è ’He became proud to him.’

C.4.6.2. Ungrammatical Third Person Forms

*è-tà-bòł-òkì̀-è
*è-tà-gòl-òkì̀-è
*è-y-bòŋ-àkì̀-è
*è-y-dìk-àkì̀-è
*è-y-dìm-àkì̀-è
*è-y-dòŋ-àkì̀-è
*è-y-gèr-òkì̀-è
*è-y-gùs-òkì̀-è
*è-y-kàsh-àkì̀-è
*è-y-kód-òkì̀-è
*è-y-lèp-àkì̀-è
*è-y-lèp-òkì̀-è
*è-y-lèt-òkì̀-è
*è-y-lùŋ-òkì̀-è
*è-y-màł-àkì̀-è
*è-y-nòk-àkì̀-è
*è-y-nòs-àkì̀-è
*è-tò-rùt-òkì̀-è
*è-tì-sìr-àkì̀-è
*è-tè-shèt-àkì̀-è
*è-tò-tòm-àkì̀-è
*è-tè-yùŋ-àkì̀-è

C.4.6.3. Initial Surface High Forms

á-tà-gór-òkì̀-è ’I became angry at him.’
áá-tá-gór-ókin-è ‘I became angry at you.SG.’

C.4.7. DAT and Middle (MID), Perfect Aspect (Plural)

The following plural perfect forms, with DAT and MID, have a high-low-low stem tone pattern. I have all third person forms.

è-tà-dál-àkin-òt-è ‘They played for each other.’
3-PF-play-DAT-PL.PF-DAT.PF
è-tù-duñ-òkin-òt-è ‘They cut for each other.’
è-tù-ghùr-òkin-òt-è ‘They kept silent to him.’
è-tà-gòl-òkin-òt-è ‘They became strong for each other.’
è-tà-gór-òkin-òt-è ‘They became angry at him/her/each other.’
è-y-dông-òkin-òt-è ‘They pounded (e.g., grain) for each other.’
è-y-dông-òkin-òt-è ‘They made each other pound.’
è-y-gèr-òkin-òt-è ‘They made each other climb.’
è-y-gèr-òkin-òt-è ‘They did write for each other.’
è-y-gìs-àkin-òt-è ‘They did carve for each other.’
è-y-lèp-àkin-òt-è ‘They climbed for each other.’
è-y-nòs-àkin-òt-è ‘They ate for each other.’
è-y-pår-àkin-òt-è ‘They questioned for each other.’
è-tù-lùb-òkin-òt-è ‘They were greedy/hungry to each other.’
è-fù-ñjìd-àkin-òt-è ‘They became proud for each other.’
è-fù-ñjìd-àkin-òt-è ‘They were proud to each other.’
è-tà-pèj-òkin-òt-è ‘They burned for each other.’
è-fù-ñjìp-àkin-òt-è ‘They sewed for each other.’
è-tù-rùt-òkin-òt-è ‘They collected honey for each other.’
è-fù-sùr-àkin-òt-è ‘They painted for each other.’
è-tè-shèt-àkin-òt-è ‘They built for each other.’
è-tè-tôn-àkin-òt-è ‘They stayed for each other.’
è-wwàs-àkin-òt-è ‘They became proud for each other.’
è-tè-yyàñ-àkin-òt-è ‘They slaughtered for each other.’

C.4.8. DAT and Middle (MID), Inceptive (INCEP)

The following inceptive forms, with DAT and MID, have a high-low-high stem tone pattern.
C.4.8.1. Third Person Form

è-bà-ykín-ô-yú òréyy'ét ‘The river is reachable/can be reached.’
3- reach-DAT-MID-INCEP

C.4.8.2. Forms with k-

k-é-duŋ-ôkín-ô-yú ‘It is cuttable for him.’
k-é-bà-ykín-ô-yú ènkèrây ‘The child is reachable/visitable. (i.e., not sick, bad tempered).’

C.4.9. DAT and Passive (PASS)

The following non-perfect forms, with DAT and PASS, have a high-downstepped high-high stem tone pattern.

C.4.9.1. All Third Person Forms

è-bòl-ôk’ìn-iph ‘It will be opened for him.’
3-open-DAT-PASS
è-y-bùk-ôk’ìn-iph ‘It will be poured into it.’
è-y-dîk-ôk’ìn-iph ‘(Someone) will join it for him.’
è-y-dōn-ôk’ìn-iph ‘(Someone) will join it for him.’
è-y-gùs-ák’ìn-iph ‘(Someone) will carve for him.’
è-y-lèp-ák’ìn-iph ‘(Someone) will climb for him.’
è-jùn-ák’ìn-iph ‘(Someone) will enter for him.’
è-bùk-ôk’ìn-iph ‘It will be poured into it.’
è-dàs-ák’ìn-iph ‘It will be milked for him.’
è-gùr-ôk’ìn-iph ‘(Someone) will strangle on his behalf.’
è-mùr-ák’ìn-iph ‘(Someone) will sell/chase for him.’
è-môk-ák’ìn-iph ‘(Someone) will brew for him.’
C.4.9.2. Forms with k-

k-é-bük-ók’mín-i  ‘It will be poured into it.’
k-é-y-bük-ók’mín-i  ‘It will be poured into it.’
k-é-y-dík-ók’mín-i  ‘(Someone) will join it for him.’
k-é-lèj-ák’mín-i  ‘Someone will lie for him.’

C.4.10. DAT and Passive (PASS), Perfect Aspect

The following perfect forms, with DAT and PASS, have a high-low-high stem tone pattern.

C.4.10.1. All Third Person Forms

è-tà-ból-ók-ók-ì ènkítók ènkàjì. ‘The house has been opened for the woman.’
3-PF-open-DAT-PF-PASS
è-tù-bük-ók-ók-ì  ‘It was poured into it.’
è-ytù-duŋ-ók-ók-ì  ‘He forced someone to cut it for him.’
è-tà-gòr-ók-ók-ì  ‘(Someone) strangled for him.’
è-y-dík-ók-ók-ì  ‘(Someone) joined (rope, etc.) for him.’
è-y-dóng-ók-ók-ì  ‘(Someone) pounded it for him.’
è-y-ĝís-ák-ák-ì  ‘(Someone) carved for him.’
è-y-lep-ák-ák-ì  ‘(Someone) climbed for him.’
è-ti-jín-ák-ák-ì  ‘(Someone) entered for him.’
è-tè-lèj-ák-ák-ì  ‘(Someone) lied for him.’
è-tù-mír-ák-ák-ì  ‘(Someone) entered for him.’
è-tù-mók-ák-ák-ì  ‘(Someone) brewed for him.’
è-tò-pòrr-ák-ák-ì  ‘He was agreed with.’

C.4.10.2. Initial Surface High form

kí-tù-duŋ-ók-ók-ì  ‘It was cut for you.’
C.5. Forms with Middle (MID)

C.5.1. MID and Inceptive (INCEP)

For inceptive forms with MID, the stem tone pattern is high-downstepped high-high, except for stative roots that have a final -a/o which may be called ‘frozen’, though that final vowel is not obligatory in forms of these stative roots (e.g., êytánàn, ‘He will make it soft’). It is not clear to me what is happening with the 1/2SG forms here.

C.5.1.1. Third Person Forms

è-bél-¹-á-yù  ‘It is breakable.’
3-break-MID-INCEP
è-dúg-¹-ó-yù  ‘It is cutable.’
è-y-din-¹-á-yù  ‘It will become crowded.’
è-y-dón-¹-ó-yù  ‘It is poundable,’ also ‘He warrants a beating.’
è-y-gér-¹-ó-yù  ‘It is writeable.’
è-y-kén-¹-ó-yù kòtokàjì  ‘The door is closeable.’
è-y-kó-¹-ó-yù  ‘He is advisable.’
è-y-nós-¹-á-yù  ‘It is edible.’
è-y-nṣl-¹-á-yù  ‘It is stirrable.’
è-y-njór-¹-á-yù  ‘It is (always) visible.’
è-y-pèr-¹-á-yù  ‘It is splittable.’
è-y-rósh-¹-á-yù  ‘It will become thick.’
è-y-shór-¹-á-yù  ‘It will become overcooked.’
è-kéd-¹-ó-yù  ‘It is climbable.’
è-níń-¹-ó-yù  ‘It will be heard.’
è-shéń-¹-á-yù  ‘It is auditable.’
è-shét-¹-á-yù  ‘It is plaitable.’
è-dóá-¹-á-yù  ‘The child is visible/can be seen.’
è-y-rrítn-¹-á-yù  ‘It/They can be looked after.’
è-nán-¹-áw  ‘It/they will become soft.’
è-nórrtn-¹-á-yù  ‘They are lovable.’
C.5.1.2. Forms with k-

k-é-y-dón-í-ó-yú  ‘It is beatable.’
k-é-bél-í-á-yú  ‘It is breakable.’
k-é-dúŋ-í-ó-yú  ‘It is cutable.’
k-é-y-dín-í-á-yú  ‘It will become crowded.’
k-é-y-kó-í-ó-yú  ‘He is advisable.’
k-é-y-nós-í-á-yú  ‘It is edible.’
k-é-y-rósh-í-á-yú  ‘It will become thick.’
k-é-y-shór-í-á-yú  ‘It will become overcooked.’
k-é-kéd-í-ó-yú  ‘It is climbable.’
k-é-shét-í-á-yú  ‘It is plaitable.’
k-é-y-bál-í-á-yú  ‘It/They will become visible.’
k-é-y-rait-í-á-yú  ‘It/They can be looked after.’
k-é-nán-í-á  ‘It/they will become soft.’
*k-ké-nàn-í-á-yú

C.5.1.3. Initial Surface High Forms

á-shíp-á-yú tátsérè  ‘I’ll be happy tomorrow (and I’m not happy now).’
í-dámón-ò-ó-yú  ‘You.SG are worthy of being remembered.’
í-pórr-í-á-yú  ‘You (sg) are loveable.’

C.5.1.4. Stative Roots

è-dál-á-yú  ‘He can play.’
è-lüb-ó-yú  ‘He will become better at playing.’
è-nút-á-yú ènkítòk tènkáràkì ñlpáyyán  ‘The woman will become pregnant because of the man.’
è-ŋíd-á-yú  ‘He will become proud.’
è-shıp-á-yú  ‘He will become happy.’
è-řikín-ò-ó-yú  ‘It is easily forgotten.’
è-wwás-á-á-yú  ‘He will become proud.’
è-gír-á-yú  ‘He/they will become silent later.’
k-é-ąpít-á-yú  ‘The man will be respectable.’
k-é-dàl-á-yù 'He can play.'
   ‘He will become better at playing.’
k-é-dòp-á-yù ènkířìŋò ‘The meat will be chewable (in the future).’
k-é-dòp-á-yù níŋè ‘He will become a dependable person.’
k-é-lùb-ó-yù ‘He will become greedy.’
k-é-ŋùd-á-yù ‘He will become proud.’
k-é-ríkín-ô-yù ‘It is easily forgotten.’

C.5.1.5. Other exceptions

è-dàmón-ô-yù ‘They/he/she are/is worth remembering.’
è-y-sój-à-yù ‘He/They is/are washable.’
k-é-níŋ-ô-yù ‘It will be heard.’

C.5.2. MID and Antipassive (APAS)

The following form, with MID and APAS, is not acceptable.

*e-l-a-isho

C.5.3. MID and Instrumental (INST)

The following non-perfect forms, with MID and INST, have a high-downstepped high-high stem tone pattern.

C.5.3.1. Third Person Forms

è-shíp-1á-ré ‘He is happy due to it.’
3-be-happy-MID-INST ‘He will become proud because of it.’
è-wwás-1á-ré ‘It is broken, by something.’
è-bélt-1á-ré ènkúkúří è-dáš-1á-ré èndá kíteŋ ‘The calabash was used to make the cow milked.’
ènkálém áy è-dúŋ-ô-ré ‘He/they will be cut (using my knife).’
   ‘He will use it to cut himself.’
C.5.3.2. Forms with k-

k-é-wwás-’á-ré ‘He will become proud because of it.’
k-é-á-r-’á-ré ‘He will fight with her.’
k-é-gír-’á-ré ‘He will (continue to??) be silent.’
k-é-y-dón-’ó-ré ‘He/It is beaten with (a stick.)’
k-é-y-kód-’ó-ré ‘He will use it to decorate.’
k-é-y-nós-’á-ré ‘It is eaten with (a spoon.).’
k-é-níd-’á-ré ‘He is proud because of him (the child.).’
k-é-pét-’á-ré ‘He will keep close to it.’
k-é-shét-’á-ré ‘His hair is plaited with it.’

C.5.3.3. Initial Surface High Forms

á-dún-’ó-ré ‘I am cut (using the knife).’
   ‘I will use it to cut myself.’
ènkálém á-dún-’ó-ré ‘I am cut (using the knife).’
á-pét-’á-ré ‘I will keep close to it.’
á-shét-’á-ré ‘My hair is plaited with it.’
k-á-á-r-’á-ré ‘I will fight with him.’
k-á-pét-’á-ré ‘I will keep close to it.’
k-á-túm-’ó-ré ‘I shall meet (to) him.’
î-á-r-’á-ré ‘You will fight with her.’
C.5.4. MID and Instrumental (INST), Perfect Aspect

The following singular perfect forms, with MID and INST, have a high-low-low stem tone pattern.

C.5.4.1. Third Person Forms

è-tè-bél-à-rè  ‘It was broken, by something.’
3-PF-break-MID-INST
è-tà-dál-à-rè ‘He used it to play.’
è-tù-dùŋ-ò-rè ‘He used it to cut himself.’
è-ṯi-géř-à-rè ‘He was silent to him.’
è-y-gě́r-ò-rè ‘It was written with it.’
è-y-giš-à-rè ‘It was carved with it.’
e-y-kóð-ò-rè ‘He used it to decorate.’
e-y-nós-à-rè èŋkįjįkò ‘It was eaten with a spoon.’
‘He used it to eat himself.’
e-y-ŋól-à-rè ‘It was stirred with (a stirring rod.).’
‘He used it to stir himself.’
e-y-súj-à-rè ‘He used it to wash himself.’
e-tù-lúb-ò-rè ‘He was always greedy when it was there.’
e-tà-náŋ-à-rè èélátá. ‘It became soft due to the oil.’
e-ṯi-ŋíd-à-rè ‘He was proud because of him.’
e-ṯe-pět-à-rè ‘He kept close to it.’
e-ṯe-šéň-à-rè ‘His hair was plaited with it.’
e-ṯi-šiř-p-à-rè ‘He was happy due to it.’
e-tù-tům-ò-rè ‘He has met him.’
e-tà-wwás-à-rè ‘He became proud because of it.’
*è-tà-là-rè

C.5.4.2. Initial Surface High Forms

á-tá-ář-à-rè ‘I fought with him.’
á-tá-dá-rè ǐnkįřįŋọ ‘I ate the meat.’
á-tù-dùŋ-ò-rè ‘I used it to cut myself.’
á-ṯe-pět-à-rè ‘I kept close to it.’
á-té-shét-à-rè  ‘My hair was plaited with it.’
á-tú-túm-ò-rè  ‘I have met him.’

C.5.5. MID and Instrumental (INST), Perfect Aspect (Plural)

The following plural perfect forms, with MID and INST, have a highs-falling (or a final downstepped high) tone pattern. I have all third person forms.

é-tá-dál-á-rè  ‘They used it to play.’
3-PF-play-MID-INST
e-tú-dúñ-ò-r’é  ‘They used it to cut themselves.’
e-tú-dúñ-ò-rè
e-ti-gir-à-r’é  ‘They were silent to him.’
émòwwó é-y-pót-ò-rè  ílpáyyání  ‘The men called each other with a horn.’
è-y-rít-’á-ré  ‘The cows were looked after with a stick.’
è-tú-lúb-ò-r’é  ‘They were always greedy when it was there.’
è-tá-náñ-à-r’é  ‘They became soft due to it.’
è-tí-ńd-à-r’é  ‘They were proud because of him.’
è-tí-shíp-à-r’é  ‘They were happy due to it.’
è-tá-wwás-à-r’é  ‘They became proud because of it.’

C.5.6. MID and Passive (PASS)

The following non-perfect forms, with MID and PASS, have a high-downstepped high stem tone pattern. It is not clear why there are two variant shìpa forms, the second with a final falling tone.

C.5.6.1. All Third Person Forms

è-túm-’ó-y  ‘They meet/they gather.’
3-meet-MID-PASS
e-gír-’á-y  ‘People are silent.’
e-dúñ-’ó-y  ‘People will cut each other/be cut.’
e-á-r-’á-y  ‘People fight.’
e-dál-’á-y  ‘They will play.’
è-dī-¹á-y ‘People will curse each other.’
è-gōr-¹óy ‘People will strangle each other.’
è-y-māl-¹á-y ‘People will give each other’s wives cows.’
è-y-ŋōr-¹á-y ‘People will look at each other.’
è-y-pār-¹á-y ‘People will question each other.’
è-y-pōt-¹óy ‘People will call each other.’
è-y-rū́t-¹á-y kōndá kíshú (or èndá kítën) ‘The cows will be looked after.’
è-y-rū́sh-¹á-y ‘People will be found out.’
è-lū́b-¹ó-y ‘They (unknown) are greedy.’
è-ŋīd-¹á-y ‘People are happy/pride.’
è-rīkīn-¹ó-y ‘He will be forgotten.’
è-shḗt-¹á-y ‘People will plait each other.’
è-shīp-¹á-y ‘People are happy (now).’
è-shīp-áy ‘People are happy.’
è-wwās-¹á-y ‘People are proud.’ or ‘Arrogance happens.’
*è-nān-¹á-y
*è-ké-bēl-¹á-y
*è-ké-dek-¹á-y

C.5.6.2. Forms with k-

k-è-y-rū́t-¹á-y ŵkīshú ‘The cows will be looked after.’
k-è-dāl-¹á-y ‘They will play.’
k-è-rīkīn-¹ó-y ‘He will be forgotten.’

C.5.7. MID and Passive (PASS), Perfect Aspect

The following perfect forms, with MID and PASS, have a high-low-high stem tone pattern. I have all third person forms.
è-tā-gīr-áṭ-ēk-í ‘People were silent.’
3-PF-be.silent-MID-PF-PASS
è-tā-ār-áṭ-ēk-í ‘People fought.’
è-tā-dāl-áṭ-ēk-í ‘People played.’
è-tē-ńr-áṭ-ēk-í ‘People cursed each other.’
è-tū-duń-óṭ-ēk-í ‘People have cut/broken the line.’ (They) cut each other.’
è-tā-gōr-ōṭ-ēk-í ‘People have become angry.’
è-y-màl-áta-tğk-ı ‘People gave each other’s wives cows.’
è-y-nôr-áta-tğk-ı ‘People looked at each other.’
è-y-pâr-óta-tğk-ı ‘People questioned each other.’
è-y-pôt-óta-tğk-ı ‘People called each other.’
è-y-rôsh-áta-tğk-ı ‘People were found out.’
è-tâ-l-áta-tğk-ı ‘People were stranded.’
è-tû-lûb-óta-tğk-ı ‘They (unknown) were greedy.’
è-tô-rông-áta-tğk-ı ‘(say) the people have loved each other today.’
è-tû-ǹjîd-áta-tğk-ı ‘People became happy/proud.’
è-tô-ǹkîn-óta-tğk-ı ‘He was forgotten.’ (*each other).’
è-tê-shêt-áta-tğk-ı ‘People plaited each other.’
è-tû-shîp-áta-tğk-ı ‘People were happy.’
è-tà-wواس-áta-tğk-ı ‘People became happy.’
è-tô-[nànn-áta-tğk-ı
è-y-rît-áta-tğk-ı

C.6. Forms with Antipassive (APAS)

C.6.1. APAS and Perfect Aspect

For singular perfect forms with APAS, the stem tone pattern is high-downstepped high.

C.6.1.1. Third Person Forms

è-tà-dàl-îsh’è ‘He became more playful.’
3-PF-play-APAS.PF
è-tà-dàm-îsh’è ‘He thought.’
è-tà-dâs-îsh’è ‘He milked by the mouth.’
è-tû-dûn-îsh’è ‘He was the cutter.’
è-tà-gôr-îsh’è ‘He strangled.’
è-y-bôn-îsh’è ‘He foretold.’
è-y-dông-îsh’è ‘He pounded.’
è-y-ger-îsh’è ‘He wrote.’
è-y-kèn-ìsh'è ‘He did the closing.’
è-y-nòs-ìsh'è ‘He ate.’
è-y-ŋòl-ìsh'è ‘He was the person who stirs.’
è-y-ŋòr-ìsh'è ‘He looked.’
è-y-pòsh-ìsh'è ‘He was a shaker/churner.’
è-y-pòt-ìsh'è ‘He called.’
è-y-rūt-ìsh'è ‘He became better at looking after cows.’
è-y-sīk-ìsh'è ‘He ran away (habitually).’
è-tà-l-ìsh'è ‘He was a cryer.’
è-tè-lèj-ìsh'è ‘He was a liar.’
è-tò-mòn-ìsh'è ‘He has borrowed.’
è-tò-nīŋ-ìsh'è ‘He heard.’
è-tà-ràp-ìsh'è ‘He did singing.’
è-tò-rɪkɪn-ìsh'è ‘He/it was forgettable.’
è-tì-gìr-ìsh'è
è-y-shūr-ìsh'è
è-tù-lùb-ìsh'è
è-tà-nàŋ-ìsh'è
è-tī-ŋīd-ìsh'è
è-tī-shìp-ìsh'è
è-tà-wwàs-ìsh'è
è-y-bàl-ìsh'è
è-tà-dám-ìsh'è ‘I thought.’
è-y-nínìŋ-ìsh'è ‘I heard what was being said’ (somethat one must be very attentive to hear).’
è-tò-nịŋ-ìsh'è ‘I have started hearing.’ or ‘I have learned a lesson.’ or ‘I have started waking up from sleep.’
è-tá-ràŋ-ìsh'è ‘I did singing.’
è-tà-ràŋ-ìsh'è ‘You (sg) did singing.’

C.6.2. APAS and Perfect Aspect (Plural)

For plural perfect forms with APAS, the stem tone pattern is high-low-low. I have all third person forms.
è-tà-dål-îsh-ôt-ê ‘They became more playful.’
3-PF-play-APAS-PL.PF-APAS.PF
è-tù-duŋ-îsh-ôt-ê ‘They were the cutters.’
è-y-bôn-îsh-ôt-ê ‘He foretold.’
è-y-dôn-îsh-ôt-ê ‘They have done the beating.’
è-y-kên-îsh-ôt-ê ‘They did the closing.’
è-y-pôš-îsh-ôt-ê ‘They were shakers/churners.’
è-y-pôt-îsh-ôt-ê iltápâyàní ‘The men called.’
è-y-rôt-îsh-ôt-ê ‘They became better at looking after cows.’
è-y-sûk-îsh-ôt-ê ‘They ran away (habitually).’
è-tâ-l-îsh-ôt-ê ‘They have done the beating.’
è-y-rôt-îsh-ôt-ê ‘They heard.’
è-tà-ràp-îsh-ôt-ê ‘They did singing.’
è-tô-rîkîn-îsh-ôt-ê ‘They were forgettable.’
è-tèlèj-îsh-ôt-ê ‘They were liars.’
è-tô-môn-îsh-ôt-ê ‘They have borrowed.’
è-tô-nîng-îsh-ôt-ê ‘They heard.’
è-tà-ràp-îsh-ôt-ê ‘They did singing.’
è-tô-rîkîn-îsh-ôt-ê ‘They were forgettable.’

C.6.3. APAS and Inceptive (INCEP)

For inceptive forms with APAS, the stem tone pattern is high-low.

C.6.3.1. All Third Person Forms

è-dùŋ-îshó-yû ‘He is becoming good at cutting.’
3-cut-APAS-INCEP
è-dàs-îshó-yû ‘He will milk (later) by the mouth. (i.e., He will become better at it.).’
è-gôr-îshó-yû ‘He will become better at strangling.’
è-y-bôn-îshó-yû ‘He will become better at foretelling.’
è-y-dôn-îshó-yû ‘He will become better at pounding.’
è-y-gèr-îshó-yû ‘He will become better at writing.’
è-y-kên-îshó-yû ‘He is becoming better at closing.’
è-y-nôs-îshó-yû ‘He will become a better eater.’
è-y-nôl-îshó-yû ‘He will become a better stirer.’
è-y-nôr-îshó-yû ‘He will become better at looking.’
è-y-pôsh-îshó-yû ‘He will become better at churning.’
è-y-pôt-îshó-yû ‘He will become better at calling.’
è-ômôn-îshó-yû ‘He will become more of a borrower.’
è-nūŋ-ǐshó-yù  ‘He/she will learn a lesson.’

C.6.3.2. Forms with k-

k-é-dùŋ-ǐshó-yù  ‘He will be able to cut.’
k-é-ykèn-ǐshó-yù  ‘He will be able to close (i.e., later).’
‘He is becoming better at closing.’

C.6.4. APAS and Instrumental (INST)

The following non-perfect forms, with APAS and INST, have a high-low-high stem tone pattern.

C.6.4.1. Third Person Forms

è-bèl-ǐshò-ré  ‘He will use it to break.’ or
è-bèl-ǐshò-ré 3-break-APAS-INST
è-dùŋ-ǐshò-ré ènkèrày ènkàlèm  ‘The child will use a knife to cut.’
è-gòr-ǐshò-ré ȍlgòsòy  ‘He will use a rope to strangle.’
è-y-gèr-ǐshò-ré ènkàlám’ú  ‘He will write with a pen.’
è-y-gūs-ǐshò-ré  ‘He will use it to carve.’
è-y-kòd-ǐshò-ré  ‘He will use it to decorate.’ or
è-ykòd-ǐshò-ré
è-lèp-ǐshò-ré  ‘He will use it to milk.’
ènúdī è-màn-ǐshò-ré  ‘He always walks around with a stick.’
è-shúk-ǐshò-ré  ‘He will use it to fold.’
è-y-shòp-ǐshò-ré ȉròpìānì èpènàk  ‘He will use his money to dress.’
èmòwwò è-y-pòt-ǐshò-ré ȉlpàiyyàńi  ‘The men will use a horn to call.’

C.6.4.2. Forms with k-

k-é-bèl-ǐshò-ré  ‘He will use it to break.’
k-é-gòr-ìshò-ré òlgòsòy ‘He will use a rope to strangle.’
k-é-y-dòñ-ìshò-ré ‘He will make people pound.’
k-é-y-gìs-ìshò-ré ‘He will use it to carve.’
k-é-y-kòd-ìshò-ré ‘He will use it to decorate.’
k-é-y-shòp-ìshò-ré ū̀pò̀ìǹà ‘He will use his money to dress.’
k-é-shùk-ìshò-ré ‘He will use it to fold.’

C.6.4.3. Initial Surface High Forms

á-dáš-ìshò-ré ènkùkúrì ‘I am milking with a calabash.’
á-gòr-ìshò-ré ‘I will use it to strangle.’
á-y-shòp-ìshò-ré ū̀pò̀ìǹà ‘I will use his money to dress.’
k-á-y-shòp-ìshò-ré ū̀pò̀ìǹà ‘I will use his money to dress.’
k-á-y-bá-ìshyò-ré ‘I will make him hate.’

C.6.5. APAS and Instrumental (INST), Perfect Aspect

The following perfect forms, with APAS and INST, have a high-low-low stem tone pattern.

C.6.5.1. Third Person Forms

è-tè-bèl-ìshò-ré ‘He used it to break.’ or
è-tè-bél-ìshò-ré
è-tù-duŋ-ìshò-rè ènkálém áy ‘He has cut with my knife.’
è-tà-gòr-ìshò-ré òlgòsòy ‘He used a rope to strangle.’
è-y-gìs-ìshò-ré ‘He used it to carve.’ or
è-y-gìs-ìshò-ré
è-y-kòd-ìshò-ré ‘He used it to decorate.’
è-mòwò́ ò-̀y-pò̀t-ìshò-ré ò̀lpàyyà̀n ‘The man used a horn to call.’
è-tù-shùk-ìshò-ré ‘He used it to fold.’
è-y-shòp-ìshò-ré ū̀pò̀ìǹà ‘He used his money to dress.’
è-y-dòñ-ìshò-ré ‘He did/will make people pound.’
C.6.5.2. Initial Surface High Forms

á-tá-dás-ìshò-rè ènkúkúrí ‘I was milking with a calabash.’
á-tá-gór-ìshò-rè ‘I used it to strangle.’

C.6.6. APAS and Instrumental (INST)

The following forms, with APAS and INST, have a high-falling/downstepped high stem tone pattern. I have all third person forms.

é-té-bél-ìshò-r’è ‘They used it to break.’
é-tú-dùŋ-ìshò-r’è ‘They used it to cut.’
é-tá-gór-ìshò-r’è ‘They used it to strangle.’
é-y-gís-ìshò-r’è ‘They used it to carve.’ or
é-y-gís-ìshò-rè
é-y-kód-ìshò-r’è ‘They used it to decorate.’
èmòwwò é-y-pót-ìshò-r’è ‘ìlpáyyànì ‘The men called with a horn.’
é-tú-shúk-ìshò-r’è ‘They used it to fold.’
é-y-shóp-ìshò-r’è ìròpiànnì èpènàk ‘They used their money to dress.’

C.6.7. APAS and Instrumental (INST), Passive (PASS)

The following forms, with APAS, INST, and PASS, have a high-low-low stem tone pattern. This tone pattern holds for perfect and non-perfect forms, unlike most passives, where perfect has a high-low-high stem tone pattern.

C.6.7.1. All Third Person Forms

è-bél-ìshò-rèk-ì ‘It will be used to break.’
é-bél-ìshò-rèk-ì
3-break-APAS-INST-PASS
è-dùŋ-ìshò-rèk-ì ‘It will be used to cut.’
é-dùŋ-ìshò-rèk-ì
è-gór-ìshò-rèk-ì ‘It will be used to strangle.’
è-y-ḡis-ḵó-rèk-ŋ ‘It will be used to carve.’
è-y-kòd-ḵó-rèk-ŋ ‘It will be used to decorate.’
è-y-lèp-ḵó-rèk-ŋ ‘It will be used to climb.’
è-y-pòt-ḵó-rèk-ŋ ‘He is being questioned.’
è-y-shóp-ḵó-rèk-ŋ ‘It will be used to call.’
è-y-shôp-ḵó-rèk-ŋ ‘It was used to wear/dress.’
è-tû-shûk-ḵó-rèk-ŋ ‘It was used to cut.’
è-tà-gôr-ḵó-rèk-ŋ ‘It was used to strangle.’
è-y-ḡis-ḵó-rèk-ŋ ‘It was used to carve.’
è-y-kòd-ḵó-rèk-ŋ ‘It was used to decorate.’
è-y-pòt-ḵó-rèk-ŋ ‘It was used to call.’
è-y-shôp-ḵó-rèk-ŋ ‘It was used to wear/dress.’
è-tû-shûk-ḵó-rèk-ŋ ‘It was used to fold.’

C.6.7.2. Forms with k-

k-é-y-ḡis-ḵó-rèk-ŋ ‘It will be used to carve.’
k-é-y-kòd-ḵó-rèk-ŋ ‘It will be used to decorate.’
k-é-y-lèp-ḵó-rèk-ŋ ‘It will be used to climb.’
k-é-y-pòt-ḵó-rèk-ŋ ‘It will be used to call.’
k-é-y-shôp-ḵó-rèk-ŋ ‘It was used to wear/dress.’

C.6.8. *APAS and Middle (MID)

The following form, with APAS and MID, is apparently not valid.

*è-dûn-šóró ‘He cuts himself.’

C.6.9. APAS and Passive (PASS)

The following non-perfect forms, with APAS and PASS, have a high-
downstepped high stem tone pattern.
C.6.9.1. All Third Person Forms

è-bèl-‘ish’ó-y  ‘The breaking is being done.’
3-break-APAS-PASS
è-dùŋ-‘ish’ó-y  ‘The cutting is being done.’
è-shèt-‘ish’ó-y  ‘The building is being done.’
è-y-dùŋ-‘ish’ó-y  ‘The beating is being done.’
è-y-gèr-‘ish’ó-y  ‘The writing is being done.’
è-y-‘gís-‘ish’ó-y  ‘Carving will be done.’
è-shûk-‘ish’ó-y  ‘The folding is being done.’

C.6.9.2. Forms with k-

k-é-y-gèr-‘ish’ó-y  ‘The writing is being done.’
k-é-y-‘gís-‘ish’ó-y  ‘Carving will be done.’

C.6.10. APAS and Passive (PASS), Perfect Aspect

The following perfect forms, with APAS and PASS, have a high-low-high stem tone pattern. I have all third person forms.

è-tè-bèl-‘ish-ót-èk-í  ‘The breaking was done.’
3-PF-break-APAS-PL.PF-APAS-MID-PASS
è-tût-dùŋ-‘ish-ót-èk-í  ‘People cut’ (or, ‘give beer’).’
è-y-gèr-‘ish-ót-èk-í  ‘The writing was done.’
è-y-‘gís-‘ish-ót-èk-í  ‘Carving was done.’
è-y-rrit-‘ish-ót-èk-í  ‘People looked after cows.’
C.7. Forms with Instrumental (INST)

C.7.1. INST and Inceptive (INCEP)

I'm not sure what to do with these three data. They seem to have both INCEP and INST semantics, but this combination of affixes could use more checking, particularly with other stative-like verbs.

C.7.1.1. All Third Person Forms

è-tù-lúbó-ìŋ-yé ọlgbáfi ‘He became greedy because of ugali.’
3-PF-be.greedy-INCEP-INST
è-tú-lúbó-ìŋ-yé ọlgbáfi ‘They became greedy because of ugali.’

C.7.1.2. Form with k-

k-é-lúbó-ìŋ-yè ọlgbáfi ‘He will become greedy because of ugali.’

C.7.2. INST and Passive (PASS)

The following forms, with INST and PASS, have a high-low stem tone pattern for non-perfect and perfect aspects.

C.7.2.1. All Third Person Forms

è-bòl-yék-ì èmbólét. ‘The key will be used to open it.’
3-open-INST-PASS
è-dùŋ-yék-ì ènkálém ‘The knife will be used to cut it.’
è-tòp-yék-ì ‘It will be used to sit.’
è-y-dòŋ-yék-ì òrînká shímpĩ ‘The club was/will be used to beat the salt.’
è-y-bòk-yék-ì ènụdì ‘The stick will be/was used to block.’
è-tè-bèl-yék-ì ‘It was used to break it.’
è-tà-bòl-yék-ì òlbòlèt ènkàjì. ‘The key was used to open the house.’
è-tù-duŋ-yék-ì ènkàlèm ‘The knife was used to cut it.’
è-y-bòk-yék-ì ènụdì ‘A stick will be/was used to hinder/block it.’
è-y-ɗík-yék-ì ‘It was used to join them.’
è-y-mìs-yék-ì ‘He will be/was sunk.’
è-tò-òsh-yék-ì òrînká èmàkàt ‘The club was used to beat the salt.’
è-tè-shèt-yék-ì ǹjàpètà ‘The posts were used to build.’
  ‘My hair was plaited with it.’
è-tò-tòp-yék-ì ‘It has been sat on.’
e-tò-tòp-yék-ì òlòrìkà. ‘The chair was used to sit.’

C.7.2.2. Forms with k-
k-é-y-bòk-yék-ì ènụdì ‘A stick will be used to hinder/block it.’
k-é-y-lèp-yék-ì ‘He will use it to make him climb.’
k-é-y-ɗík-yék-ì ‘It will be used to join them.’
k-é-y-dòŋ-yék-ì òrînká shímpĩ ‘The club will be used to beat the salt.’
k-é-y-mìs-yék-ì ‘He will be sunk.’
k-é-shèt-yék-ì ǹjàpètà ‘The posts will be used to build.’
k-é-y-rrít-yék-ì ‘The cows will be looked after with a stick.’

C.8. Forms with Passive (PASS)

C.8.1. PASS and Progressive (PROG)

For progressive forms with PASS, the stem tone pattern is high-downstepped high.
C.8.1.1. Third Person Forms

ë-bèl-ítʃá-ɣy  ‘It is being broken.’
3-break-PROG-PASS
è-bóɾ-ítʃá-ɣy  ‘He is being injured.’
è-dùŋ-ítʃ₀-ɣy  ‘He is being cut.’
è-dùŋ-ítʃ₀-ɣ y tèŋkáléːm  ‘The knife is being used to cut it.’
è-gòr-ítʃ₀-ɣy  ‘It is being strangled.’
è-y-bèl-ítʃ₀-ɣy  ‘It is being rocked from side to side.’
e-y-bòk-ítʃ₀-ɣ y tèŋúdi  ‘A stick is being used to hinder/block it.’
e-y-dòŋ-ítʃ₀-ɣy  ‘It is being pounded.’
e-y-gèr-ítʃ₀-ɣy  ‘The writing is being done.’
e-y-kèn-ítʃ₀-ɣy  ‘It is being closed.’
e-y-kòd-ítʃ₀-ɣy  ‘He is being decorated.’
e-y-ŋə⏱-ítʃ₀-ɣy  ‘He is being looked at.’
e-y-pàɾ-ítʃ₀-ɣy  ‘He is being questioned.’
e-y-pûm-ítʃ₀-ɣy  ‘He is being measured.’
è-лежа-ítʃ₀-ɣy  ‘He is being lied to.’
è-nîŋ-ítʃ₀-ɣy  ‘He is being chased.’
e-nîŋ-ítʃ₀-ɣ y ìntáï  ‘You.PL are being heard.’
e-nîŋ-ítʃ₀-ɣy  ‘He is being heard.’
e-nîŋ-ítʃ₀-ɣ y ìyyóːk  ‘we are being heard.’
e-ŋòr-ítʃ₀-ɣy  ‘People are loving him!’ ‘People love him’ (habitually).’
e-shèt-ítʃ₀-ɣy  ‘It is being plaited/built.’
e-shèt-ítʃ₀-ɣ y tòŋjëpëtá  ‘The posts are being used to build.’
e-tôn-ítʃ₀-ɣ y tòlòrikà  ‘The chair is being used to sit.’

C.8.1.2. Forms with k-

k-é-ɣiːs-ítʃ₀-ɣy  ‘Jumping is now being done.’
k-é-nîŋ-ítʃ₀-ɣ y ìntáï  ‘You.PL are being heard.’

C.8.1.3. Initial Surface High Forms

kí-nîŋ-ítʃ₀-ɣy  ‘You.SG are being heard.’
è-kí-ŋòrr-ítʃ₀-ɣy  ‘People are loving you!’ ‘People love you’ (habitual).’
C.8.2. PASS and Inceptive (INCEP)

For these inceptive forms with PASS, the stem tone pattern is high-downstepped high.

C.8.2.1. All Third Person Forms

è-nòrr-ú̱n-í‘He will be loved.’
3-love-INCEP-PASS
è-pír-ú̱n-í‘People will grow fat.’

C.8.2.2. Forms with k-

k-é-nòrr-ú̱n-í‘He will be loved.’
k-é-tú̱m-ó-y‘They meet/they gather.’

C.9. PL and Perfect Aspect

For plural perfect forms, the tone pattern is either level-falling or level-downstepped. It is not clear at all which is the regular word tone pattern, with some speakers giving final falling tones, and others final downstepped high tones. Another variation from these word tone patterns is that the first mora (only) may be pronounced low – which is distinguished from the normal third person word tone pattern where each mora before the last mora of the word is pronounced high. I think these word tone patterns do not contrast lexically, though it would require more investigation to be sure.
C.9.1. All Third Person Forms

é-tá-áś-\(^{-1}\)á
3-PF-do-PF

‘They have done it.’

è-té-béł-\(^{-1}\)á
‘The children broke the glass.’
è-tá-ból-\(^{-1}\)ó
‘They opened it.’
è-tá-boréy-\(^{-1}\)á níncè
‘They became full.’
è-tá-dór-\(^{-1}\)ó
‘They became red.’
è-tú-dún-\(^{-1}\)ó
‘They have cut (it).’
è-tá-gól-\(^{-1}\)ó
‘They have become hard.’
è-y-dón-\(^{-1}\)ó
‘They beat it.’
è-y-kén-\(^{-1}\)ó
‘They shut it.’
è-y-pík-á
‘They projected.’
è-y-rópij-\(^{-1}\)á
‘They became cold.’
è-y-rúg-\(^{-1}\)ó
‘They bent him over.’
è-y-rírit-á in-k-íshú
‘They looked after cows.’
è-té-jíy-á
‘They swelled.’
è-tó-níñ-\(^{-1}\)ó
‘They heard it.’
è-tó-pórr-\(^{-1}\)á
‘They have loved it.’
è-tí-píj-\(^{-1}\)á
‘They became brave.’
è-shómð
‘They went.’
è-tó-tóm-\(^{-1}\)á
‘They sat.’
è-tú-rúgüm-\(^{-1}\)á
‘They made him vomit.’ or
è-tú-rúgüm-á
‘They were/became wide.’
*è-tá-lál-\(^{-1}\)á
‘They were/became soft.’

C.9.2. Forms with \(\text{t}t\) Morpheme

The plural perfect morpheme \(\text{t}t\) has not been exhaustively investigated, though something can be said of it. The quality of the vowel in this morpheme shows the same harmony as the epenthetic vowel between reduplicated roots. That is, it is \(\ddot{u}\)\(i\), but harmonizes to a following high back vowel, i.e., \(\ddot{u}u\) (TM:221). Here the stem tone pattern is high-low-falling.
è-tà-dám-üt-w-à ‘They remembered.’
è-tò-dôr-üt-à ‘They became red.’
è-tà-goıl-üt-ò ‘They have become harder.’
è-y-bôr-üt-à ‘They became white.’
è-y-pôsh-üt-à ‘They made him wander off due to (stressful) problems.’
è-y-rôpîj-üt-à ‘They became cold.’
è-y-rôwwâj-üt-à ‘They (inan.) became hot.’
They were hot.
è-y-rûg-üt-ò ‘They bent him over.’
è-y-têr-üt-y-à ‘They fainted.’
è-té-jyè-yt-à ‘They swelled.’
è-tà-lá-üt-à ‘They have missed it.’
è-tà-lál-üt-à ‘They were wide.’
è-tà-nân-üt-à ‘They were/became soft.’
è-tà-pôkûn-üt-ò ‘They became brown.’
è-tî-pîj-üt-à ‘They became brave.’
è-tô-pîr-üt-ò ‘They became fat.’
è-tô-rôk-üt-à ‘They became black.’
è-tà-sâs-üt-à ‘They became thin.’
è-tà-yyôl-üt-ò ‘They have known (i.e., come to know.).’
è-tà-dáj-üt-à ‘play’
è-ti-gîr-üt-à ‘be silent’
è-y-rrâbûl-üt-à ‘lied/lay on stomach’
è-tà-l-üt-à ‘be stranded’
è-tò-lûb-üt-ò ‘be greedy’
è-tè-mêr-üt-à ‘be drunk’
è-tî-ûîd-üt-à ‘be proud’
è-tô-rîkûn-üt-ò ‘forget’
è-tô-rrûgûm-üt-à ‘vomit’
è-tû-shîp-üt-à ‘be happy’
è-tà-wwâs-üt-à ‘be proud’

C.9.3. Forms with k-

k-è-tà-bôl-ò ‘They opened it.’
k-è-tà-bá-üt-à án-â năn’ò ‘They have become the same as me.’
k-è-tô-rôk-üt-à ‘They became black.’
APPENDIX D

SYNTACTIC EFFECTS ON TONE

In this Appendix, I give first data with tone patterns that seem to be impacted by the syntax of Maa, though a complete analysis is not presented. In the subjunctive, the verb is either not clause initial, or it is joined to a prior clause in some close way. The second part of the appendix gives data with discourse markers, which seem to be word level morphemes with their own tone. For where I have much data (i.e., DSCN k-) the tone effects are highly regular (see Rasmussen and Payne, under review).

D.1. Subjunctive

The most common place to find the subjunctive tone pattern, described in the following sections, is following peeè, ‘so that, for which, etc.’. This tone pattern may also be found after ashu, and directly following other verbs in certain constructions. Recall that the falling tone in Maa simplifies to a High tone when not phrase final, i.e., when followed by another word, as on the peeè in all the following examples. There are several different apparent variations from the indicative tone pattern due to this context, and these are given in the following sections according to change from the corresponding indicative tone pattern.
D.1.1. Simple Forms

The following are morphologically simple forms, i.e., no morphology beyond the bound argument pronoun and root, including the Class II prefix for Class II roots. Only the first person singular data has been well checked.

\[\text{pêê ã-áp} \quad \text{'...so that I will be pregnant before circumcision.' (vulgar)}\]
\[\text{pêê ã-ár} \quad \text{'...so that I will beat it.'}\]
\[\text{pêê ã-bôl} \quad \text{'...then I will open it.'}\]
\[\text{pêê ã-dôl} \quad \text{'...then I will see them/him.'}\]
\[\text{pêê ã-sôj} \quad \text{'...so that I will follow him.'}\]
\[\text{pêê ã-yâ} \quad \text{'...so that I will take it.'}\]
\[\text{ãshó ã-tôîn} \quad \text{'...or I will sit.'}\]

D.1.2. Complex Forms

The following sections are categorized according to the tone pattern found on these forms in the indicative mood.

D.1.2.1. Forms That Would Have Final High Tone in Indicative

(47) Third person subject (3) forms:
\[\text{pêê ê-sôj-ô} \quad \text{'...so that he will follow him (in this direction).'}\]
\[\text{pêê ê-yyêr-ô} \quad \text{'...so that he will cook (herbs) to get medicine out of them.'}\]
\[\text{pêê ê-nôrr-ô} \quad \text{'...so that he will love it.'}\]

(48) Forms with initial high:
\[\text{pêê ã-sôj-ô} \quad \text{'...so that I will follow him (in this direction.)'}\]
\[\text{pêê ã-yyêr-ô} \quad \text{'...so that I will cook (herbs) to get medicine out of them.'}\]
\[\text{pêê ã-dôl-yê} \quad \text{'...so that I will use it to see it.'}\]
\[\text{pêê ã-lêp-yê} \quad \text{'...so that I will use it to milk.'}\]
D.1.2.2. Forms with Final High-Low in Indicative

(49) Third person subject (3) forms:
peē e-dūŋ-ôkí... '...so that he will cut (it) for him.'
peē e-niŋ-ôkí '...then he will agree with him.'

(50) Forms which would have initial high in indicative:
peē á-ákò ọlùnùn'í '...then I will become a man.'
peē á-niŋ-ôkí '...then I will agree with him.'
peē i-niŋ-ôkí '...then you will agree with him.'
peē i-dũn-ôkí-kí '...then you (pl) will cut for him.'

D.1.3. Forms with Same Tone as in the Indicative

peē á-y-soj '...so that I will wash it.'
peē áá-y-soj '...so that I will wash you.'
peē áá-dśl '...so that he will see me.'

D.2. Discourse Markers

There are three apparent discourse markers for which I have tone data. They are presented here in order of increasing volume. The first is TM’s ‘n tense’, of which I have almost none. The second is an allomorph of k- (either 3>2>1 or 1PL), which seems similar to the discourse marker k- in its tone effect. Finally, data with k- are presented, organized in the same manner as in Appendix B for comparison.

D.2.1. Forms with the CONN n- Morpheme

Recall that this underlined data is from the Il-Wuasinkishu section of the Maasai.

For each of these words, the tone pattern without n- begins Low (Chapter VI).
n-é-bwàk-í  '(and) people made noise.' or '(and) noise was made.'
n-é-akôn-í  '(and) the people became ...'
n-é-ytà-àdèr-í  '(and) they were made tall.'
n-é-mùrát-í  '(and) they were circumcised.'
n-í-ntá-dèr  '(and) you made him tall.'
m-áà-bà-yè  'He has not seen me yet.'

D.2.2. Forms with ekt-

The two bound argument pronouns with segmental form kinteresting (i.e., 1PL and 3>2>1) have allomorphs (ekt-), which may be interpreted as the same morpheme with an additional DSCN prefix e-. The tonal affect of this allomorph seems to be the same as that of the k-form for vowel initial bound argument pronouns, i.e., an additional initial High tone. Note that as the two k-form morphemes have different tonal implications on their verbs, so the tonal implications of each ekt- are also different from each other.

D.2.2.1. DSCN for 1PL

I have indicated that there is a word internal falling tone on some of these words, which appears nowhere else in Maa phonology. It is not clear to me what the underlying etiology of these word-interval ‘falling’ tones are: whether they are phonemically long vowels or a single vocalic mora, with the second tone being born by the following sonorants.

ékî-n-kén  ‘We will shut it.’
ékî-m-píd  ‘We jump (up and down)’
ékî-râ-g  ‘We will lie down.’
ékî-sój  ‘We will wash it.’
ékî-pwà-yá  ‘We will go roaming around.’
éki-pòn-ú  'We will come.'
éki-gòr-ó  'We will strangle each other.'
éki-màn-á  'We live...(somewhere)'
éki-tùm-ó  'We shall meet together (e.g., for a talk, cup of tea, etc.)'
éki-bòytá  'We will be together.'
éki-ɲòr-ó  'We will love him/her/them.'
éki-dùn-òkì  'We will cut for him.'
éki-dàmò  'We can remember/we will remember.'
éki-bàrn  'We will shave.'
éki-dì  'We are red.'
éki-dìl  'We will see.'
éki-gòr  'We will strangle(someone)'}
éki-kwèt  'We will run with each other/together.'
éki-nìn  'We will hear.'
éki-pìk  'We will put it.'
éki-pùdô  'We will go.'
éki-sùj  'We will go for him.'
éki-yèyr  'We will cook it.'
éki-ntò-ɲòr  'We make him love.'
éki-ádò  'We are tall.'
éki-nìn-ìshò-yù  'We will learn a lesson.' or ‘We will wake up from sleep.'
éki-ròrà  'We are/are asleep.'
éki-bòl-ìtò  'We are opening it.'
éki-ntò-nìn-ó  'We will make each other hear it.'
éki-bà-ìkìn-ó  'We will be visiting/meeting one another.'

D.2.2.2. DCSN for 3>2>1

déni-n-túk-ú  'You will wash me.' or ‘He ... you.’ etc. (This section)
DCSN.3>2>1-Il-wash-VENT
déni-ntò-ɲòr  'You will make me love it.'
déni-máñà  'You live...(somewhere)'
déni-gírà  ààbòytàràè  'You (pl) are with me.'
déni-ɲòrr-ò  'You (sg) will love me.'
déni-bà-ìyè-yè  'You (pl) last sighted me.'
déni-ɲòrr-ù-rrò  'You (pl) will love me.'
déni-bàrn-ì-bàrn-à  'You (pl) will shave me.'
déni-ntò-dàm-ìshò-shò  'You (pl) will make me think.'
déni-ntò-nìn-ì-nìn-ì  'You (pl) will make me hear it.'
déni-ntò-ɲòrr-ì-ɲòrr-ò  'You (pl) will make me like/love it.'
déni-kwèt  èn-kùt'éñ  'Your cow will run.'
Rasmussen and Payne (under review) showed that the discourse morpheme $k$- bears a High tone, along with some implications this fact has for Maa phonology, such as the analysis of non-automatic downstep (discussed in Chapter IV, Section 4). Appendix B gave forms showing the contribution of suffixes to the tone of verbs, only having briefly mentioning forms with the discourse marker $k$- in Chapter VI. Because this form is very common in Il-Keekonyokie Maa, the data behind analysis of this prefix (Rasmussen and Payne, under review) is given here. In this section, I will focus on the forms of the word with $k$-, showing the tone patterns for those forms. This chapter uses
the same groupings as Appendix B, and gives the tone of the forms without k- for comparison.

**D.2.3.1. The Class I Causative (CAUS)**

These forms have a High-Low stem tone pattern.

(51) Third person subject (3) forms:

<table>
<thead>
<tr>
<th>Form</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>k-é-ytá-dáɅ</td>
<td>'He will make him play.'</td>
</tr>
<tr>
<td>DSCN-3-CAUS-play</td>
<td></td>
</tr>
<tr>
<td>k-é-ytá-dò</td>
<td>'He will make him red.'</td>
</tr>
<tr>
<td>k-é-ytá-dùŋ</td>
<td>'He will make him cut himself.' or 'He will make him cut it.'</td>
</tr>
<tr>
<td>k-é-ytá-gír</td>
<td>'He will make him silent.'</td>
</tr>
<tr>
<td>k-é-ytá-lá</td>
<td>'He will make him stranded.'</td>
</tr>
<tr>
<td>k-é-ytá-láɅ</td>
<td>'He will make it wide.'</td>
</tr>
<tr>
<td>k-é-ytá-líb</td>
<td>'He will make him greedy.'</td>
</tr>
<tr>
<td>k-é-ytá-mèɅ</td>
<td>'He will 'Make him drunk.'</td>
</tr>
<tr>
<td>k-é-ytá-nàn</td>
<td>'He will make it soft.'</td>
</tr>
<tr>
<td>k-é-ytá-níŋ</td>
<td>'He will make him hear it.'</td>
</tr>
<tr>
<td>k-é-ytá-ŋ³r</td>
<td>'He makes him love.'</td>
</tr>
<tr>
<td>k-é-ytá-ŋ³d</td>
<td>'He will make him proud.'</td>
</tr>
<tr>
<td>k-é-ytá-ʃíp</td>
<td>'He will make him happy.'</td>
</tr>
<tr>
<td>k-é-ytá-wôɅr</td>
<td>'He will make him proud.'</td>
</tr>
</tbody>
</table>

(52) Forms with initial high:

<table>
<thead>
<tr>
<th>Form</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>k-á-ytá-gír</td>
<td>'I will make him quiet.'</td>
</tr>
<tr>
<td>DSCN-1SG-CAUS-hear</td>
<td></td>
</tr>
<tr>
<td>k-á-ytá-ŋ³n këwán</td>
<td>'I will make myself hear it.'</td>
</tr>
<tr>
<td>k-á-ytá-ŋ³u</td>
<td>'I will make it smelly/rotten.'</td>
</tr>
<tr>
<td>k-á-ytá-.yy³r</td>
<td>'I will make him cook.'</td>
</tr>
<tr>
<td>k-áá-ytá-gór</td>
<td>'I will make you angry.'</td>
</tr>
<tr>
<td>DSCN-1&gt;2-CAUS-be.angry</td>
<td></td>
</tr>
<tr>
<td>k-áá-ytá-ŋ³r</td>
<td>'I will make you love it.'</td>
</tr>
</tbody>
</table>

(53) exceptions:

<table>
<thead>
<tr>
<th>Form</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>k-é-ytá-řík³m³'ô</td>
<td>'He will make him/each other forget.'</td>
</tr>
<tr>
<td>k-á-ytá-p³'úû</td>
<td>'I will make it be alive.'</td>
</tr>
<tr>
<td>k-áá-ytá-d'ám³ó</td>
<td>'I will remind you (sg).'</td>
</tr>
</tbody>
</table>
D.2.3.2. The Motion Away Suffix (AWAY) -- Class I

The stem tone pattern has a High-Low stem tone pattern for class I roots.

(54) Third person subjects
k-é-bèl-áà  'She will break them (one at a time.)'
DSCN-3-break-AWAY
k-é-dál-áà  'He will play going away.'
k-é-dùŋ-òò  'He will cut it off.'
k-é-giil-áà  'He will break it away(stick-like)'
k-é-màn-áà  'He will walk around (away from his house).'
k-é-nòrr-áà  'He/she accepts it/will accept it.'
k-é- njòd-áà  'He will be proud while going.'
k-é-nànn-áà  'They are soft, one after another.'

(55) Initial high forms
k-á-dùŋ-öò  'I will cut it away from (e.g., a tree) '
DSCN-1SG-love-AWAY

D.2.3.3. The Motion Away Suffix (AWAY) -- Class II

These data show a High-Downstepped High stem tone pattern for Class II roots.

(56) Third person subjects
k-é-y-bùk-öò  'He will pour it out.'
DSCN-3-II-pour-AWAY
k-é-y-bàl-áà épwò  'It will become visible as it goes.'
k-é-y-dòŋ-öò  'He will beat them one at a time.'
k-é-y-gèr-öò  'He will write them one at a time.'
k-é-y-kèn-öò  'He will close it against the outside.'
k-é-y-nòs-áà  'He will eat it as he goes.'
k-é-y-tùkw-öò  'He will wash them, one at a time.'

(There are no initial high forms available.)

(57) Exceptions
k-é-y-pòt-öò  'They/he will call someone away from his house.'
D.2.3.4. The Ventine Suffix (VENT) – Class I

The data in this section show a High stem tone pattern for verbs with Class I roots. On the forms of *ba* the tone pattern is identical to that on CVC roots without suffixes, leaving open the possibility that VENT is ultimately toneless (or at least that *ba* and VENT together give the same tone as CVC roots). With the High-toned discourse marker, the initial High forms show a downstep, showing that they bear only one tone in the form without the discourse marker. I’m not sure what this potential exception of *baw* means. It may be that *baw* is not synchronically analyzable, or it may be that this is the product of TMHS.

(58) Third person subjects

<table>
<thead>
<tr>
<th>Verb</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>k-é-pwón-ú tomon</td>
<td>'Ten will come.'</td>
</tr>
<tr>
<td>DSCN-3-shave-VENT</td>
<td></td>
</tr>
<tr>
<td>k-é-är-ó</td>
<td>'He will bargain.'</td>
</tr>
<tr>
<td>k-é-bàrn-ó</td>
<td>'He will shave.'</td>
</tr>
<tr>
<td>k-é-bùk-ú</td>
<td>'He will pour it out.'</td>
</tr>
<tr>
<td>k-é-bùl-ó</td>
<td>'He will grow up.'</td>
</tr>
<tr>
<td>k-é-dài-ó</td>
<td>'He will play coming.'</td>
</tr>
<tr>
<td>k-é-duŋ-ú</td>
<td>'He will cut (the stick) off of/ from...'</td>
</tr>
<tr>
<td>k-é-òjl-ó</td>
<td>'He will break it off of it.'</td>
</tr>
<tr>
<td>k-é-lót-ú</td>
<td>'My goat will come to bleat.'</td>
</tr>
<tr>
<td>k-é-ŋ̃d-ó</td>
<td>'He will be proud when coming.'</td>
</tr>
</tbody>
</table>

(59) Initial high forms

<table>
<thead>
<tr>
<th>Verb</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>k-á-́ár-ó</td>
<td>'I will beat(force) myself (e.g., out of bed).’</td>
</tr>
<tr>
<td>DSCN-1SG-beat-VENT</td>
<td></td>
</tr>
<tr>
<td>k-á-́á-w</td>
<td>'I will arrive.'</td>
</tr>
<tr>
<td>k-á-yy'ér-ó</td>
<td>'I will cook (herbs) (i.e., to get the medicine) out of them.'</td>
</tr>
</tbody>
</table>

(60) Exceptions:

<table>
<thead>
<tr>
<th>Verb</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>é-bá-w</td>
<td>'He will arrive.'</td>
</tr>
</tbody>
</table>

3-reach-VENT

<table>
<thead>
<tr>
<th>Verb</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>k-é-bá-́w</td>
<td>'He will arrive.'</td>
</tr>
</tbody>
</table>

DSCN-3-reach-VENT
D.2.3.5. The Ventive Suffix (VENT) – Class II

These data show a High-Low stem tone pattern for Class II roots. The High-toned discourse marker ɖ- does not cause downstep in the Initial high forms, because there is a word final Low tone.

(61) Third person subjects
k-ɛ-y-bál-ɔ
‘It will be visible as it comes.’
DSCN-3-II-be.visible-VENT
k-ɛ-y-rít-ɔ ˈinkishú
‘He/they will look after cows as they come.’
k-ɛ-y-dőn-ɔ
‘He will beat it off.’
k-ɛ-y-gér-ɔ
‘He will write it from something (e.g., reference material, photocopying.)’
k-ɛ-y-nós-ɔ
‘He will eat it coming.’
k-ɛ-y-pót-ɔ
‘He will call him to come.’
k-ɛ-y-tûk-ɔ
‘He will wash it.’

(62) Initial high forms
k-á-y-pár-ɔ ˈimbáá kúmɔk
‘I will ask many questions.’
DSCN-1SG-II-ask-VENT
k-á-y-nép-ɔ
‘I will meet him.’

D.2.3.6. The Antipassive Suffix (APAS)

The stem tone pattern is High-Downstep High-High for both Class I and Class II.

(63) Third person subjects
k-ɛ-gór-ˈishó
‘It is a strangler.’ / ‘He will strangle.’
DSCN-3-respect-APAS
k-ɛ-y-bá-yshō
‘He hates.’
k-ɛ-y-bón-ˈishó
‘He will foretell.’
k-ɛ-y-dón-ˈishó
‘He pounds.’
k-ɛ-y-gér-ˈishó
‘He writes.’
k-ɛ-y-nós-ˈishó
‘He will eat.’
k-ɛ-y-ŋs₁-ˈishó
‘He is the person who stirs.’
k-ɛ-y-ŋr-ˈishó
‘He will look.’
This data shows the non-iterative nature of the k- tone association. Where there is only one initial Low TBU on the form without k-, the form with k- is high and level, as in kégóř'ishó above. With more than one low TBU in the non-k- form, however, there is an initial High-Low stem tone pattern, as in kěřiķin'íshó, above.

D.2.3.7. The Dative Suffix (DAT) – Class I

The stem tone pattern is High-Low for Class I roots.

(64) Third person subjects
k-é-bèl-ákī 'She will break it(stick) for him.'
DSCN-3-break-DAT
k-é-gül-ákī 'She will break it for him.'
k-é-gór-ókī 'He will strangle for him.'
k-é-ñeř-ákī 'She will tear it for him.'
k-é-tôn-ákī 'He will sit for someone.'

(65) Initial high forms
k-á-bél-ákī 'I will break it(stick-like) for him.'
DSCN-1SG-break-DAT
k-á-ár-ákī mětǐšipə'yū 'I will force her to be happy.'
k-á-dùŋ-ókī 'I will cut for him.'
k-á-gül-ákī 'I will break it for him.'
k-á-gór-ókī 'I will strangle for him.'
k-á-j-ókī měshômə 'I will tell him to go.'
k-á-ñeř-ákī 'I will agree with him.'
k-á-ñeř-ákī 'I will tear it for him.'
k-á-ñeř-ákī 'I will agree with you.'
DSCN-1>2-love-DAT
D.2.3.8. The Dative Suffix (DAT) – Class II

The stem tone pattern is a High-Downstepped High-High for Class II roots.

(66) Third person subjects
k-é-y-báł-ákí  'He will reveal it to him.'
DSCN-3-II-reveal-DAT
k-é-y-dójñ-ókí  'He will pound (the grain) for him.'
k-é-y-gér-ókí  'She will write it for him.'
k-é-y-kén-ókí  'She will close it for him.'
k-é-y-lép-ákí  'She will climb it for him.'
k-é-y-rít-ákí  'He will look after cows for him.'

(67) Initial high forms
k-á-y-dójñ-ókí  'I will pound (the grain) for him.'
DSCN-1SG-II-beat-DAT
k-á-y-gér-ókí  'I will write it for him.'

D.2.3.9. The Instrumental Suffix (INST) – Class I

The stem tone pattern is High for Class I, giving a high and level word pitch pattern for first and second person forms without k-. With k-, these forms are downstepped after the first TBU.

(68) Third person subjects
k-é-bèl-yé  'He will use it to break it.'
DSCN-3-break-INST
k-é-bò-yé  'He will use it to remove the front lower teeth.'
k-é-bòl-yé  'He will use it to open it.'
k-é-bül-yé  'He will use it to pierce it.'
k-é-gór-yé  'I will use it to strangle.'
k-é-lèp-yé ènkúkúrè  'He will use the calabash to milk it (cow).' k-é-shèt-yé  'He will use it to build.'
k-é-shük-yé  'He will use it to fold it.'

(69) Initial high forms
k-á-dúŋ-yé  'I will use it to cut.'
DSCN-1SG-cut-INST
k-á-gór-yé  'I will use it to strangle.'
k-á-l’ěp-yé ènkúkúří ènkítěŋ ‘I will use the calabash to milk the cow.’
k-á-shē-tyē ‘I will use it to plait/build them.’

D.2.3.10. The Instrumental Suffix (INST) – Class II

The stem tone pattern is High-Low for Class II. Exceptions are

*Irwəwɔ, *iterre, and *ishu.*

(70) Third person subjects
k-é-y-bál-yè  ‘He will make it visible.’
DSCN-3-II-reveal-INST
k-é-y-shūr-yè  ‘She will make it overcooked.’
k-é-y-bél-yè  ‘He will use it to roll it.’
k-é-y-bók-yè  ‘He will use it to hinder him.’
k-é-y-búŋ-yè  ‘He will use it to support him.’
k-é-y-dīŋ-yè  ‘It will make it crowded.’
k-é-y-dón-yè  ‘He will use it to pound (grain.)’
k-é-y-dúr-yè  ‘He will use it to migrate.’
k-é-y-gér-yè  ‘He will use it to write.’
k-é-y-rūsh-yè  ‘He will make it thick.’
k-é-y-rrág-yè ènkàyná  ‘My arm is lying down.’
k-é-y-rrít-yè  ‘He will use it to look after cows.’

(71) Initial high forms
k-á-y-dón-yè èŋúðí ʾlpáèk  ‘I will use a stick to beat the maize.’
DSCN-1SG-II-beat-INST
k-á-kwét-yè  ‘I will make him run.’ (as class II tone form)

(72) Exceptions
k-é-y-rów’wáj-yè  ‘He will make it hot.’
k-é-y-tèrr’é-yīę  ‘He will make/made him faint.’
D.2.3.11. The Middle Suffix (MID)

The stem tone pattern is High-Low. Exceptional roots are rikin, irrabala, and damu. Perhaps nana is just a long root. Note that this Middle form includes the Dynamic Middle semantics for Class I roots (as in Appendix B).

(73) Third person subjects
k-é-ár-à  'He is beaten.'
DSCN-3-beat-MID
k-é-ár-à  'They will fight.'
k-é-áp-à máâtè  'They will refuse each other (not necessarily people).'
k-é-bárn-à  'They are shaving each other.'
k-é-dál-à  'He will play.'
k-é-dî-à  'He is cursed. / They will curse each other.'
k-é-dúŋ-ô  'They will cut each other.'
k-é-dôp-à nîncê  'They are dependable/helpful.'
k-é-gîr-à  'He will be silent.'
k-é-gôr-ô  'They will strangle each other.'  'They will be made angry.'
k-é-y-dûŋ-ô  'It is crowded.'
k-é-y-gîr-ô  'It is beaten.'
k-é-y-gîs-à  'It is carved/sliced.'
k-é-y-kên-ô  'It is closed.'
k-é-y-nôs-à  'It is eaten.'
k-é-y-ŋôl-à  'It is stirred.'
k-é-y-pôsh-à  'He will wander off due to (stressful) problems.'
k-é-y-rîrt-à  'He/they will look after the cows'
k-é-y-rûr-à  'He is sleeping.'  (may just be in bed, not actually asleep.)'
k-é-y-rûsh-à  'It is thick.'
k-é-y-mán-à  'He drags himself (from laziness.)'
k-é-lûb-ô  'He is/they are greedy.'
k-é-îmîr-à  'He is drinking deliberately.'  'He is drunk.'
k-é-ŋîd-à  'He is proud.'
k-é-šêt-à  'He is plaited. / They will plait each other.'
k-é-thûm-ô  'They meet/they gather.'
k-é-wôás-à  'He is proud.'

(74) Initial high forms
k-á-dî-à  'I am cursed/insulted.'
DSCN-3-curse-MID
k-á-gîr-à  'I will keep silent.'
k-á-gór-ò  'I will become angry (habitual).'
k-á-yrór-à  'I am asleep.'
k-á-yrrít-à ’inkîshú  'I will look after them (cows)'
k-á-shîp-à táïsér'ê  'I'll be happy tomorrow (and am happy now, too.)'

(75) exceptions:
k-é-y-rrábál’-á  'He will lie on his stomach.'
DSCN-3-II-lie.down-MID
k-é-dâmôn’-ê  'They will remember each other.'
k-é-řîkîn-’ô ’întáy  'He (you (pl)) will forget.'
k-é-nàn-à  'It is soft.'

D.2.3.12. The Dynamic Middle Suffix (MID2) – Class II

The stem tone pattern is High-Downstepped High. This dynamic middle form is not available for Class I stems; rather, the semantics of the dynamic middle are included in the other middle form (Section D.2.3.11). Also due to the plural semantics, there is no 1SG or 2SG form. I do not have any 2PL forms, though one would be theoretically possible.

(76) Third person subjects
k-é-y-dôn-’ô  'They will beat each other.'
3-II-beat-MID2
k-é-y-mâl-’á  'They will give each other's wives cows.'
k-é-y-nôs-’â  'They will eat each.'
k-é-y-pâr-’â  'They will question each other.'
k-é-y-pîk-’â nîncê  'They will project each other.'
k-é-y-pôt-’ô ’îlpáyîanjî  'The men will call each other.'
k-é-y-kên-’ô  'It/they will be closed.'
D.2.3.13. The Passive Suffix (PASS)

The stem tone pattern is a High. Based on extrapolation from available data (e.g. that with $3>2>1$ kr- morpheme from Section D.2.2.2 above), it is assumed that the first and second person singular forms would be High and level.

(77) Third person subjects

<table>
<thead>
<tr>
<th>Verb</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>k-é-àŋ-í ènkîné  āy</td>
<td>'My goat will be refused.'</td>
</tr>
<tr>
<td>k-é-bèl-ì</td>
<td>'They will be broken.'</td>
</tr>
<tr>
<td>k-é-bòr-ì</td>
<td>'He will be injured.'</td>
</tr>
<tr>
<td>k-é-dùŋ-ì</td>
<td>'It/He will be cut.'</td>
</tr>
<tr>
<td>k-é-ydòŋ-ì</td>
<td>'It will be pounded.'</td>
</tr>
<tr>
<td>k-é-yqìs-ì</td>
<td>'Jumping will be done.'</td>
</tr>
<tr>
<td>k-é-ykòd-ì</td>
<td>'He will be decorated.'</td>
</tr>
<tr>
<td>k-é-yŋòr-ì</td>
<td>'He will be looked at.'</td>
</tr>
<tr>
<td>k-é-ypâr-ì</td>
<td>'He will be questioned.'</td>
</tr>
<tr>
<td>k-é-ypìm-ì</td>
<td>'He will be measured.'</td>
</tr>
<tr>
<td>k-é-yryrît-ì ūnkîshû</td>
<td>'They must/will be looked after.'</td>
</tr>
<tr>
<td>k-é-lèj-ì</td>
<td>'He will be lied to.'</td>
</tr>
<tr>
<td>k-é-mîr-ì</td>
<td>'He will be chased.'</td>
</tr>
<tr>
<td>k-é-jòr-ì</td>
<td>'He is loved.'</td>
</tr>
<tr>
<td>k-é-tùm-ì ènk'îríñá</td>
<td>'The bracelet will be found.'</td>
</tr>
</tbody>
</table>

(78) Exceptional forms.

<table>
<thead>
<tr>
<th>Verb</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>k-é-àkûn-ì</td>
<td>'People become ...'</td>
</tr>
</tbody>
</table>

DSCN-3-become-PASS

<table>
<thead>
<tr>
<th>Verb</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>k-é-y'á-y</td>
<td>'The cows will be taken.'</td>
</tr>
<tr>
<td>k-é-tôn-ì</td>
<td>'They will sit.'</td>
</tr>
<tr>
<td>k-é-dàmûn-ì</td>
<td>'The orphan child will be remembered.'</td>
</tr>
<tr>
<td>k-é-in-ì</td>
<td>'They/he/she will be born.'</td>
</tr>
<tr>
<td>k-é-átà-y ūná bókù</td>
<td>'That book was owned.'</td>
</tr>
</tbody>
</table>

D.2.3.14. Forms with PROG Only

<table>
<thead>
<tr>
<th>Verb</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>k-é-bòl-ítò</td>
<td>'He/they is/are opening it.'</td>
</tr>
<tr>
<td>k-é-tôn-ítà ēńñító ěmbártá</td>
<td>'The girl is seated on the horse..'</td>
</tr>
<tr>
<td>k-á-dîl-ítà ēndá kér</td>
<td>'I am seeing the goat..'</td>
</tr>
</tbody>
</table>
k-á-áŋ-ítà ‘I am waiting for/refusing it.’
k-á-ból-ítò ‘I am opening it.’
k-á-dúng-ítò ‘I am cutting.’
k-á-y-kén-ítò ‘I am shutting it.’
k-á-y-kén-ítà ‘I am counting.’
k-á-y-súj-ítà ‘I am washing it.’
k-á-ló-ytò ‘I am going.’
k-á-mán-ítà ‘I’m moving about.’
k-á-náp-ítà ‘I am carrying it’
k-á-súj-ítà ‘I am following him.’

D.2.3.15. Forms with INCEP Only

k-é-dór-ù ‘It will become red.’
DSCN-3-be.red-INCEP
k-é-gól-ù ‘The skin will become hard.’ (or strong, expensive).’
k-é-lá-ù ‘He will miss it (i.e., try to borrow it, but it’s unavaiable).’
k-é-nórr-ù ‘They/he/she will love.’
k-é-rók-ù ‘He/they will became black.’
*k-é-láy-ù ‘He is strandable.’ *‘He will become (more) stranded.’

k-á-ap-u ‘I will wait for it.’
k-á-dór-ù ‘I will become red.’
k-á-jyé-yù ‘I will swell.’
k-á-nórr-ù ‘I will become loving.’
k-á-ŋwó-yù ‘I will become smelly/rotten.’

D.2.3.16. Forms with Class I Roots Only

The stem tone pattern is High and level. Exceptions include Class I kwet ‘run’,
as mentioned above, which seems to have some Class II properties, though it doesn't bear
the Class II prefix (-t). As far as I can see, these roots behave the same as other Class I
roots elsewhere.

(79) Third person subjects
k-é-b’ík ‘They will stay.’
DSCN-3-stay
k-é-árá ènkàlèm ɔltùnànjì 'A knife can kill a person.'
k-é-b'árn 'The woman will shave the man.'
k-é-b'ól 'He will open the cow's mouth.'
k-é-b'wák 'He will bark/shout.'
k-é-g'ól 'My skin of a lion is hard.'
k-é-ló 'He will go.'
k-é-ló 'He will spread it out.'
k-é-ó 'It is ripe.' (with emphasis)
k-é-shůk 'He will bend it.'
k-é-t'ón ènfútò tèmbàrtá 'The girl will sit on the horse.'
k-é-yá '(the car) will take it.'
k-é-d'ó 'They/she will see it.'
k-é-j'ó 'They/he/she loves (today).'
k-é-p'ó 'He/they are brave.'
k-é-p'ír 'He/They is/are fat.'
k-é-r'ók 'He/They is/are black.'
k-é-yy'er 'They/he/she will cook it.'

(80) Initial high forms

k-á-ádó 'I am tall.'
DSCN-1SG-be.tall
k-á-áp 'I will refuse it.'
k-á-á-bárm 'I will shave you.'
k-á-b'ík 'I will stay here.'
k-á-b'ól 'I hold/twist the cow by the mouth.'
k-á-b'ólból 'I hold/twist the cow by the mouth.'
k-á-dèk 'I will curse him.'
k-á-d'ó 'I am red.'
k-á-d'ól 'I see them/him.'
k-á-g'ól 'I am strong.'
k-á-á-gór 'I will strangle you.'
k-á-y'ú 'I will give birth to him.'
k-á-j'í 'I will sift.'
k-á-j'út 'I will wipe him (e.g., with a cloth)' k-á-á-k'égj 'I will lie to you.'
k-á-á-náp 'I will carry you.'
k-á-nj'ú 'I am smellly/rotten.'
k-á-p'ót 'I go near (the post) (i.e., and will be touching it)'
k-á-á-p'úr 'I am fat.'
k-á-t'ón 'I will stay here/sit here.'
k-á-t'úm 'I shall meet him.'
k-á-yy'á 'I will take it.'
The following second person singular data show the tonal alternation that is seen with and without k- on other initial high forms (i.e., a downstep instead of high and level to the end of the word). A reasonable hypothesis would be that there is one tonal alternation for all forms, which includes a k- in all forms except the second person. The k- would be dropped here because together with the second person bound pronoun (i.e., k-r-), the two morphemes would confused with k-r- (either 1PL or 3>2>1).

\[
\begin{align*}
\text{k-á-yy'ér} & \quad \text{I will cook it.'} \\
\text{k-á-yb'á} & \quad \text{I hate him.'} \\
\text{k-á-ysh'ú} & \quad \text{I am alive.'}
\end{align*}
\]

\[
\begin{align*}
\text{í-ládó} & \quad \text{You are tall.'} \\
\text{í-láp} & \quad \text{You will give birth before circumcision.'} \\
\text{í-lámn} & \quad \text{You will shave.'} \\
\text{í-b'ík} & \quad \text{You will stay here.'} \\
\text{í-d'ól} & \quad \text{You see him.'} \\
\text{í-d'úŋ} & \quad \text{You will cut.'} \\
\text{í-g'ór} & \quad \text{You will strangle.'} \\
\text{í-y'ú} & \quad \text{You will give birth to him.'} \\
\text{í-n'úŋ} & \quad \text{You hear/will hear.'} \\
\text{í-p'ír} & \quad \text{You are fat.'} \\
\text{í-yy'ér} & \quad \text{You will cook it.'}
\end{align*}
\]

Forms without TMHS (long roots and lexical exceptions):
\[
\begin{align*}
\text{k-é-ádó} & \quad \text{He is/they are tall.'} \\
\text{DSCN-3-be.tall} & \\
\text{k-é-dámó} & \quad \text{They/she/he will remember the people.'} \\
\text{k-é-lálá} & \quad \text{It is wide.'} \\
\text{k-é-rúgúm} & \quad \text{He will make him vomit.'}
\end{align*}
\]

(81) Other exceptions
\[
\begin{align*}
\text{k-é-ákó ènkítéŋ} & \quad \text{It will become a cow.'} \\
\text{DSCN-3-become} & \\
\text{k-é-átà ô&macute;mó} & \quad \text{He will be/was lucky.'} \\
\text{k-é-bà á'n'á nánñó?} & \quad \text{Is he the same as me?'} \\
\text{k-é-bóy'tá kól'é} & \quad \text{The milk will be together.'} \\
\text{k-é-lá} & \quad \text{He will be stranded.'} \\
\text{k-é-ô} & \quad \text{It leaks.(with emphasis)'}
\end{align*}
\]
k-é-shéykì àyrritá ‘ínkìšhú.  ‘He persistently watches over cows.’
k-é-bóré  ‘It is/was full.’

k-á-ákù  ‘I will become.’
DSCN-1SG-become
k-á-dáà  ‘I will eat.’
k-á-gírà ààpó  ‘I am waiting for it.’
k-á-kwèt  ‘I run (habitual)’

D.2.3.17. Forms with Class II Roots Only

The stem tone pattern is High-Low.

(82) Third person subjects
k-é-y-bèl  ‘He will rock from side to side.’
DSCN-3-II-rock
k-é-y-bòk  ‘He will hinder it.’
k-é-y-dòŋ  ‘He will beat it.’
k-é-y-gís  ‘He will jump.’
k-é-y-kásh  ‘He is better than him.’
k-é-y-kèn  ‘He will close it.’
k-é-y-kèn  ‘He will count.’
k-é-y-mùn  ‘It will be lost.’
k-é-y-míš  ‘They will sunk.’
k-é-y-nèl  ‘He will stirr it.’
k-é-y-pìk  ‘They/He will project.’
k-é-y-pòsh  ‘It will make him wander off due to (stressful) problems.’
k-é-y-pòt  ‘He will call him.’
k-é-y-rráq  ‘They will lie down.’
k-é-y-ròwùà  ‘It is hot.’
k-é-y-rùg  ‘He will bend it over.’
k-é-y-sòj  ‘They/he/she will wash it.’
k-é-y-tèrrè  ‘He will faint.’

(83) Initial high forms
k-á-y-bèl  ‘I will rock from side to side.’
DSCN-1SG-II-rock
k-á-y-bòk  ‘I will hinder it.’
k-á-y-gèr èmpál’áy ...  ‘I will write a letter ...’
k-á-y-gís  ‘I will jump.’
k-á-y-gís  ‘I carve/slice.’
k-á-y-kášh  ‘I am better than him.’
k-á-y-kèn  'I will shut it.'
k-á-y-kèn  'I will count.'
k-á-y-lèp  'I will go up/climb the hill.ACC.'
k-á-y-pàŋ  'I will go out.'
k-á-y-rràŋ  'I will lie down.'
k-á-y-sùj  'I will wash it.'

(84) Potential exceptions – class uncertain:
k-é-yb'á  'He hates him.'
DSCN-3-II?.hate
k-é-yk'ó  'He will do that.'
k-é-ysh'ú  'He is alive.'
APPENDIX E

THE IMPORTANCE OF WRITING TONE

As mentioned in the earlier chapters of the thesis, there is something of a tradition in Maa scholarship of not indicating tone and ATR vowel contrasts. While evidence against this practice might be found in several places, it seemed good to give here some of the difficulties posed in Maa when the segmental parts of words (letters) are considered without regard to tone. It is my hope that this information be used to help those who speak Maa to develop a writing system that will allow them to read and write their language more widely and proficiently.

For the most part, this appendix deals with systematic confusions, rather than those that might exist for just one or two roots. The words I have are listed, though I presume that each section could be extended to words with most other roots as well. As this thesis deals with verb tone, I do not deal with other indications of the importance of writing tone, such as the case system for nouns (i.e., nîñê ‘he’ vs. nîŋé ‘him’), which is also indicated by tone alone.

E.1. Tonal Minimal Pairs

There are many minimal tone pairs among Maasai verbs, that is, different words that would be written the same without tone marks, but which are pronounced differently
because of the tone. That is, the difference in meaning is only conveyed in the tone. It should be clear from this section that tone carries a lot of information in Maa verbs, and that Maa often uses tone to distinguish between two forms that might otherwise be written the same.

Most of these fall into a limited number of categories, based on certain parts of the verb inflection paradigms. The following sections give those categories. The first pair in each set is parsed and glossed, and the remainder in each is given without morpheme breaks.

E.1.1. 3>1 vs. 1>2

The first set of minimal pairs comes from two bound argument prefixes which are segmentally identical but tonally distinct. Whatever the underlying tone of the 3>1 áà-morpheme is, it is tonally but not segmentally distinct from the 1>2 morpheme, as the following minimal pairs show.

(1)

a. áà-bárn  
3>1-shave  
‘He/she/it/they will shave me.’

b. áá-bárn  
1>2-shave  
‘I will shave you.’

káàbárn  
‘They will shave me.’

c. káá’bárn  
‘I will shave you.’

áàdádmó  
‘They/he/she (will) remember me.’

d. áádádmó  
‘I remember you.’

áàtàngórûkînê  
‘He/She became angry at/for me.’

e. áátàngórûkînê  
‘I became angry at you (sg).’
E.1.2. Inverse Marker 3>2>1 vs. 1PL

The following forms show the tonal distinction between the bound argument pronouns for first person plural (i.e., kiri) and 3>2>1 (i.e., kiri). The underlying tone of the first person plural is not clear, as mentioned in chapter 5, but I will continue to assume something like HL for now. In contrast, the inverse 3>2>1 prefix seems to pattern like the first person singular prefix a-, so we could say that it is lexically toneless with surface high spreading onto the prefix from the stem (see Chapter VI).

(2) Non-perfect forms
   a. kí-bár
      3>2>1-shave
   b. kí-bár
      1PL-shave

kiból
‘He will open you.’
kibol
‘We will open it.’

kipir intárè
‘Your sheep are fat.’
kipir
‘We are fat.’

kidúŋókí
“You (sg) will cut for me.’
kidúŋókí
“We will cut for him.’

kintúkü
“He will wash you.’
kintükü
“We will wash it.’
(3) Perfect forms

a. ńi-tó-níŋ-ò  ‘You made me hear.’ / ‘He made you hear.’
   3>2>1-CAUS-hear-PF
b. ńi-tó-níŋ-ò  ‘We made him/them hear.’
   1PL-CAUS-hear-PF

kísójā  ‘You (sg) washed me.’
kísójā  ‘We washed it.’

kitágorò  ‘You (sg) strangled me.’
kitágorò  ‘We strangled someone.’

kitólnōrā  ‘You have loved me.’
kitólnōrā  ‘We have loved him/her/them.’

kitōrikinōtē  ‘They have forgotten you.’
kitōrikinōtē  ‘We forgot.’

kitōnǐŋōkī  ‘You (sg) were heard.’
kitōnǐŋōkī  ‘We heard you.’

kitūduŋōkī  ‘You (sg) have been cut.’
kitūduŋōkī  ‘We were cut.’

Both 1PL and 3>2>1 have allomorphs with the form ńe-kr-, which may be
something like a discourse marker attached to the ńi- form, as mentioned in Appendix D.

This ńe- formative, like the DSCN marker ńk- (Appendix D), has a High tone, giving the
following forms.

(4) Non-perfect forms

a. ńe-ńi-bārn  ‘You will shave me.’ or ‘He will shave you (sg).’
   DSCN-3>2>1-shave
b. ńe-ńi-bārn  ‘We will shave.’
   DSCN-1P-shave

ńkí'ídl  ‘You will see me.’ or ‘He will see you.’
ńkīdāl  ‘We will see.’

ńkī'gōr  ‘You will strangle me.’
ńkīgōr  ‘We will strangle(someone)’
Ékintónorr ‘You will make me love it.’
Ékintónorr ‘We make him love.’

Ék'ipik ‘He will put you by the river.’
Ék'ipik ‘We will put it.’

Ékikwët ènkít'éj ‘Your cow will run.’
Ékikwët ‘We run with each other/together.’

Ék'iyyér ‘He will cook you/you will cook me.’
Ék'iyyér ‘We will cook it.’

Ék'idámó ‘You will remember me.’ / ‘they/etc. will remember you.’
Ék'idámó ‘We can remember/we will remember.’

Ékímáñà ‘You live....(somewhere)’
Ékímáñá ‘We live....(somewhere)’

Ékintúkù ‘You will wash me.’
Ékintúkù ‘We will wash it.’

Ékîpôrrò ‘You (sg) will love me.’
Ékînôrró ‘We will love him/her/them.’

E.1.3. Plural vs. Singular (Perfect)

Perfect forms show somewhat different tone patterns than the non-perfect forms given in the majority of this thesis. I have not discussed this in the body of the thesis because this hasn’t yet been reduced to a system, though number of third person subject clearly gives tonal minimal pairs in the perfective aspect. This data shows a final High tone in the singular perfect form and a falling tone in the plural perfect form, whatever the person markers are. It would seem reasonable that another TBU (such as the archaic -í plural (Greenberg 1959) still seen in some verbs, e.g., ton ‘sit’, gol ‘be.hard, be.strong, etc.’) was lost, leaving the tone to combine with the prior TBU.
(5) 3>1 Forms with the Instrumental Suffix
a. áå-tà-gòr-yé ‘He/etc. strangled me (using/for ...)
   3>1-PF-strangle-INST
b. áå-tò-gòr-yē-ô ‘They strangled me (using/for ...)
   3>1-PF-strangle-INST-PL

áåtònòrryé ‘He/she loved me because of / used something to love me.’
áåtònòrryē ‘They loved me because of ...’
áåygèryé ‘He made me write.’
áåygèryē ‘They made me write.’
áåykènỳé ‘He did make me shut it.’
áåykènỳē ‘They did make me shut it.’ (+ATR from INST makes this identical to ‘count’.)
áåykènyé ‘He did make me count it.’
áåykènyē ‘They did make me count it.’ (+ATR from INST makes this identical to ‘shut’.)
áåylèpyé ‘He did make me climb.’
áåylèpyē ‘They did make me climb.’
áåyshìrỳé ‘He did make me cry.’
áåyshìrỳē ‘They did make me cry.’
áåytùdùnyé ‘He made me cut using it.’
áåytùdùnyē ‘They made me cut using it.’
áåytòpòrryé ‘He/she used it to make me like it.’
áåytòpòrryē ‘They used it to make me like it.’

(6) Other 3>1 Perfective Forms
áåtàgòró ènkèrày òlmànjàìntá ‘The child has strangled my enemy.’
áåtàgòró `ìnkèrày ... ‘My children has strangled ...’
áåtònìnjò ‘He/she has heard me.’
áåtònìnjô ‘They have heard me.’
áåtònòrrá ‘He/she have loved me.’
áåtònòrrà ‘They have loved me.’
The following perfect pairs, rather than showing a falling tone for the plural form, show a Downstepped High on the final syllable. This indicates some kind of relationship between the falling tone and the downstepped High, as they often appear in the same place, either in differing dialects, or in different varieties used by a single speaker. These data also show some variation on the initial pitch, which is sometimes low, but it is unclear what motivates this difference.

(7) Simple Third Person Forms

a. é-tá-ás-á
   3-PF-do-PF
   ‘He did it.’

b. é-tá-ás-á
   3-PF-do-PF.PL
   ‘They have done it.’

détábóló
   ‘He opened it.’

eétábóló
   ‘They opened it.’

két'ábóló
   ‘He opened it.’

kétábóló
   ‘They opened it.’

détágóló ólcóni.
   ‘The skin has become hard.’

eétágóló
   ‘They have become hard.’

détôtñórrá
   ‘He has loved.’

eétôtñórrá
   ‘They have loved it.’

détôdóró
   ‘He became red.’

eétôdóró or étôdórô
   ‘They became red.’

détônîñjó
   ‘She/he heard.’

eétônîñjó or étônîñjó
   ‘They heard it.’

détôtñá
   ‘He sat.’

eétôtñá or étôtñá
   ‘They sat.’
éykénó  ‘He shut it.’
éykén’ó or éykén’ó  ‘They shut it.’

In some roots, the singular form is downstepped on the penultimate mora, rather than level and high to the end (as in (7) above). The plural form remains Downstepped High or Falling on the last mora.

(8) Forms with the Class I Causative
è-ytó-n’íŋ-ò  ‘He/she made him/them hear.’
3-CAUS-hear-PF
è-ytó-n’íŋ-’ô also -ô  ‘They made him/them hear.’
3-CAUS-hear-PF.PL
èytóŋ’ôrrá  ‘He made him love it.’
èytóŋôrr’á  ‘They make each other love something else (habitually).’
éytóŋ’ôrryé  ‘She/he used it to make him/her like it.’
èytóŋôrryé also -ë  ‘They used it to make him/her like it.’
kíntákw’êpá  ‘You (sg) made me laugh.’
kíntákwéŋ’á  ‘You all made me laugh.’
kíntóŋ’ôrrá  ‘you (sg) have made me love it.’
kíntóŋôrr’á  ‘you (pl) have made me love it.’

In the following pairs, the singular has a final low tone, which becomes Downstepped High in the plural form. These are all second person forms.

(9)
í-súj-à  ‘You (sg) washed it.’
2-wash-PF
í-súj-’á  ‘You (pl) washed it.’
2-wash-PF.PL
ítôníŋò  ‘You (sg) have heard.’
ítôníŋ’ô  ‘You (pl) have heard.’
ítôŋôrrrà  ‘You (sg) have loved it.’
ítôŋôrr’á  ‘You (pl) have loved.’
ítósójá  ‘You (sg) followed him.’
ítósójá  ‘You (pl) followed him.’

The following pair shows that the singular/plural distinction holds, even with the
3>2>1 prefix.

(10)
kí-súj-á  ‘You (sg) washed me.’
3>2>1-wash-PF
kí-súj-á, also kí-súj-á  ‘You (pl) washed me.’
3>2>1-wash-PF.PL

E.1.4. Perfect Passive vs. Dative for Class II

These data show that verbs that are in the perfect aspect with the Passive suffix
would be written the same as those in the non-perfect aspect with the Dative suffix,
except for the tone.

(11)
 a. áà-y-súj-àk-í  ‘I was washed.’
  3>1-II-wash-PF-PASS
 b. áà-y-súj-ákì  ‘He will wash for me.’
  3>1-II-wash-DAT
áàypàràkì  ‘I was questioned.’
áàypàràkì  ‘He will question for me.’
kààypíràkì  ‘I was faced.’
kààypíràkì  ‘He will face someone for me.’
áàyrùsòkì  ‘I was pierced.’
áàyrùsòkì  ‘He will pierce someone for me.’
áàysòjàkì  ‘I was washed.’
áàysòjàkì  ‘He will wash for me.
èydòñòkì  ‘They are beaten.’
èydòñòkì  ‘He will pound (the grain) for him.’
E.1.5. Perfect vs. Non-Perfect with Class I Causative and Instrumental

On forms that have 3>1 áà-, as well as both the Class I causative (-\(\pi V\)) and the instrumental suffix (-\(\gamma e\)), the non-perfect form has a High-Low stem tone pattern, with the High stem tone pattern on the perfect (as in Appendix A).

(12)

a. áà-ytà-dòt-\(\eta\)-yé  ‘He made me pull it\(_1\) out (using it\(_2\)).’
   3>1-CAUS-pull-VENT-INST

b. áà-ytà-dòt-\(\eta\)-è-\(\emptyset\)  ‘He will make me pull it\(_1\) out (using it\(_2\)).’
   3>1-CAUS-pull-VENT-INST-PF

ááytálèpyèkí ènkúkúrì ènkítènì
‘I was made to use the calabash to milk the cow.’

ááytálèpyèkí ènkúkúrì ènkítènì
‘I will be made to use the calabash to milk the cow.’

ááytèyyèryè è\(\eta\)údì.
‘He/they used a stick to make me cook.’

ááytèyyèryè è\(\eta\)údì.
‘He/they will use a stick to make me cook.’

ááytòòpyè ‘He made me sit using it.’
ááytòòpyè ‘He will make me sit using it.’

ááytòùpòrryè ‘He/she used it to make me like it.’
ááytòùpòrryè ‘They used it to make me like it.’
ááytòùpòrryè ‘He/she will use it to make me like it.’

ááytùdùnyè ‘He made me cut using it.’
ááytùdùnyè ‘They made me cut using it.’
ááytùdùnyè ‘He/they will make me cut using it.’

ááytùdùnyèkí ‘They made me cut using it.’
ááytùdùnyèkí ‘I will be made to cut using it.’

ááytùsùjèyè ‘?(pl)They used it to make me follow.’
ááytùsùjèyè ‘?(pl)They will use it to make me follow.’

ááytùsùjèyèkí è\(\eta\)údì  ‘a stick was used to make me follow.’
ááytùsùjèyèkí è\(\eta\)údì  ‘a stick will be used to make me follow.’

With the class II causative (-\(\gamma e\)), there seems to be no ultimate High at all in the
non-perfect, though the perfect maintains the High stem tone.

(13)
áąygęryę  ‘He made me write.’
áąygęryę  ‘They made me write.’
áąygęryę  ‘He will make me write.’

áąykęnyę  ‘he did make me shut it.’
áąykęnyę  ‘They did make me shut it.’
áąykęnyę  ‘he will make me shut it.’

áąykęnyę  ‘he did make me count it.’
áąykęnyę  ‘They did make me count it.’
áąykęnyę  ‘he will make me count it.’

áąylępyę  ‘He did make me climb’
áąylępyę  ‘They did make me climb’
áąylępyę  ‘He will make me climb’

áąyshıryę  ‘He did make me cry.’
áąyshıryę  ‘They did make me cry.’
áąyshıryę  ‘He will make me cry.’

E.1.6. Perfect vs. Middle

Because the perfect suffix and the middle suffix have the same segmental form (i.e., al/ο-), when the perfect prefix is blocked (as in these words with Class II stems), the spelling is the same apart from tone. The next three sections show a comparison of these two forms and the dynamic middle, which is also distinguished only by tone. When the plural perfect forms (Section E.1.3) are included, this gives a four-way minimal difference, as in the first four forms of example (6) from Chapter 4.1 (p. 16).

(14)
a. é-y-bó-ó  ‘He hindered it.’
   3-II-hinder-PF
b. è-y-bó-ò nincè/nípè
3-II-hinder-MID
‘They/He are/is hindered.’

éydóŋó
‘He beat it.’
éydóŋò
‘They beat it.’
éydóŋô
‘He/It/They is/are beaten.’

eykènó
‘He shut it.’
eykènò
‘They shut it.’
eykènò èmilàngò
‘It/they is/are closed.’

éypréá
‘He questioned him.’
éypréà
‘He/They is/are questioned.’

éypréshá
‘It made him wander off due to (stressful) problems.’
éypréshà
‘He will wander off due to (stressful) problems.’

éypréó
‘He called him.’
éypréó (nínè)
‘He/They is/are called.’ or ‘They will call each other.’

èyrrít’á nínè/nincè ‘nkìshú
‘He/They looked after cows.’
èyrrítà ‘nkìshú
‘They looked after cows.’
èyrríti nínè/nincè ‘nkìshú
‘He/they will look after cows.’

kélùà
‘He has spread it out.’
kél’ùá
‘He will spread it out.’

E.1.7. Perfect vs. Dynamic Middle

These forms are similar to those in section E.1.7, except that the perfect here is compared with the dynamic middle.

(15)
a. á-y-súj-à
1SG-II-wash-PF
‘I washed it.’
b. á-y-súj-á
1SG-II-wash-MID2
‘I will wash myself.’

íntóníŋ’ó
‘you made him hear it.’
íntón’íŋô
‘You will make yourself listen.’
Éybóó ‘He hindered it.’
Éybóó nincè (*nį̀nè) ‘They will hinder each other.’ (*himself)

Éydónjó ‘He beat it.’
Éydónjó ‘They beat it.’
Éydónjó ‘They will beat each other.’

Éykénó ‘He shut it.’
Éykênó ‘They shut it.’
Éykênó ‘It/They will be closed.’

Éypárá ‘He questioned him.’
Éypárá nincè ‘They will question each other.’

Éypótó ‘He called him.’
Éypótó ǂlpáyyàní (*ɔl-) ‘The men will/are calling each other.’ (*man)

Èysújá ‘They washed it.’
Èysújá nį̀nè/nincè ‘He/They is/are/will be bathing (later.)’

E.1.8. Stative Middle vs. Dynamic Middle for Class II

As mentioned in Appendix B, there is a tonal distinction for Class II roots between the stative and dynamic readings for the middle. Because this is only a distinction by tone, it also contributes a long list of minimal tone contrasts. Note that some of the semantic contrasts in these forms do not easily fall into the categories of stative and dynamic, particularly for verb roots that are inherently stative, where this contrast seems indicate some type of aspectual distinction indicated.

(16) MID

a. è-ybó-ò nį̀nè/nincè ‘They/He are/is hindered.’
   3-II-hinder-MID
b. èybóó nincè (*nį̀nè) ‘They will hinder each other.’ (*himself)
   3-II-hinder-MID3
(17) Other forms
èyồóñò ‘He/It/They is/are beaten.’
èyồóñ’ò ‘They will beat each other.’

kéyồóñò ‘It is beaten.’
kéyồóñ’ò ‘They will beat each other.’

èyồó yò ‘It/they is/are written/employed.’
èyồó ǐpáyyàñ (nǐnè) ‘The men will employ each other.’

èyìísà nǐnè/níncè ‘They/It are/is carved/sliced.’
èyìís’à níncè (nǐnè) ‘They will carve each other.’

èykènò èmilàngò ‘It/they is/is closed.’
èykèn’ò ‘It/They will be closed.’

kéykènò ‘It is closed.’
kéykèn’ò ‘It/they will be closed.’

èymálà èná kítk ‘She is given to (you can see her cows.)’
èymál’á ‘They will give each other’s wives cows.’

èynòsà ‘It/they is/are eaten.’
èynòs’á ílùjínnà ‘They will eat each other.’

kéynòsà ‘It is eaten.’
kéynòs’á ‘They will eat each other.’

èyòrò níñè/níncè ‘She/They is/are looked at.’
èyòr’á ‘They will look at each other.’ or ‘He will look at himself.’

èypá’á níncè ‘They will question each other.’
èypà ‘He/They is/are questioned.’

èyòpò t (níñè) ‘He/They is/are called.’
èyòpò’ó ípáyyàñ (nòpáyyàn) ‘The men will/are calling each other.’

èyìísà níñè/níncè ‘He/They is/are praised.’
èyìís’á níncè (níñè) ‘They will praise each other.’

èyòsú jà níñè/níncè ‘He will wash himself.’ or ‘She/They is/are washed.’
èyòsú j’á níncè ‘He/They is/are bathing (now.)’
èyòsú j’á níñè/níncè ‘He/They is/are/will be bathing (later.)’
E.1.9. Perfect Class I Causative vs. Imperative

As mentioned in Chapter IV, the perfect and imperative affixes are identical in segmental form. This leads to minimal tone pairs, such as the following.

(18)

a. í-nñú-dùŋ-ó ènkálêm ̀lchàñí  
   2-CAUS-cut-PF
   ‘You caused the knife to cut the tree.’

b. í-nñú-dùŋ-ó ènkálêm ̀lchàñí  
   2-IMP-cut-IMP
   ‘You cause the knife to cut the tree!’

E.1.10. Mid vs. Vowels Final Roots

There are a few cases where there seems to be a vowel without synchronic semantic weight, being homonymous with the same root with a given affix. For example, the following illustrates the perfective (19)a, in contrast with an unknown formative in (19)b, which appears whenever another suffix is not present on this root.

(19)

a. á-y-rrít-ìá  
   1SG-II-guard-PF
   ‘I guarded (cows).’

b. á-y-rrít-à  
   1SG-II-guard-??
   ‘I will look after them (cows).’

E.2. Tonal Homophones

There are only two complete homophones that I know of in the verb system, one where different verb conjugations end up with identical segmental and tonal information, and the other which maybe a part of language shift over time. For both, the segmental similarity comes from the fact that the perfect prefix is blocked (in the first by the Class II prefix, in the second by the Class I Causative prefix).
In the first set of homophones, the Middle suffix takes the same form as the perfect suffix, and the tonal contribution from each of these combination of forms come out the same, resulting in total homophony for the initial high (i.e., lexically unmarked) bound argument pronouns, such as the first person singular \textit{a-}.

\begin{itemize}
\item \textit{á-y-dóŋ-ô} \quad \textit{I beat him.}'
\item \textit{á-y-dóŋ-ô} \quad \textit{I am beaten.}'
\item \textit{á-y-sój-à} \quad \textit{I washed it.}'
\item \textit{á-y-sój-à} \quad \textit{I am washed (but don’t know who did it.)}'
\end{itemize}

In the second case, the instrumental blocks the perfective suffix, giving no segmental indication of aspect. While these may have been tonally distinct at one time, the distinction seems to be lost, with one form (or both) standing for both aspects.

\begin{itemize}
\item \textit{éytéb'élýé} \quad \textit{He used/will use it to make him break it.}'
\item \textit{kéytád'ályé} \quad \textit{He will use it to make him play.}'
\item \textit{èytésh'ényé} \quad \textit{He used/will use it to build for him.'}
\item \textit{èytóti'önyé} \quad \textit{He did/will use it to make him sit.'}
\end{itemize}

E.3. Summary

This appendix has given selections of words that show that what Tucker and Mpaayie
called “opportunities for ambiguity” (p. xiii) are both systematic and not limited to certain parts of the system. They have to do with the inflection of each root, and are not limited by one root or another. These potential confusions are also not just present in one or two ways to inflect verb roots, but they are present between person markings, aspects, suffixes, and in combinations where person, aspect, and suffixes may be confused one with another. One example was given in Section 4.1, which I will repeat here. It combines the contrasts given in Sections E.1.3, E.1.6, E.1.7, E.1.8):

<table>
<thead>
<tr>
<th>Root</th>
<th>Meaning</th>
<th>Aspect</th>
</tr>
</thead>
<tbody>
<tr>
<td>ẹy/dóó</td>
<td>‘They will beat each other.’</td>
<td>Dynamic Middle</td>
</tr>
<tr>
<td>ẹy/dóò</td>
<td>‘He/she/it/they is/are beaten.’</td>
<td>Stative Middle</td>
</tr>
<tr>
<td>ẹy/dóó</td>
<td>‘He/she/it beat it.’</td>
<td>Perfective Aspect, Singular Person</td>
</tr>
<tr>
<td>ẹy/dóò</td>
<td>‘They beat it.’</td>
<td>Perfective Aspect, Plural Person</td>
</tr>
</tbody>
</table>

And this systematic potential confusion can be found on almost any Class II stem. Thus, an incredible amount of systematic information is lost if tone is not written.
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