

DEICTIC TONE IN NUER: A PRELIMINARY REPORT¹

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Abstract

This report presents new evidence for a three-way tonal contrast in Nuer (Western Nilotic), distinguishing proximal, distal, and proper nouns. Many common nouns display two tonal forms: one used when the referent is proximal to the speaker, and another when it is distal. The tonal pattern of the distal form suggests the presence of a floating H tone at its right edge. In addition, oblique forms of proper nouns derived from common nouns exhibit a distinct tonal pattern. It is proposed here that the tonal differences arise from a morpheme consisting of a floating mora preceding proper names in the oblique form.

Keywords: Western Nilotic, Nuer, floating tone, proximity, non-concatenative morphology

1. INTRODUCTION

This article presents new data indicating that certain Nuer nouns (ISO 639-3: *nus*) exhibit distinct tonal patterns depending on whether they are used with proximal or distal reference. Additionally, the oblique case forms of some proper nouns display tonal patterns that differ from those of their corresponding base forms. These contrasts are not attested in earlier descriptions of Nuer, beginning with Crazzolara (1933), and they point to the existence of previously undocumented non-segmental morphemes in the language - specifically a “distal” marker and a moraic prefix.

This preliminary study is based on detailed elicitation with a native speaker of Eastern Nuer (EN), specifically the Gajiok dialect spoken in Nasir. The consultant is a man in his 50s who currently resides in the United States and uses Nuer daily at home and within his local community. Further investigation involving additional speakers will be necessary to confirm and refine the analysis.

2. BASICS OF NUER MORPHOPHONOLOGY

All Nuer (native) roots follow the pattern *C(G)VC-*, with *G* standing for an optional glide /*j*/ or /*w*/. Any of the vowel phonemes given in Table 1 (cf. Monich and Baerman 2019; Reid 2019, 2024; Monich 2020, 2023b) may occur in the position

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represented by V. Breathy voice in vowels is indicated by placing a diacritic beneath the vowel symbol (e.g., $\underset{\cdot}{y}$).

Table 1: Nuer vowel inventory

$\underset{\cdot}{i}$, i	$\underset{\cdot}{u}$, u	$\underset{\cdot}{ie}$, iɛ	$\underset{\cdot}{uo}$, uo
ɛ, e	ɵ, ɸ		
ɛ, (ɛ) ²	ɔ, ɔ	ɛa, (ɛa) ³	ɔa, ɔa
ʌ			
a, a			
a. Monophthongs		b. Diphthongs	

The Nuer language features a distinctive prosodic system in which each vowel, including diphthongs, listed in Table 1 may appear in one of three degrees of length: short (V), long (V:), or overlong (V::).

Nuer is a tonal language, with five surface tones (Monich 2020, 2023b; Reid 2019; Gjersøe 2019). Following Monich’s analysis (2020, 2023b), these surface tones represent three underlying tonemes: Low ($\hat{v}$), High, and Rising. The High toneme has two allotones: a level high ($\hat{v}$) when occurring on breathy vowels, and a falling ($\hat{v}$) tone when on modal vowels. Besides its basic rising allotone ($\check{v}$), the Rising toneme also has the following contextual variants: mid ($\bar{v}$), low ($\hat{v}$), and falling ($\hat{v}$).

The mid allotone of the Rising toneme is of particular interest here. Although it may occur as a near-free variant of the rising contour, certain phonological environments require one vs. the other allotone. In disyllabic prosodic units (which are common domains for tonal sandhi in Nuer), the Rising toneme on the second syllable is invariably realized as mid rather than rising. For example, in an imperative construction consisting of a monosyllabic verb and a monosyllabic object, the Rising toneme of the object is consistently realized as mid, never as rising. Thus, / $\bar{n}\check{\chi}k\ j\check{\theta}::k$ / ‘kill the dogs!’ is realized as [$\bar{n}\check{\chi}k\ j\check{\theta}::k$] with a mid tone on the object $j\check{\theta}::k$ ‘dog.PL.NOM’ instead of a rising tone. To represent the phenomenon of the deictic tone faithfully, all tone transcriptions in this study reflect the tones as actually observed, without adjustment based on presumptions about the underlying tonemic inventory.

² This vowel is marginal and arises in a handful of items under specific morphophonological conditions only.

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Despite the three-way vowel length contrast, Nuer syllables may contain at most two tone-bearing units (TBUs); as such, three-tone contours are prohibited.

Another crucial point about Nuer tone concerns the asymmetrical role of the first vs. the second tonal autosegment in a syllable. This initial tone appears to have a stronger influence on tonal processes than the segment contributing the contour. For instance, many segmental affixes in Nuer are assigned a tone that is polar to the tone of the preceding syllable. However, polarity is not computed in relation to the preceding tonal autosegment but rather to the first tonal autosegment of the preceding syllable: a polar tone is L after a H or HL syllable, and H after a L or LH one. Consider the subject agreement suffix in the verbs *tâ:l-ɔ̌* ‘cook.TR-1SG’ and *lě:b-ɔ̌* ‘open.CP.TR-1SG’. The suffix carries a low tone after the falling tone (HL) in *tâ:l*, and a high tone after the rising tone (LH) in *lě:b*.

Nuer morphology is largely non-concatenative: most grammatical information is expressed through root-internal mutation rather than segmental affixation. These mutations may target the following four properties of the root syllable (Monich and Baerman 2019; Reid 2019): vowel quality, vowel length, tone, and phonation or manner of articulation of the root-final consonant. Table 2 illustrates all four mutation targets in the nominal paradigm of *dê:l* ‘sheep/goat’.

Table 2: A sample nominal paradigm

Gloss	SG		PL	
	NOM	OBL ⁴	NOM	OBL
‘sheep/goat’	<i>dê:l</i>	<i>dēa:l</i>	<i>dēt</i>	<i>dē:t</i>

As illustrated with the sample paradigm in Table 2, morphological processes may either lengthen or shorten the root vowel. Regarding vowel quality mutation, two independent processes operate: *a*-mutation, triggered by certain inflectional morphemes, and *i*-mutation, associated with derivational morphology and the formation of marked number stems. In Table 2, the NOM.SG form displays the basic root vowel, the OBL.SG form exhibits the *a*-mutated vowel, the NOM.PL form shows the *i*-mutated version of the basic root vowel, and the OBL.PL form presents a variant combining both *i*- and *a*-mutations.

The morphemes responsible for these root mutations originated as segmental suffixes in the ancestral language (Monich and Baerman 2019, 2022). These suffixes

⁴ For nouns denoting locations and inalienably possessed body parts, two distinct oblique cases may be identified: the genitive and the locative. For all other nouns, these cases are syncretic. Locative forms carry High or Rising tonemes and do not manifest the proximal vs. distal distinction that is the focus of this paper. As such, the locative case is not directly relevant to the present discussion.

conditioned various phonological processes within the root, such as vowel metaphony and intervocalic lenition. Although their segmental content has since been lost, these morphemes continue to trigger phonological changes in the stem and are therefore best analyzed as “floating” phonological entities - floating morae, tones, and features.

In addition to these non-segmental suffixes, which trigger changes in the root, there are also non-segmental prefixes. These prefixes lack overt phonological realization when words are pronounced in isolation but, in appropriate contexts, can induce lengthening and tonal modification of the last vowel in the preceding word (Monich 2021, 2023a, 2023b; Reid and Remijsen 2025). Because of the lengthening effect that these prefixes may have on the preceding vowel, they are represented here as floating morae before the root (μ -). Some nouns consistently contain this prefix in all forms, while others acquire it through derivational morphological processes. We return to these morphemes in Section 5.

3. PROXIMITY CONTRAST

Our initial observation is that certain nouns exhibit two distinct tonal forms, conditioned by pragmatic context. The primary function of this tonal contrast is to distinguish objects that are close to the speaker from those that are more distant. In other words, these nouns have proximal and distal tonal forms. Representative examples are given in (1): the examples in (1a) illustrate the proximity contrast in the nominative case, while the examples in (1b) illustrate the contrast in the oblique case. The oblique forms in (1b) were elicited as dependent nouns in the associative construction, consisting of a monosyllabic head noun such as *bîɛ:l* ‘color.SG.NOM’ followed by the oblique form of the target noun. In this context, the Rising toneme on the oblique form is consistently realized as its mid allotone (see Section 2).

1. Proximal vs. distal nouns (spatial)

- | | | |
|----|---|---|
| a. | <i>tùɔ::ŋ</i> (émè) ‘this egg’ | <i>tùɔ::ŋ</i> (émò/émì) ‘that egg’ |
| | <i>t̥ɔ̣:l</i> (émè) ‘this snake’ | <i>t̥ɔ̣:l</i> (émò/émì) ‘that snake’ |
| | <i>ràa::m</i> (émè) ‘this sheep’ | <i>ràa::m</i> (émò/émì) ‘that sheep’ |
| | μ -gɛw (émè) ‘this water pitcher’ | μ -gɛw (émò/émì) ‘that water pitcher’ |
| b. | <i>pà::ɲ</i> (émè) ‘of this wall’ | <i>pā::ɲ</i> (émò/émì) ‘of that wall’ |
| | <i>lwà::k</i> (émè) ‘of this cattle byre’ | <i>lwā::k</i> (émò/émì) ‘of that cattle byre’ |
| | <i>cà:l</i> (émè) ‘of this Nile perch’ | <i>cā:l</i> (émò/émì) ‘of that Nile perch’ |

Segmental demonstratives in Nuer (shown in parentheses in (1)) encode a three-way contrast in proximity. The proximal demonstrative *émè* ‘this’ is used with nouns referring to entities very close to the speaker. The medial demonstrative *émì* ‘that’ refers to entities that are slightly removed, while the distal demonstrative *émò* ‘that yonder’ is used for entities that are far away.

As shown in Example (1), the proximal tonal form of a noun can co-occur with *émè*, signaling the nearest degree of proximity. In contrast, both *émò* and *émì*, which indicate greater distance, combine with the distal tonal form of the noun. Either tonal form may occur with or without a demonstrative. However, compatibility between the demonstrative and the tone of the noun is constrained: the distal tonal form may only co-occur with the medial or distal demonstratives. For example, both *tǔɔ::ŋ émò* and *tǔɔ::ŋ émì* are grammatical, but **tǔɔ::ŋ émè* is not. The reverse of this generalization does not seem to hold, however: the proximal form of the noun seems to be possible in combination with *émò* and *émì*, although the result may sound somewhat less natural. My impression is that combining a low-toned noun with a medial or distal demonstrative sounds slightly awkward when a corresponding variant with a mid or rising tone is available. In such cases, the speaker seems to take a slight pause before the demonstrative.

The two tonal forms may also be used to mark temporal proximity. In (2a), the proximal form *tǐḁ::ŋ* indicates that the antelope was just killed, whereas in (2b), the distal form *tǐḁ̃::ŋ* suggests that the animal was killed some time ago.

2. Proximal vs. distal nouns (temporal)

- a. *μ-kḙ:l tǐḁ::ŋ*
hide.SG antelope.SG.OBL.PROX
‘a hide of the antelope (just killed)’
- b. *μ-kḙ:l tǐḁ̃::ŋ*
hide.SG antelope.SG.OBL.DIST
‘a hide of the antelope (killed a long time ago)’

In addition to signaling spatial and temporal distinctions, Nuer also appears to exploit the contrast between the two tonal forms to encode specificity. When no contrast in physical or temporal remoteness is being drawn, the proximal tonal form tends to indicate a specific, identifiable referent. In contrast, the distal tonal form is interpreted as referring to a more generic or non-specific entity. For example, in sentence (3a), the use of the proximal tonal form suggests that the speaker is searching for a specific snake, presumably one they have just spotted. In (3b), however, the distal tonal form implies a general search for a snake, with no particular snake in mind. A similar contrast is observed in (3c) and (3d): (3c) is

understood as a directive to kill a specific serval, while (3d) expresses a more general command to kill any serval.

3. Specific vs. Non-specific nouns

- | | | | | |
|----|--|-----|----|------------------------------|
| a. | <i>gḥ::rḏ</i> <i>tḥ:l</i> | vs. | b. | <i>gḥ::rḏ̄</i> <i>tḥ̄:l</i> |
| | search.1SG snake.SG.NOM ⁵ .PROX | | | search.1SG snake.SG.NOM.DIST |
| | ‘I am looking for the (specific) snake’ | | | ‘I am looking for a snake’ |
| c. | <i>nḏk</i> <i>tḥa::n</i> | vs. | d. | <i>nḏk</i> <i>tḥ̄a::n</i> |
| | kill.IMP serval.SG.NOM.PROX | | | kill.IMP serval.SG.NOM.DIST |
| | ‘kill the serval!’ | | | ‘kill a serval!’ |

However, these effects were not obtained consistently and require further documentation. At times, the Nuer consultant who contributed to this study expressed a strong preference for one tonal form over the other based on the considerations of specificity. At other times, however, he judged both forms to be acceptable in the same context. Scenario-based elicitation yielded similarly inconclusive results, with responses varying across sessions and examples.

4. PHONOLOGICAL MANIFESTATIONS OF PROXIMITY MARKING

At the current stage of research, the full picture of how the proximity distinction is marked on the noun and how the associated tonal contours are derived remains incomplete. Nevertheless, several aspects of the phonological alternation are well established. In particular, it is clear that word forms associated with a High toneme do not participate in the proximal-distal contrast. As illustrated with the examples in (4), the High toneme (and its falling allotone) appears in both proximal and distal contexts, showing no sensitivity to spatial deixis.

4.

wâr ‘shoe (dist./prox.)’

tḥ̄::t ‘bull (dist./prox.)’

rḥc ‘fish.SG (dist./prox.)’

kḥ̄:m ‘chair (dist./prox.)’

In those nouns that exhibit the proximity contrast, the proximal form is consistently associated with the Low toneme, while the distal form bears the Rising toneme, as illustrated in (5).

⁵ Direct objects appear in the nominative case.

5.	Proximal	Distal	
	<i>tùɔ::ŋ</i>	<i>tǔɔ::ŋ</i>	‘egg’
	<i>wǔ::t</i>	<i>wǔ::t</i>	‘ostrich’
	<i>tǔ:l</i>	<i>tǔ:l</i>	‘snake’

However, some nouns have only a single tonal form - either with the Low toneme or with the Rising - and do not exhibit the proximal/distal distinction.

6.

- | | | | |
|----|--|-----|-------------------------------------|
| i) | only Low possible | ii) | only Rising possible |
| | <i>gàt</i> ‘child (dist./prox.)’ | | <i>μ-gǔ::k</i> ‘dove (dist./prox.)’ |
| | <i>μ-cièk</i> ‘metal ornament (dist./prox.)’ | | <i>mǎ:c</i> ‘fire (dist./prox.)’ |

The difference between the Low (L) and Rising (LH) tonemes in proximal and distal forms correspondingly boils down to the presence of an H following an L tone in distal forms. The key analytical question is whether the H tone is added in distal forms, removed in proximal forms, or whether both processes are active.

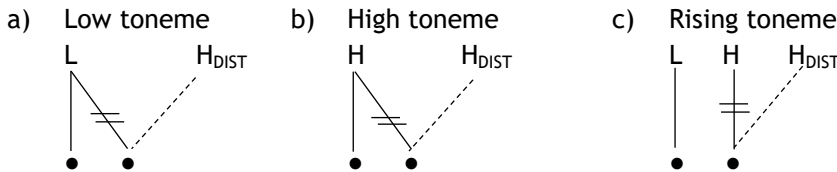
In this analysis, I adopt the view that L-toned forms are basic. A key consideration in this decision is the fact that low-toned forms are in principle acceptable in non-proximal contexts (such as when paired with distal or medial demonstratives), whereas mid- or rising-toned counterparts are disallowed in proximal contexts (see Section 3). This observation suggests that the low-toned variant serves as the default when both tonal alternatives exist. Furthermore, proper nouns derived from common nouns exhibiting this tonal alternation are consistently L-toned (See Section 5). For example, while the common noun *rǎa::m* ‘sheep’ has a distal variant *rǎa::m*, the corresponding proper name is always L-toned, i.e., *rǎa::m* ‘person named Roaam’.

For these reasons, I propose that in nouns bearing the L toneme, the distal form is derived by shifting the tone to LH (Rising) by adding a floating tone, termed here *the distal H* (H_{DIST}). Nouns that bear H or LH tonemes do not show a tonal contrast between proximal and distal forms, since adding the distal H in these cases produces no surface effect.

The diagrams in (7) illustrate how the addition of H_{DIST} modifies the three lexical tonemes in nouns containing two tone-bearing units (TBUs; indicated with ●). I assume that in such nouns, the L and H tonemes correspond to single tonal autosegments (L or H) associated with both TBUs. The distal H is then realized by replacing the tone on the rightmost TBU: H_{DIST} associates to the final TBU of the word, and the previously linked tonal autosegment is delinked from it. When the distal H is added to a syllable already bearing a High or Rising toneme (7b, 7c), no surface change occurs. In contrast, when it is added to a syllable with a Low toneme

(7a), the result is a Rising tone. This process accounts directly for the tonal alternation observed in distal forms.

7.



One issue that the proposed account does not fully resolve concerns L-toned nominal forms such as *gàt* ‘child’ and *μ-cìek* ‘metal ornament’, which fail to exhibit corresponding distal forms. A plausible explanation is that these nouns are too short to host the “distal” H tone – specifically, that they contain only a single tone-bearing unit (i.e., are monomoraic), and that H_{DIST} cannot associate to the initial TBU. Association of the distal H in this position would require delinking of the lexical L tone, resulting in the loss of the lexical tone. The restriction may therefore be motivated by the avoidance of such loss of lexical information. Supporting evidence for this explanation comes from contexts in which such nouns appear with demonstratives: in these cases, it is sometimes the second syllable of the demonstrative that hosts the distal H. For example, the combination of *gàt* ‘child’ with the distal demonstrative *é-mì* ‘that.DIST’ may be realized as *gàt é-mì*. Here, it appears that *gàt*, being insufficiently long to host the floating distal H tone itself, triggers its association with a nearby target – in this case, the demonstrative – replacing the righthand tonal autosegment.

Assuming the alternation is triggered by a floating H tone, a central question is whether this tone encodes a morphosyntactic category (and which one) or instead belongs to the domain of intonation. One possibility is that the “distal” H functions as a demonstrative, perhaps even undergoing grammaticalization into a marker of specificity.⁶ Surprisingly, the typological literature on the iconic use of tone in demonstratives holds that high tone is typically associated with proximal reference, while low tone tends to mark distal reference (see Breunese and Diessel 2023;

⁶ Alternatively, it may function more like a presentational particle, comparable to *von* in Russian or *voilà* in French. A third possibility is that the H tone constitutes an intonational pitch accent. Cross-linguistically, high pitch is often used iconically to signal distance from the speaker. In English, for instance, a speaker might say *THAT house* with raised pitch and vowel lengthening to convey remoteness. Crucially, though, in English (and many other languages), this pitch modulation applies to the demonstrative, not the noun itself. Nuer differs in allowing pitch raising to apply directly to the noun to convey distal reference, even in the absence of an accompanying demonstrative. The precise grammatical function of the distal tone in Nuer remains an open question.

Akinbo and Bulkaam 2024). The pattern observed in Nuer runs counter to this generalization: in Nuer, pitch is raised in distal forms, while proximal forms retain low pitch. Nevertheless, Nuer is not unique among Nilotic languages in this respect. In Shilluk, for example, proximal nouns are marked by tonal lowering at the right edge of the word (Remijsen and Ayoker 2018). In Kipsigis, proximal demonstratives are low-toned, while medial and distal demonstratives carry a high tone (Kouneli and Nie 2020). And perhaps the most striking of all, in Agar Dinka - a close relative of Nuer - proximal demonstratives are low, while distal demonstratives are high: *təŋ-ɛ* ‘this spear’ vs. *təŋ-ɛ̃* ‘that spear’; *m̩iith-k̩ə* ‘these children’ vs. *m̩iith-k̩ə̃* ‘those children’ (Andersen 1987: 18).

5. OBLIQUE FORMS OF PROPER NOUNS

In Nuer, personal names are frequently derived from common nouns, as illustrated in (8).

8. Nominative forms of common and derived proper nouns

d̩i:t ‘bird’ → *d̩i:t* ‘person named Dit’

t̩i:t ‘bull’ → *t̩i:t* ‘person named Tuut’

r̩a:m ‘sheep’ → *r̩a:m* ‘person named R̩aam’

c̩o:ɔ:l ‘compensation (for the loved one)’ → *c̩o:ɔ:l* ‘person named Cuol’

k̩aŋ ‘alcoholic drink’ → *k̩aŋ* ‘person named K̩aŋ’

As shown in (8), the nominative forms of proper nouns are identical to the corresponding common nouns. Moreover, when a common noun exhibits two tonal variants - a proximal form with a Low toneme and a distal form with a Rising toneme - the proper name derived from it consistently appears with a low-toned nominative form. This pattern, noted earlier in Section 3, supports the analysis that the proximal variant represents the basic variant of the common noun.

While personal names and common nouns are segmentally identical in the nominative case, their oblique forms often diverge. These differences go beyond tonal contours and include contrasts in vowel length, vowel quality, tone, and the presence or absence of segmental suffixes. For example, many common nouns display *a*-mutated or suffixed oblique forms, whereas the corresponding proper names typically do not: compare *t̩i:ɔt* ‘bull.SG.OBL’ with *t̩i:t* ‘Tuut.PN.OBL’, or *r̩ə:m-ɛ̃* ‘sheep.SG.OBL’ with *r̩ə:m* ‘R̩aam.PN.OBL’.

In what follows, I focus on a subset of nouns whose oblique forms are segmentally identical in both their common and proper noun usage, yet differ in their tonal properties. These nouns all have long root vowels and morphologically

simple nominative forms (i.e., root forms without any mutations), for example, *dî:t* ‘bird.SG.NOM’, *kî:r* ‘river.SG.NOM’, *ɣjê:k* ‘dog.SG.NOM’, *tî:k* ‘ox.SG.NOM’, *dê:l* ‘goat/sheep.SG.NOM’, etc. The oblique form features an *a*-mutated overlong vowel in both common and proper nouns of this type. However, the tonal contour of the proper noun’s oblique form diverges from that of the corresponding common noun – either from the proximal form alone or from both the proximal and distal variants – occasionally resulting in a three-way tonal contrast, as illustrated in (9).

9.

- | | | |
|-----------------------|--------------------------|------------------|
| a. Common (proximal): | <i>dwɛ̌l</i> | <i>dîe::t</i> |
| | house.SG | bird.SG.OBL.PROX |
| | ‘house of this bird’ | |
| b. Common (distal): | <i>dwɛ̌l</i> | <i>dîe::t</i> |
| | house.SG | bird.SG.OBL.DIST |
| | ‘house of that bird’ | |
| c. Proper: | <i>dwɛ̌l</i> | <i>ˈdîe::t</i> |
| | house.SG | Dit.PN.OBL |
| | ‘house of Dit (<‘bird’)’ | |

In (9), the proximal oblique form of the noun *dî:t* ‘bird’ is pronounced with a low tone, while the distal oblique form bears a mid tone. The proper oblique form, however, exhibits a downstepped falling tone.

In some nouns of this group, the proximal and distal oblique forms are not distinguished, as both are realized with a mid tone. Nevertheless, the proper oblique form remains distinct, marked by a downstepped falling tone, as shown in (10).

10.

- | | | |
|-----------------------|---------------------------------|-----------------------|
| a. Common (proximal): | <i>dwɛ̌l</i> | <i>ɲā::ŋ</i> |
| | house.SG | crocodile.SG.OBL.PROX |
| | ‘house of this crocodile’ | |
| b. Common (distal): | <i>dwɛ̌l</i> | <i>ɲā::ŋ</i> |
| | house.SG | crocodile.SG.OBL.DIST |
| | ‘house of that crocodile’ | |
| c. Proper: | <i>dwɛ̌l</i> | <i>ˈɲā::ŋ</i> |
| | house.SG | Nyaŋ.PN.OBL |
| | ‘house of Nyaŋ (< ‘crocodile’)’ | |

It is important to note that all nouns exhibiting the two patterns illustrated in (9) and (10) have modal vowels in their oblique forms. Only two nouns in this class

were elicited with a breathy vowel in the oblique form, and both follow the third pattern, illustrated in (11): the distal and proper forms are realized with a midtone, while the proximal form is Low-toned.

11.

- | | | |
|-----------------------|-----------------------------|-------------------|
| a. Common (proximal): | <i>dwɛl</i> | <i>tɔ̃a:l</i> |
| | house.SG | snake.SG.OBL.PROX |
| | 'house of this snake' | |
| b. Common (distal): | <i>dwɛl</i> | <i>tɔ̃a:l</i> |
| | house.SG | snake.SG.OBL.DIST |
| | 'house of that snake' | |
| c. Proper: | <i>dwɛl</i> | <i>tɔ̃a:l</i> |
| | house.SG | Thɔl.PN.OBL |
| | 'house of Thɔl (< 'snake')' | |

To summarize, we find three tonal patterns in the oblique forms of the relevant class of nouns. In the first set, exemplified in (9), all three oblique forms are distinct: the proper name bears a downstepped HL (falling) tone, the distal form is mid-toned (M), and the proximal form is low-toned (L). In the second set, illustrated in (10), the proper noun also has the HL contour, but the distal and proximal forms are both mid-toned. Finally, in the third set, exemplified in (11), the proper and distal forms both exhibit mid tones, while the proximal form is low-toned.

Below, I propose an analysis of these tonal patterns that is compatible with the account developed thus far - one which treats the low-toned proximal form as basic and posits the existence of a "distal" floating H tone.

First, we note that in all three patterns, the distal form of the common noun consistently surfaces with a mid tone. By contrast, the proximal form alternates between L and M. This distribution can be explained by positing that the oblique form of common nouns is underlyingly specified either as L or as LH. If, as previously proposed, the distal form is derived through the addition of a floating H tone at the right edge of the word, then nouns that carry L underlyingly will surface as LH in the distal form and will be realized with the mid allotone. In contrast, nouns that carry LH will show no distinction between proximal and distal forms.

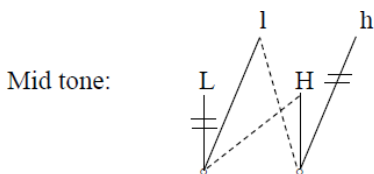
Second, we observe that the tonal realization of the proper oblique forms correlates with the phonation type of the vowel: nouns with modal vowels exhibit a downstepped falling tone (HL), while those with breathy vowels show a mid tone (M). This pattern aligns with observations made in Monich (2020, 2023b), where the High toneme is realized as a falling contour over modal vowels and as a level high tone over breathy vowels. The same phenomenon is at work here, so that modal vowels are realized with a fall, while breathy vowels are realized with level pitch, but with an additional complication that both tones start on a lower pitch than expected. In other words, both forms carry a downstepped High toneme and, as

expected, it is realized with a fall in modal vowels and with a flat high tone in breathy vowels. However, due to the downstep, the latter is equivalent to the mid tone.⁷

The presence of downstep in forms with modal vowels suggests that a floating L tone precedes the High toneme in these contexts. But where does this floating L come from?

As discussed in Section 2, some Nuer nouns carry a moraic prefix μ -. Certain nouns are obligatorily prefixed (e.g., μ -*ḳɛ̃n* ‘rat’, μ -*l̥ɛ̃k* ‘pestle’, μ -*ḅiːj* ‘cloth’), while others acquire the prefix through derivation, for instance, in the formation of certain deverbal nouns (μ -*j̣ɛ̃c* ‘broom’ < *j̣ɛːc* ‘sweep’).⁸ The prefix is absent in citation forms. However, in sentential context, it manifests itself through its effect on the vowel of the preceding syllable: if the preceding syllable ends in a short vowel, that vowel is lengthened; if the preceding syllable bears a Low toneme, the tone shifts to Rising. For instance, in (12a), we see an inherently prefixed noun, μ -*ḳɛ̃n* ‘rat (SG.NOM)’, which appears in its oblique form after a motion verb ending in a short low-toned vowel. The μ - prefix surfaces by lengthening the preceding vowel and shifting its tone from low to mid. In (12b), the preceding vowel is already overlong and cannot be further lengthened. As a result, only the tonal shift - from low to rising - is realized.

⁷ The downstepped falling tone (HL) simply starts the fall at a lower pitch, but the downstepped high tone (H) neutralizes with the underlying Rising toneme (LH). Here is why the neutralization occurs. Within the Register Tier Theory framework of Snider (1999), a downstepped High tone results from *l*-register spreading and is represented as H(l). Similarly, the realization of an LH sequence as a mid tone can be analyzed as a combination of downstep (i.e., rightward *l*-register spreading) and contour simplification via leftward H-tone spreading, as illustrated below. This resulting tone – categorized as ‘mid’ – is likewise represented as H(l) in Snider’s system. Consequently, both processes yield the same tonal configuration, H(l), resulting in the neutralization of Rising and High tonemes in the contexts where the downstep of the High toneme is triggered.



⁸ Moreover, there is a moraic proclitic that shows up in possessive constructions under certain conditions (e.g., *ṇɛ̃t-ḷ̣* μ -*g̣àt-ḷ̣* = [*ṇɛ̃t-ḷ̣-g̣àt-ḷ̣*] ‘of a child’s rib’) (Monich 2020, 2023b). Considering the many uses of the moraic prefix we are most likely dealing with several homophonous morphemes.

12.

- a. $rî:η-ḷ$ $μ-kŭḷn$ = $[rî:η-ḷ-kŭḷn]$
 run.1SG rat.SG.OBL
 ‘I run to the rat.’
- b. $cḷa::$ $μ-kŭḷn$ = $[cḷa::-kŭḷn]$
 bone.SG.NOM rat.SG.OBL
 ‘bone of the rat.’

A shift from a low to a rising tone due to the effects of the prefix can be analyzed as the result of adding the H tone associated with the moraic prefix to the L tone of the preceding syllable. In fact, this floating moraic element is analyzed as H-toned in Reid and Remijsen (2025). In contrast, Monich (2023a, b) proposes that the prefix is assigned a polar tone: H if the preceding syllable carries a Low (L) or Rising (LH) toneme, and L if the preceding syllable carries a High (H) toneme. (See Section 2 for a brief discussion of tone polarity in Nuer; we will return to this issue shortly.)

We can now compare the behavior of a prefixed noun like $μ-kŭḷn$ ‘rat’ with that of common nouns without prefixes and the proper nouns derived from them. In (13), the oblique form of the noun $dî:t$ ‘bird’ shows three distinct tonal realizations depending on whether it appears in the proximal form, the distal form, or as a proper name.

13.

- a. Common (proximal): $rî:η-è$ $dîe::t$
 run.3SG bird.SG.OBL.PROX
 ‘He runs to this bird.’
- b. Common (distal): $rî:η-è$ $dîe::t$
 run.3SG bird.SG.OBL.DIST
 ‘He runs to that bird.’
- c. Proper: $rî:η-è$ $μ-dîe::t$ = $[rî:η-è-dîe::t]$
 run.3SG Dit.PN.OBL
 ‘He runs to Dit (< ‘bird’).’

In (13a), the oblique form of the common noun has a Low toneme in the proximal context. In (13b), the distal form displays a Rising toneme realized as a mid allotone. In contrast, the oblique form of the corresponding proper noun in (13c) is realized with a High toneme. However, the tonal properties of the root syllable are not the only feature distinguishing the proper noun in (13c). The vowel of the verbal suffix preceding the proper oblique form is lengthened, and its tone is modified from Low to Rising (realized phonetically as a mid tone). These changes in the preceding word suggest that the proper name $Dî:t$, derived from the common noun

meaning ‘bird’, contains the moraic prefix μ -, which is absent in the corresponding common noun *d̥iːt*.

In the analysis proposed in Monich (2021, 2023a, b), the prefix is assigned a polar tone relative to the tone of the preceding syllable – specifically, H after both L and LH, and L after H. When the preceding syllable carries a Low tone, the addition of the High tone of the prefix results in a Rising toneme (e.g., *c̥ḡaːː* μ -*k̥ḡɔn* = [*c̥ḡaːː*-*k̥ḡɔn*] ‘bone of a rat’). If the preceding syllable already bears a Rising (LH) toneme, the addition of another H has no phonological effect as it is a vacuous tonal change (e.g., *w̥ic* μ -*k̥ḡɔn* = [*w̥ic* *k̥ḡɔn*] ‘head of a rat’). When the preceding syllable has a High toneme, the added L from the prefix produces an HL contour. This does not alter the surface realization: the HL surfaces as a falling tone only if the vowel is modal (e.g., *b̥ɛl* μ -*k̥ḡɔn* = [*b̥ɛl* *k̥ḡɔn*] ‘color of a rat’); if the vowel is breathy, the HL will be realized as a high level tone (e.g., *dw̥ɛl* μ -*k̥ḡɔn* = [*dw̥ɛl* *k̥ḡɔn*] ‘house of a rat’). In neither case does the addition of the L bring about any changes to the tonal contour of the preceding vowel. Nevertheless, the presence of the L tone is not entirely without phonological effect – it reveals itself through the downstep of the following High toneme.

In fact, the data currently available indicate that all common nouns displaying a downstepped falling tone following a high-toned possessum are nouns that contain the moraic prefix. For example, as shown in (14), the noun (μ)-*gôr* ‘meerkat’ bears a High toneme in the oblique case, which is realized as a downstepped falling tone. Strikingly, in this instance, the oblique forms of common and proper nouns are completely syncretic.

14.

- | | |
|------------------------------|---|
| a. Common (proximal/distal): | $dw̥ɛl$ μ - <i>gôr</i> :r = [<i>dw̥ɛl</i> 'gôr] |
| | house.SG meerkat.SG.OBL
‘House of a meerkat’ |
| b. Proper: | $dw̥ɛl$ μ - <i>gôr</i> :r = [<i>dw̥ɛl</i> 'gôr] |
| | house.SG Gor.OBL
‘House of Gor (< ‘meerkat’)’ |

The fact that prefixed common nouns and proper nouns share this otherwise unusual tonal pattern lends strong support to the hypothesis that the presence of the downstepped High toneme in both is conditioned by the one structural element they have in common – namely, the moraic prefix. This observation has interesting implications which are best pursued in a separate study.

6. CONCLUSION

This article has presented evidence that some Nuer nouns exhibit a three-way tonal contrast depending on whether the noun is proper, proximal, or distal. When the distinction is present, the proximal form has a Low toneme, and the distal form has a Rising toneme. Moreover, oblique forms of proper nouns derived from common nouns may exhibit yet another tonal contour: they may bear a High toneme, which is realized with a falling allotone over modal vowels.

These differences point to the presence of non-segmental morphemes that have previously gone unrecognized. The proximal/distal contrast is best analyzed as the result of a floating high tone (H_{DIST}) that docks at the right edge of the noun in distal contexts. The distinctive tonal behavior of proper nouns suggests the presence of a floating moraic prefix, which gives rise to a range of phonological effects, including vowel lengthening and tonal raising (i.e., $L \rightarrow LH$) on the preceding syllable, and tonal lowering (i.e., downstep) on the root syllable.

Depending on the interaction of several factors (lexical tone, vowel phonation, and the presence or absence of the moraic prefix), different Nuer nouns may display varying degrees of tonal differentiation across the three oblique forms - proximal, distal, and proper. Some nominal forms, such as *d̪iɛ::t* ‘bird.OBL’, show a full three-way contrast (proximal, distal, and proper), while others distinguish only two tonal forms: either proximal vs. distal/proper, e.g., *t̪̥a::l* ‘snake.OBL’, or proximal/distal vs. proper, e.g., *ɲā::ŋ* ‘crocodile.OBL’. A third group, consisting of nouns with a non-segmental prefix μ -, e.g., *μ-gôɔ:r* ‘meerkat.OBL’, exhibits no tonal differences between these contexts.

These findings present a remarkably coherent and logical system. However, more work needs to be done to establish the function of these non-segmental morphemes and to identify the phonological mechanisms by which the corresponding tonal contours are generated.

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Abbreviations

CP = centripetal
DIST = distal
IMP = imperative

NOM = nominative
OBL = oblique
PL = plural

PN = personal name

SG = singular

PROX = proximal

TR = transitive

REFERENCES

- Akinbo, Samuel and Michael Bulkaam. 2024. "Iconicity as the motivation for the signification and locality of deictic grammatical tones in Tal". *Glossa*, 9(1): 1-41.
- Andersen, Torben. 1987. "The phonemic system of Agar Dinka". *Journal of African Languages and Linguistics*, 9(1): 1-28.
- Breunese, Merlijn and Holger Diessel. 2023. "Iconicity in spatial deixis: A cross-linguistic study of 180 demonstrative systems". In Caroline Gentens, Lobke Ghesquière, William B. McGregor and An Van linden (eds.), *Reconnecting Form and Meaning: In Honour of Kristin Davidse* (Studies in Language Companion Series 230), 185-207. Amsterdam: John Benjamins.
- Crazzolaro, Joseph Pasquale. 1933. *Outlines of a Nuer Grammar*. Wien: Verlag der Internationalen Zeitschrift "Anthropos".
- Gjersøe, Siri. 2019. *Tonal Interactions in Nuer Nominal Inflection*. PhD Thesis, Universität Leipzig.
- Kouneli, Maria and Yining Nie. 2021. "Across-the-board tonal polarity in Kipsigis: Implications for the morphology-phonology interface". *Language*, 97(2): e111-e138. <https://dx.doi.org/10.1353/lan.2021.0034>.
- Monich, Irina. 2020. "Nuer tonal inventory". *Studies in African Linguistics* 49(1): 1-42.
- Monich, Irina. 2021. "Alienable and inalienable possession in Nuer". Talk presented at the 15th Nilo-Saharan Colloquium, Edinburgh (online), 4-6 August 2021.
- Monich, Irina. 2023a. "Morphological analysis of alienability contrast in Nuer: an atypical typical case". *The Linguistic Review*, 40(2): 217-263.
- Monich, Irina. 2023b. "Interaction of tone and vowel phonation in Nuer". *Phonological Data and Analysis* 5(6): 1-40.
- Monich, Irina and Matthew Baerman. 2019. "Stem modification in Nuer". In Emily Clem, Peter Jenks and Hannah Sande (eds.), *Theory and Description in African Linguistics: Selected Papers from the 47th Annual Conference on African Linguistics*, 499-520. Berlin: Language Science Press.
- Monich, Irina and Matthew Baerman. 2022. "Less is more: Metric truncation in morphology". Talk presented at the 14th Conference of the Association for Linguistic Typology, University of Texas at Austin, USA, on 15-17 December.
- Reid, Tatiana. 2019. *The Phonology and Morphology of the Nuer Verb*. PhD Thesis, University of Surrey.
- Reid, Tatiana. 2024. "Nuer". *Journal of the International Phonetic Association*, 54(1): 479-514.

- Reid, Tatiana and Bert Remijsen. 2025. "Nuer has a floating suprasegmental component consisting of quantity and tone". *Phonology*, 42: e4. <https://doi.org/10.1017/S0952675724000198>.
- Remijsen, Bert and Otto Gwado Ayoker. 2018. *A Descriptive Grammar of Shilluk* (Language Documentation and Conservation Special Publication, 14). Honolulu: University of Hawai'i Press.
- Snider, Keith L. 1999. *The Geometry and Features of Tone*. Dallas: Summer Institute of Linguistics.

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