# Tone and Morphology in Aetso

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# TONE AND MORPHOLOGY IN ATESO


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# Abstract

Tone plays an important role in the morphology of Nilotic Languages such as Ateso, in that it can mark categories such as tense and case. However, especially beyond the root level, tonal assignment processes are scarcely described in the literature. By means of bibliographic research and with the data I have gathered working with a native speaker, I will provide a descriptive account of some phenomena tone assignment and realization in morphologically derived environments in Ateso, focusing primarily on nominal morphology. I shall discuss the underlying tone of roots and affixes, and describe the surface tonal phenomena that make determining it a difficult task.

Furthermore, I will discuss the evaluative morphology of Ateso, i.e., the formation of augmentatives and diminutives, which up until now has been analysed as being encoded by affixes with distinctive tonal behaviour, but in my speaker's speech is based on gender shift. I will provide a description of how the system works on the Ateso spoken by my

consultant, contrast it with that provided by David Barasa in the only existing grammar of Ateso, and compare it with other Nilotic and Eastern African systems of evaluative morphology. I will also offer some tentative explanations about why two different accounts of the phenomenon exist, being dialectal variation between the Northern and Southern groups of Ateso speakers the one I deem to be the most plausible.

# 1. Introduction: The Ateso language

Ateso is an Eastern Nilotic language spoken in Uganda and Kenya. Many names originating from the root *teso* have been used to refer to the language, the people who speak it and the land they inhabit, sometimes interchangeably and often leading to confusing and even awkward situations. I will use the terminology that is most common in the current literature and that appears to be more in line with native sensibilities: *Ateso* for the language, *Iteso* for the people to whom it is indigenous, and *Teso* for their traditional homeland. *Iteso* is a plural form; an individual female is an *Atesot*, and a male, an *Etesot*. (See sections 5.1.1 and 6.1 for more information on gender and gender marking). The origin of the word *teso* itself is not clear, although oral traditions that recount the origin of the Iteso link it with the word for "grave" or "corpse". In a nutshell, the story narrates how a group of people that would become the Iteso split off a larger group of herders in search of greener pastures, and was deemed by those who stayed behind to only find their graves, i.e., die. My speaker, however, prefers to associate it with the phrase *ite iso*, contracted *ite-so* which means "we (exclusive) have seen". He argues that it is what the scorned pathfinders said when bringing word of the new lands they found, and that thus the name *Iteso* reflects on the "visionary" character of his people. Both interpretations of the word are likely to be folk etymologies. Very similar variations of the story (without the part about the Iteso being visionaries) seem to be told by the peoples related to the Iteso, as the Turkana or the Karimojong (Dyson-Hudson, 1966, as cited in Vossen, 1982), who are the people the Iteso split off of.

In this section, I will provide a brief overview of the language, including basic information about its demographics, classification and history, as well as some typological essentials.

## 1.1. The Iteso: speakers and geographical expansion.

The best estimates of the number of speakers of Ateso are compiled by Ethnologue, yet it must be kept in mind that they account for ethnic Iteso rather than actual speakers of the language, which never correlates one to one, especially among the younger generations. Even if Ateso is still considered a strong language with widespread use among most contexts and age groups, given the general sociolinguistic situation of Africa, it would not be surprising to learn that the colonial and national languages of Uganda and Kenia (English, Luganda and Swahili) are gradually taking over in some fractions of the population. There is no literature specifically about the subject, although Barasa does claim to recognise such a trend among young urban young speakers (Barasa, 2017a). My impression that my consultant has, who perceives the vitality of the language and culture of the Iteso as threatened and receding.

Ethnologue counts a total of 2,778,000 speakers (Iteso individuals), 2,360,000 of them in Uganda and 418,000 in Kenya. There is no estimation about the number of speakers in each of the two Ateso-speaking groups, namely the Northern Iteso and the Southern Iteso, due to the Southern group's presence on both sides of the border. I shall explain this situation shortly.

The Iteso, as part of a group that had not yet be split into the ethnic and linguistic groups of the Jie, Iteso, Karamojong and Turkana, originated in South Sudan, north of the present homelands of said peoples (Barasa, 2017a; Vossen, 1982). At some point around the XIV and XV centuries, they settled in the area between mt. Moroto and mt. Elgon (Vossen, 1982: 49), in North-Eastern Uganda, after a centuries long migration process (Barasa, 2017a: 1). In their oral traditions, the southwards migration is remembered as a travel that some young Iteso embarked on in search of better pastures, splitting from a group that would go on to become the Karimojong people, which seems to correlate with the accounts of the experts to some extent[1].

Most Iteso today still live in part of that homeland in the basin of Lake Kyoga, today roughly equivalent to the Teso sub-region of Uganda, but a small fraction of them lives

[1] Which should not be so surprising given that oral tradition is an important source of information for those who reconstructed the history of the Nilotic peoples.

further south. This is due to the fact that around two or three centuries ago, a group of Iteso split off and settled down south of mount Elgon, in an area that today lies on both sides of the Ugandan-Kenyan border (see Figure 18, in section 6.5.2). A wall of Bantu languages separates the groups, now commonly referred to as Northern Iteso and Southern Iteso (Barasa, 2017a; Karp, 2004; Vossen, 1982; Vossen, 1983).

As all Nilotic peoples, historically the Iteso have been on semi-nomadic pastoralists, but since their arrival to the fertile areas of the Great Lakes region, and more crucially since the arrival of European Colonial powers (Lawrance, 1957, as cited in Vossen, 1982), they have focused more on agriculture than most other Nilotic peoples. Nonetheless cattle are still an important sector of their economy, and a key aspect of the culture of the Iteso.

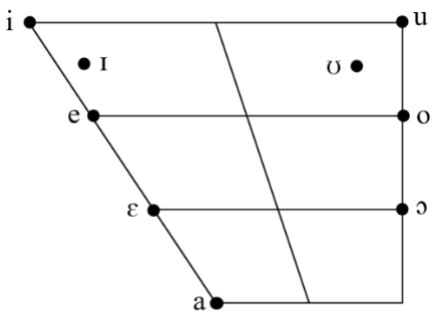
## 1.2. Phonetic inventory

Ateso has a typically Eastern African consonant inventory, displayed on Table 1, and a vowel inventory also typical for a Nilotic language, shown in Table 2.

*Table 1. Ateso consonant inventory*

| | Biabial | Alveolar | Palatal | Velar |
|---|---|---|---|---|
| Stop | p b | t d | c ɟ | k g |
| Nasal | m | n | ɲ | ŋ |
| Rhotic | | ɾ | | |
| Fricative | | s | | |
| Approximant | | l | | |
| Glides | w | | j | |

*Table 2. Ateso vowel chart*




As many other Nilotic languages, Ateso has ATR harmony, meaning that all vowels phonemes (except /a/, in the case of Ateso) have two phonetical variants: an Advanced

Tongue Root one ([e], [i] and [u]) and a Retracted Tongue Root one ([ɛ], [ɪ] and [ʊ]), and each one of them can only co-occur within a word with vowels of the in the same tongue root position.

### 1.3. Word order, morphology and TAM

Ateso is a highly inflectional VSO language. It is also a tonal language, in which tone is not lexical but is used to convey grammatical categories such as tense and case, of which there are five: nominative, accusative, genitive, locative and instrumental, . Aspect and mood are mainly conveyed by means of prefixes.

## 2. Methodology

The data that I use has been collected in two phases. The first one was the Field Methods courses I took during the first semester of my MA, on the 2022-2023 academic year, where I first got acquainted with the Ateso language and my consultant. The data collection happened bot in group sessions and private out-of-class sessions in which I worked working with a classmate. I have permission from everyone involved in the course to use the data gathered there: consultant, classmates and teacher, who also kindly agreed to be the supervisor of this thesis. Our goal as students was to analyse the language resorting as little as possible of the existing literature, in order to produce a grammar sketch of Ateso by the end of the course. was not actively looking for the phenomena that I study on this thesis, as I didn't yet know practically anything about them. Translation – elicitation was the method one we used the most, in addition to the transcription, translation and analysis of a text – which was, incidentally, the story about the origin of the Iteso that I mention in section 1.

After that, and once I decided the topic of my thesis, I hade a couple private sessions carried on during the second semester, I was looking for the phenomena. I also used the translation method and I often asked for his native speaker intuitions, although I remained sceptical at all times because I realised in many occasions how misleading they can be, as I talk about more below, in section 2.1.2.

English has been the language used during the data collection sessions, a language that our consultant is fluent in. During the whole process he has shown himself eager to

collaborate and to reflect on his own language, something he claims never to have done before, although he is talented for it and has very sharp linguistic intuitions.

He sometimes does not feel comfortable about his own grasp of his language, and claims to be forgetting it, which is a cause of concern for him but also a motivation to take part in this project. However, his presumed loss of command of his native language has proved to be restricted to the lexical domain, since while he might very occasionally fail to remember a word or feel somewhat uneasy with his familiarity with certain semantic fields -e.g., colours- his grasp of the deeper structures of Ateso remained those of a fluent native speaker. There is no reason to believe that the phonology, syntax morphology and so on of my informant's speech have become flawed to the point that his Ateso is not a faithful example of how it is spoken where he is from.

On a sidenote, his confidence on his linguistic abilities has skyrocketed throughout this process, ever since he started working with us in our Field Methods lessons until my last private sessions with him. Witnessing how working with us has helped him overcome his fears of losing his native tongue and how he has gained a very deep interested in the workings of Ateso and language in general has been very motivating for myself, as well as one of the aspects of this work that has brought me most joy at the personal level.

### 2.1. *In situ* tone identification

Identifying tone on recorded elicitations can be a challenging task even with the aid of acoustic analysis tools such as PRAAT - let alone in real time during the sessions themselves, especially for speakers of non-tonal languages like myself.

In addition, asking the consultant directly about the tone of words can be a misleading approach for various reasons. On the one hand, they can have ideas about the tonal system of their own language that do not necessarily align with reality, or even be completely ignorant thereof (see Bowern, 2008: 70).

On the other hand the linguist might mistake cues and indications given by the informant as relating to tone, when they refer to a different matter altogether. This is something that I had to suffer myself: in one of our first elicitation sessions with our consultant during our FM course, he labelled two forms that constituted a minimal pair as "deep" and "bright". Knowing already that we were dealing with a tonal system, but without knowing hardly anything about its workings, we enthusiastically classified the "deep" form as

containing low tones where the "bright" one contained high ones. It was not until much later, after I had the chance to look into descriptions of other Nilotic Languages, that I discovered (with quite some dread) that our consultant was not talking about a tonal contrast, but about a tongue root position harmony one. And this is what our consultant was talking about when he labelled the word for *cows* as “deep” and that for *mouth* as “bright”; while we automatically assumed that the “bright” word had to be something like /ákítúk/ and the “deep” one something like “ákìtùk”. A latter PRAAT analysis would show that the vowel quality  of both words was different, while the tone patterns were identical, as it can be seen in figures 1 and 2:

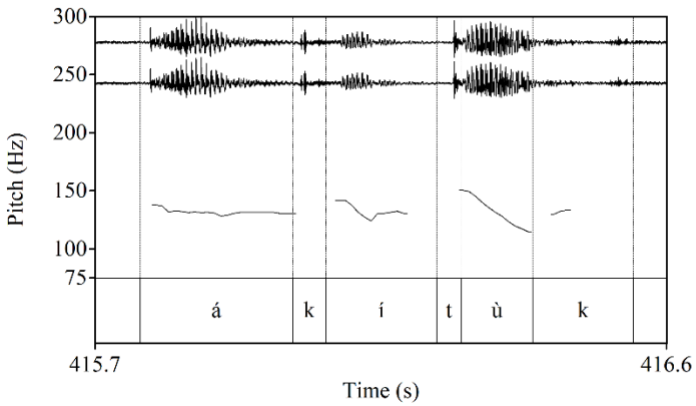



*Figure 1. /ákítùk/ , "cows", ATR vowels.*

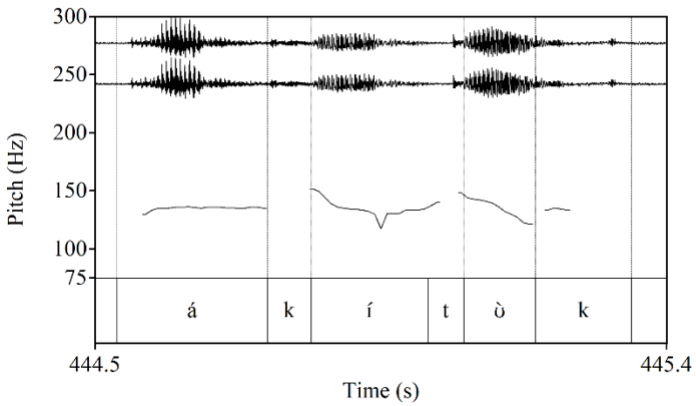



*Figure 2. /ákítòk/, “mouth", RTR vowels.*

### *2.1.1. Secondary means to utter tone*

Linguists have used other strategies to identify tone on the spot without having to ask the speaker directly what tone is used in a given word that they have just uttered. Consultants can be taught to hum or whistle tone patterns, as it is said that Gerrit Dimmendaal claims

to do with the speakers that are able to. (Bowern, 2008: 70; Dimmendaal, Gerrit, 2001: 62). Moreover, one can even use "props", like music instruments, to let consultants emulate their spoken tone patterns, as I heard from prof. Crhistian Rapold in a fascinating lecture about tone in Africa.

I myself taught my consultant to whistle Ateso tone patterns in our FM sessions - and hum in the re mote ones, since whistling is often reduced to hissing bursts of white noise when transmitted and recorded by the basic devices and software we used in out videoconferences. This was - or seemed to be, more on that in section 2.1.2- truly helpful when attempting to identify tone both during the sessions and when analysing the recordings. And so was the second and more experimental method that I tried. I decided to use a musical instrument, inspired by Prof. Rapold and by the regret I felt for not having used the occasion of experimenting with it the time our consultant brought to class a traditional finger harp that the Iteso call *akogo*. I wanted an instrument that met two requirements: 1) It had to be possible to slide from one note to the next without interrupting the sound flow, as human voice does, thus making it theoretically possible to reproduce phenomena like falling tones. 2) It had to be played using the hands, allowing the consultant to speak while operating it. The first requirement ruled out instruments like pianos, xylophones or the *akogo* itself, while the second one disqualified wind instruments like harmonicas or whistle flutes, which were among my first choices.

In the end, since using an accordion did not seem quite viable, the instrument of my choice was a Stylophone. A Stylophone is a novelty pocket synthesizer first marketed during the late sixties and early seventies, that achieved popularity as a toy and occasionally as a proper instrument, featured in hits like David Bowie's *Space Oddity* or Kraftwerk's *Pocket Calculator*. The production of the Stylophone ceased in 1975, but a cheaper copy of the original was relaunched on 2007 (Wikipedia contributors, 2023), of which I purchased one.


*Figure 3. Modern Stylophone, identical to the one I purchased* (Redvers, 2023).

The Stylophone is played by touching the keyboard - a metal strap with notes printed on it - with a stylus, which produces a sound that is not interrupted when sliding the stylus across all the notes on the strap. It proved adequate to reproduce the tonal range of Ateso, apart from being a nice little present to give to my speaker, once we finished our sessions. It should be noted that my consultant is a professional musician and skilled multi-instrumentalist, and speakers with less musical expertise might not match the ease and speed with which my consultant learnt to replicate tonal patterns of his spoken Ateso.

See Figure 4 and Figure 5 for an illustration of how a sentence with a LLLLHHL pattern is uttered and reproduced with the stylophone:

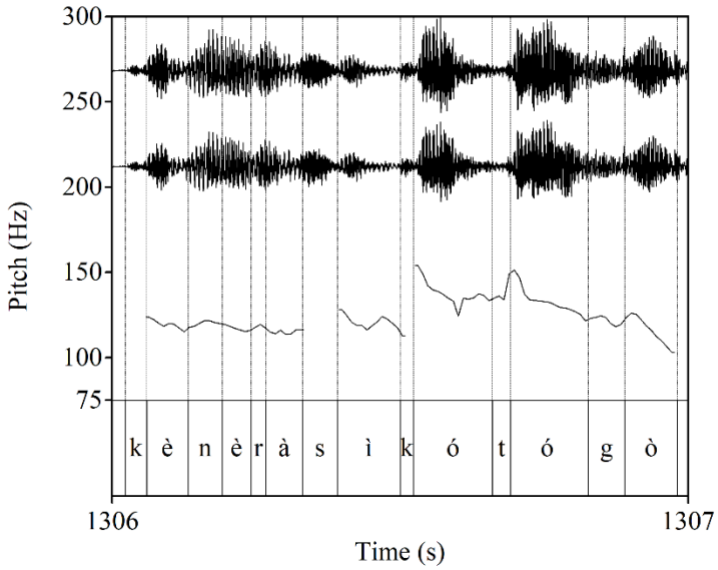



*Figure 4. Kènèràsì kótógò, "They talked at home".*

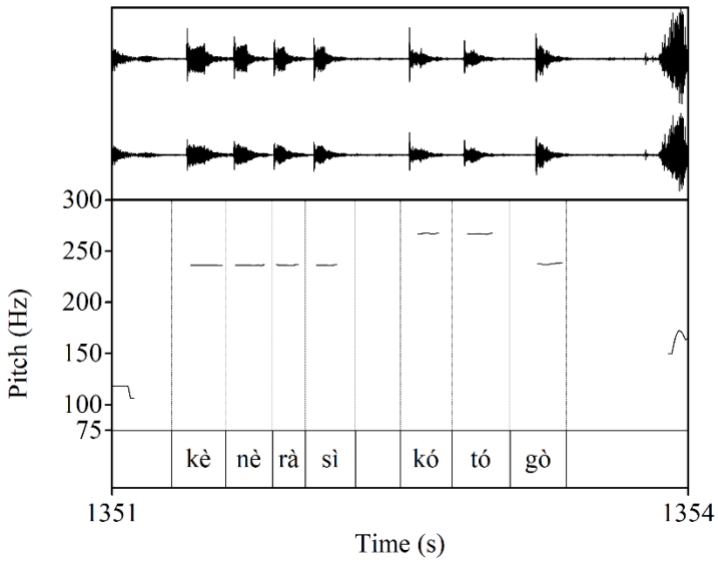



*Figure 5. Same sentence of fig. 3, "played" on the stylophone by my consultant.*

### *2.1.2. Native intuitions and discordances*

At this point I should address some intriguing complications that I faced when I started having my consultant use the Stylophone

Sometimes there would be differences between the tonal patterns that my consultant played and those he uttered out loud: he would produce an utterance, I them would ask

him to whistle or hum, and would get same pattern. If he then played it on the stylophone, the result could be different.

We can group the versions in two groups: on the one hand, the uttered and whistled/hummed patterns, which I call "oral", and on the other hand, the ones reproduced on the Stylophone or *akogoo*, which I call "played"

In case of discrepancy, the oral ones tend to align with the expected tonal pattern, while the played ones tend to align with his intuitions.

Take the word /àbérù/ as an example, which has /LHL/ as underlying tone pattern. When uttered and whistled, my consultant would produce a LHL pattern, but if asked to play it, it he produced a LLL. When asked explicitly what the tones of the word were, he said "they are al low", just as he played it, even if he had uttered a LHL pattern orally and whistling.

In cases like this I would pick up the Stylophone and start producing the expected pattern, and after an amusing back and forth, we end up coming to a common ground, to the expected "correct" pattern, which his intuitions ended up aligning with while he would say something like "of course, what was I thinking about?".

Just as it happened with when I realised the existence of the ATR harmony, this makes me think that I got quite some tone patterns wrong during my early days of FM sessions, when we sometimes relied on our consultant's impressions of the tone quality of words. And I am also relieved I only decided to try the stylophone relatively late in my research, and never made it as the main tool to tell tone apart.

But why this happens discordance happens, and what implications it can bring, I cannot even venture a hypothesis for. On the one hand, this is just an impression I get from a couple instances this happened. I would have had to try and elicit this kind of data to get something meaningful information. And even then that would not render the problem easier, since on the other hand, except for the *in passim* mention to whistling by Dimmendaal, there is no literature whatsoever on the usage of these kind of strategies by fieldworkers studying tonal languages. I have not been able to find a single mention to instruments as a tool to learn about tone in the field.

Clearly there is a lot to be researched here. I think that conducting a comprehensive and systematic study on the usage of these "oral" and "secondary" means would be a great contribution to field linguistics theory and also to theoretical linguistics overall.

# 3. Ateso nominal morphology

Ateso nominal morphology is severely understudied, as it is usually the case in Nilotic languages. While the complex verbal paradigms of many Nilotic languages have been painstakingly described by many authors, we lack similarly described Nilotic nominal paradigms, which are usually deemed much more irregular and problematic than the verbal ones. When going through the literature, it is not unusual to find comments by the linguists complaining about how, in stark contrast to the verbal system of a given Nilotic language, the nominal one seems to be entirely made of exceptions to rules that one can hardly even formulate. The oldest of such comments I found is about the numerous and unpredictable ways in which Maa encodes number, where in the section dedicated to grammatical number in *A grammar of Maasai* (Tucker & Mpaayei, 1955), the authors say that "there is only one safe rule for beginners, viz. learn the plural of the noun as you come to it". In addition to it, the one who has best summarised the situation is Chet Creider, who says that "a familiar feature of African languages is the presence of great, often bewildering, complexities in nominal forms together with a high degree of regularity in verbal forms"

In this section, I shall discuss of such complex system. I will delve into the marked nominative morphosyntactic alignment of the language in particular depth, and then provide a short overview of the three remaining grammatical cases. I will deal with the question of how can we know what the underlying tone assignment of Ateso roots are, which is a problem of crucial importance

## 3.1. Morphosyntactic alignment

Ateso shows a marked nominative alignment, a cross-linguistically rare morphosyntactic alignment that has been documented almost uniquely in Africa, being relatively widespread among Afroasiatic and Nilo-Saharan languages from the East of the continent (Comrie, 2013; König, 2006). In Bernard Comrie's WALS chapter about alignment of noun cases (2013), only four languages outside of that geographical area are classified as

having such system: Maricopa (Yumam, Arizona), Central Aymara (Aymaran), Central Atlas Tamazight (Berber), and Igbo (Niger-Congo). Christa König, on the other hand, despite classifying many other languages as marked nominative languages within Africa, only acknowledges Yumam as using it outside of the continent (König, 2006: 698; König, 2008: 544). She points out that more documentation is needed about some languages to be able to make definitive claims about their alignment systems.

### *3.1.1. Morphosyntactic alignment types*

Let us first make a summary of the features of the possible case systems, using Dixon's terminology (1994). In nominative/accusative systems, the subjects of intransitive sentences (S) and agents of transitive sentences (A) receive the same morphological treatment, and the objects (O) are treated differently. The case that encodes S and A is called the nominative, and is deemed to be the unmarked one (more on that in a moment, in section 3.1.2), in morphological and functional terms, and the case that encodes the O is called accusative, and is, on the other hand, the marked one.

In ergative/absolutive systems, S and O are treated the same way, while it is A that receives the different treatment. The case that encodes S and O is called absolutive or absolute, while the one that encodes A is known as ergative and is supposed to be the marked case.

### *3.1.2. The marked nominative alignment*

Marked nominative is said to be a mix of both accusative and ergative alignment systems because, even if the configuration of cases and functions is the same as that of nominative systems, it differs from nominative systems in terms of markedness.

That is to say, S and A are indeed encoded by the same case, also called nominative, and O is marked differently, by the accusative case, but unlike it is the case in classical nominative systems, in languages that have the marked nominative system, the nominative is marked, and the accusative is not.

In this context, I use markedness as Christa König does (2006). She differentiates between functional markedness and morphological markedness. The morphologically unmarked case is, according to her, that which has morphological zero realization, and the morphologically marked case is that which has non-zero realization. On the other hand, a functionally unmarked case is just that which is used for only a few functions, whereas

the functionally unmarked case, which we can consider the "default case", in König's words, has a wider range of functions. One of the functions that gives away the unmarkedness of a case is that of citation.

In the renowned *A Maasai Grammar with Vocabulary,* Tucker and Mpaayei make the following statement about case: "When asked for the name of anything, the Maasai will always give the word in its accusative form" (1955: 175). Similarly, when in our Field Methods class we students would ask our speaker for a single Ateso word using a translation elicitation method, the tone pattern of the word would always be different from the one he would use if he elicited the same word in A or S function in a sentence, as it can be seen in (1-3). We did not yet now it (nor did most of us even think about it at that point), but this is due to one of the key features of the marked nominative systems: the accusative form is the one used in citation.

(1) a) ì-kápà
N-cat\ACC
"Cat"

b) ì-kàpà jèn-ironon
N-cat\NOM REL-black
"the cat is black"

(2) a) í-tésò
M.PL-Teso\ACC
"Iteso, Teso people"

b) ì-tèsò è-jálàmá-sì
M.PL-Teso:NOM 3-be.happy\NONPAST-PL
"The Iteso are happy"

(3) a) éŋò
1SG\ACC
"Me, I"

b) èŋò Aitor
1SG\NOM Aitor
"I am Aitor"

At a first glance, nominative marking always involves lower tones, while there are always some high tones in the stem – and crucially, in the affixes – in the accusative and other cases that will be low in the nominative. This raises the question of whether nominative is encoded by a lowering of the tones of the accusative, or if on the contrary, accusative (and the rest of cases) is a product of raising in the L toned "default" nominative. In the

following section I shall explore different possibilities and explain why I am inclined to believe the former.

### *3.1.3. Accusative as the as underlying tone pattern*

I think that Moodie and Billington's approach to Lopit nominative is very illustrative. In this Eastern Nilotic language of the Lotuxo-Maa subgroup, nominative is encoded in a very similar way to Ateso, i.e., tonally, being the key difference that unlike in Ateso, the tonological operation[2] that produces the nominative can be of two kinds, either a lowering or a raising. Consider examples (4) - (6) (Moodie & Billington, 2020: 84)

| | | | | |
|---|---|---|---|---|
| (4) | a) tjàn | animal.SG | b) tján | animal.SG.NOM |
| (5) | a) kèr | sheep.SG | b) kèr | sheep.SG.NOM |
| (6) | a) xábàràk | cattle owners.PL | b) xábárák | cattle owners.PL.NOM |

They consider the varied tonal patterns used to encode each case to be lexically specified instead of being tonal morphemes, but they do see a tendence in the marking of the nominative, which they analyse as an inversion of the accusative tone pattern (called absolutive in their *Grammar*)**.** In sum, they consider the accusative/absolutive to be the base form in Lopit, and the nominative and other cases to be coded by alternative tone patterns.

And Dimmendaal's approach to Turkana nominative is equally interesting, albeit quite different. In contrast to Moodie & Billington's understanding of the workings of nominative marking in Lopit, he does see a fundamental difference between the Turkana nominative and the other cases:

> Nominative case marking differs from the other case inflection types discussed below, in that the marker itself is a morpheme consisting of a low tone, whereas with other cases the tonal inflection is probably best represented in terms of a fixed tone pattern. (Dimmendaal, Gerrit J., 1982: 261)

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[2] From (Rolle, 2018: 19): **Tonological operation**: A phonological operation where there is a change to tonal structure in the input-to-output mapping (e.g. tone addition, deletion, replacement, shifting/displacement, assimilation, dissimilation/polarization, docking, spreading, absorption/simplification, *etc*.)

The limitations that come from my data and the purpose of this work itself render impossible to attempt an analysis of Ateso nominative marking as deep and as the one Dimmendaal in his grammar of Turkana (see Dimmendaal, Gerrit J., 1982, for an astonishing collection of figures). However, I can claim that this model resembles the situation of Ateso much more than the one proposed for Lopit. In Ateso too we have a nominative case marking that relies in a productive tone-lowering operation, instead of having lexically specified forms, result perhaps of a past but unproductive operation, now grammaticalized.

The key factor that backs the decision of considering the nominative a result of lowering of the accusative tone pattern, as opposed to an independent tone pattern, is the relative predictability nominative formation. Although there is no doubt tendencies exist (see Table 1), the tone pattern of the accusative and the other cases cannot be predicted. Conversely, when the linguist comes across an accusative – and since it is the citation form, it is the case in which most nouns will be inflected when they first encounter them – the will be able to predict what the nominative form is with a significantly high rate of success, even if it has not been attested before. In examples (7) - (10) I show some nouns for which I predicted nominative patterns that turned out to be accurate.

| | accusative | | nominative | meaning |
|---|---|---|---|---|
| (7) | è-kíŋòk | > | è-kìŋòk | dog |
| (8) | è-cóc | > | è-còc | porcupine |
| (9) | í-rísà | > | ìrìsà | leopards |
| (10) | ì-k ílók-ít | > | ì-kìlòk-ìt | man |

On the other hand, given that I established that the accusative pattern is the basic one on which the others are variations, I will go a step further and, following the example set by most of the linguists who have described Nilotic languages, treat the tone patterns on the root as given in isolation as the underlying tone patterns. This is, the tonemes on the root of (7) are /HL/ > /kíŋòk/, of (8), /H/ > /cóc/ and of (9), /HH/ > /kílók/. A vv great example showing basically the same idea on Jumjum, another Nilotic Language of the Western branch, is presented by Rolle (2018: 22), working on data offered in (Andersen, 2004: 161):

(11) Jumjum replacive tone: L-replacement in modified nouns

| | Underlying | Absolutive | Modified | Surface | Meaning |
|---|---|---|---|---|---|
| a. | /H/ | ɖɛ́:ŋ | **ɖɛ̀:ŋ** | [**L**] | ‘cow’ |
| b. | /L/ | kù:n | **kù:n** | [**L**] | ‘thorn.SG’ |
| c. | /HL/ | cícàm | **cìcàm** | [**LL**] | ‘knife’ |
| d. | /LH/ | cʌ̀w-nʌ́ | **cʌ̀w-nʌ̀** | [**LL**] | ‘arrow-SG’ |

### 3.2. Other Ateso grammatical cases

As I mentioned above, while nominative is the result of a tonal lowering of the accusative, the three other cases, which we might call “secondary”, are but variations of the accusative case. In many occasions the tone pattern of these cases is identical to that of the accusative – especially with the instrumental, which in any given word tends to share the tonal pattern with the accusative – or in some cases slight variations occur. In any case, the tone pattern of the secondary cases is lexically specified for in every word, and contrarily to the nominative there is no rule which can be applied to predict the result taking the accusative as a base. There might as well have been some in the past, but in this case, they would effectively be grammaticalized and ceased to be productive by now.

*Table 3. Tone patterns of the word for "woman", adapted from Barasa’s table 8.2: Ateso case markers*

| Case type | Marker | Tone on “woman” | Surface form |
|---|---|---|---|
| Absolutive | tone | LHL | [àbérù] |
| Nominative | tone | LLL | [àbèrù] |
| Genitive | tone | HLL | [ábèrù] |
| Locative | [loss of] gender prefix and tone | LHL | [kàbérù] |
| Instrumental | tone | LHL | [àbérù] |

## 4. Surface characteristics of Ateso tone

Ateso tone is grammatical, not lexical – no lexical minimal pairs contrasting in tone. Tone is used to encode grammatical information such as tense and case.

Ateso has two tones on the phonemic level, a high one (H) and a low one(L), although more can be found at the phonetic level. According to Barasa (2017a), the tones that can be realised on the phonetic level are high and low, plus a high downstep tone and a falling or high-low tone.

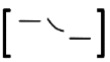
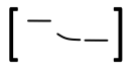
I can also tentatively propose the existence of a low-falling tone and an extra low tone, that, as the other two surface tones that Barasa identifies, are realised as a result of tonal processes that I shall now explain. These surface tonal processes pose huge difficulties when trying to determine the underlying tone of the forms, which was precisely one of my goals for this essay.

#### *4.1.1. Relationship between tone and articulatory features of Ateso*

It is well known that pitch modification is common when interacting with laryngeal and velar features (Yip, 2002). In ateso, there is a pitch raising after unvoiced stops, especially velar ones, and after pause or word initially, where there is usually some sort of glottal. In sum, pitch raising happens after [k] and [ʔ].

#### *4.1.2. Rising and falling contours due to proximity*

Sometimes L tones are slightly raised after H, and H tones are slightly lowered before L. It is not that the whole tone is lower or higher, but the pitch creates almost a falling contour.

In lowering of H, the beginning is as high (or higher, if there is a [k] / [ʔ] before) as the rest of Hs, and the end is almost as low as the following L tone:  In a raised L, the beginning is almost as high as the previous H, while the end is as low as the rest of Ls (and usually even lower because of the extra low that I discuss later): 

Gerrit Dimmendaal detects this phenomenon in Turkana: “Complications occur with low tones after high tones. A low tone immediately preceded by a high tone is raised to downstep-high.” (Dimmendaal, Gerrit J., 1982: 37)

The raising of the picth happens especially often if there is no voiceless stop between them, i.e., in VV or V-non unvoiced stop consonant-V sequences. It also happens more often in isolation and slow and careful elicitations.

This can be seen in most figures below:

Lowering of H

fig. (6): ém**á**mètè

fig (7): èjókúk**á** ìbàrèn

Rising of L:

fig (6): ákíp**ì**

fig (16): ítj**à**ŋ (here the glide also helps to the contour being so noticeable)

Of course, both can happen at the same time:

fig (6): ít**ésò**

This phenomenon can really pose a difficulty when determining tone height looking at spectrograms. But interestingly, it usually is less of a problem when one can hear the word. Having the word played on the stylophone also helps greatly.

### *4.1.3. Downdrift, downstep, tone-terracing?*

As I just have mentioned, Barasa puts forward the existence of a High downstep ($H^{\downarrow}$) tone that "occurs as a result of tonal simplification that occurs when the L is dropped out of the L-H-L sequence"(2017a: 25). The phenomenon is not explained further, although throughout the book there are around half dozen of words with the downstepped tone, such as *ɛ́*$^{\downarrow}$*táó* "heart", *é*$^{\downarrow}$*djá*, "vegetables" or *ákí*$^{\downarrow}$*lé*. When the H is lowered due to a non-surface L, either a floating one or a historically present one, as according to Barasa, it is the case here, the phenomenon is referred to as non-automatic downstep or just downstep. I have additionally identified another kind of downstep; a purely phonological one, motivated by the accumulated effect of high tone lowering after a low tone. Its domain is the prosodic phrase. When my informant talks, there is a clear tendency for the pitch to lower progressively. This is especially apparent in longer utterances and can be seen clearly when examining them in PRAAT. Consider fig.5:

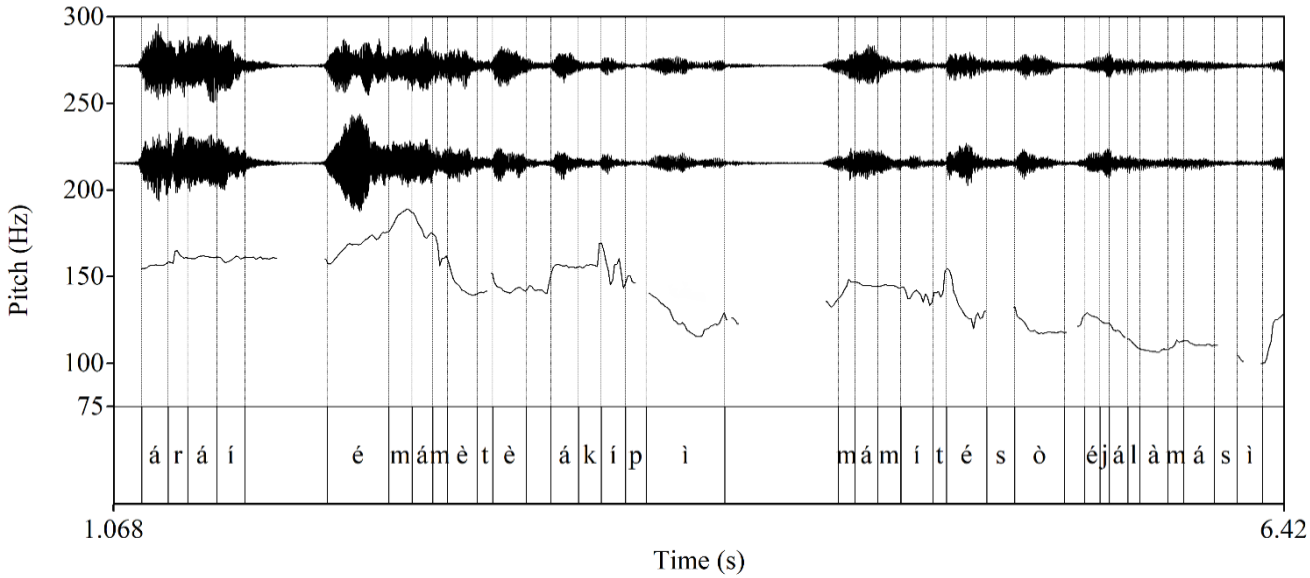



*Figure 6.. Árái émámètè ákípì, mám ítésò éjálàmásì. Lit. "If there is no water, the Iteso are not happy".*

In principle it can seem easy to tell which kind of tonal process we are facing here, but it becomes trickier after a second analysis. First of all, there is clearly an overall lowering of high tones, which become progressively lower towards the end of the utterance. Especially in longer utterances like the one shown in fig. 5, it is easy to analyse the lowering as an interaction between Hs and Ls. H tones become lower apparently after each L tone, and being it a cumulative process, H tones in the end of the utterance end up being several degrees lower than in the beginning. This becomes apparent by comparing the pitch of the high-toned person marker *é-* in the verbs *é-mámètè* "there are not[3]" and *é-jálàmásì*, "they are happy", being the latter much lower relative to the former, after the pitch of the Hs has been lowered in several occasions throughout the utterance.

If this were the only kind of pitch lowering happening in Ateso, one could confidently label it as a classic case of downdrift, sometimes also referred to as automatic downstep, two terms that have been used in different ways but that generally refer to the lowering of a H tone by the influence of a preceding L (cf. Connell, 2001; Hombert, 1974). Unlike

[3] The noun for water is always plural.

the non-automatic downstep that Barasa recognizes in Ateso, this phenomenon is purely phonological in that it is motivated by another surface tone, which makes it much easier to detect and explain since there is no need to resort to diachronical processes.

### *4.1.4. Surface lowering of low tones*

However, my data hints towards the existence of another phenomenon that can challenge theory of the downdrift[4]: low tones also seem to undergo lowering on the surface. Consider again at fig. (5), and how the plural marker *-sì* in the end of the sentence is almost 50hz lower than the also plural marker *-tè* in *émámètè,* and how the last vowel of *ákípì* lies just in the middle. Now consider fig. (6), where it is shown the pitch contour of the sentence *èjòkúká ìbàrèn.*

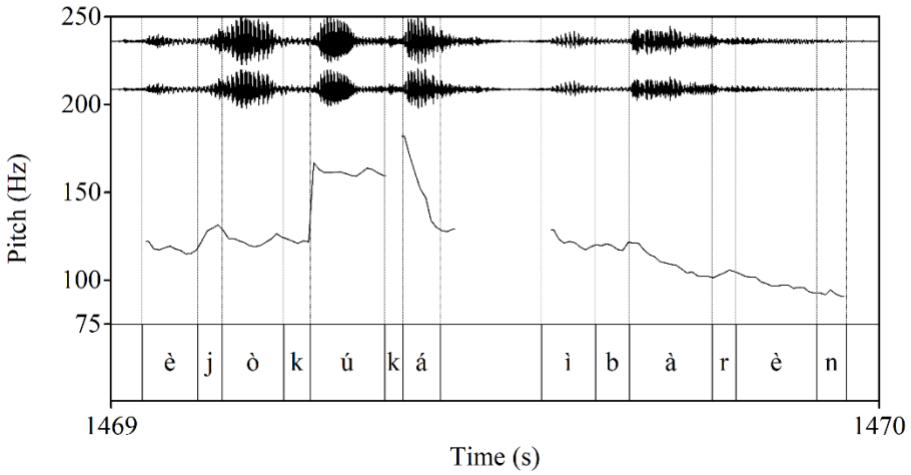



*Figure 7. Èjòkúká ìbàrèn, "the animals/cattle are good". Ibaren (sg. ebarasit) means "animals" or "cattle" as riches, in contrast to itjan, which is a more generic term to animals, or akiteŋ, which means just "cows" without the "riches" connotation.*

At first glance, one could justifiably be tempted to point out that the correct transcription of the word for "animals" in this context ought to be *íbàrèn*, but there are several reasons why this is in fact a word with an LLL tone pattern. Firstly, the pitch of *í-* is much lower than the H tones in *èjòkúká*, while incidentally being roughly the same as the L person pronoun in the same verb – *ì-* is around 120 Hz, and *è-* is 118 Hz.

[4] From now on I shall follow the example of the authors mentioned, and for the sake of clarity use downstep only to mean non-automatic downstep, and downdrift to refer to automatic downstep.

Secondly, the word is in the nominative case. Although it would be not entirely unusual to find a nominative noun with such a pattern (see section 3), the H toned í- gender prefix of plural masculine/neuter nouns in the absolutive tends to be lowered in the nominative. We know that the accusative form of this noun is *íbárèn* (see Figure 8), and the nominative lowering to yield *íbàrèn*, with a H toned gender prefix, would make it a (not to uncommon) irregular form.

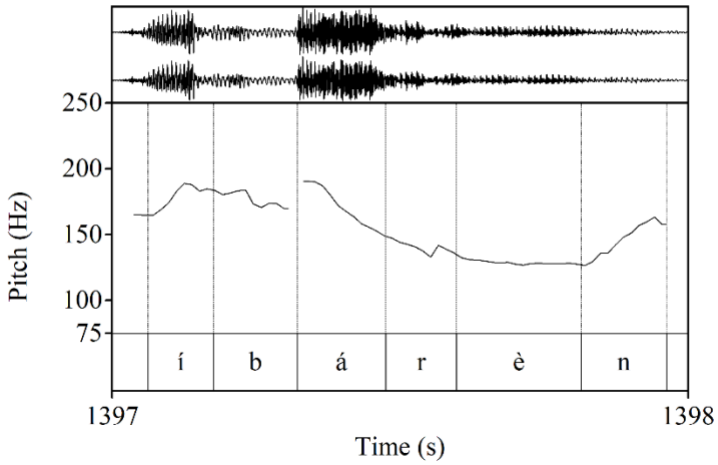



*Figure 8. Íbárèn, "animals, riches" in isolation, taking the accusative HHL tone pattern.*

Thirdly, when I attempted to repeat the sentence my consultant uttered in fig. (6), I kept getting *ìbàrèn* wrong by pronouncing and whistling it in a HLL pattern, which he immediately deemed to be a mistake (see fig. (8)).

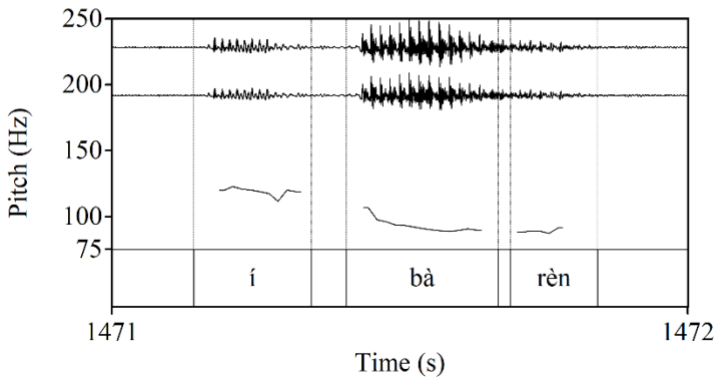



*Figure 9. My attempt to reproduce the noun in fig. (6), deemed wrong by my speker because of its HLL pattern.*

He responded by repeatedly producing LLL patterns by whistling and using the Stylophone, and by repeating the word very slowly. However, these patterns he reproduced where not the three equally pitched low tones that one could expect from a word that has an underlying LLL pattern. Instead, the speaker reproduced the descending pattern that we can observe in Figure 7 showing that he is to some extent aware of this phenomenon I am discussing, as an effect of which low tones are also gradually lowered. Figs (9), (10) and (11) show the speaker's recreations of the tonal pattern of this word.

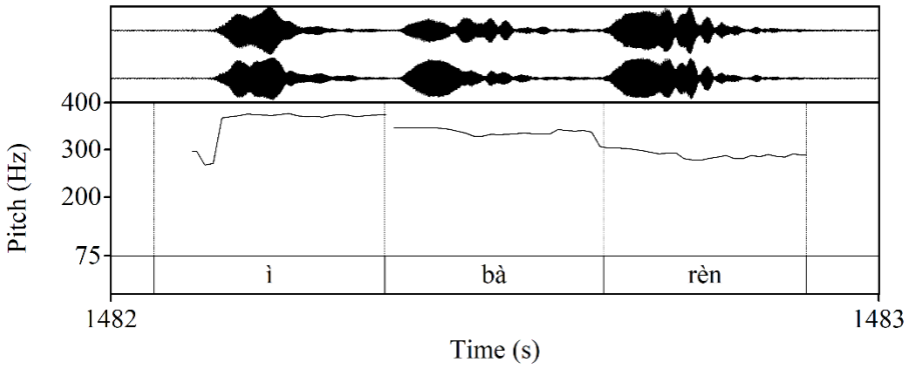



*Figure 10. Whistled tonal pattern of ìbàrèn, as said in the sentence shown in).*

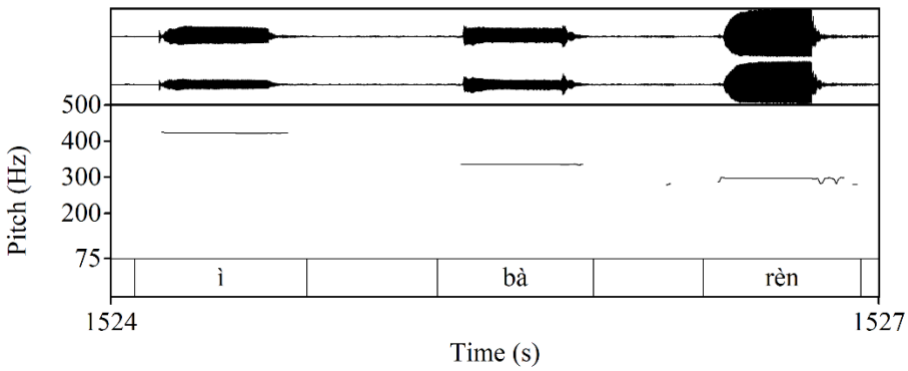



*Figure 11. Tonal pattern of ìbàrèn, as said in the sentence shown in fig. (6), played on the Stylphone.*

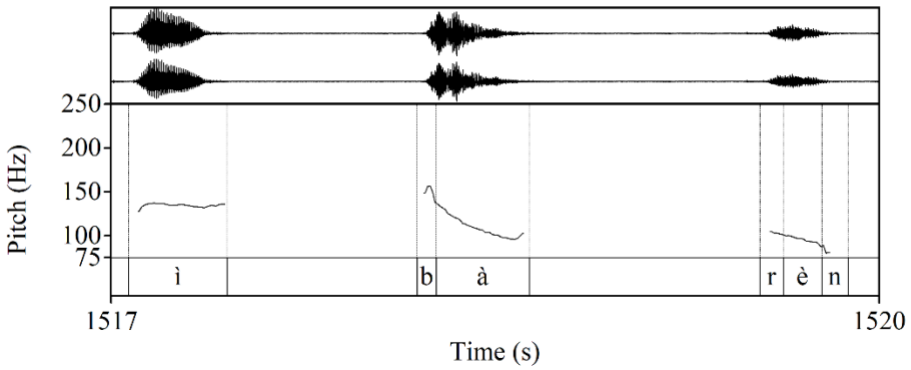



*Figure 12. Ìbàrèn, as said in the sentence shown in fig. (6), repeated in a very slow and careful manner. Surface form can be transcribed as* ìbărën.

I found this interesting, since here one can see that the speaker clearly recognises an overall descending pattern in a word with three underlying low tones in a row, and that he divides said pattern in three different tones/notes. Since we established that the first of those is low both underlyingly and on the surface, we can only analyse the surface pattern as low, low descending, extra low: *ìb a̗rèn.* It should be noted that it is not only in sequences of three L tones that the lowering exists, for in a LL sequence the second one will also be significantly lower than the first one, the question here being whether in that case we should classify the first one as low descending or just low. Consider the following example:

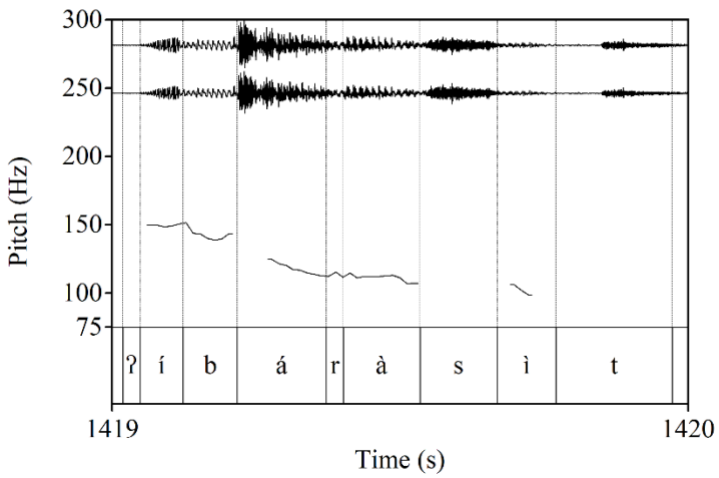



*Figure 13. Íbáràsìt, the singulative form of íbárèn, in the accusative case.*

Here we have a HHLL pattern in which the final tone is clearly extra low in the surface, but in which I would not analyse a low falling allotone on the penultimate syllable:

*íbáràsɨ̀t* would be a better transcription of the word than *íbár a͡sɨ̀t*. However, were we to find the nominative form of the word in my recordings, which I can predict to be something like *ìbàràsìt*, we would certainly expect there to be a low falling tone, since there are three Ls in a row: the surface form *ìbàr a͡sɨ̀t* would be expected. Thus I would say that the low falling tone occurs when it transitions from the low to the super low tone, therefore it can only happen if three low tones occur after each other.

It is, incidentally, a phenomenon thar resembles how, like I mentioned above, high tones tend to have a descending contour when they precede low tones – compare the pitches of both instances of the negator *mám* in fig. (5), or consider that of the second high toned syllable in fig. (12) as an example.

The difference is that this apparently descending H tones are not analysed as such by the speaker: he will not analyse an underlying HHL tone sequence such as that from fig. (13) as being formed by three distinct tones with a HL falling tone between the H and the L, resulting in a H-HL-L pattern. The word in fig. (12) cannot be analysed as *íb**â**ràsɨ̀t*, nor that of fig. (13) as *ák**î**nòk*[5].

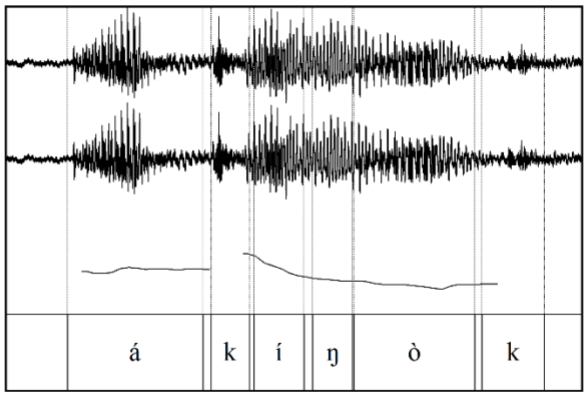



*Figure 14. Ákíŋòk, "female dog" accusative case.*

[5] Note that in *ákíŋòk* we find another beautiful example of slight pitch raising after a voiceless velar consonant.

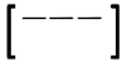
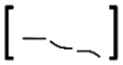
This is why I think it is safe to analyse the three tonemes in *ìbàrèn* as being realised as three different allotones on the surface.

(12) /ìbàrèn/ > [ìb a̍rèn]

/L-L-L/ > [L-LF-XL]

And, by the way, this word is by no means exceptional, since almost invariably every word with a LLL pattern in words in my data have surface tonal patterns such as this one

*Table 4. Pitch contours and phonological representations of possible phonemic patterns.*

| Underlying pattern | Surface pattern | pitch contours |
|---|---|---|
| H-H-H | H-H-H |  |
| H-H-L | H-H-L |  or |
| H-L-L | H-L-XL |  or |
| L-L-L | L-LF-XL |  |
| H-L-L-L[6] | *H-L-LH-XL |  or |

Why do I say that this phenomenon challenges the idea of the downdrift?

[6] I have not encountered the surface pattern and the pitch contours of this possible underlying pattern in my data. The forms presented in these two columns are those that I would expect to find, not forms that I have actually observed.

Because it is not only Hs that are lowered, which is kind of a challenge for the downddrit idea because now we could say that tone in general gets progressively lower, almost as if it was a case of declination (cf. Connell, 1991) But still, it is the pitch of Hs that are the ones that are lowered the most, and they still do it after lows so I deem it more accurate to say that a terracing effect still present, while some degree of declination happens, as it does in every language. And, more crucially, the lowering of Hs happens on the sentence level, while lowering of Ls only occurs on the word level

I have not found many analogues to this phenomenon where lows get Lower, neither good ways to explain its coexistence with H downdrift, but the ones I do have found are very relevant, since they occur in closely related languages: Dimmendal presents an almost identical phenomenon in his grammar of Turkana (Dimmendaal, Gerrit J., 1982: 36-39)

## 5. Tone beyond the noun root

What the underlying tones of Ateso affixes are is one of the questions that most prompted my consideration of writing my thesis about the tone and morphology of this language. When examining the literature on Nilotic languages, the fact that the tone of these affixes is often left unstated puzzled me since the beginning. In tables and lists where prefixes indicating gender, number, case, aspect, and other features are presented, their tone is frequently unmarked. However, examples within the literature demonstrate the presence of tones without providing an explanation for why such tones are realised in the affixes.

Interestingly, this lack of clarity is not evenly distributed, for nominal morphology tends to exhibit more imprecision compared to verbal morphology. Whereas gender markers, pluratives, singulatives, locative markers, and other elements may display fuzziness or unexplained variation, we do see explicit reference of the tones taken by markers of person, aspect, and mood, etc.

I think there are justifiable reasons for the observed disparities between verbal morphology and nominal morphology in terms of their study and understanding. Firstly, and as I mentioned before (see section 3) verbal morphology is usually considered to be systematic and predictable, although complex, while nominal morphology is perceived as more irregular and impredictable. This perceived complexity of nominal morphology has contributed to relative lack of comprehensive research, limiting our understanding of its underlying mechanisms. Conversely, the relative simplicity and regularity of verbal

morphology have attracted more thorough examination, resulting in the development of better rules and theories, thereby deepening our comprehension of the underlying forms. Moreover, the nature of tone marking in these morphological categories plays a significant role in the discrepancy. In verbal morphology, tense is conveyed through high or low tones, which is said to affect the whole root (see example (13)) This means that when dealing with verbs, the tonal realisation of each part of the words is predictable, at least in comparison with nouns.

(13) a) é-nèrà-ì-sì b) é-nérá-sì

3-talk\PAST-IPFV-PL 3-talk\PAST-PL

Notably, in the context of encoding time, modifying the tone of the stem generally does not necessitate a corresponding change in the tone of the affixes, at least at the phonemic level, as it can be inferred from the example above. However, as I shall show and to some extent try to explain, phonetic variation does exist.

Conversely, in nominal morphology, grammatical information, particularly case marking (except the nominative, as I explained in section 3.1), is conveyed through lexically specified tone patterns that vary from word to word, and that do seem to often affect the tone height of the affixes. Let us start by discussing gender prefixes, which are of exceptional importance for the present work.

### 5.1. Gender markers

Ateso has three grammatical genders: feminine, masculine, and neuter the latter being also called “diminutive gender” in some descriptions of Eastern Nilotic languages. Genders are encoded by prefixes that all nouns take:

*Table 5. Ateso gender prefixes, adapted from* (Barasa, 2017a: 47)

| | Singular | Plural |
|---|---|---|
| Feminine | a- | a- |
| Masculine | ɛ-, e- | ɛ-, e- |
| Diminutive | ɪ-, i- | ɪ-, i- |

Barasa lists e-/ɛ- in the column for plural pronouns, because apparently some masculine Ateso nouns do not always take i- in the plural. I have not encountered any of such nouns in my own work with Ateso, nor this phenomenon is reflected in other Eastern Nilotic languages, as we can see in the previous tables. There are not many examples of these kind of nouns in his *Grammar* (see 1), and I suspect they are quite exceptional. Interestingly loanwords present this syncretism more often that native Ateso nouns. The horizontal and diagonal lines reflect the phenomenon of augmentation of diminutisation. A simpler table that accounts for the data used in this study is the following:

*Table 6. Gender pronouns of Ateso, simplified.*

| | Singular | Plural |
|---|---|---|
| Feminine | a- | |
| Masculine | e-, ɛ- | i-, ɪ- |
| Neuter | i-, ɪ- | |

This system is similar to those of related languages such as Turkana, Maa, Karimojong or Lopit, all of them belonging to "Teso-Lotuxo-Maa" one of the two primary branches of Eastern Nilotic. It is the branch that comprises by far the most languages in the Eastern Nilotic group (Southern and Western Nilotic languages are genderless.)

*Table 7. Turkana gender markers, adapted from Dimmendaal (1982: 210), where high tones are not marked with diacritics.*

| | Nominal gender markers | |
|---|---|---|
| | singular | plural |
| f | á- | ŋá- |
| m | é- | ŋí- |
| n | í- | |

*Table 8. Karamojong gender prefixes, adapted from Novelli, 1985: 41*

| | |
|---|---|
| m.s. | ɛ́- |
| p. | ŋí- |
| f.s | á- |
| p. | ŋa- |
| n.s. | í- |
| p. | ŋí- |

*Table 9. Maa gender prefixes, adapted from* (Tucker & Mpaayei, 1955: 3)

| | singular | plural |
|---|---|---|
| masculine | ol- | il- |
| feminine | en- | in- |

Barian is the other primary branch of the Eastern Nilotic, which in Glottolog's classification counts 4 languages, as opposed to the 14 counted within the Teso-Lotuxo-Maa branch. Languages on this branch only have masculine and feminine gender, and, moreover, they are not marked overtly in the noun, but in particles such as demonstratives or the relativisers that also exist in Ateso. Consider the following excerpt from Lutwori et al. (2013: 25) on the Mandari gender system:

> In (1), the masculine demonstrative **lo** 'this (mas.)' follows the masculine noun **merenye** 'grandfather'. In (2), the feminine demonstrative **na** 'this (fem.)' follows the feminine noun **mony** 'mother-in-law'.

(1) **merenye lo** this grandfather

(2) **mony na** this mother-in-law

In fact, according to Heine and Vossen (1982), the gender markers in Teso-Lotuxo-Maa, branch that they refer to as "non-Barian", (Heine & Vossen, 1982; Vossen, 1982), are a result of grammaticalization of demonstratives. They claim that Proto-Eastern-Nilotic did not mark gender overtly on nouns; however, the proximal demonstratives that they reconstructed **lo* (m.) and **na* (f.) required gender agreement. These demonstratives clitized in Proto-Teso-Lotuxo-Maa, resulting in the prefixes shown in the tables above, while the Barian branch remained much more like Proto-Eastern-Nilotic in its treatment of gender, without overt nominal gender marking but using agreement-requiring demonstratives.

This shows that comparisons of Barian languages and Ateso are not of much worth for this paper. In addition, in the scarce literature about such languages there is no mention to gender manipulation or to any kinds of augmentatives or diminutives, a phenomenon that I will discussed in depth later.(Cohen, 2000; Lutwori et al., 2013; Moodie & Billington, 2020; Mustafa, 2015; Yokwe, 1977).

### *5.1.1. Tone of Ateso gender markers*

There is some degree of syncretism in Eastern Nilotic gender systems, since in those that have three genders the masculine-neuter distinction is lost in the plural. But on top of that, as Table 6 shows, Ateso neuter pronouns do not seem to have a segmental singular-plural distinction, meaning that there is a threefold syncretism situation in which m.pl, n.pl and n.sg are the same, i.e, *i-*.

However, working with my consultant it became apparent very early on that in the Ateso spoken by him there often exists a tonal distinction between the neuter singular and the masculine/neuter plural forms: many nouns in the absolutive case take a high tone on the plural form, while usually it remains low in the singular.

Consider Figure 15 and Figure 16, which were actually the first tonal minimal pair my consultant gave us on our first Field Methods session, when, to our great dread (and to his great amusement) we first discovered that we were dealing with a tonal language. They show two inflected forms of the word *ètjàŋ*, "animal": *ìtjàŋ* "small animal", which takes the neuter marker *ì-* to encode diminutisation (much more on that later", and has a

LL pattern, and *ítjàŋ*, “animals”, which takes the plural marker *-í* and has a HL tone pattern.

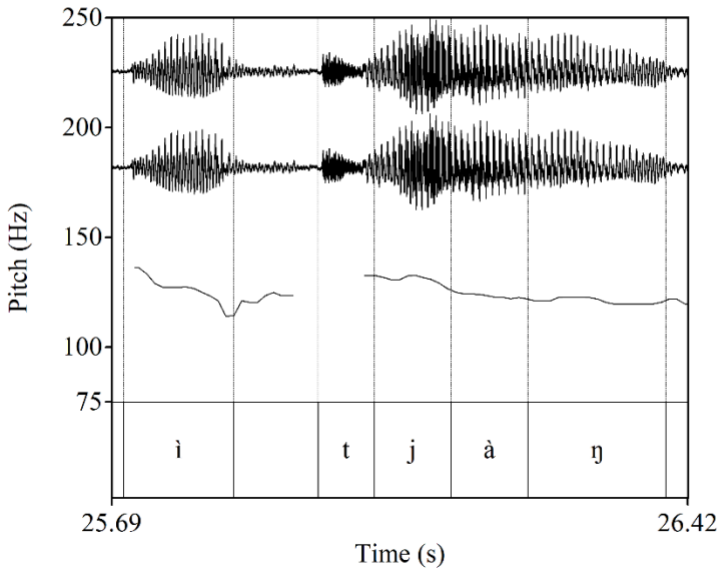



*Figure 15. Ìtjàn, “small young animal”.*

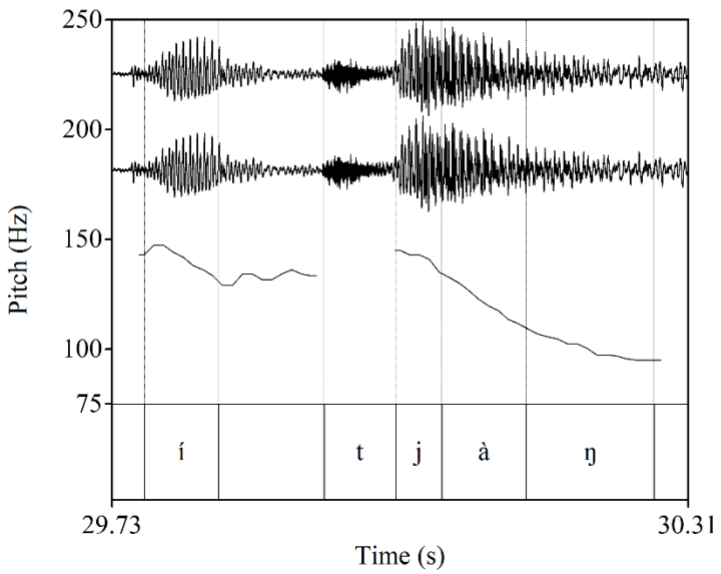



*Figure 16. Ítjàŋ, “animals”.*

In all honesty, in the beginning I analysed the distinctive tone on this minimal pair as being that of the stem being my transcription thereof on those early days of Field Methods *ítjáŋ* and *ítjàŋ*. Nonetheless, I later came to realise that grammatical number seems to

always be encoded segmentally in Ateso. Thus, the only alternative was that it was in fact the tone of the prefixes that is different in both words, and that even if at first glance the first tone on both words looked similar (although there is actually a difference of some 20 Htz) the new analysis held equally well because tone is relative rather than absolute. However, just in order to be sure, I asked my consultant to play the tonal pattern on his akogo on one of our private sessions, resulting in the unequivocal patterns shown below:

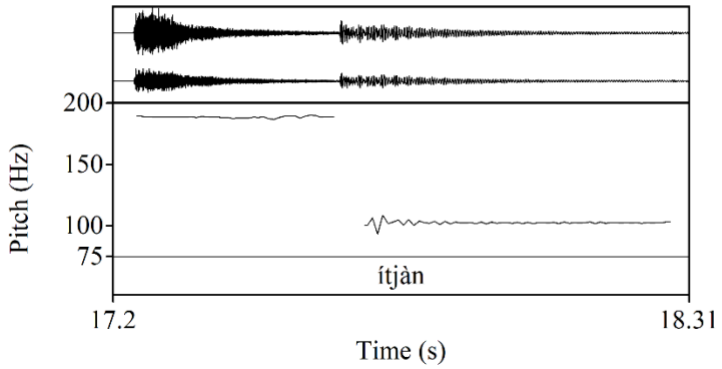



*Figure 17. "Many animals", play on the akogo..*

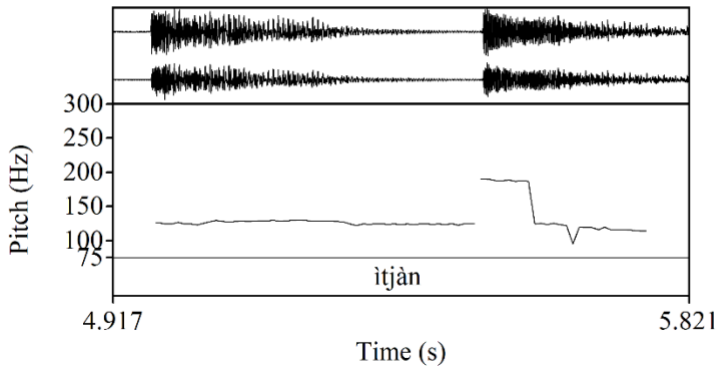



*Figure 18. "Small animal", played on the akogo.*[7]

[7] I was foolish enough to speak during the only time my consultant played this pattern, resulting in a small hiccup in the pitch for the second note. However, he only played two notes to reproduce the tone pattern of *ìtjàn*, LL.

This way we have again as many different forms as we do in Turkana and Karimojong. In fact, I think it would not be unreasonable to propose a historical reason for this: when the *ŋ* drops in Ateso prefixes, a tonal distinction is created/enforced in ordain to avoid ambiguity regarding gender and number.

*Table 10. Ateso gender prefixes, with marking of underlying tones.*

| | Singular | Plural |
|---|---|---|
| Feminine | à- | |
| Masculine | è- | í- |
| Neuter | ì- | |

However, the number of exceptions to this "rule" is so overwhelming that it makes one even doubt, for starters, about if it is true that these are in fact the underlying forms of the suffixes, or just very common in the absolutive, and, moreover, if there is even a point in searching such underlying forms.

## 5.2. Other affixes

As I have mentioned numerous times so far, in the literature about Ateso and other Nilotic languages it is often left unstated what the tonemes of affixes are, or when it is described explicitly, the variation that we can detect in examples and texts between the supposed tonemes and the allotones is poorly accounted for, if at all. In this section I shall discuss what it has been said in the literature about both the underlying tone and phonological representations of said affixes in the literature, as well as offering my own opinions on the matter.

I argue that just as affixes tend to be dropped and assimilated to the surrounding stems, their tone is subject to many types of influences from the tonal processes that occur in the roots.

### *5.2.1. Weakness of the affixes*

One of the possible answers to the question of the underlying tone of affixes could be to simply analyse most of them as unspecified, and explaining their surface realizations as mere tonal spread from neighbouring roots. However, I find it much more compelling to

analyse them as having a weak tone target, as Mandarin neuter tone is analysed to have by Chen & Xu (2006).

On the first place, it must be explained that ateso affixes are "weak" also segmentally, in that, as unstressed particles, they tend to be shortened or assimilated into the surrounding stems in natural speech. In this section I shall explain that so are tonologically, in the sense.

This is particularly true for prefixes starting by vowel and suffixes ending in vowel – the latter description accounting for the practical totality of suffixes, with the notable exception of singulatives, that have the shape *-(V)t*.

This tendency is common in Nilotic languages, whether it is something that happens in fast speech or it is even more systematic, like in Maa: "The -l- element of the masculine prefix is never pronounced before -s-, -r-, -l-, -y-."(Tucker & Mpaayei, 1955: 3). Even more common is the devoicing of final vowels, present in other Nilotic languages such as Turkana (Dimmendaal, Gerrit J., 1982) and Toposa (Schröder, 2008; Schroder & Schroder, 1987) and which has been argued to be an areal feature in Eastern Africa originating in Nilo-Saharan languages (Dimmendaal, Gerrit J., 1982: 31), that is also present in languages belonging to other families, like Ik, a Kuliak language from North-Eastern Uganda. Here are some examples from different languages, that show that unvoiced vowel phonemes may even be entirely gone when realised phonologically:

| | | | | | |
|---|---|---|---|---|---|
| (14) | Ateso: | /ikelạ̥/ | > | [ikel] | "teeth" |
| | | /amotị̥/ | > | [amot] | "pot" |
| (15) | Turkana: | /ŋikelạ̥/ | > | [ŋikeḷạ̥] | "teeth" |
| | | /etomẹ̥/ | > | [etom] | "elephant" |

(Dimmendaal, Gerrit J., 1982: 32)

| | | | | | |
|---|---|---|---|---|---|
| (16) | Ik: | /rebẹ̥/ | > | [reḇẹ̥] / [reḇ] | "finger millet" |
| | | /morido / | > | [moridọ̥] / [moriḍ] | "beans" |

(Schrock, 2014: 53)

Consider also how pronouns tend to assimilate into the preceding verb:

| | | | | |
|---|---|---|---|---|
| (17) | étêì èŋò ìkápà | > | [étêjŋò ìkápà] | "I see the cat" |

(18) kíráì ìɟò ètèsòt > [kírâjɟò ètèsòt] "You are an Etesot[8]"

I think it is very useful consider verbal morphology when discussing nominal morphology, because many processes almost mirror each other. For example, the lowering of the accusative tone patterns, the default case, to encode nominative, the marked case, is the noun equivalent of the past case marking, which consists of a lowering of the H toned verb root, which encodes the non-past tense (present and future).

I think this is a illustrative way to explain a great deal of the unexplained variation between tonemes and allotones in affixes. Take for example the sentence from Figure 4:

(19) è - nèrà - sì kó-tógò

3-talk\PAST-PL LOC-house\LOC

"They talked at home"

As I mentioned earlier, according to Barasa person markers take H tones, so the predictable tonal realization of the verb should have been [énèràsì]. However, if we look at Figure 4 and Figure 5, which I reproduce below as **Error! Reference source not found.**, we see that there is no way we could possibly analize that verb as having a HLL pattern.

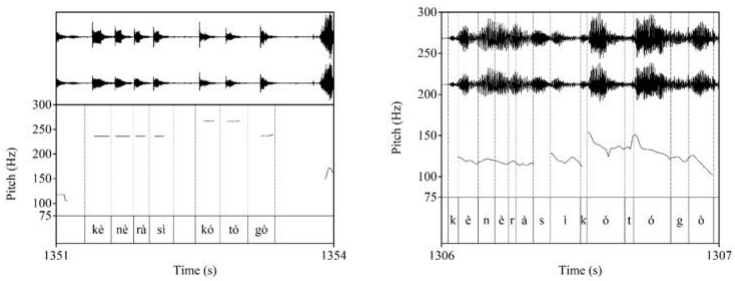



*Figure 19. Reproduction of fig. 4 and fig 5, side by side.*

Consider also Figure 20 and its gloss:

[8] A Teso man, see 1.1.

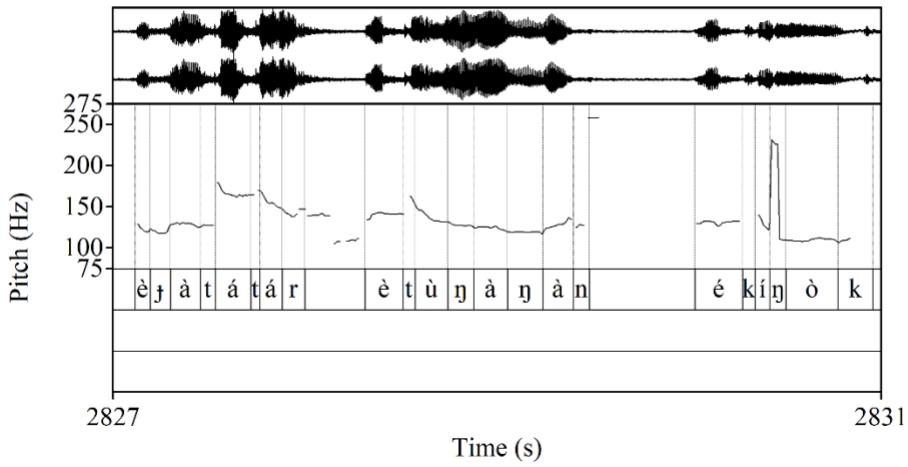



*Figure 20. The man had a dog.*

(20) è-ɟà-tátár è-tùŋànàn é-kíŋòk
3-have\PAST-PFV M.SG-man\NOM M.SG-dog\ACC
"the man had a dog"

The lowering happens in the verb root and spreads to the person marker, which would have been expected to be *é-*. Contrastingly, the rather uncommon perfective marker *-tátár* remains H toned, remaining unaffected by the lowering. Incidentally, this sentence also shows many of the surface phenomena described in section 4: on the one hand, the pitch is progressively lowered along the phrase, resulting in the H toned (accusative) gender marker in *é-kíŋòk* to be as low as for example the person marker in *è-ɟàtátár*, or the gender marker of *è-tùŋàŋan*, and in the other hand we can see a slight raising of the pitch after each voiceless stop, as in *é-kíŋòk*, where the second vowel is moreover lowered in contact with the following L tone.

Dimmendaal analysed the nominative as tonal morpheme that acts between the gender marker and the first syllable of the root, as I quoted in section 3.1.2. While I am not in the position of saying whether that is also true for Ateso, I can confidently say in the light of examples like these that the prefix and first syllable of the root are in fact where lowering takes place, whether it is nominative mrking in nouns, or past marking in verbs. This accounts for the 1) prevalence of L toned gender prefixes in nominative, while more exceptions occur in accusative and the secondary cases, and 2) for the seeming tendency of person markers to be L toned in the past tense.

If not unspecified, affixes, especially those with an underlying L tone, i.e. gender markers are weak and tone spread affects them all the time, especially prefixes, since most tonological operations like nominative and past tense lowering affect mainly the first syllable, and to a lesser degree, the second syllable. Suffixes, especially the H toned ones, like imperfectives or singulatives, tend to be less affected by these changes.

### 5.3. Conclusion

Trying to answer the question of what the underlying tone of affixes is has proven to be extremely difficult, and much more research will have to be conducted to find satisfactory answers to this problem. The weakness of prefixes makes them vulnerable to constant tone spread, and on top of that, the many surface phenomena of Ateso tone makes determining their underlying tonemes extremely difficult, especially with data from a single speaker. More research is needed on the subject, which needs to be conducted with a broader sample of consultants.

## 6. Gender marking and evaluative morphology.

In David Barasa's *Ateso Grammar*, tone also plays an important role in evaluative morphology, since augmentation and diminutisation are encoded by means of prefixes that contrast with others just in their H tone. Di Garbo (2014) defines as evaluative the morphology that encodes amelioratives, pejoratives and augmentatives. I shall use this term here, because as I shall explain below augmentation and diminutisation can have ameliorative and pejorative connotations.

However, the system of evaluative morphology that I have documented in the sessions with my speaker, based in gender prefixes, is quite different from that offered by Barasa. For in Ateso as spoken by my consultant, gender markers can encode more information than just grammatical gender: They can also be used to convey information about the size of the entity that the noun they are attached to refers to, i.e, to encode augmentation or diminutisation. In some cases, like when talking about humans or other animals, this information can also be about the entity's age or moral value, the later constituting what is usually called amelioratives and pejoratives.

In this section, I shall discuss the two different evaluative gender provided by Barasa and myself. I will provide a description of the prefix based strategy that is used in my consultant's Ateso, and summarize the tone base strategy accounted for in Barasa's *Grammar*. I will show the differences between the two accounts and propose some possible explanations, tentatively arguing for one based on dialectal variation.

## 6.1. Ateso gender[9]

As mentioned in section 5.1, Ateso has three grammatical genders, masculine, feminine, and neuter. Gender is marked overtly in nouns by prefixes that all nouns take (see Table 6), which derive from Proto-Eastern-Nilotic distal demonstratives, as proposed by Heine & Vossen in their seminal paper *On the origin of gender in Eastern Nilotic* (1982).

| PEN | Toposa(Givón, 1971) | Teso and Turkana |
|---|---|---|
| *ni-lo m > | nye- > | (consonant e-, |
| *ni-na f > | nya - > | loss) a-, |

Attaching **ni-* before the proximal demonstratives *lo-* and *na-* is how Heine and Vossen reconstruct distal demonstratives. The third gender

### *6.1.1. Gender assignment*

As one can notice by flicking through any Ateso dictionary or wordlist (Hilders, 1958; Kiggen, 1953), most Ateso nouns are feminine. Masculine nouns account for a significantly lower fraction of the lexicon, and neuter ones are the minority.

In essence, Ateso has a sex-based gender system. There is a tendency for male animates to take the masculine gender in their unmarked form, and female animates, to take the feminine, while arguably animates denoting small or young beings tend to take the neuter

[9] Some terminological clarification might be necessary at this point. I will use the term 'gender' rather than 'nominal class' fundamentally because of tradition. It is the term that has been most commonly used in the past when describing threefold systems such as that of Ateso, including in the literature dedicated to Eastern Nilotic languages. However, I do not mean to make any kind of statement for or against the usage of either term: I deem both acceptable and I understand the arguments from both sides; I would have chosen 'class' for my assignment if it was the standard in the field.

gender. This third class does not necessarily contradict the sex-based nature of the system. Crosslinguistically it is very common for young and small beings to be treated grammatically as "sexless" – consider the Dutch ***het*** *meisje* and ***het*** *hondje*, and also inanimate diminutives like ***het*** *broodje* or ***het*** *bonnetje* – or at least as not having the same status as their "sexed" adult counterparts, as Corbett amusingly puts it when he says "in various languages small children are treated grammatically as not being quite human"(Corbett, 1991a: 14), when discussing the Zande language (Atlantic-Congo), which uses classifies children along with animals in the gender used for non-human animates.

(21) Feminine àkítèŋ: cow
àbérù : woman
àpésé: girl
Masculine èmôŋ: bull
èkìlókìt: man
èsápát: boy
Neuter ìkápà: cat
ìkwéŋ: bird
íkókù: child
imukeru: baby

We can thus see that, except for the neuter, biological sex is the "semantic core" (cf. Corbett, 2013) of Ateso genders. However, as it is the case with most sex-based gender systems, this principle that is so clear in the "core" is in practice blurred, since most nouns denote inanimate beings, and there are countless exceptions among the animates: for example, rabbits and rats, which are smaller than cats, carry the masculine marker, *èpúò* and *émír*. Determining how the inanimates are assigned a gender is a complex matter. In their rather outdated yet still useful *An introduction to the Ateso Language* (1957: 1-3), Hilders & Lawrence make a classification in which, apart from mentioning the sex based animate nouns, they propose groupings like "words for indigenous drinks" that comprise entities like water or millet beer, and which belong to the masculine gender, while non-

indigenous drinks like tea or coffee are feminine. It correlates almost one to one with Novelli's classification for Karamojong gender (1985: 41-45)

These classifications are in principle useful, but they have a lot of exceptions. In order to account to all the variation and to explain the gender assignment of new forms that enter the language a formal assignment strategy should be postulated, although that is well beyond the scope of this work.

In any case, it is safe to say that the gender of nouns, especially concerning inanimates, is to a large extent unpredictable until further research is conducted. There indoubtedly are some formal rules, as all languages whose assignment is not 100% semantical have (Corbett, 1991b). However, the semantic ones can be useful and a few rules apply almost always. Based on observation, we can say that the feminine is the main residue class, followed by masculine, while the neuter doesn't get many new words. It would be very interesting to conduct a couple experiments on this.

### *6.1.2. Neuter or diminutive gender? Terminological issues*

In some descriptions of Nilotic languages genders, the third gender is called "diminutive" instead of "neuter". I prefer the latter term and I shall use it in this work, because on the one hand, "diminutive gender" can convey the idea of an overall semantic connection between all nouns and gender assignment in Ateso, and on the other hand, I think it is clearer to use different sets of labels to name the genders (masculine, feminine and neuter) and to name the functions those genders can perform (augmentative and diminutive).

Usually, the choosing of the term "diminutive" is based upon two key aspects of Eastern Nilotic gender systems, apart from the force of tradition:

1) While masculine and feminine genders are to some extent sex-based, especially concerning animate nouns, many nouns that denote small or young beings are of the third gender. This contrasts with the traditional usage of the term "neuter", which especially when it comes to European languages, given that traditionally the neuter gender has been associated with inanimate, abstract and collective since its emerging in PIE (Luraghi, 2011). This notion has stuck in the terminology, but does not correspond to the reality of Ateso or Eastern Nilotic languages in general, there is not a tendency for abstract nouns to take the neuter/diminutive gender.

2) On the other hand, as I have already mentioned and I will explain promptly, there are ways in which the prefix that encodes this third gender can be used to form diminutive forms of masculine and feminine nouns. Consider the following excerpt from David Barasa's *Grammar:*

> Accordingly, gender prefixes alternate depending on two basic functions. The first and main function of gender prefixes is to mark gender where three gender disctinctions apply, i.e., feminine, masculine, and diminutive. Feminine and masculine gender relate to properties of sex of animate beings where male referents are tagged as masculine and females as feminine. Other referents are treated as diminutive gendered which is an indefinite reference to no particular sex but may be used for diminutisation of animate beings. All inanimate world objects and the abstract expressions are marked with gender." (2017: 47)

However, I would argue that this particular usage of the term "diminutive" can be misleading, as it may create the impression that we are facing a semantic system of gender assignment (cf. Corbett, 1991a) , which is not true for Ateso or any other Eastern Nilotic Language. As I have already explained in section 6.1.1 and contrarily to what one could gather from Barasa's excerpt above, semantics has nothing to do with the gender assignment of the vast majority of Ateso nouns, just as there is no direct semantic reason for *huile* being feminine and *vinaigre*[10] being masculine in French.

Semantics of course is an important factor in the gender assignment of nouns that refer to animate entities, but as I said, there are a lot of exceptions between animates (cf. (22)), and inanimates are distributed between all three genders, although somewhat unevenly since F takes most of them. If one wanted to go tthat way, calling it "small" gender would be better than "diminutive".

(22) *akinyan*: F, "cocodrile"
*agareait*: F, "fish"
*ekunyuk*: M, "squirrel"

[10] *Oil* and *vinegar*, respectively.

*itjian*: N, generic word for “animal”

Nonetheless, this alone would not be enough for me to I believe it is clearer and more precise to use ‘neuter’ to mean the gender, and ‘diminutive’ to the function it can perform. Otherwise, could not a case be made that we can use ‘augmentative’ instead of ‘masculine’? In this work I shall use ‘masculine’, ‘feminine’ and ‘neuter’ when referring to grammatical genders and will only use ‘augmentative’ and ‘diminutive’ when discussing their functions, and not only because ‘the noun *cat* has diminutive gender’ sounds awful to me.

## 6.2. Barasa’s account of augmentation and diminutisation

In David Barasa’s *Grammar*, diminutisation is accounted for as a morphologic and tonal phenomenon:

> Some Ateso nouns indicate diminutive forms which are derived from other nouns using both morphemes and supra-segments to denote smallness of things, especially living things. Diminutive forms are mostly used in a derogatory manner. They consist of high-toned diminutive prefixes i- or e- attached to the noun stem (Barasa, 2017a: 60-61).

In Ateso as documented by Barasa, diminutisation is encoded by high-toned prefixes *í-* and *é-*, which, keep in mind, can contrast tonally with other prefixes such as gender markers, as it can be seen in the following example, adapted from (Barasa, 2017b: 90)[11]

| (23) Basic form | | Diminutive | |
|---|---|---|---|
| ì-kókù | “child” | í-kókù | “small child” |
| ì-mòɟònìtì | “old man” | í-mòɟònìtì | “small old man” |
| ì-tògò | “house" | í-tògò | “small house” |
| è-mòɟòŋìtì | “old woman” | é-mòɟònìtì | “old woman” |

## 6.3. A new account of augmentation and diminutisation

[11] Note that some of these forms differ from my account not only in tone, but also in gender. In the Ateso I have documented from my consultant and that is reflected on the best existing dictionary (Kiggen, 1953) the unmarked form of *house* is masculine (è-tógò), as is *old man* (è-móɟòŋ), while *old woman* is feminine (à-móɟòn). While dialectal variation is a plausible reason for the variation in the gender of *house*, I am really intrigued about why Barasa’s *old man* and *old woman*¸ both animate, take genders different from the biological sex of the entities they denote.

My analysis of Ateso diminutisation gives a result much unlike that of Barasa, mainly because it is based on a gender assignment. In summary, the system works as follows: changing a noun's gender prefix for a neuter one denotes diminutisation, and using a masculine one instead denotes augmentation.

As I just mentioned, this account is radically different from that offered by Barasa, but conversely, it is really similar to how diminutisation and augmentation work in other Eastern Nilotic languages. Consider first that of Turkana as described by Gerrit Dimmendaal (1982), a language so close to Ateso that our speaker has even referred to them as being 'the same language, different dialects' in an occasion. Dimmendaal says that neuter gender 'may be used to indicate small size or amount'(1982: 218). Similarly, in the only comprehensive description of the Karamojong language, the following statement is made: 'A noun referring to a living being may simply exchange the prefixes in order to indicate a small being, a male or a female, e.g., *étyáŋ,* 'adult male animal'; *ítyáŋ,* 'small animal' (Novelli, 1985: 43). And lastly, a similar phenomenon is hinted in a very *in passim reference* in Tucker and Mpaayei's *A Maasai Grammar* (1955: 3):

> The masculine prefixes may also be associated with largeness or strength, and the female with smallness and weakness:
>
> ol-doinyo (mountain); en-doinyo (hill)
>
> enk-ayioni (little boy)

Many diminutives in the absolutive form have an underlying low tone on the gender prefix, like *ìtógò* "small house", *ìmír* "small mouse". Many do have a high tone, like íkókù, but there is no way to have a ìkókù/íkókù distinction between child/small child, as Barasa says: there is only íkókù in the absolutive, and the notion of smallness is already always there because of "smallness" denoting semantic core the neuter pronoun. The distribution of H toned gender markers in the ACC among diminutives is similar to that among non-diminutive neuter nouns, and the nominative lowering the prefix, being as I explained above tonally weak, is subject to lowering affected by surface tonal processes, in the same way the gender prefix of non-diminutive neuter markers are.There is no reason to believe it is a different marker.

### 6.4. Conflicting points between both accounts

Barasa's account of diminutisation and augmentation in Ateso and my own show some striking differences, to the point that they are seemingly irreconcilable. First and foremost is Barasa's conception of Ateso diminutisation and augmentation as partly tonal, which contrasts to the solely morphological nature the phenomenon as I have documented it in my consultant's speech.

Secondly, Barasa proposes the existence of distinct diminutive and augmentative prefixes, while in my analysis the prefixes used to encode augmentation and diminutisation can be understood as reassigned gender prefixes. This

Moreover, Barasa's prefixes are tonally autonomous, meaning that they stay H even in the nominative, while I find that in my consultant's speech these gender prefixes are weak and follow the general tonal patterns when they encode diminutisation or augmentation. As I just mentioned.

Another insurmountable difference in our accounts is the forms themselves, the shape of the prefixes. In Barasa's published *Grammar*m *í-* and *é-* encode diminutisation, and in his PhD thesis, á- can also encode augmentation. Conversely, my research shows that i- can encode diminutisation, and e-, augmentation.

This is puzzling. First of all, an e- prefix in my consultant's Ateso will be analysed as a masculine prefix and assigning it to a noun of different gender can only be understood as augmentation. Barasa only gives one example where diminutisation is marked by a high-toned é- prefix: "è-mòɟòŋìtì (old woman) > é-mòɟòŋìtì (small old woman)". Apart from the oddity of an apparently masculine e- prefix used in a noun denoting a feminine entity, this cannot happen in my consultant's ateso**:** *á-móɟòŋìt* is the word he uses for old woman, and its diminutive form is *í-móɟònìt,* with a neuter pronoun. The nominative forms are the lowered *àmòɟònìt* and *ì-mòɟònìt,* respectively. Using an *e-* prefix, regardless of its tone, can only have the opposite result, namely that the augmentative form "big old woman" is created, since that prefix would be analysed by as a masculine one.

Similarly, using high-toned á- prefixes to encode augmentation, as Barasa describes in his PhD thesis, is equally incompatible with my understanding of this phenomenon, and not only due to the suprasegmental nature of the process that is absent in my account: when asked about this, my consultants has explicitly stated in several occasions that using a feminine prefix would give no information about the size of the entity: if we replace the

masculine prefix in the noun *e-togo* (house, unmarkedly masculine, tone pattern in isolation HLH) for a feminine one, the resulting **a-togo* would not mean anything in the way that *i-togo*, using a neuter prefix, means “small house”. It would be even somewhat ungrammatical, since the resulting noun would mean the semantically nonsensical “female house”.

Lastly, according to Barasa, augmentatives can be made from masculine nouns and diminutives out of neuter nouns. On the one hand, by using the prefix á-, from “è-sápát” (boy) we can get  é-sápát (big boy), and on the other hand, since tone plays a part in the process, from “ì-kókù” (child) we can get “í-kókù” (small child).

1. bar) diminutisation is also a tonal process / me) diminutisation is not tonal. 2. bar) there is a distinct diminutive prefix with distinct tonal behaviour / me) there is not distinct prefix, it is just the neuter prefix and it follows the general tone patterns 3. bar) í- or é- are the diminutive prefixes / me) only neuter prefix i- works as diminutive marker, masculine prefix e- would actually encode augmentation 4. bar) tone can be used to make diminutives out of neuter nouns / me) you cannot make diminutives out of neuter nouns, the "idea of smallness" is already in them.

## 6.5. Possible explanations

Barasa is not wrong. He is an accomplished linguist, his data seems sensible, and his analysis is self-consistent, therefore an erroneous interpretation of the phenomenon on his part is out of the question. On the other hand, my own data is also self-consistent, and probably more importantly, quite similar to the phenomenon as it happens in related languages. While it is true that having a single speaker is a significant hindrance to make generalisations about a language, I think I have shown enough evidence to prove that at least in his speech this is a very real phenomenon.

### *6.5.1. Language attrition*

This until now unattested phenomenon is not the result of a speaker showing symptoms of language attrition. As I mentioned in the introduction of this essay, my consultant speaks Ateso fluently, and even if he sometimes doubts his proficiency and worries about being forgetting his native language, this loss only affects the lexical level, which, even if it is very conspicuous to a speaker, does not mean he is effectively forgetting his Ateso. His command of the phonology, morphology and syntax of the language remains sound.

It is also unlikely that a system this complex and self-consistent springs out of the blue in an attrition situation. An objection to this could be that he is borrowing structures from related languages that he speaks, in a morphological calque fashion. This is not possible, since Kumam and Luo, the only other Nilotic languages he is somewhat acquainted with, although he claims to not be able to really speak them, are genderless (Hieda, 2013; Okoth-Okombo, 1997).

Therefore, I deem it safe to say the we are dealing with a real phenomenon that must be be possible to extrapolate to a larger speech community, the vital question now being how large it is.

### *6.5.2. Dialectal variation*

Right now it seems quite clear that dialectal variation the best explanation for the discordance between Barasa's and my own description, being one system "northern", and the other, "southern". Let us first consider Barasa's selection of informants:

*Table 11. David Barasa's consultant sample, adapted from* (Barasa, 2017b: 24)

| Name | Age | Gender | Occupation | Residence | Country |
|---|---|---|---|---|---|
| A | 57 | Male | Farmer | Ng'elechom | Kenya |
| B | 69 | Male | Retired administrator | Machakus | Kenya |
| C | 30 | Female | Teacher | Ong'ariama | Kenya |
| D | 28 | Male | University student | Alupe | Kenya |
| E | 36 | Female | House maker | Amon | Kenya |
| F | 43 | Female | Farmer | Tororo | Uganda |
| G | 60 | Female | Business | Machakus | Kenya |
| H | 32 | Male | Watchman | Malaba | Uganda |
| I | 42 | Male | PhD student | Bukedea | Uganda |
| J | 51 | Female | House maker | Asing'e | Kenya |
| K | 32 | Male | Teacher | Soroti | Uganda |
| L | 54 | Female | House maker | Bungoma | Kenya |

This table is taken from Barasa's PhD thesis (2017b), and is absent from the published version of the *Grammar* (2017a). However, the information he gives in the latter about

when he conducted fieldwork, what number of speakers did he select, etc., shows that the sample of consultants and the data he worked with is almost certainly the same for both works, which, as I have previously explained, don't differ much – and were published the same year. This should not be a problem for my analysis.

Returning to the issue at hand, if we assume that the place of residence more or less coincides with the place of birth for most speakers, it is safe to say that his sample is somewhat unbalanced. Eight out of Barasa's eleven informants (72.7%) are from Kenya, where it is estimated that only around 15% of Ateso speakers live (see section 1), and out of the four Ugandan informants, two are also from the south, resulting in 10 out of 12 being from/residing in the southern area that is labelled "5" in the map in Figure 21).

In that area the Tororo dialect of Ateso is spoken, which according to my consultant, is sometimes looked down upon by speakers from the Ugandan Teso district, who consider that their own dialect is the *real*, *pure* and *standard* version of Ateso, whereas the Tororo dialect is a *marginal* variety *corrupted* by the surrounding Bantu languages.

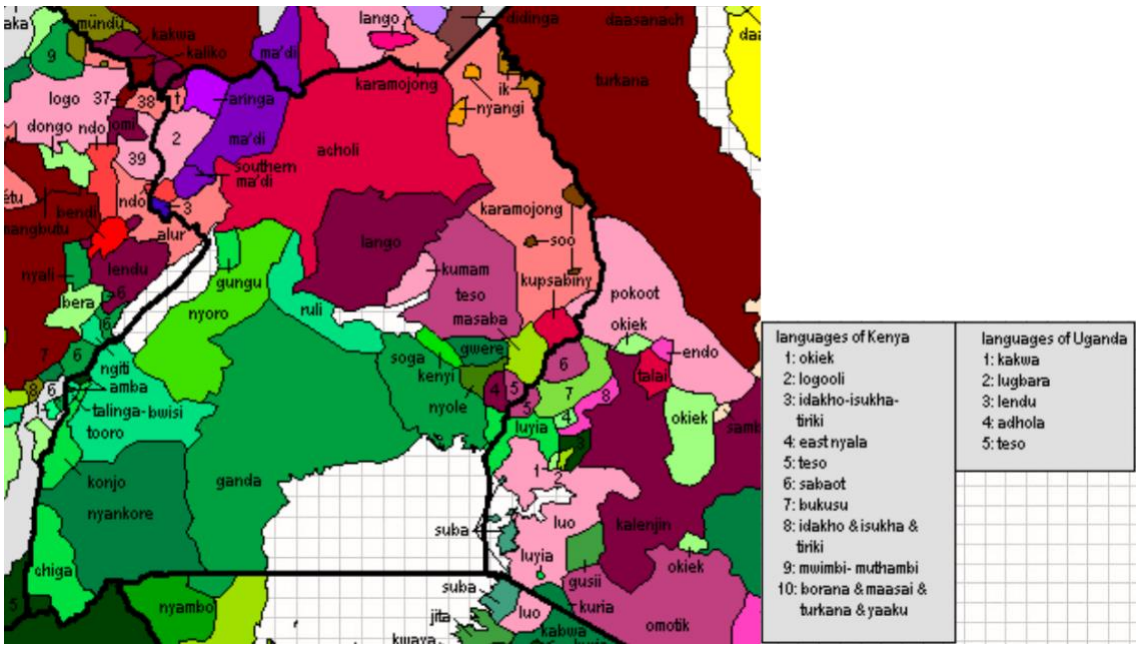



*Figure 21. Detailed map of the linguistic situation of Ateso and its neighbours. Source:* (Muturzikin, 2007) *Cropped by me from a larger map.*

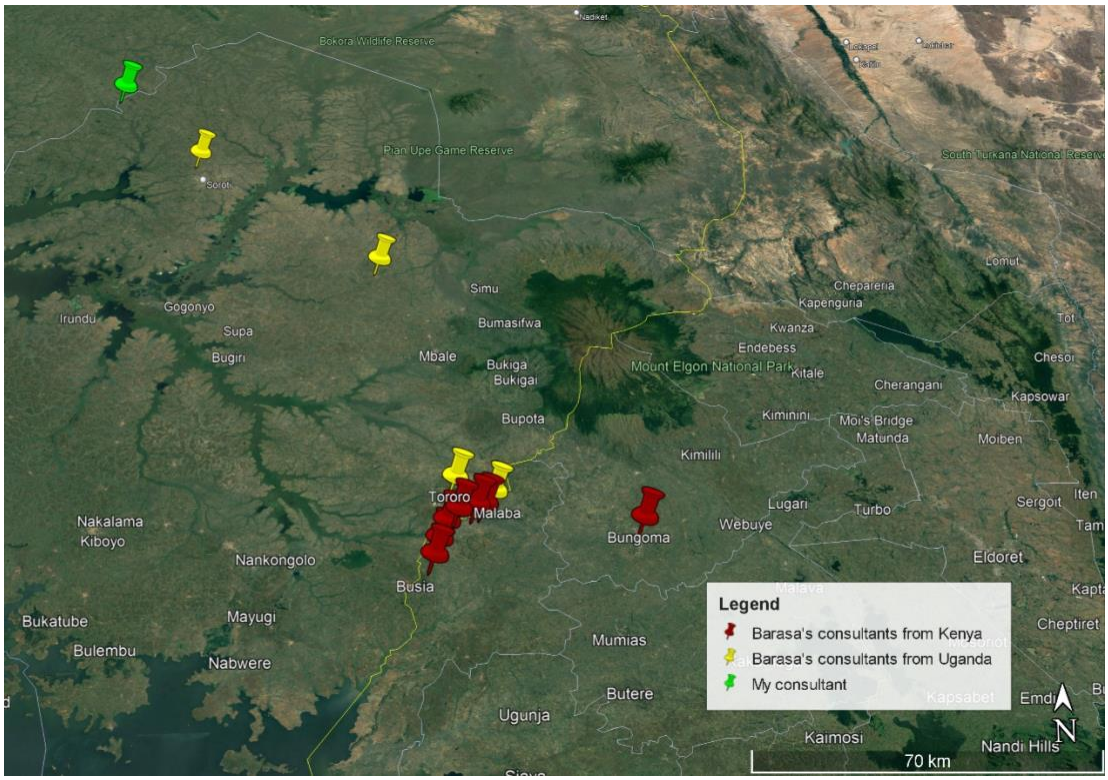



*Figure 22. Map of consultants. Barasa's ones placed on map according to information on "residence" column.*

My consultant, who is an enthusiastic advocate for the unity and solidarity between all Iteso (and other Ateker peoples), is aware of the fact that these attitudes can be negative and tries to remain free of prejudice, but will still insist that the way he encodes diminutisation and augmentation is the "real" one, while the high-toned-prefix-based one that Barasa describes is not. He states that most speakers from Teso would still understand what they mean, but would identify the system as southern and not canonically Ateso, and most interestingly, "too Bantu".

### *6.5.3. A Bantu origin for the Tororo system?*

I have found no sound evidence in the literature that could point towards a Bantu influence on the Tororo system of evaluative morphology, even if a contact induced language change scenario was a very interesting prospect at first, given that it seems really difficult to draw parallels between the Tororo system and those of the other Eastern Nilotic languages. Generally, Bantu languages encode diminutisation and augmentation by swapping nouns to specific classes different of their inherent ones. Although there is some variation (see the Bukusu example in (25)), synchronically the most frequent classes to encode diminutisation are class 12 for the singular and 13 for the plural which in Proto-

Bantu took the prefixes **kà-* and **tù-*, respectively (Gibson, Guérois, & Marten, 2017). Although apparently "Class 7 is the most recurrent augmentative class" (Van de Velde, 2019) the variation in classes that encode augmentation is greater, probably due to the fact that there appears to be no one Proto-Bantu class with that specific function.

This strategy is practically identical to the gender shift (my) Ateso uses, being also called *noun class shift* in the bantuist literature (Di Garbo, 2014). Consider also the following example from Bukusu (Austen, 1975), the Bantu language that most closely neighbours Tororo Ateso[12]. The class 1 noun for "man", [omundu], is transposed to class 12 to encode diminutisation and 13 to encode augmentation. However, in Bukusu augmentation and diminutisation also carry strong pejorative connotations, something that in my consultant's Ateso only happens every so often with nouns that denote animate beings, especially human. If only size may be expressed, adjectives can be used instead of gender shift in Bukusu, a strategy that is also perfectly common and natural in Ateso.

(24) class 12 xaxandu "a small (minded) person"
class 1 omundu omukexe "a small (physical size) person"
class 13 kukundu "a large (clumsy oaf) person"
class 1 omundu omuBoofu "a big (physically) person" (Austen, 1975: 122)

In the same way as in the second and third examples [omundu] remains in class 1 if the speaker does not want to add a pejorative connotation, my speaker also could just say:

(25) neuter: ìbérù "a small sized woman OR an undesirably small or wimpish woman"
feminine: àbérù nà dídík "a small sized woman"
masculine: èbérù "a big sized woman OR an undesirably large or fat woman"
feminine: àbérù nà tí "a big sized woman"

## 6.6. Conclusions.

[12] Bukusu is one of the languages spoken by the Luhya people, the ethnic group with whom the southern Iteso have had the most intense contact since their split from the northern Iteso two centuries ago. Other

It is clear that there are two different ways to encode augmentation and diminutisation in Ateso. Seemingly the variation can be explained as dialectal, and from what I have gathered from my single consultant, the two systems do not overlap. The system of the southern or Tororo dialect, spoken where most of Barasa's consultants are from, is marked by high-toned prefixes, while the system of the Ateso "mainland" relies on gender shift.

I harbour no doubts about the reliability of either account, mine or Barasa's. Not only David Barasa is a competent researcher whose work should not be distrusted, as I mentioned above, but his account of the phenomenon has been explicitly recognised by my speaker as a reality of southern Ateso. On the other hand, my analysis is also consistent, and not only with itself but also in respect to the languages most closely related to Ateso.

Perhaps more importantly, I have proven that gender shift is a productive strategy of encoding augmentatives and diminutives in at least the variety of Ateso spoken by my consultant. However, judging by his own admittedly biased impressions and the existing information about Eastern Nilotic languages, I think it is safe to assume that the gender shift strategy must be a extended one across the geographical domain of Ateso. It might even be the standard or dialectally unmarked one, given that the high-tone-prefix-based strategy seems to be marked in that pertaining to the southern/Tororo variety. Moreover, the system I have described is the first one in which augmentation is clearly shown to be encoded by masculine gender shifting, a phenomenon that had only been cursorily hinted at in a single description of a Nilotic language, in that *big-small mountain* example from Tucker & Mpaayei's *Maasai Grammar* (1955). While Barasa and Hilders did already analyse the neuter gender as one (secondary) way to encode diminutives, especially of animates, the usage of the masculine in order to encode augmentation has never been accounted for in Ateso. Furthermore, I dare to speculate that such phenomenon exists also the other languages of the Teso-Turkana group: I believe that if we searched for it in Turkana, Nyangatom, Toposa and Karimojong, we would find that augmentatives are in fact produced shifting nouns to the masculine gender.

However, these are highly speculative claims, and much further research will be needed to clarify the many questions that arise from this work. If we had a decent sized and geographically balanced sample, we might be able to answers to questions such as the

exact geographical extent of each system. From my data it seems that a clear-cut division exists between the main Ateso speaking region from Teso region and the southern exclave. According to my consultant's impressions, his system, the one described in the present essay, is the "proper" one used in Teso by a population that accounts for the majority of speakers of the language while Barasa's system is the Tororo one, the southern "dialectal" variety. Nonetheless, with all certainty reality must be much more complex. How much of the northern Ateso speaking population recognises the southern system? And vice versa? Is there any region in which both systems are used, perhaps in some kind of *continuum* situation? And lastly, where does Barasa's southern system come from? It is not like its Eastern Nilotic counterparts but also not Bantu at all, in fact it is not rooted in the typically African gender shift strategy.

I hope the preliminary analysis of Ateso evaluative morphology might be an adequate starting point for some future research that could be able to answer questions such as these.

# 7. Final remarks

As I have conveyed in the two conclusions sections of my thesis 5.3 and 6.6, I have provided a descriptive account of two phenomena of the ateso language that are somewhat related: tone on morphologically derived situations, and evaluative morphology, which had so far been reported to have more to do with tone than it does in the variety of Ateso I have described.

On the one hand, I have put forward that the weakness of affixes is responsible for their many possible phonological realisations, being influence by tonological operations like nominative or past tense lowering, or surface phenomena like tone spread.

On the other hand, I have described a previously unattested system for the encoding of augmentation and diminutisation based on gender shift, which is entirely productive and uses reassignment of the masculine gender to encode augmentation, a phenomenon that has not been attested in the other Teso-Turkana languages, where neuter gender reassignment has been described.

This has not been easy, there have been some significant hindrances to my research. On the one hand, Ateso is a severely underdescribed and underdocumented language from a

family almost equally unknown to modern linguistics. On the other hand, I have worked with data gathered from a single speaker, although he was the best single consultant I could have wished for and to whom I am incredibly grateful. And lastly, tone is a incredibly complex matter of which I was pretty much ignorant of when I started working on this thesis

However, the many headaches I have suffered from this are outweighed by how much of a formative and captivating of an experience this process has been. Being a student of the *language description and documentation* specialisation, having had the chance to work gathering data from a speaker in order to study a phenomenon that to me was as complex as alien has proved to be an unbeatable experience on the academic and personal levels.

Lastly, I am more reassured than ever on the notion that underdescribed languages like Ateso are in urgent need of being documented and researched. If a graduate student with little linguistics background can make contributions like the "discovery" of a previously unattested phenomenon like Ateso's diminutisation and augmentation strategy, there are scores of interesting phenomena waiting to be described by linguists willing to go to the field. I am currently planning a trip to Teso with my consultant, so I sure hope to be one soon.

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