

A SKETCH OF THE MIDOB VERBAL MORPHOLOGY

August 2014

Manfred Grüning

Presented as part of the requirement of the MA Degree in Field Linguistics,

Centre for Linguistics, Translation & Literacy, Redcliffe College.

DECLARATION

This dissertation is the product of my own work. I declare also that the dissertation is available for photocopying, reference purposes and Inter-Library Loan...

Manfred Grüning

ABSTRACT

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Midob or *tì dn-á al*, as Midob speakers refer to their own language, belongs to the Nubian language family. The group is genetically classified as a member of Eastern Sudanic which is a subgroup of Nilo-Saharan (Greenberg 1963). Morphologically the verb has an agglutinating or rather polysynthetic structure. This study of the verbal morphology of Midob is mainly based on material, published and unpublished, collected by Roland Werner in Khartoum in 1987-88.

After an introduction and a discussion of morphologically relevant phonological topics, the study presents four areas of verbal morphology: a short sketch and discussion of modifications of the verbal root is followed by a discussion of a larger number of mainly derivational morphemes. After that follows a description of the different inflectional patterns. Finally a number of non-finite verb forms are presented, which are heavily used in narrative contexts. A final chapter summarizes findings and open questions.

To present evidence and illustrate the use of the described morphemes, sentences with interlinear morphemic gloss and transcribed surface tone have been added from the field notes and recordings of Roland Werner. Questions that cannot yet be answered due to the nature of the study (mother tongue speakers could generally not be consulted) are marked as topics for future studies.

PREFACE

This study on the verbal morphology of Midob is essentially an expanded commentary on the verbal morphology in Werner's *Tidn-áal: a study of Midob: (Darfur-Nubian)* (1993), as well as an attempt to reorganize the available data and to present analysed evidence from additional unpublished sentences. This was possible only because Roland Werner generously provided to me the sources of his fieldwork from 1987-88 with the explicit wish to publish more of the material. Therefore my first thanks go to Roland Werner.

I also want to express my gratitude to Angelika Jakobi and Marcus Jaeger, who introduced me over a longer period of time to the Nubian languages. I owe much support to both of them. A special thanks goes to Angelika, who offered to support the present study as the external supervisor. Her valuable feedback from the beginning on shaped this study and many errors have been corrected due to her input. More stimulating input I received from students and staff of the African Studies Institute of Cologne University during a presentation of the topic. My thanks also go to the staff of what has become the Centre for Linguistics, Translation & Literacy at Redcliffe College / University of Gloucestershire. Their sincere support made it possible for me to join the running MA program without complications. A special thanks is due to Howard Jackson, who supervised the current study and contributed a number of valuable corrections.

The present study would not have been possible without two speakers of Midob: mainly Adam Yusif Adam, but also his brother Mohammed Yusif Adam who provided the language data as Roland Werner's language

consultants. Although I never met them, their speech and comments are reflected in the recordings and field notes of Roland Werner. Additionally I received valuable help from Mohamed Issa Mahmoud (Berlin). Despite the short time of interaction his comments greatly improved my understanding of several details. I am especially pleased to be in contact with Ishag Abdelrahman Hassan, a Midob speaker researching his own language.

I am thankful for the strong support by my family as well as by many friends, especially by my wife Petra, who freed me from other responsibilities and gave me time for the linguistic study. Additionally I want to mention the friendly library staff of the University of Education in Schwäbisch Gmünd, Germany. In their rooms much of the study was conducted.

This study is dedicated to the Midob speakers. I have the privilege to work on their fascinating language and sincerely hope that it will contribute to a better knowledge about the language as well as encourage the community of Midob speakers to continue using and developing it in ways they envision.

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CHAPTER 1

INTRODUCTION

Midob or tì dn-á a l, as Midob speakers refer to their own language, belongs to the Nubian language family. The group is genetically classified as a member of Eastern Sudanic which is a subgroup of Nilo-Saharan (Greenberg 1963). The Midob traditionally live as semi-nomadic pastoralists. Their homeland is in North-Eastern Darfur in Sudan, near the town of Malha in and around the Midob mountains (also known as Jebel Midob or Jebel Meidob).

Typologically Midob (as well as the other Nubian languages) has SOV constituent order, the genitive is marked by -n and precedes the head noun. Morphologically the verb has an agglutinating or rather polysynthetic structure. Sentence 1 serves as a first illustration of these characteristics. There is also evidence of various multiverb constructions in Midob, which have been largely ignored in previous studies.

1 (0797)	tid-ń	oor-ár	ùurti	ol-j-um.
	Midob-GEN	mountain-LOC	millet	cultivate-Pj-IPFV.3

They cultivate millet on Jebel Midob.

Like the above sentence all following examples will be referred to by their consecutive number. A reference to the Midob sentence database is added in parentheses. The first line of each example contains a simplified phonetic transcription. The second line provides the morphological glossing according to the *Leipzig Glossing Rules* (2008), the third line presents a free translation of the sentence. This translation is in most cases a direct quote from Werner's field notes. Where it is not available, I present my own translation.

The present study is based on data that had been collected by Roland Werner during a research project with speakers of Midob (Uurti dialect) in Khartoum in 1987-88. As a result he published a sketch of the language with the title *Tidn-áal: a study of Midob: (Darfur-Nubian)* (Werner 1993), but a considerable amount of his data has remained unpublished. A few years ago he generously gave me access to his material. This study is based almost solely on these data, since a season of fieldwork in Sudan, which I had envisaged, had to be cancelled.

The data itself consists of about 2500 sentences and two narratives, which had been prepared and checked for printing, but they have been published only in part in Werner (1993). Additional material comes from Werner's handwritten notes: roughly the same amount of unedited sentences, various verbal paradigms and a larger number of narratives (different genres and speakers) – for most of them there are audio recordings available as well. Neither the narratives nor the single sentences had been analysed in respect to their morphological and syntactic composition. Interlinear glossing is lacking both for the sentences and for the published and unpublished narratives.

While working with the material before, I realized the need for a better understanding of the verbal system in several aspects: It is not always clear, how the verb paradigms presented in Werner (1993, p.47) correspond to the actual forms in the sentences, and what kind of phonological processes are involved. The verbal system is morphologically rich in suffixes, whose functions are still little known. In the narratives the expected TAM suffixes are

only rarely used – other verb forms are used instead and these need further investigation to facilitate a basic understanding of the narratives. The goal of this study is to improve our understanding of the verbal system in regard to the above mentioned aspects, particularly by providing interlinear morpheme glossing according to the *Leipzig Glossing Rules* (2008).

In the course of this study I collected and analysed the various verbal forms with their inflectional morphemes (TAM-marking and agreement in person and number), a number of derivational morphemes and various non-finite verbal forms that are especially important for a better understanding of narrative texts.

Only towards the end of this study I was able to consult a mother tongue speaker. Therefore the results of this study are severely limited, due to the nature of the material available. This implies that many questions are left unanswered. The large amount of material available nevertheless proves to be a valuable resource in finding answers to the above questions, but much of the material was only skimmed over.

This study of the Midob verbal system has been informed by various typological studies. Dixon's *Basic Linguistic Theory*, especially the first chapters of volume 1 (2010), as well as Payne (2002) and Haspelmath and Sims (2010) served as guides for the present study, as they provide an overview over the relevant topics.

As for Midob I must mention the short but excellent article by Thelwall (1983) next to the already mentioned grammatical sketch of Midob by Werner (1993). As many valuable references to other works on related Nubian

languages can be found in the bibliography of Jakobi and Kümmerle (1993), here I will only mention the grammar of the Nile Nubian languages, Nobiin (Werner 1987) and Kunuz (Abdel-Hafiz 1988). Studies on areal features had been valuable guides for this study, particularly the general overview in Heine and Nurse (2008), Amha and Dimmendaal (2006) on converbs and Hofherr (2010) on verbal plurality.

CHAPTER 2

NOTES ON PHONOLOGY

For an understanding of morphology and the morphophonemic processes, a solid understanding of phonology is essential. In this chapter some relevant phonological basics for an understanding of Midob morphology will be discussed. This, of course, is a reciprocal process as new insights into the morphology will result in a better understanding of phonology as well.

2.1 Vowels and consonants

Notation: Since I am using linguistic data from Roland Werner, this data is based on his notation, but most instances where he deviated from IPA I will move towards using the IPA (see International Phonetic Association 1999):

Instead of Werner's [ng, nng] I will use [ŋ, ɲŋ]. This makes it possible to distinguish between the velar nasal [ŋ] and a [ng] sequence as in [omdurmaan-ge]. It helps as well not to mistake [ŋ] as a sequence but naturally recognize it as a single consonant. In the same way I will use [ʃ / ʃʃ] instead of [sh / ssh].

Instead of Werner's [j] for the palatal plosive [ɟ] will be used and instead of [y] for the palatal approximant [j] will be used. [ɲ] will be used for the palatal nasal instead of Werner's [ny]. This was only done after I had observed that [ɲ] indeed behaves differently than a sequence of [n] and [j]

regarding the phonemes that occur before and after them, since based on recordings only it was difficult to decide if Werner's [ny] is indeed a single segment or rather a sequence of two.

I will keep one deviation from IPA however: Long vowels will be written as digraphs (i.e. [aa] instead of [a:]) for practical reasons (i.e. being able to mark tonal variation marking tone).

For more detail on the notation used in this study compared to the notation in Werner (1993) and Thelwall (1983) see the Appendix (Consonants and Vowels). The resulting vowel chart in Table 1 is identical to Werner (1993, p.21) and similar to Thelwall (1983, p.99).

i, ii		u, uu
e, ee	ə, əə	o, oo
	a, aa	

Table 1: Phonemic vowels of Midob

The consonant chart in Table 2 is based on Werner (1993, p.18) and Thelwall (1983, p.99) and leaves out all consonants from Arabic loanwords.

p	t	c	k
b	d	ʃ	g
f	s	ʒ	h
m	n	ɲ	ŋ
w	r, l	j	

Table 2: Phonemic consonants of Midob

2.2 Phonological restrictions

A good knowledge of phonological restrictions and processes will result in a better understanding of the internal structure of Midob verbs. Since Thelwall and Werner present a number of valuable notes on phonology, I will mostly comment on their insights and add some detail, where possible. Loanwords from Arabic have been excluded.

2.2.1 Phonological constraints on consonants

2.2.1.1 *Geminated consonants*

Thelwall (1983, p.100) notes that “all segments except w, y, h¹ may occur with long and short duration.” Looking at a large number of sentences I would suggest only slight modifications of his observations: all consonants except for [h] and [j] occur geminated, [w] and [p] appear geminated only in a few words ([w] in *owwi* (soup) and *towwi* (small cattle), [p] in *puppem* (to blow) and in *peppedo* (bat)).

2.2.1.2 *Word-initial*

In the following list of word-initial segments, the rare occurrences are marked by parentheses:

a, e, ə, (h), i, k, (m), (n), (ŋ), o, p, s, (ʃ), t, u, (w)

1 In IPA notation this corresponds to [w, j, h]

In summary all vowels, the voiceless plosives [p, t, k] and the alveolar fricative [s] appear word-initially. Additionally there are a few word-initial occurrences of nasals (bilabial, alveolar, velar: [m, n, ŋ]), the bilabial approximant [w] and the postalveolar fricative [ʃ].

2.2.1.3 CCC sequences

There are only a few sequences of three consecutive consonants:

[rdn/rtn], [ldn/ltn] and [rcm]. Additionally there are a few geminated consonants in combination with another consonant: [ddn/ttn], [kkr] and [ʔʔt]². All of these occur only a few times in the material examined, but they nevertheless offer important insights into the phonology:

None of these occur word-initial. The sequence is always liquid-plosive-nasal, or for the geminated cases a sequence of plosive plus liquid or nasal. The place of articulation of all combined consonants is usually the same (alveolar). Exceptions are [kkr] in səkk-re (big_stick-with, 0013) and [rcm] in marcmarco (little green grass, 0986) – the last includes reduplication and is possibly a borrowing.

2.2.1.4 CC sequences

Starting out from Thelwall's table of distributional restrictions for consonants (Thelwall 1983, p.106) I created the following Table 3 and Table 4 to present

2 The voiceless lateral fricative [ɬ] is the result of an assimilation of a sequence of [lh]. It is not phonemic (cf. Werner 1993, p.19) and for that reason not included in Table 2.

the data in more detail. For each of the possible CC combinations, grouped by their place of articulation (POA), the tables include a rough indication of their number (few, many, some, none) and additional comments on the restrictions.

First cons.	Second consonant	
	Plosive	Nasal
Plosive	many only geminated (otherwise spreading of POA)	many only [dn,tn] (same POA) exception marcmarco
Nasal	many only same POA (POA-spreading from plosive plus optional spreading of [+voice] from nasal)	many only geminated
Fricat.	few only [ft] and [sk] ([-voice])	few only [sn]
Liquid	many all plosives except [p] fewer [l] than [r]	(many) fewer [l] than [r]
Approx.	few only with j as part of diphthong [aj, oj]	few only as part of diphthong

Table 3: CC occurrences: plosives, nasals

First cons.	Second consonant		
	Fricative	Liquid	Approx.
Plosive	very few only -h (PRF-marker)	some only -r or in AR loanwords	none
Nasal	very few only -h (PRF-marker)	few only -re or ta m-r-a a-m (don't touch, 1372)	none (one exception)
Fricat.	many only geminated [hh] not possible	few only [fr]	none
Liquid	many only -h (PRF-marker) (few exceptions – borrowings?)	many only geminated more [l] than [r]	some almost only [rw], [lj] as part of diphthong
Approx.	very few only [jh] (PRF-marker, [j] as part of diphthong) exception ʃa wʃa w (1464)	some only as part of diphthong	some geminated or as part of diphthong [ajw]

Table 4: CC occurrences: fricatives, liquids, approximants

To sum up some of the observations: There are a number of restrictions for CC sequences: CC sequences never occur word-initially, neither as geminates nor as a combination of different consonants (the only exception being ʃtaraltirŋa (work), a loanword from Arabic). Geminated consonants are generally possible. CC-sequences consisting of consonants

with the same manner of articulation but different POA are not allowed (exception: approximants as diphthongs).

As for CC-sequences whose consonants differ in the manner of articulation, only two kinds are often encountered: combinations of liquid plus any consonant and combinations of plosive plus nasal and nasal plus plosive, the second group requiring the same place of articulation (or inducing the spread of it). Other combinations are encountered only rarely and thus seem to be restricted.

One solution to conform to these restrictions is the use of a VC-shaped allomorph of a C-shaped morpheme (see next section), another is the spread of the place of articulation to the neighbouring consonant (cf. Tables 3 and 4 above).

2.2.1.5 VC-shaped allomorphs

Werner (1993, p.46) describes the insertion of vowels for phonological reasons to avoid restricted sequences of consonants at morpheme boundaries. In this study, by contrast, I assume that VC-shaped allomorphs of otherwise C-shaped morphemes are employed at morpheme boundaries.

Vowel quality: There seem to be tendencies, but no strict and coherent rules to determine the quality of the vowel of VC-shaped allomorphs. In the verb paradigms in Table 5, the PRF-marker -h appears in a number of VC-shaped allomorphs (-ah, -ih, -oh, -uh). The vowel quality shows adaptation to both, the vowel of the previous and the following syllable. Additionally idiolectal vowel variation should be expected.

Note that the allomorphic vowel in the examples of Table 5 appears between two consonants [g + h] that (with one exception) never appear in sequence in the whole database. Therefore the vowel between these consonants surely fulfils a phonological requirement.

person/number	make-PRF-__	run-PRF-__
1SG	torg -ih-em	tirg -ih-em
2SG	-oh-om	-ih-om
3SG	-uh-um	-oh-um
1PL	-ah-am	-ih-am
2PL	-uh-we	-ih-we
3PL	-ih-am	-ih-am

Table 5: Vowel variation in VC-shaped PRF-suffixes

The vocabulary list of Werner (1993, pp.75 ff.) contains a number of pairs of verbal forms ending in -wa, (IPFV.1SG) and -hem (PRF.1SG). When analysing these pairs for VC-shaped allomorphs, the following observations can be made: [u] never appears before PRF, an [i] before PRF corresponds to [u] before IPFV in a number of cases, but in even more cases it remains [i]. This serves to confirm the overall arbitrariness of vowel quality.

2.2.2 Phonological constraints on vowels

Midob has only a few diphthongs, as Werner (1993, p.22) shows.

Nevertheless some of the diphthongs are used quite frequently, e.g. aagear

(really) and əj (l). The VV sequences that can not be identified point to restricted VV-sequences. So when two vowels would immediately follow each other and therefore would violate phonological rules, a consonant appears between those vowels. This can be shown in the following examples:

so + aag	>	[sowaag]	walk-PROG1	(1207)
so + aa	>	[sowaa]	walk-NEG	(0308)

Here the appearance of [w] is a clear example of a phonological process motivated by restrictions of vowel sequences. Other cases have been found, where it is not clear whether an [r] or [n] appears for phonological reasons or whether the consonants represent a distinct morpheme or if they form their own morphemes (or are an essential part of a morpheme). One example with an additional [n] is attested in Werner (1993, p.50) when he describes combinations of extensions with example verbs: tii-wanaa-hem (drink-INT3.NEG-PRF-1SG, no sentence available):

wa + aa	>	[wanaa]	INT3.NEG
---------	---	---------	----------

2.2.3 Findings and open questions on phonology

In the above sections a number of phonological restrictions and processes have been identified that are relevant for an understanding of Midob verbal morphology. A closer look at the syllable structure of Midob verbs will provide further helpful insights, but is beyond the scope of the present analysis. It can help resolve ambiguities, that is, answer the question whether a specific

structure serves to keep the syllable structure intact or whether it has morphological significance.

2.3 Tone

In this study tone is marked as follows: High tone is marked by an acute accent [á], mid tone normally remains unmarked (to resolve ambiguity it is sometimes marked by a macron [ā]), low tone is marked by a grave accent [à], a falling tone is marked by the combination of an acute and a grave accent [â] and a rising tone by the combination of a grave and an acute accent [ǎ]. In a series of vowels only the first vowel is marked, when all vowels carry the same tone. Additionally to marking tone on vowels, tone is marked on syllabic nasals.

As Thelwall (1983, p.100) claims, a two way tonal contrast would be sufficient to distinguish most lexical items. Werner (1993, p.22) extends this claim to be true for all items, countering a claim by Herman Bell³, who mentions it to possess three tones. Even if it is true that the tonal system can be sufficiently described by two register tones, a two way contrast is not sufficient to describe and explain the complexity of the tonal patterns encountered. The example in Figure 1 illustrates some of the complexities encountered. In this example, as in many others, more than two levels of

3 According to H. Bell (personal communication, June 1, 2010), this difference can also be due to a dialectal variation, since he worked on the Kaageddi dialect, while Thelwall and Werner both worked on the Uurti dialect of Midob.

pitch can be clearly heard and seen across a sentence. In his Midob grammar and in his field notes Werner transcribes Midob as having an underlying two-tone-system. Hoping that a more detailed analysis of tone will be possible in the future, in this study tone is retranscribed from the recordings to reflect surface pitch with an approximation of three levels. Only full sentences are marked for tone.

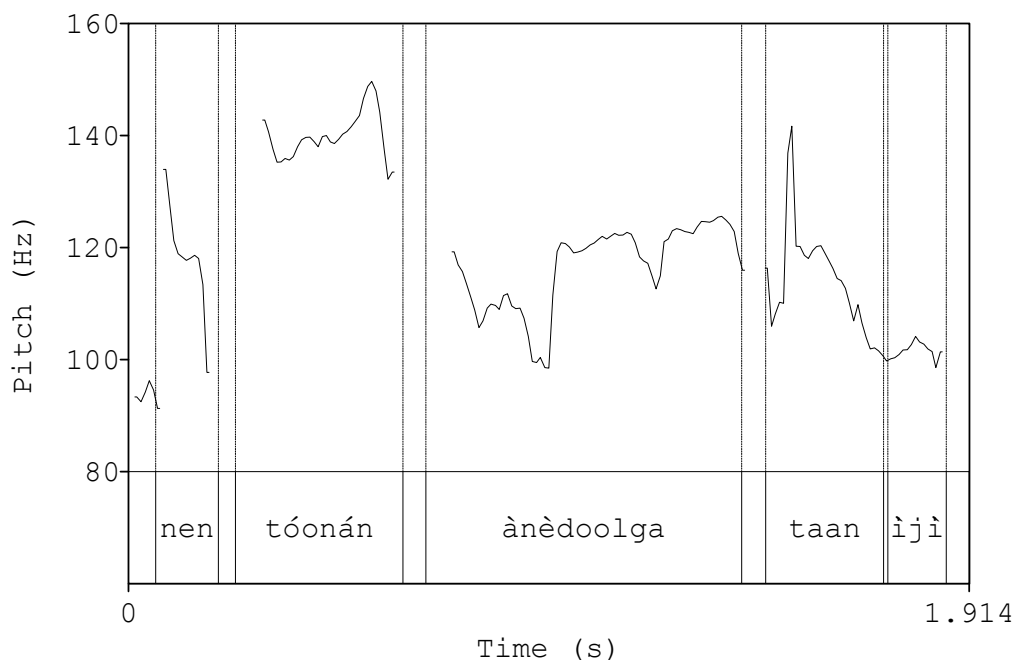


Figure 1: Pitch in sentence 0168

Other sentences exhibit even more tonal complexity. In Figure 2 the pitch-contour can be more precisely described by a five-way contrast: The first and second syllable are rising, the second additionally falling after a peak, the next two syllables have different levels for M and the last two syllables have different levels for L. Of course, much of this can probably be explained by tonological processes, but in this study it will not be possible to

analyse them in detail. The examples only serve to demonstrate the complexity of tonal patterns.

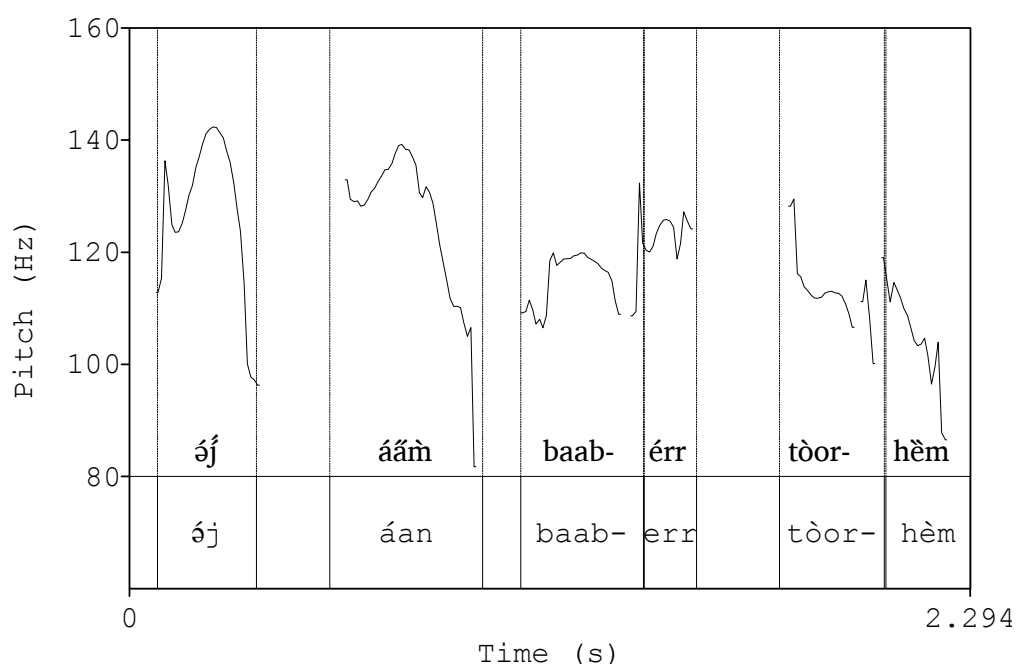


Figure 2: Pitch in sentence 0155

A few observations are worth mentioning: The rising tone at the beginning of sentence 0155 in Figure 2 is a striking feature of many sentences beginning with [əj] (EN 'I'), but it is also seen at the beginning of a few other sentences. The rising tone may be due to an elevated H at the beginning of (some) sentences that causes these contours or a natural pattern of rising. More analysis is needed for a better understanding.

Werner's "pausal tone rule" (1993 p.25)⁴, can be confirmed. It affects the sentence-final syllable which becomes L (or HL). However, in distinction to Werner's claim, interrogative clauses do not seem to be exempt from this

4 For an explanation of the pausal tone rule Werner refers to Nobiin (Werner 1987, p.66), a related Nubian language.

rule. Exceptions from the rule can be found for the various clause types encountered: interrogative, indicative and imperative. A pattern that would explain these exceptions does not emerge from the limited data analysed. The exceptions might even be artefacts of an artificial recording situation.

Concerning the tone specifically for Midob verbs Werner has given a first description (1993, p.45). Since my own tonal analysis is only in the beginning stages, I am currently unable to comment on it.

CHAPTER 3

VERBAL MORPHOLOGY

Midob verbs have an agglutinating or polysynthetic structure that can be illustrated with the following example:

ett-eek-indoo-h-em

buy.PLR-CAUS-CPL2-PRF-1SG

I sold [my goats.]

Moving from left to right through this example, various characteristics of Midob verbs can be observed: The first element is the verbal root, which can be modified in various ways. In this case the root was modified to refer to a plural object. See Section 3.1 for more details on root morphology. After the verbal root Midob allows for a number of derivational suffixes. In this example a causative (CAUS) was added ('cause to buy' i.e. 'to sell'), and a completive (CPL2). Section 3.2 on derivational morphology explains these morphemes in more detail. Finally Midob verbs are used with a number of inflectional paradigms that signal agreement with the person and number of the subject. In the above example the perfect marker PRF co-occurs with the inflectional suffixes of the perfect paradigm (here first person singular). As will be shown later, in the imperfective paradigm a specific imperfective marker is absent, but a characteristic plural marking appears. See Section 3.3 on inflectional morphology for details.

Note, that the above division into derivation and inflection uses these terms differently from their conventional sense. In the above example the completive marker is an inflectional morpheme (as it marks aspect), while the

causative marker is rather derivational. However, both are inserted before the minimal inflectional ending (here a marker for perfect and another for person and number) and thus appear to constitute a distinct group of morphemes. In this study these morphemes are described in the derivational morphology (Section 3.2), even though some of them are rather inflectional in nature. Only those morphemes at the end of a verb, that mark the verb as finite or non-finite (the minimal inflectional pattern) are described in the inflectional morphology (Section 3.3).

A number of non-finite verb forms are used in Midob as well. Section 3.4 is a first attempt to present those forms in a systematic way. A simplified structural overview over Midob verb morphology is provided in Figure 3.

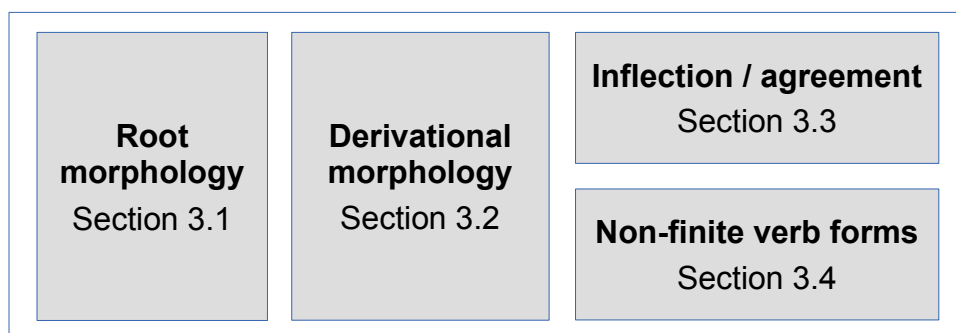


Figure 3: Midob verbal morphology overview

3.1 Root morphology

Modifications of the root are not very frequent. Werner explicitly mentions two modifications, both having to do with marking verbal plurality. Apart from these we will look at two more suggested modifications.

3.1.1 Reduplication of the root

Werner (1993, p.52) presents three examples for partial reduplication of the verbal root that point to plurality of either objects or actors. A few more are attested in the data. Because of their limited number, all cases will be listed.

Here are the examples from Werner:

sot-er-h-em	>	so~sot-er-h-em	to cut (many trees)	(1511/12)
teg-er-h-em	>	teg~eg-ih-em	to tie (many goats)	(1546/7)
tettahem	>	tetekihem	to cut (plurality of actors)	(0113)

For the third example Werner refers in his field notes to Sentence 2 as evidence, which surprisingly expresses subject plural already with Pj.

Therefore the reduplication seems rather due to object plural (they cut many onions) or event plural (they cut onion(s) many times):

2 (0113)	iddédír	ædi-ré	bàsàl	tètèek-ìj-ù(m).
	woman.PL	knife-with	onion	cut.PL?~Pj-IPFV.3

The women cut the onion with a knife.

Therefore all three above cases seem to express object plural. Other examples of reduplication are attested in Werner's wordlist (1993 p.75 ff.), all of them pointing towards plurality of object:

oddirhem	>	ododihem	to put (plural object)
pattihem	>	papatanan	stealing (plural)
tegerhem	>	tegegihem	to bind (plural object, see also tegegnan)
tuffurhem	>	tutuffidn	roasting (plural object)
ukkinan	>	ukkukinan	giving birth (multiple times or children)

In contrast to the above examples, Sentence 3 expresses rather event plural, since an object is not available. In this case *soosodanan* should more precisely be translated as 'to go for walks' or 'for an extended walk'.

3 (1847) áj sóo~so-dàn-an ìi-h-èm.
 1SG walk~PLR-??-CONN come-PRF-1SG

I went for a walk and came back.

The same interpretation is also possible for all above examples: Reduplication could generally express event instead of object plural. If the meaning this reduplication is associated with is that narrow, I would suggest event plurality. If its meaning range is broader, it could point to both, event and / or object plurality. Of course this will need to be checked with speakers of Midob.

Finally I present a case that might represent reduplication, but might also be interpreted differently:

4 (0688) áj tæ əddí tèn-dèm!
 1SG cow two bring~PLR (interpretation 1)
 1SG cow two bring-CPL2 (interpretation 2)

Bring [or give] me two cows!

In case of reduplication (interpretation 1) it encodes event plurality or object plurality, on the other hand (interpretation 2) it can represent a variation of the completive *-ndoo* (cf. the verb *teendi hem*, 'I brought', in Werner (1993, p.129), that seems to include the completive).

3.1.2 Devoicing of a root consonant

Werner (1993, p.52) presents a case where a root consonant is devoiced, while being geminated. This may represent a special case of the above reduplication. Semantically it encodes object / event plural as in the cases above. Formally it may be derived as follows: The reduplication of the verbal root is partial (similar to other cases above) in that it only affects the consonant, resulting in a geminated consonant. The gemination is accompanied by devoicing of the consonant ($d \sim d > dd > tt$).

5 (1585) áj áən óndi ed-eek-indoo-h-èm.
 1SG 1SG.GEN camel buy-CAUS-CPL2-PRF-1SG
 I have sold my camel.

6 (1584) áj áən tér-g ett-eek-ìndòo-h-èm.
 1SG 1SG.GEN goat-ACC buy.PLR-CAUS-CPL2-PRF-1SG
 I have sold my goats.

Note that this verb (including its various derivations) is the only example that was found so far.

3.1.3 Combined roots

Abdel-Hafiz describes compounding of roots (two roots that combine in one verb) of a related language in his Kunuz Nubian Grammar (1988, p.123 ff.). This section looks at possible equivalents in Midob. The following is one of many examples that may belong to such a category:

7 (1207)	òon sów-ág-anán	tek-er-h-ùm.	
	3SG walk-sit-CVB1	stop-Per?-PRF-3SG	(interpretation 1)
vs.	3SG walk-PROG1-CVB1	stop-Per?-PRF-3SG	(interpretation 2)

He stopped walking.

The above example can be interpreted in two different ways: As a combination of two adjacent lexical verb roots (so 'walk' + aag 'sit') of which only the second takes the inflectional suffixes (interpretation 1), or as a lexical verb root combined with another grammaticalized verb, that takes the inflection suffixes (aag 'PROG1', interpretation 2). I would argue rather for the second interpretation, since it better fits the free translation and there is no evidence to the contrary.

Note that contrary to Kunuz Nubian, in Midob the second element carries grammatical function, while in Kunuz Nubian it is the first element that carries grammatical information. In Midob (as will be shown later) the degree of grammaticalization is not clear and rather seems to form a continuum. In this study I will treat the second root as a grammaticalized morpheme, while recognizing different degrees of grammaticalization.

3.1.4 Suppletive roots

Werner (1993, p.53) lists a few verbs as being used for subject “plural only (plurale tantum)”. Since they form a kind of suppletive root with other forms that are used for singular (according to Werner with the special property that the singular forms can be used for plural as well). Here we will have a closer look at the examples given and their use in sentences:

toor-hem (SG except 1043)	ott-aham (PL only)	to enter
ukkur-hem (SG + PL)	ottər-jum (PL only)	to put
tii-hem (SG + PL)	ettanii-jum (PL?)	to die
pedi-hem (SG, 1552 only)	pees(ir)-ham (PL + SG?)	to leave

The first two examples fit Werner's description while the third needs to be discussed. The verb *ettaniiyum* (to die) appears only in one sentence, which I would interpret differently. It is possibly related to *ettanum* (to finish) which is used in SG as well – in which case it does not fall into the category of plural only but is rather used as a synonym of *tiihem*:

8 (0085)	tìd-ń	oor-ár	íij-én	təə	pocc-íccí-r
	Midob-GEN	mountain-LOC	exist-CONN	cow	all-INTS-SBJ ⁵
	ètt-àn	ij-(ùm)			
	finish-CONN	exist-IPFV.3			

All cows that existed on Jebel Midob have died.

9 (1729)	sukkàr	ètt-àn-um.
	sugar	finish-??-IPFV.3SG

The sugar is finished.

The fourth example given only appears in very few sentences that are debatable as well – I will leave it out of the current analysis. In a different note Werner (1993, p.50) mentions another plural verb that appears similarly distributed to the above:

5 Werner (1993, p.28) notes that -r (here glossed SBJ) in the past possibly had “some sort of determinative function” but has lost this function today, while it still appears to play a role in phonology (it appears mostly after a word-final vowel). Its marking of the subject is optional.

aag-ahem (SG+PL)

tel-ham (PL)

to sit

Looking just at the few sentences that use the above verbs, both forms are always used in a suppletive way (aag for SG and tel for PL). But a glance at the recorded verb paradigms presents a different picture. The verb aag is almost exclusively used – for singular as well as for plural. Only in one paradigm (out of 22) the speaker switches to tel for the plural. Additionally both forms are being used as a suffix to mark progressive, where both forms again supplement each other in a similar way. For a discussion of these see Section 3.2.4.6.

3.2 Derivational morphology

In this chapter I will describe morphemes that are somehow separable from the inflectional paradigms. They are not purely derivational in character, as the heading may suggest, but their various properties characterize them as being either predominantly derivational or inflectional (see Haspelmath & Sims 2010, p.98).

The morphemes concerned appear to a differing degree in the literature on Midob: While Thelwall (1983, p.106) explicitly presents only one such morpheme (Negation), Werner describes a large number of morphemes mainly in his chapters on “Verbal extensions” (1993, pp.49-51) and “Internal verbal modifications” (1993, pp.51-55) and in a few separate sections on loanword derivation and expressing the concept 'to have' and 'to be' (1993, pp.56-57).

In my study each morpheme is presented with a short description, an illustrative example, and a table with the known allomorphs and the morphemes it can be combined with. Often a note is added on the productivity of the morpheme, or rather on “the number of actual words formed according to [this morphological] pattern” (Haspelmath & Sims 2010, p.129). According to Haspelmath & Sims, this does not exactly measure the productivity of a morpheme, and in our case an accurate judgement is severely limited by the available data, but it nevertheless gives a first impression on how broadly a morpheme is used.

The morphemes are grouped into categories they seem to constitute – semantically as well as by the order in which they appear (morphemes that do not exactly fit any category are assigned to the best fit). The categorization is hoped to reflect the intuitive categorization and ordering of the morphemes for Midob speakers, but the present ordering can only be a suggestion. More research will be necessary for a better classification.

3.2.1 Derivation from other word classes

3.2.1.1 Loan marker LOAN (-tir)

According to Werner (1993, p.56), the suffix -tir is used to derive verbs from Arabic. This is found to be generally true. One of the many examples is given below, where *kəre* is a borrowing based on the Arabic verb 'to read'.

10 (1906)	òon	madrasà-rár	uccédí	kəre-tìr-eek-um.
	3SG	school-LOC	child.PL	study-LOAN-CAUS-IPFV.3

He teaches the children in the school.

The morpheme *-tir* is used to integrate many different Arabic lexemes (verbs and even a noun) into the Midob language, thus becoming Midob verbs: *iid-itir-h-am*, *celebrate-LOAN-PRF-13PL*, 2567).

Nevertheless there are questions regarding the above understanding: A few examples can be found, whose origin as a loanword cannot yet be determined, e.g. *ardangirid-tir-h-am*, (they surrounded us, 1877) or *coo-tir-on-um* (*split-LOAN-CPL1-IPFV.3*, 0178). To confirm the above description of the morpheme, the origin of the loanword (from Arabic or another language) needs to be identified, otherwise the verbs should be analysed differently, representing a morpheme different from *LOAN*. If both is not possible, the interpretation of *-tir* as a loanword marker must be questioned.

Interestingly in a few other cases the incorporation of an Arabic loanword does not require the loanword marker, e.g. *kusi-n-um* (*break-?-IPFV.3*, 0169) or *kuss-er-aa-m* (*break-Per-NEG.IMP.SG*, 0182), *telig-idn-oo-h-em* (*divorce-??-CPL2-PRF-1SG*, 1899). A reason for omitting the loanword marker might be that the loanword perfectly fits into the Midob phonology and verb structure (or was made to fit it). Another possible reason can be a different time of incorporation for those that are not using *-tir* than those that use it.

The morpheme *-tir* shares a strong formal similarity with the Midob verb *tir-h-em* (to give, see Werner (1997, p.132) or 0240), which makes a

Allomorphs of LOAN

Gloss	Form	Example	EN gloss/translation	Ref.
LOAN	-tir	kære-tir-eek-um	study-LOAN-CAUS-IPFV.3	1906
LOAN	-itir	koof-itir-h-em	fear-LOAN-PRF-1SG	1225

Combinations with LOAN

Gloss	Form	Example	EN gloss/translation	Ref.
INT2	-ɲa	rakaa-tir-ɲa-wa	pray-LOAN-INT2-IPFV.1	1066
CPL1	-on	wasix-tir-on-um	dirty-LOAN-CPL1-IPFV.3	0068
CPL2	-ndoo	hamil-tir-andoo-h-em	forgive?-LOAN-CPL2-PRF-1SG	1920
REFL	-rat	axxir-tir-rati-h-em	late-LOAN-REFL-PRF-1SG	2310
HAB	-ke	haafiz-tir-ke-ni(-j-um)	keep-LOAN-HAB-ITIV(-Pj-IPFV.3)	0014
NEG	-aa	kədəm-tir-aa-m	work?-LOAN-NEG-IPFV.3	0583
PROG2	-tel	kære-tir-atel-j-um	read-LOAN-PROG2-Pj-IPFV.3	1914
CAUS	-eek	kære-tir-eek-um	study-LOAN-CAUS-IPFV.3	1906
??	-(r)at	tuub-itir-at-n-um	repent-LOAN-??-??-IPFV.3	1163

Table 6: LOAN (-tir): Allomorphs and combinations

relationship between these two forms conceivable. Other derivational morphemes are clearly derived from Midob verbs, but in this case a plausible semantical relationship between the two forms still needs to be found to support their relationship.

3.2.1.2 The verbalizer VBLZ (-a(n))

When writing about the verb 'to be', Werner (1993, p.57) points out that the “morpheme -á(n)- can be added to any noun, both substantives and adjectives. Verbal extensions such as negation, habitual action etc. can also be added.” The morpheme he describes derives a verb from an adjective or

noun. Thelwall (1983, p.108) describes the same phenomenon under the heading “Copula Construction”, but lists only a selection of the paradigm. In Sentence 11 the verb is derived from the adjective *saṇacci* (small), in Sentence 12 from the noun *tediti* (girls).

- 11 (0200) əən kàt sàṇaccì-jà-m.
 1SG.GEN son small-VBLZ-IPFV.3

My son is small.

- 12 (2526) ner əən tedit-à-j-ùm.
 this 1SG.GEN girl.PL-VBLZ-Pj-IPFV.3

These are my daughters.

To demonstrate how the morpheme changes across a paradigm I will supplement the example from Werner (1993, p.57) with a paradigm from Mohamed Issa Mahmoud (personal communication, March 2014):

person	SG (I am Midob...)	PL	SG (I am small...)	PL
1	tid-an-wa	tid-a-j-wa	saṇaccij-an-wa	saṇacc-a-j-wa
2	tid-an-we	tid-a-j-we	saṇaccij-an-we	saṇacc-a-j-we
3	tid-a-m	tid-a-j-um	saṇaccij-a-m	saṇacc-a-j-m

The suffix *-an* appears to have several allomorphs. The allomorph *-an* appears with first and second person singular imperfective forms which are marked by *-wa* and *-we*, respectively. When followed by the third person singular suffix *-m* or by the plural marker *Pj*, the nasal of the suffix *-an* is deleted. The corresponding perfect paradigm is not available. In the above

example where the stem ends in [i] (saḡacci, small), [i] is deleted for the plural forms and supplemented with [j] for the singular forms.

Allomorphs of VBLZ

Gloss	Form	Example	EN gloss/translation	Ref.
VBLZ	-an	mabsuut-an-wa	content-VBLZ-IPFV.1	1147
VBLZ	-a(n)	koḡḡ-ert-a-m	build-NMLZ-VBLZ-IPFV.3 (he is a builder)	0228
VBLZ	-ja(n)	paḡatte-ja-m	old_man-VBLZ-IPFV.3	0080
VBLZ	-ija(n)	perr-ija-m	big-VBLZ-IPFV.3	0185

Combinations with VBLZ

Gloss	Form	Example	EN gloss/translation	Ref.
NEG	-aa	aagid-an-aa-h-um	truth?-VBLZ-NEG-PRF-3SG (it is not true)	2096

Table 7: VBLZ (-a(n)): Allomorphs and combinations

The morpheme can be combined with the morpheme for negation. Other combinations (e.g. with the morphemes marking habitual, completive) can not be confirmed by the available data. This is of course disregarding combinations with the suffixes described in the inflectional morphology, see Section 3.3.

3.2.1.3 The verbalizer 'to have' (-oḡam)

Werner (1993, pp.56-7) includes a section on the verb 'to have': Next to the ordinary verb he mentions a special suffix -oḡam that can be added to adjectives to mark possession in singular: tæər eemi tass-oḡam (the cow has a long tail, 0730). In the sentence database this morpheme appears in a

number of cases. It would be interesting to see whether (and how) similar forms are used for other person and number combinations, or whether this is the only form.

3.2.2 Valency changes and adjustments

3.2.2.1 Causative CAUS (-eek)

According to Werner (1993, p.54), the causative can be expressed with the suffix *-eek*. A causative normally increases the valency of a verb (the subject becomes object and a new subject is added), although in Midob this does not seem necessary. See Sentence 13 for a rather typical causative and Sentence 14 for an example with an added subject but omitted object, resulting in a change of roles instead of an added participant.

- 13 (2361) *áj ná èeba-ratij-èek-ih-em.*
 1 SG 2 SG.ACC wash-REFL-CAUS-PRF-1 SG

I caused him to take a bath.

- 14 (2506) *áj áən tér-g ett-eek-ih-èm.*
 1 SG 1 SG.GEN goat-ACC buy.PLR-CAUS-PRF-1 SG

I sold my goats.

The suffix is attested on a number of verbs. For some of them the use as a derived causative form is quite straightforward (e.g. 'to sell' as 'cause to buy'), for other examples the causative function of the suffix is questionable

(e.g. *kàŋŋ-èk-aa-j-ù m*, laugh-CAUS-NEG-Pj-IPFV.3, they do not laugh, 0195).

The suffix may have lost its function in some instances, or the given translations are not clear enough.

Allomorphs of CAUS

Gloss	Form	Example	EN gloss/translation	Ref.
CAUS	-eek	ett-eek-ih-em	buy.PL-CAUS-PRF-1SG	2506
CAUS	-ek	kanɲ-ek-aa-j-um	laugh-CAUS-NEG-Pj-IPFV.3	0195

Combinations with CAUS

Gloss	Form	Example	EN gloss/translation	Ref.
NEG	-aa	kanɲ-ek-aa-j-um	laugh-CAUS-NEG-Pj-IPFV.3	0195
INT2	-ɲaa	teg-er-eek-iɲaa-wa	stay-Per?-CAUS-INT2-IPFV.1	0007
CPL2	-ndoo	ed-eek-indoo-h-èm	buy.SG-CAUS-CPL2-PRF-1SG	1585

*Table 8: CAUS (-eek): Allomorphs and combinations***3.2.2.2 Reflexive REFL (-rati)**

Werner (1993, p.53f) comments on a few cases of reflexivity, marked by the suffix -(r)ati. As he remarks, the origin of the suffix is not clear. Perhaps further analysis of the suffix is possible as it consists of two syllables. It reduces transitivity in that agent and patient are co-referential.

15 (2360)	áj	eeba-ratí-h-èm.	áj	eeba-rat-ùwà.
	1SG	wash-REFL-PRF-1SG	1SG	wash-REFL-IPFV.1
		<i>I took a bath.</i>		<i>I take a bath.</i>

Allomorphs of REFL

Gloss	Form	Example	EN gloss/translation	Ref.
REFL	-rati	tag-rati-h-em	sit?-REFL-PRF-1SG/cover myself	1860
REFL	-rat	eeba-rat-ùwà	wash-REFL-IPFV.1	2360
REFL	-(r)at	axxir-tir-(r)ati-h-em	late-LOAN-REFL-PRF-1SG	1707
REFL	-ratij	eeba-ratij-eek-ih-em.	wash-REFL-CAUS-PRF-1SG	2361

Combinations with REFL

Gloss	Form	Example	EN gloss/translation	Ref.
CAUS	-eek	eeba-ratij-eek-ih-em	wash-REFL-CAUS-PRF-1SG	2361
CPL1	-on	tag-rat-(o)n-um	cover-REFL-CPL1-IPFV.3	1857

*Table 9: REFL (-rati): Allomorphs and combinations***3.2.2.3 Transitive TRR (-ir)**

When Werner (1993, pp.53-4) writes about marking transitivity, he presents examples for transitivity marked by -ir. See the corresponding Sentences 16 and 17, working similarly with pecc-ih-em / pecc-ir-h-em (to get up / to wake up somebody, 1240/41). The morpheme seems to function as a transitivity marker.

- 16 (1662) áj keeci timm-íir-h-è.m.
 1SG grass gather-TRR-PRF-1SG

I gathered grass.

- 17 (1663) aadí tummanicci timm-ih-àm.
 1PLI all gather-PRF-13PL

We all gathered.

A number of similar examples can be identified that confirm the interpretation of *-ir* as a transitivizer. The morpheme may be easily confused with the verbal plural suffix *-er* (see Section 3.2.3.3) due to their phonetic similarity.

Allomorphs of TRR

Gloss	Form	Example	EN gloss/translation	Ref.
TRR	-ir	aand-ir-e kell-ai-wa	take-TRR-INF1 want-Pj-IPFV.1	p035.06
TRR	-iir	timmm-iir-h-em	gather-TRR-PRF-1SG	1662
TRR	-er	teg-er-h-em	stay-TRR-PRF-3SG	1546
TRR	-it	pagall-it	turn-TRR (as imperative)	0376

Combinations with TRR

Gloss	Form	Example	EN gloss/translation	Ref.
CPL1	-on	odd-er-on-um	hurt-TRR-CPL1-IPFV.3	0249
CAUS	-eek	tek-er-eek-u	stop-TRR?-CAUS-IMP	1206
??	-erti	eeg-ir-erti-h-em	tell-TRR?-??-PRF-1SG	2388

Table 10: TRR (-ir): Allomorphs and combinations

3.2.3 Verbal plurality and directionality

This section is concerned with morphemes that modify the verb in ways, other than TAM or valency changing morphemes. Since some of the following verbal plural morphemes appear to differ only in their segmental representation, their form was used for their glossing which reflects both aspects: the perceived typical form of the suffix is attached to a 'P', which stands for plural marking, for example Pid, Per.

3.2.3.1 Verbal plural Pid (-id)

Werner (1993, p.52) lists the suffix -id as one of several “internal verbal modifications”, expressing “plurality of action” and provides one example:

18 (0670)	nen	iddi-r	úcc	eeɲè	ùkk-id-an	òn-ùm.
	this	woman-SBJ	child	many	bear-Pid-CONN	have-IPFV.3

This woman kept on giving birth to many children.

The Pid suffix is directly attached to the verb root. The meaning range expressed by the suffix is not very specific from the given translation: In the above example Pid may either express a repetition of a whole process (giving birth) or rather point towards plurality of the object (the child). Another example points rather to a process that is in itself repetitive but is completed only once: *koɲɲ-id-anan* (build a house, 1043).

In sum, the morpheme does not seem to be very broadly used as it appears only a few times in the data available. It is used to mark different kinds of plural (object and event plurality) on the verb.

Allomorphs of Pid

Gloss	Form	Example	EN gloss/translation	Ref.
Pid	-id	kocc-id-ah-em	slaughter-Pid-PRF-1SG	1538

Combinations with Pid

Gloss	Form	Example	EN gloss/translation	Ref.
??	-an	koɲɲ-id-an-an	build-Pid?-??-CVB1?	1043

(It is not clear, whether -an- is part of the following suffix or forms a morpheme in its own right)

Table 11: Pid (-id): Allomorphs and combinations

3.2.3.2 Verbal plural Pii (-ii)

Werner (1993, p.51) presents three examples with the verbal plural marker -ii, two of them with questions (missing audio recording for kettahem / kettiitem and debatable interpretation for ukkurhem / ukkukkihem). Only a few more examples appear in Werner's word list and in the sentence collection. The clearest example can be found in the following sentences:

19 (1607)	òon aadí sùkk-ìij-uh-um.	(1608)	òon á-k sukk-ah-um.
	3SG 1PLI beat-Pii-PRF-3SG		3SG 1SG-ACC beat-PRF-3SG
	<i>He beat us.</i>		<i>He beat me.</i>

Werner does not describe the semantic function of the marker in detail, only translations of the examples are given (several objects / several times and/or objects). One difficulty with the data available is that Pj can be easily mistaken for Pii. That excludes imperfective sentences with subject plural from the analysis, since no example is available to demonstrate how Pii and Pj work together. To give an impression of Pii's use, a few more examples are provided below:

kettahem	>	kettiitem	to lead (PL OBJ)	(1608/09s, word list)
tokkahem	>	tokkiitem	to milk (PL OBJ)	(word list)
pirkaham	>	pirkiitem	to scatter (SBJ intrans)	(1846)

Form	Example	EN gloss/translation	Ref.
-ii	sukk-ii-h-em	beat-Pii-PRF-1SG	1603
-iij	sukk-iij-uh-um	beat-Pii-PRF-3SG	1607

Table 12: Pii (-ii): Allomorphs

3.2.3.3 Verbal plural Per (-er)

Werner (1993, p.52) presents -er as another verbal plural marker. He adds that it can no longer “be clearly identified with plurality of object only” (in contrast to Kunuz, a related Nubian Language). Sentences 20 and 21 are two similar sentences that demonstrate the use of Per: Sentence 20 shows a sentence without the use of Per, while in Sentence 21 Per is added. The difference between both sentences point to the meaning of Per: it refers to a plural object (the small children vs. the small child). Both sentences are addressed to a plural subject (contrary to the translation given by Werner) as the addressee of the request is in both cases marked for plural (IMP.PL).

20 (0240) kúccó saɲáccí àldì tir-ic!
 infant small food give-IMP.PL

Give food to the small child (said to SG)! [original translation]

Give food to the small child (said to PL addressee)! [corrected translation]

21 (0241) uccédí tèré àldì tir-er-ìc!
 child.PL small food give-Per-IMP.PL

Give food to the small children (said to PL)!

Other examples are less obvious: The translation of Sentence 22 does not account for a plural object but the verb is marked with a suffix *-er*.

Possibly the plural object is expressed by pəəl-g with an unmarked nominal plural. On the other hand -er might refer to increased transitivity, which is marked by the phonetically similar morpheme -ir (TRR), cf. Section 3.2.2.3.

22 (0109) áj péal-g eŋ-er-àwà.
 1SG dog-ACC fear-Per?-IPFV.1

I fear the dog.

Currently the meaning of Per cannot be clearly identified, but it can be much clearer after cases of TRR have been sorted out. Some examples point towards plurality in a broader sense. In Sentence 23 the morpheme in question may be interpreted as a transitivizer (don't break **it**!) or as Per. The second interpretation appears more likely when we compare Sentence 23 with *kuss-u* (open-IMP.SG in 'Open the door of the house!', 0236): both verbs are similarly transitive, so that the interpretation of *-er* as transitivizer can be ruled out. If interpreted as Per, *-er* in *kuss-er-aam* seems to be an expression of a rather intensified action, pointing towards a plural in a broader sense (translated either as 'don't totally break' or 'don't break into pieces').

23 (0182) nen gálamì kùss-ér-aàm!
 this pencil open-Per?-NEG.IMP.SG

Don't break that pencil!

Allomorphs of Per

Gloss	Form	Example	EN gloss/translation	Ref.
Per	-er	tel-er-h-am	sit-Per-PRF-13PL	1570

Combinations with Per

Gloss	Form	Example	EN gloss/translation	Ref.
NEG	-aa	tel-er-aa-h-am	sit-Per?-NEG-PRF-13PL	1571
CAUS	-eek	teg-er-eek-ij-um	stay-Per?-CAUS-Pj-IPFV.3	0006

*Table 13: Pid (-id): Allomorphs and combinations***3.2.3.4 Verbal plural Pc (-c)**

Finally Werner (1993, p.52) presents another marker regarding plurality: -c (or -ca) as marking subject plural – being a possible variant of Pj. One example verb he lists that appears in Sentence 24.

- 24 (1977) òŋŋá-r pèele ìi-ca-h-àm.
 3PL yesterday come-PC-PRF-13PL
 They came yesterday (individually or in small groups).
- 25 (2562) kéal tìd-ń oor-ar íi-cà-j-ùm.
 camel Midob-GEN mountain-LOC exist-PC-Pj-IPFV.3
 There are camels on Jebel Midob.

Judging from the examples above the picture appears slightly different: Pc cannot be a functional variant of Pj since these verbal suffixes have a different distribution: Pj only appears in imperfective forms while in Sentence 24 Pc it is used in conjunction with perfect. In Sentence 25 Pc even appears in conjunction with Pj. Nevertheless it is conceivable that Pc

historically derives from Pj, as they are phonetically similar (-ɟ, an allomorph of Pj, is a palatal plosive like -c).

Semantically both sentences point into a different direction than subject plural. Since subject plural in both cases is already encoded in the person and number agreement markers which follow Pc, it is quite possible that Pc encodes event plurality: in Sentence 24 the sequential arrival of several small groups and in Sentence 25 possibly the distributed existence of many groups of camels across Jebel Midob.

The examples above are the only clear ones that can be identified. Additionally a small number of sentences are found with a more uncertain analysis like the following:

26 (2366)	àŋŋá-r	èd-k	aŋ-ar-cí-n	ojùm.
	they-SBJ	man-ACC	take?-PNCT?-PC?-CONN?	have-Pj-IPFV.3
	<i>They (women) have married.</i>			

The question marks indicate uncertainties in analysis. The verb aŋarcin is the exact same form as in a similar sentence (we will catch birds, 2368). If the above analysis is correct, Pc can again stand for the number of weddings necessary to marry these women (or the number of bird catches) – again event plurality. At this stage no statement can be made regarding the productivity of Pc.

3.2.3.5 Directionality marker ITIV (-n)

The morpheme -n refers to directionality. Werner (1993, p.54) calls it an applicative (pointing to an indirect object) that describes a motion away from

the speaker. Since only few example can be verified, I cannot add to this.

One difficulty with finding suitable examples is that -n appears in a number of other morphemes as well.

For the opposite direction (towards the speaker) Werner (1993, p.55) presents the morpheme -int with the example ətintihum (he sent to me), but this and further examples cannot be verified by the audio recordings available. As a result I can only give examples on the ITIV (a motion away from the speaker).

27 (1314) əj ná cawaab àət-n-ìh-èm.
 1SG 2SG.ACC letter send-ITIV-PRF-1SG
 I sent a letter to you.

28 (1315) əj cawaab àət-ìh-èm.
 1SG letter send-PRF-1SG
 I sent a letter.

The few examples available use the ITIV in a consistent way.

Allomorphs of ITIV

Gloss	Form	Example	EN gloss/translation	Ref.
ITIV	-n	əət-n-ìh-em	send-ITIV-PRF-1SG	1314

Combinations with ITIV

Gloss	Form	Example	EN gloss/translation	Ref.
INT2	-ŋaa	əət-n-iŋaa-tan	send-ITIV-INT2-INT.1	1316
INT3	-wa	əət-n-awa	throw-ITIV-INT3	0167

Table 14: ITIV (-n): Allomorphs and combinations

3.2.4 TAM not encoded in inflection

3.2.4.1 Completive CPL1 (-on)

Werner (1993, p.49) lists under “verbal extensions” two different morphemes to mark completed action: -no(n) (here glossed as CPL1) he describes as “Affirmation” (e.g. I completely / really drank) and -ndoo (here glossed as CPL2) he describes as “Completed / effective action”. The differences between both morphemes in usage and meaning are not clear, but the first seems less grammaticalized. We will look at it in more detail now.

29 (0178) tòrká-r ákan kàar coo-tír-on-ù(m).
 lightning-SBJ that(far) tree split-LOAN-CPL1-IPFV.3

Lightning has split that tree.

The morpheme is clearly related to the verb oohem / on(u)wa (to have) and seems to bear that same meaning. The low degree of grammaticalization can be illustrated with the following paradigm (təgəraan ohem, I have not closed):

person	SG	PL
1	təg-ər-aan o-h-em	təg-ər-on-aa-h-am
2	-om	-we
3	-um	-am

Comparing the singular and plural, a change in order can be observed: the sequence aano in singular becomes onaa in plural. Since the order of the morphemes can be seen as stable, the following explanation

seems plausible: -aa (NEG) has a nearly final position in the derivational slots. Thus the first plural form can be analysed as close-??-CPL1-NEG-PRF-13PL (we have not closed). To explain the singular form, it is not sufficient to suppose an exchange of CPL1 and NEG morphemes as this would force them to appear in a wrong position. To suppose a word boundary could explain the construct. The verb is then analysed as two separate words where the discussed morphemes perfectly fit a known pattern:

'close-??-NEG-CONN have-PRF-1SG'. As a result in the same paradigm we have fluctuation between the grammaticalized morpheme -on (CPL1) and the verb it is derived from: oohem / on(u)wa (to have). Similar fluctuation can be observed at other places as well. To suppose that the morpheme is not grammaticalized at all (i.e. always function as a full verb) would raise a number of other questions. Verbs like aar-on-aa-m (take-CPL1-NEG-IPFV.3, he has not married, 0150) then must be analyzed either as aar-on aa-m (take-CONN? NEG-IPFV.3), leaving us with an unknown finite verb aam or as aar on-aa-m (take have-NEG-IPFV.3), where the first verb is the pure stem (that possibly includes some derivational morphemes) – the form used for the imperative! Both versions do not seem plausible.

This simplifies Werner's -no(n) to -on for the completive, while sequences like no or non should be checked for a word boundary, as in the following example (the verb originally was transcribed as ukkanonum):

30 (0004)	nen	tii	àccí	ukk-án	on-ùm.
	this	sheep	lamb	bear-CONN	have-IPFV.3

This sheep gave birth to a lamb.

Allomorphs of CPL1

Gloss	Form	Example	EN gloss/translation	Ref.
CPL1	-on	coo-tír-on-ù(m)	split-LOAN-CPL1-IPFV.3	0178

Combinations with CPL1

Gloss	Form	Example	EN gloss/translation	Ref.
NEG	-aa	aar-on-aa-m	take-CPL1-NEG-IPFV.3	0150
INT2	-ηaa	eegir-on-ηaa-h-em	answer-CPL1-INT2-PRF-1SG	Werner 1993, p.50

Table 15: CPL1 (-on): Allomorphs and combinations

3.2.4.2 Completive CPL2 (-ndoo)

Werner (1993, p.49) lists a second completive morpheme, -ndoo, among the “verbal extensions”. According to him, it denotes “Completed / effective action”, but more detail is not known. An example is seen in Sentence 31.

31 (2380)	òon	saar	eeɲè	étt-éek-indoo-h-um.
	3SG	thing	many	buy.PL-CAUS-CPL2-PRF-3SG

He sold many things.

Interestingly the morpheme appears also in conjunction with the verb oohem (to have), which is related to the first completive morpheme (see CPL1 in Section 3.2.4.1). It is not clear in which way both forms supplement each other. See Sentence 32 for an example.

32 (0634)	ùmmì-r	àn	áən	áccì	pe-ndoo-n	òn-ùm.
	leopard-SBJ	that	1SG.GEN	donkey	kill-CPL2-CONN	have-IPFV.3

A leopard has killed this donkey of mine.

Allomorphs of CPL2

Gloss	Form	Example	EN gloss/translation	Ref.
CPL2	-ndoo	pe-ndoo-n	kill-CPL2-CONN	0634
CPL2	-indoo	eed-eek-indoo-h-um	buy-CAUS-CPL2-PRF-3SG	2379
CPL2	-andoo	hamil-tir-andoo-h-em	forgive?-LOAN-CPL2-PRF-1SG	1102
CPL2	-undoo	ug-undoo-h-em	lose-CPL2-PRF-1SG	1665

Combinations with CPL2

Gloss	Form	Example	EN gloss/translation	Ref.
NEG	-aa	sokko-ndoo-aa-h-em	carry-CPL2-NEG-PRF-1SG	Werner 1993, p.50

Table 16: CPL2 (-ndoo): Allomorphs and combinations

3.2.4.3 Habitual HAB (-kə), HAB.NEG (-kaa)

According to Werner (1993, p.49), habitual is expressed with the suffix -kə.

My data suggests that it is rather a rare allomorph of -kə, which is more frequently used.

33 (p036.06)	áj	indér	íi-kə-h-em.
	1SG	here	live-HAB-PRF-1SG

I used to live here.

Similar to -on (CPL1) this morpheme seems only weakly grammaticalized. It is related to the verb *kəhem* (to say) and is used in a similar way as the separate verb.

For the negation two versions exist, as already Werner (1993, p.50) notes. One is the combination of both morphemes NEG-HAB, the other is a fusion of both in one morpheme -kaa (HAB.NEG). This morpheme has as well a counterpart in the verb *kaahem* (to not say, 2521). In one recorded paradigm fluctuation between both versions can be observed (i.e. *təg-ər-aa-kə-h-em* vs. *təg-ər-kaa-h-em*, used to close).

Allomorphs of HAB

Gloss	Form	Example	EN gloss/translation	Ref.
HAB	-kə	ii-kə-h-am	live-HAB-PRF-2PL	p036.05
HAB	-ikə	toot-ikə-j-um	dance-HAB-Pj-IPFV.3	1555
HAB	-ake	ett-ake-h-em	buy.PL-HAB-PRF-1SG	2531
HAB	-ku	òo-ku-h-am	have-HAB-PRF-13PL	0106
HAB	-ke	haafiz-tir-ke-ni(-j-um)	keep-LOAN-HAB-ITIV(-Pj-IPFV.3)	0014

Combinations with HAB

Gloss	Form	Example	EN gloss/translation	Ref.
ITIV?	-ni	əəji-kə-ni-j-um	fight-HAB-ITIV?-Pj-IPFV.3	0124
NEG	-kaa	təg-ər-kaa-h-em	close-??-HAB.NEG-PRF-1SG	paradigms

Table 17: HAB (-kə): Allomorphs and combinations

3.2.4.4 Intentional INT2 (-ɲaa)

Werner (1993, pp.49-50) lists the different combinations of -ɲaa (INT2) in his table of “Verbal extensions” with short notes on their use. In conjunction with different inflectional paradigms INT2 expresses the following:

comment (Werner)	example (Werner)
IPFV Definite future / intention	teffirɲaawa, I will help at a certain point
PRF Intention in past / not realized	sokkorɲaahem, I wished I had carried
INT Far future	eegirɲaatan, I will answer later

No verb can be proposed where INT2 supposedly derived from. The sentence database provides a few valuable examples of its use (none of it in PRF though) that also contain a number of allomorphs. Derivational morphemes that follow INT2 are not known.

34 (0015)	wàllè	ii-nàn	agàé	kar-re	səər-ɲá-j-wà.
	well	come-CVB1	then	village-LOC	go-INT2-Pj-IPFV.1

After going to the well we will go home.

Form	Example	EN gloss/translation	Ref.
-ɲaa	ii-ɲaa-wa	come-INT2-IPFV.1	1589
-ɲa	səər-ɲa-j-wa	go-INT2-Pj-IPFV.1	0037
-aɲaa	ag-aɲaa-tan	sit-INT2-INT.1	1960
-iɲaa	əət-n-iɲaa-tan	send-ITIV-INT2-INT.1	1316

Table 18: INT2 (-ɲaa): Allomorphs

3.2.4.5 Intentional INT3 (-wa)

Another morpheme expressing some kind of intentional is listed in Werner (1993, pp.49-50) with the negation and one example each. One of the very few examples in a complete sentence is given below:

35 (0167)	nen	fúul	porɲedi	əət-n-àwà-Ø!
	this	peanut	husk	throw-ITIV-INT3-IMP.SG

Throw this peanut's husk away!

As has been verified⁶, the form in Sentence 35 is indeed a morphologically unmarked imperative, and not an imperfective ending. Interestingly the morpheme appears at various places without being explicitly marked: in the imperfective interrogative paradigm of Thelwall (1983, p.107) as well as in a number of recorded paradigms of Werner. Below the first singular forms of the paradigms containing INT3 from the verb *tii* (to drink) are given with a comment from Werner's notes. This should give an impression of the different uses of INT3 (morpheme boundaries added):

paradigm	comment
əj tii-wa-nija	Will I drink?
əj ondaren ti-wa-nija	When will I drink?
əj ti-wa-hem	past intentional
əj ti-wa-naa-hem	neg past intentional

In the last example the morpheme marking NEG appears as *-naa*, which is an allomorph of *-aa*. This allomorph is necessary to mark the boundary between both elements of the sequence INT3-NEG.

6 Thanks to Mohamed Issa Mahmoud (personal communication, March 2014) for supplementing the data: əət-na-wa-hem (I liked to throw), əət-hem (throw far), əət-na-hem (throw away)

Allomorphs of INT3

Gloss	Form	Example	EN gloss/translation	Ref.
INT3	-wa	torg-wa-h-em	do-INT3-PRF-1SG	Werner 1993, p.49
INT3	-awa	əət-n-awa	throw-ITIV-INT3	0167

Combinations with INT3

Gloss	Form	Example	EN gloss/translation	Ref.
NEG	-naa	tii-wa-naa-h-em	drink-INT3-NEG-PRF-1SG	Werner 1993, p.50

*Table 19: INT3 (-wa): Allomorphs and combinations***3.2.4.6 Progressive PROG1 (-aag) and PROG2 (-tel)**

In his list of verbal extensions Werner (1993, pp.49-50) also includes two forms for the “Durative” (i.e. Progressive), -aag (PROG1) and -tel (PROG2), the latter being used for subject plural. As has been mentioned already in Section 3.1.4, both forms are closely related to the two verbs aag and tel (sit/stay), which are similarly distributed for subject singular and plural:

verb	PROG1/2	use in paradigms	in sentences
aag-ah-em (sit-PRF-1SG)	-aag	SG+PL	SG
tel-h-am (sit.PLR-PRF-13PL)	-tel	PL	PL

Only a few sentences can be identified to illustrate the use of both morphemes.

36 (1639)	áj	nà	pel-àg-àh-em.
	1SG	3SG	scold-PROG1-PRF-1SG

I scolded him.

37 (1914) madrasa-n uccédí kære-tìr-àtel-j-um.
 school-GEN child.PL read-LOAN-PROG2-Pj-IPFV.3

The school children are reading.

In the recorded paradigms interestingly the combination of the verb aag and the progressive marking morpheme -aag appears, i.e. ag-aag-ah-em (sit-PROG1-PRF-1SG).

Allomorphs of PROG1/2

Gloss	Form	Example	EN gloss/translation	Ref.
PROG1	-aag	eeg-ir-aag-ah-em	answer?-TRR?-PROG1-PRF-1SG	Werner 1993, p.49
PROG1	-ag	sæ̀r-ag-anan	go-PROG1-CVB1 (I was going to go)	1635
PROG1	-waag	sow-aag-anan	walk-PROG1-CVB1	1207
PROG2	-atel	kære-tir-atel-j-um	read-LOAN-PROG2-Pj-IPFV.3	1914

Combinations with PROG1/2

Gloss	Form	Example	EN gloss/translation	Ref.
NEG	-aa	kood-ag-aa-h-em	see-PROG1-NEG-PRF-1SG	Werner 1993, p.50

Table 20: PROG1 (-aag) and PROG2 (-tel): Allomorphs and combinations

3.2.4.7 Negation NEG (-aa)

Werner (1993, p.49) under his “Verbal extensions” lists a morpheme encoding negation -aa (NEG). It is one of the morphemes with plenty examples and a mostly clear meaning.

38 (1571)	anǵá-r	indér	íi-h-an	ogon	tel-ér-àa-h-àm.
	3PL-SBJ	here	come-PRF-SUBJ.13PL	FOC	sit-Per-NEG-PRF-13PL

When they came here, they did not sit down.

It can be viewed as a productive morpheme as the many sentences demonstrate as well as all recorded paradigms.

Allomorphs of NEG

Gloss	Form	Example	EN gloss/translation	Ref.
NEG	-aa	oon-aa-wa	have-NEG-IPFV.1	0199
NEG	-naa	ti-wa-naa-h-em	drink-INT3-NEG-PRF-1SG	Werner 1993, p.50
NEG	-waa	soo-waa-tin	walk-NEG-INT.3	0308
NEG	-jaa	tii-jaa-wa	drink-NEG-1SG	0979

Combinations with NEG

Gloss	Form	Example	EN gloss/translation	Ref.
HAB	-kə	èerí-ján-aa-kə-h-um	expensive-VBLZ-NEG-HAB-PRF-3SG	1892

Table 21: NEG (-aa): Allomorphs and combinations

3.2.4.8 Inchoative INCH (-əən)

The only reference for this morpheme on a regular verb is in Thelwall (1983, p.107) as part of the “interrogative complete” paradigm. There it appears as a separate morpheme (e.g. *tii-əən-he*), but no comment is made on its function. All other occurrences are in Werner's sentence collection in conjunction with mostly adjectives (and one noun), which all follow the same pattern (adjective-INCH-IPFV.3).

- 39 (1158) nen kàar kòor-áæn-ùm.
 this tree big-INCH-IPFV.3

This tree is growing.

- 40 (0171) òon ùccédi-n iijà-ææn-ù(m).
 3SG child.PL-GEN mother-INCH-IPFV.3

She became the mother of children.

In these cases it functions similar to VBLZ (see Section 3.2.1.2) as a verbalizer with the difference that it carries an inchoative meaning. It is not known whether it functions as an independent verb (i.e. ææn-h-em ææn-uwa, to become). It would be desirable to find a broader range of examples of its use and possible combinations with other morphemes.

3.2.4.9 Totality TOT (-uur)

Werner (1993, p.55) comments on a morpheme -uur, expressing “totality of action (in past) or absolute certainty (in future). I will present one example each.

- 41 (1978) onṅár àare-n pèele ìi-núur-h-am.
 3PL past_in-GEN yesterday come-TOT-PRF-13SG

*They came a long time ago (lit. the yesterday of the past)
 (and the whole action is finished).*

- 42 (1878) áj æd pəl-úur-wa.
 1SG house leave-TOT-IPFV.1

I will leave the house (in the future).

In the sentence database a number of examples can be identified. Overall it seems to be used as another kind of completive. Allomorphs are

not known except for the above -nuur in Sentence 41. Other derivational morphemes following TOT are not known.

3.2.5 Inflectional morphemes

This section is concerned with two morphemes that are not considered part of the verbal stem, they rather belong to the inflectional morphology: the perfect marker -h (PRF) and the imperfective subject plural marker -j (Pj). Their description was added at this point as they share characteristics with the other previously described morphemes in that they appear before the final morphemes marking person and TAM.

3.2.5.1 Perfect PRF (-h)

Werner (1993, p.47) and Thelwall (1983, p.107) do not mention -h as a separate morpheme. Instead it appears as an essential part of their various perfect paradigms. However, I will describe -h as a separate morpheme that marks perfect. It will be glossed PRF.

43 (0040)	áy	aabéddí	aar-h-è̃m.
	1SG	bird	catch-PRF-1SG
	<i>I caught a bird.</i>		

PRF appears very regularly in all perfect paradigms. The marker precedes the respective morphemes marking person and number. See the various perfect paradigms in Section 3.3 for more detail on its use.

Form	Example	EN gloss/translation	Ref.
-h	kə-h-am	say-PRF-13PL	1636
-ah	kocc-id-ah-em	slaughter-Pid-PRF-1SG	1538
-uh	ess-uh-um	fall-PRF-3SG	0049
-ih	odd-ih-em	learn-PRF-1SG	1818

Table 22: PRF (-h): Allomorphs

3.2.5.2 Subject plural Pj (-j)

Werner (1993, p.47) lists the subject plural marker -j (here glossed Pj) as part of the “continuous indicative” paradigm as an optional marking of the plural forms. Thelwall (1983, p.107) includes -j in his paradigms for 'incomplete action', but without suggesting optionality. Data provided by the sentences as well as recorded paradigms from Werner show that -j is part of a quite regular agreement pattern in the imperfective and intentional paradigms, as it is required when the subject number is plural (I cannot find evidence for it marking other than subject plural, contrary to what Werner (1993, p.50) remarks). Here I will describe it as a separate morpheme as it always precedes the final TAM/person marking morphemes. Below examples are given for an intransitive, transitive and even a non-finite verb with Pj.

- 44 (0037) àŋá ele səər-ŋá-j-wà.
 1PLI now go-INT2-Pj-IPFV.1

We are leaving now.

- 45 (2502) aadí índé-dñ iifì-tìr-j-ùwà.
 1PLI here-CVB2? live-LOAN-Pj-IPFV.1

We live here.

46 (1846) sǎər-ɟ-àn sóo~só-dàn-à!
 go-Pj-CONN walk~PLX-??-HORT

Let us go and have a walk.

Note that the suffix Pj is not followed by other than imperfective inflectional suffixes or suffixes of non-finite verb forms. A few other cases where it appears at an earlier position are candidates for a re-analysis (e.g. pob-ij-ah-am, divide-Pj?-PRF-13PL, 1935). For more details on its typical use see Section 3.3.1 on the imperfective.

As can be seen in Table 23 the allomorphs of Pj include deviation from the palatal approximant [j], that is in some instances replaced by the palatal plosive [ɟ] or the closed front vowel [i].

Form	Example	EN gloss/translation	Ref.
-j	el-aa-j-uwa	eat-NEG-Pj-IPFV.1	0164
-ɟ	sǎər-ɟ-an	go-Pj-CONN	0088
-ij	tet-eek-ij-u(m)	cut-CAUS?-Pj-IPFV.3	0113
-uj	odd-uj-um	hurt-Pj?-IPFV.3	0233
-aj	eŋ-er-aj-um	fear-Per?-Pj-IPFV.3	0112
-ai	kell-ai-wa	want-Pj-IPFV.1	p035.06

Table 23: Pj (-j): Allomorphs

3.2.6 Other derivational morphemes

The list of the above described morphemes is by no means complete. Here I present additional morphemes where data is lacking to understand and

Form	Example	Comment	Ref.
-ak	kun-ak-ir-hem (bend it)	cf. kun-ihem (come down)	2462
	par-ak-ir-wa (ride it)	?	0082
	pil-aak-ir-hem (wave it)	?	1654
-an	əŋŋ-an-aa (listen.NEG)	cf. əŋŋ-ihem (hear) -	0063
	ett-an-um (is finished)	cf. etta-tin (when it stops) – DETR?	1729
-aar	il-aar-hem (notice)	cf. iil-hem (remember) – PNCT	Werner
-ar	aŋ-ar-cin (catch)	?	1993, p.93
-at	ull-at-num (it is burnt)	cf. ull-ihem (burn)	1393
	əl-at-aam (is not edible)	cf. əl-hem (eat); possibly related to REFL -rati?	1121
-erti	eegir-erti-hem (tell)	cf. eegir-hem (tell/answer)	2388
-ə	saar-ə-hem (get wet)	cf. saare (wet); -ə possibly variant of INCH -əən?	Werner 1993, p.122
-əər	saar-əər-hem (make wet)	cf. saare (wet)	Werner 1993, p.122
-ər	ott-ər-jum (put into)	cf. otta-hem (enter)	0594
	təg-ər-hem (close, lock)	cf. təg-ihem (leave)	2418...
-ət	ol-ət-ihem (push)	cf. ol-hem (put); -ət possibly derived from ət-ihem (send / drop)	0310
-uk	kumm-uk-hum (be silenced?)	cf. kumm-ihem (be silent)	1056
-ca	kar-ca-hem (shake)	cf. kaar-ahem (bind)? - Pc?	0575
-ci	kar-ci-hem (destroy?)	cf. kaar-ahem (bind)? - Pc?	1496
-ja	tee-ja-hem (load)	cf. tee-hem (bring)	1582, 2144
	kaa-ja-hem (separate)	?	1178
-ma	kaa-ma-hem (flatten)	?	1999
-r	kaa-ci-r-hem (break, cut)	cf. kaa-ci-hem (split)?	1142s
-wi	ka-wi-hem (knead)	?	1921

Table 24: Suggested additional morphemes

define them, but nevertheless suggest their existence as morphemes in their own right. They should be seen as an area for further investigation.

Some of the suggested morphemes in Table 24 appear to be quite straightforward, others are rather mysterious, particularly in regard to the function of a morpheme. The morphemic boundaries presented here are as well only a suggestion and require further investigation.

3.2.7 Slots of derivational morphemes

Since for other Nubian languages morphemes appear in a fixed order of slots (cf. Abdel-Hafiz (1988, pp.125-129) for Kunuz or Browne (2002, p.67) for Old Nubian), the same should be assumed for Midob as well. The current state of research makes it implausible to present a table with a verified order of slots for different groups of morphemes.

To give an impression of the emerging sequence of slots, Figure 4 presents confirmed combinations of morphemes (see the tables for each morpheme as source) as connections between the morphemes. The verbal root is on the left side of the morphemes, and the inflection follows at the right side. Some connections still need verification (especially those morphemes that are not understood well) and for many morphemes there is no sufficient data available to pin down their position at all (as can be seen in morphemes with only few connections). Redundant connections have been removed to avoid overloading the graph. The resulting order of morphemes should give a good impression of the order of slots.

The two morphemes Pj and PRF are excluded from Figure 4, as they are located at the right most position after all the represented morphemes. Their position will be illustrated in the following section on inflectional morphology.

The grouping into columns from left to right is arbitrary, where no connections to immediate neighbours exist, and was done with a functional grouping of morphemes in mind (as an extreme case TOT has no connections, but was assigned to the same column as other morphemes encoding TAM). Therefore columns indeed suggest emerging slots.

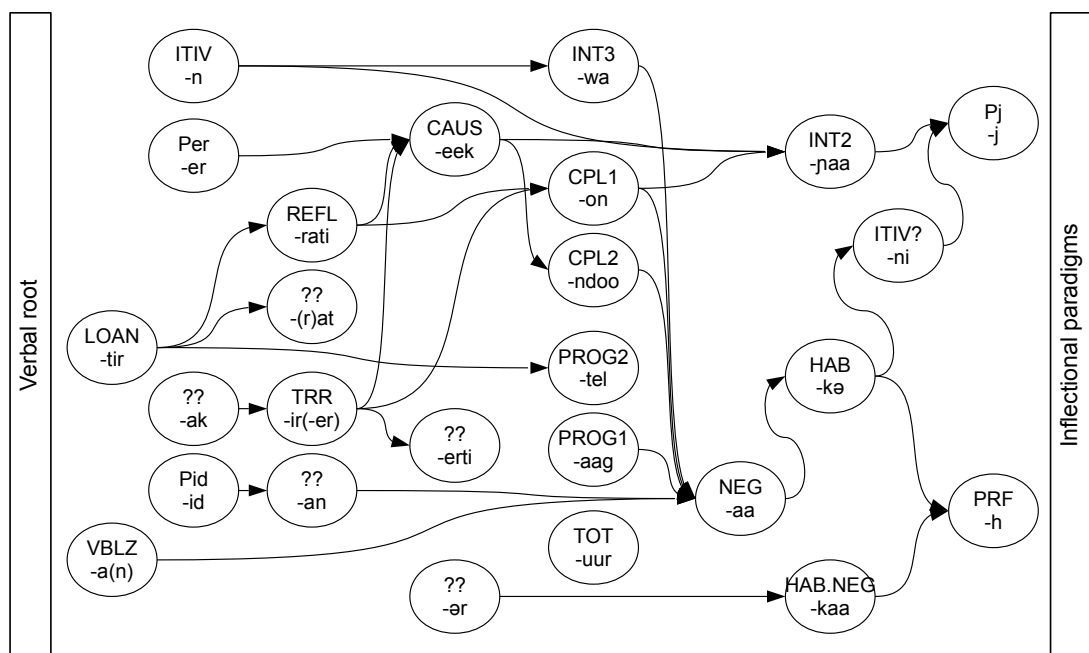


Figure 4: Combinations of derivational morphemes

I suggest the following slots: after the verbal root follows a slot for morphemes marking derivation from other word classes. It is followed by a slot for morphemes that express verbal plurality and directionality (they are grouped together since no contrasting evidence is found). This slot is followed by two slots for morphemes modifying valency. Another slot (it can

finally be more than one) appears for modifications of TAM. It is followed by a slot for negation. After negation another slot for modifications of TAM follows (which is followed by an undetermined morpheme). Finally there is a slot for both, the perfect marker PRF for perfect verbs and the subject plural marker Pj for imperfective verb forms. After these only the person/(number/)/TAM marking scheme appears from the corresponding paradigms.

The positions of morphemes in the graph confirm Werner's classification of the described morphemes in "Internal verbal modifications" (1993, pp.51-55) and "Verbal extensions" (1993, pp.49-51). His "internal verbal modifications" appear on the left side, relatively near the verbal root, while the "verbal extensions" appear on the right side, relatively distant from the root, as he explains in the introduction for each group. According to Haspelmath & Sims (2010, p.95), morphemes near the root tend to be more derivational in nature, while those nearer the periphery tend to be more inflectional in nature. This should apply to the morphemes in Figure 4 as well.

3.3 Inflectional morphology

In this section I will describe the inflectional paradigms and their use in conjunction with the above described perfect marker PRF (see Section 3.2.5.1) and subject plural marker Pj (see Section 3.2.5.2). Other final verb forms that do not exist as a full paradigm (imperative, hortative) are included as well. Some of the paradigms are fairly well understood while others still pose a number of questions.

The naming conventions should not suggest exact descriptions of their function but are in part only provisional solutions and in all cases open for debate, since a detailed enough analysis of morphosyntax has not been done so far. The different conventions that have been used at other places will be referred to as well. Here I will mark imperfective suffixes with IPFV and person, but perfect suffixes only for person, since they only appear in conjunction with the perfect marker PRF. This way redundant glossing is avoided without leaving room for ambiguities. Indicative mood is generally not marked, as it is seen as default. Other moods are marked.

The most prominent inflectional paradigms are imperfective and perfect, as well as the forms for imperative. They are described by both, Thelwall (1983) and Werner (1993). Thelwall adds an interrogative that Werner omits and Werner adds an intentional, subjunctive and four interrogative paradigms.

3.3.1 Indicative imperfective IPFV

Werner (1993, p.44) describes the “Continuous indicative tense” as referring to present and future, while Thelwall (1983, p.107) names the same paradigm “Incomplete tense/aspect”, referring to incomplete action. Following the latter description I will name it imperfective aspect (cf. Haspelmath & Sims 2010, p.330). An example can be seen below:

47 (0063)	íin	áə̃n	áal-g	ə̃ŋŋ-an-áa	torjon	koké
	2SG	1SG.GEN	mouth-ACC	hear-??-NEG	don't	then
	ə̃j	ná	att-ùwà.			
	1SG	2SG.ACC	hit-IPFV.1			

If you don't listen to my word, I will hit you.

The imperfective paradigm consists of three inflectional forms for the three persons that are used both for singular and plural. For the plural forms the subject plural marker -j (Pj) is added. Judging from a number of paradigms and sentences this pattern of plural agreement seems to be regular. Below paradigms from two verbs (əɫ-uwa, 'I eat', and əər-wa, 'I make') are presented. They are taken from Werner's recorded paradigms and field notes:

person	SG	PL	SG	PL
1	əɫ-uwa (I eat)	əɫ-j-uwa (we eat)	əər-wa	əər-j-uwa
2	əɫ-uwe (you eat)	əɫ-j-uwe (you eat)	əər-we	əər-j-uwe
3	əɫ-u(m) (s/he eats)	əɫ-j-u(m) (they eat)	əər-um	əər-j-um

Note: The [m] of the third person suffix is often barely audible. The allomorphic [u] at the beginning of the above imperfective suffix is usually very short and sometimes disappears completely. Various allomorphs have been observed:

IPFV.1	-wa	-uwa	-awa	-owa
IPFV.2	-we	-uwe	-awe	
IPFV.3	-m	-um	-em	-wum

The subject plural marker (see Section 3.2.5.2 for a description) appears regularly in conjunction with the imperfective forms. The imperfective forms mark person, but not number, while -j (Pj) marks subject plural. Future work would be needed to confirm this, especially in the light of a better understanding of noun plural marking.

3.3.2 Indicative perfect PRF

The indicative perfect paradigm was previously described by Werner (1993, p.44) as “Perfect indicative”, referring to completed actions in the past, and by Thelwall (1983, p.107) as “Complete”, referring to completed action. Since translation of the form varies⁷ (i.e. 'I was chattering', 'I have put', 'I made'), determining tense and aspect of its various uses will require further research with Midob speakers.

48 (0187) òon ná kammàr-g att-ùh-ùm.
 3SG 2SG.ACC cheek-ACC hit-PRF-3SG

He beat you on the cheek.

In contrast to the imperfective (three forms plus separate plural marking), the perfect paradigm consists of six distinct forms, marking person and number. A separate plural marker does not appear, but the perfect marker -h (PRF, see Section 3.2.5.1 for a description)⁸ appears on all forms. The following examples are taken from Werner's recordings and field notes: əl-h-em (I have eaten) and əər-h-em (I made):

7 This variation seems at least in part caused by inaccuracies in transcription.

8 Werner (1993, p.48) describes the relationship of the Midob perfect paradigm with the perfect paradigm of the related Nubian language Kunuz/Dongolawi containing a regular shift from /s/ to /h/. Interestingly the /s/ appears again when recording data with Mohamed Issa Mahmoud (personal communication, March 2014). He is a Midob speaker of Kaageddi origin who grew up in an Uurti area and this way knows both main dialects.

	SG	PL	SG	PL
1	əl-h-em	əl-h-am	əər-h-em	əər-h-am
2	əl-h-om	əl-h-we (-um)	əər-h-om	əər-h-we
3	əl-h-um	əl-h-am	əər-h-um	əər-h-am

Note: The form -hwe for the second person plural is different from Thelwall's -hum. While Werner (1993, p.47) presents both forms as alternatives, no occurrence of Thelwall's form can be identified in Werner's sentence collection and recorded paradigms. This difference can be due to dialectal variation or preference of individual speakers.

Suggesting -hwe as an allomorph of -hum, the following regular pattern emerges: -h (the perfect marker PRF) is followed by a vowel (marking person and number) that is followed by -m, marking indicative. A detailed gloss then looks like əl-h-a-m (eat-PRF-1PL-IND). For the sake of readability I will abstain from generally glossing in such detail. Similar patterns will appear for other perfect paradigms. No other allomorphs of these forms exist since they always appear in the same environment (after the perfect marker -h or its allomorphs).

3.3.3 Subjunctive imperfective SUBJ

For the subjunctive an imperfective and a perfect paradigm can be identified. The imperfective appears in sentences like the following:

49 (0152)	nen	ír	pel	ímmíl-k	òon-jín	pàrcèer	ùur-ùm.
	this	man	goat	hundred-ACC	have-SUBJ.3SG	one	lose-IPFV.3

This man who had one hundred sheep lost one.

The imperfective forms are composed of -j (here not marking plural⁹) followed by a vowel that marks person and number (the vowels are similar to those marking person and number for perfect forms), followed by -n to mark the subjunctive. A detailed gloss then looks like oon-j-i-n (have-SUBJ.IPFV-3SG-SUBJ). To demonstrate the basic characteristics of the paradigm, two examples from Werner's field notes are shown (tiijen, 'if I drink' and tirgijan, 'if I run'):

person	SG	PL	SG	PL
1	tii-jen	tii-jan	tirg-ijan	tirg-ijan
2	tii-jon	tii-jun	tirg-ijan	tirg-ijun
3	tii-jin	tii-jan	tirg-in	tirg-ijan

Note: In third person singular -j often disappears. Typical allomorphs can be observed when comparing the forms from both paradigms: -j often is replaced by its allomorph -ij. The quality of the person/number marking vowel might be influenced by preceding segments (cf. əl-on < əl + jin, or tirg-ijan < tirg + jen).

9 -j in subjunctive appears for both, singular and plural and marks the imperfective.

3.3.4 Subjunctive perfect PRF-SUBJ

For the perfect subjunctive no recorded paradigms are available. The following data are solely based on Werner's description (1993, p.47) and a few corresponding sentences:

50 (0047) íin táar-re pəl ii-h-òn áj-rè
 2SG home-LOC from come-PRF-SUBJ.2SG time-LOC

kəərén náan arda-h-inò?
 who 2SG.GEN companion-PRF-Q1.3SG

When you came from home, who was your companion?

The paradigm is similar to perfect indicative, only the final -m is replaced by -n to mark subjunctive. A detailed gloss then looks like ii-h-o-n (come-PRF-2SG-SUBJ).

person	SG	PL
1	-h-en	-h-an
2	-h-on	-h-un
3	-h-in	-h-an

3.3.5 Intentional INT

The indicative intentional is only briefly described by Werner (1993, pp.44,47,50).

51 (0308) nen əccì sóo-wáa-tín oll-ət-ìc!
 this donkey walk-NEG-INT.3 push-INTS?-IMP.PL

Push this donkey that does not [intend to] go!

The paradigm shares similarities with the indicative imperfective: It has the same subject plural agreement and a related vowel pattern to mark person, that is repeated in the plural. In most recorded paradigms the INT appears only in conjunction with the morpheme -ŋaa (INT2) while the sentence database contains only one such case. Werner calls this combination “far future” (1993, p.50). A paradigm from Werner's recordings and field notes is presented below (əər-ŋaa-tan, 'I intend to make'):

person	SG	PL
1	əər-ŋaa-tan	əər-ŋa-j-tan
2	əər-ŋaa-ten	əər-ŋa-j-ten
3	əər-ŋaa-tin	əər-ŋa-j-tin

Note: The [i] in -tin is barely audible.

3.3.6 Interrogative paradigms

Midob interrogative paradigms still raise many questions. Various verb forms can be found that relate to questions. Thelwall (1983, p.107) presents an interrogative paradigm for his “incomplete” (imperfective) and “complete” (perfect) tense/aspect. Formally similar paradigms appear in Werner's handwritten notes, but only one similar to Thelwall's perfect paradigm reappears in print in Werner (1993, p.47). Werner presents four question paradigms (two types of questions each for perfect and imperfective, see Werner (1993, p.47)), but they remain without illustrative sentences. Furthermore, in the sentence database some of the above forms cannot be verified, while additional interrogative forms appear.

In the following sections I will discuss the available paradigms. Since it should still be open to debate, which perfect paradigms correspond to which imperfective paradigm, I will describe both separately. Their glossing is provisional and should point to its origin (Qth: question paradigm from Thelwall; Q1 and Q2: question 1 and question 2 forms from Werner) or is linked to its characteristics (Qo for the characteristic ending in -o). Question verbs derived from interrogative pronouns are excluded from the current analysis. For notes on these, see Werner (1993, p.57).

3.3.6.1 Interrogative from Thelwall Qth

The imperfective forms of the interrogative paradigm by Thelwall (1983, p.107) Qth does not appear in Werner (1993), while they are recorded and transcribed (with some variation) in his field notes. There they are used for both types of questions, with and without interrogative pronouns (i.e. 'Will I drink?' and 'When will I drink?'). Thelwall presents his paradigm with the additional morpheme -wa (INT3) on all forms, that I exclude here. Two clear examples from the sentence database can be identified, one with and one without an interrogative pronoun:

- 52 (0608) íin indòn ikkà tüssi-ja-nì?
 2SG why thus cold-VBLZ-Qth.2SG
 Why do you not speak? (lit. Why are you cold like this?)
- 53 (0048) íín-jèn əən àrdà-nì?
 2SG-?? 1SG.GEN companion-Qth.2SG
 Are you my companion?

The suffixes of the Qth paradigm look as follows:

	1SG	2SG	3SG	1PL	2PL	3PL
Qth.IPFV	-nia	-nii	-a	-j-a	-j-e	-j-o

Similar to the imperfective indicative paradigm the regular use of -j (Pj) as subject plural marker can be observed. Unique to this paradigm are the different suffixes for singular and plural. Among Werner's field notes and recordings similar paradigms appear like the following (tii-wa-nija, 'When will I drink?') – note the differing vowels for plural, compared to Thelwall's forms above:

person	SG	PL
1	tii-wa-nija	tii-wa-j-o
2	tii-wa-ni	tii-wa-j-e
3	tii-wa	tii-wa-j-i

The associated interrogative perfect paradigm from Thelwall is similar to the “Question 2 perfect” of Werner – see Section 3.3.6.5 for a discussion. Note, that Thelwall presents the paradigm with an additional morpheme (-əən, INCH) on all forms, which I exclude from the paradigm.

3.3.6.2 Question 1 imperfective Q1.IPFV

Werner (1993, p.47) distinguishes between two interrogative modes that he calls “Question 1” (Q1) and “Question 2” (Q2), each of them with a perfect and imperfective paradigm. Q1, as he remarks, is used for questions with interrogative pronouns. For the imperfective, a few examples can be found.

54 (0613) óon ùur-eren ìi-ŋa?
 which day-LOC come-Q1.IPFV.23SG

On what day shall you come?

A paradigm from Werner's recordings and field notes is presented

below (kood-ne, 'What do I see?'):

person	SG	PL
1	kood-ne	kood-na
2	kood-iŋa	kood-iŋaj
3	kood-iŋa	kood-iŋaj

Since there is a tonal contrast in comparison to Q2, I will render tone (according to Werner):

	1SG	2SG	3SG	1PL	2PL	3PL
Q1.IPFV	-nè	-ŋâ	-ŋâ	-nà	-ŋájè	-ŋájè

The typical characteristic of the paradigm is the initial nasal. The -j of some plural forms resembles the subject plural marker Pj, but it appears not as regular as in other imperfective paradigms.

A note on its use: The imperfective form interestingly appears in non-interrogative contexts as well. Two explanations seem plausible: Either the question form is being used for a kind of rhetorical question, or the form is not a true interrogative, rather some kind of conditional or irrealis:

55 (0119) essi òo-ŋá toron (ko)ké aagéá kúrhí òon-ùm.
 storm have-Q1.23SG don't then really dust have-IPFV.3

When there is wind, there really is dust.

3.3.6.3 Question 1 perfect Q1-PRF

In contrast to the imperfective forms of Q1, the perfect forms only appear in interrogative contexts:

56 (0156) íin indòn pèele ìir-aa-h-ònò?
 2SG why yesterday come-NEG-PRF-Q1.2SG

Why did you not come yesterday?

The paradigm is quite regular and shares many similarities with the perfect indicative: the perfect marker is followed by the same set of person marking vowels. The final -m for the indicative is replaced by a final -no, indicating Q1. A detailed gloss looks like kood-h-e-no (see-PRF-1SG-Q1, 'What did I see?'), see the recorded paradigm below:

person	SG	PL
1	kood-h-eno	kood-h-ano
2	kood-h-ono	kood-h-ino
3	kood-h-ino	kood-h-ano

Note, that the vowel for 2PL varies between paradigms for different verbs (normally [u], sometimes [i]).

3.3.6.4 Question 2 imperfective Q2-IPFV

According to Werner (1993, p.47), the “Question 2” (Q2) is used to “put the action (or state of being) itself into question (e.g. 'did you come?').” For the imperfective no corresponding sentences can be identified. A recorded paradigm for the verb *tirg-ine* (Do I run?) follows:

person	SG	PL
1	tirg-ine	tirg-ina
2	tirg-ĩjaa	tirg-ĩjaje
3	tirg-ĩjaa	tirg-ĩjaji

The forms are almost similar to Q1.IPFV, differing only in tone and length in singular (possibly a difference in intonation only?), but the differences are audible in the recorded paradigms. Here again the paradigm is presented with tone, according to Werner:

	1SG	2SG	3SG	1PL	2PL	3PL
Q2.IPFV	-néè	-ŋáà	-ŋáà	-ŋájà	-ŋájè	-ŋájì

3.3.6.5 Question 2 perfect PRF-Q2

While the imperfective paradigms of Q1 and Q2 are almost similar, the perfect forms are distinct. Here again examples are available – all of them questioning a fact or action, as claimed by Werner.

57 (0612)	íin	náan	ɟuɣul	poccíci	tàjír-h-òò?
	2SG	2SG.GEN	work	all	finish-PRF-Q2.2SG

Have you finished all your work?

A paradigm from Werner's field notes and recordings follows (tirg-ih-ee, 'Did I run?):

person	SG	PL
1	tirg-ih-ee	tirg-ih-aa
2	tirg-ih-oo	tirg-ih-uu
3	tirg-ih-ii	tirg-ih-aa

The paradigm starts with the perfect marker, followed by a vowel that marks person and number. According to Werner (1993, p.47), the vowel can

be short or long. A detailed gloss then is like this: *tirg-ih-ee* (run-PRF-1SG¹⁰). The resulting paradigm suffixes are as follows (Werner's tone marking omitted):

	1SG	2SG	3SG	1PL	2PL	3PL
Q2.PRF	-he	-ho	-hi	-ha	-hu	-ha
variation:	-hee	-hoo	-hii	-haa	-huu	-haa

3.3.6.6 Other question forms

A number of question forms can be identified in the sentence database that seem to fit neither of the above paradigms. For these no paradigms had been recorded (if they exist) and analysis is only beginning.

A striking combination of two forms is used fairly often when asking for alternatives. The two forms have tentatively been named Q- and Q+ since it was assumed that they express opposing meanings:

58 (0016)	náan	abbá-r	èdd-ár	ag-ha	àg-à?
	2SG.GEN	father-SBJ	house-LOC	sit-Q-	sit-Q+

Is your father at home or not?

Since Q- includes an [h], which is so characteristic for all perfect forms, attention is required to not confuse both. All examples that could be identified are second person singular, except for the following:

59 (0833)	áj	ogon	táa	toor-háa	táa	tòor-àajà?
	1SG	FOC	path	enter-Q-	path	enter-Q+.1SG

Shall I go or not?

10 Q2 in this context is unmarked while other forms are marked (i.e. indicative with -m).

Suspecting a paradigm, the combination from the above sentence was checked with Mohamed Issa Mahmoud (personal communication, March 2014), where I received the following verb forms:

person	Q-.SG ... Q+.SG	Q-.PL ... Q+.PL
1	toor-ha ... toor-aaja	toor-jha ... toor-aja?
2	toor-ha ... toor-a	toor-jha ... toor-aje?
3	toor-ha ... toor-a	toor-jha ... toor-aju?

The first of the two verbs in this sequence (Q-) does not change except for the -j for all plural forms (subject plural marker Pj) and thus represents a non-finite verb form. The second verb (Q+) appears as a previously undescribed paradigm. It exhibits striking similarities to Q2.IPFV and might well be a variation of it.

A side note on morphosyntax: similar constructions as the above are used to ask for alternatives in action (i.e. 'Do you go or stay?') or object (i.e. 'Is x or y longer?'). A few combinations of Q- and Q1 (PRF as well as IPFV) can be found as well.

A different question form that is not covered by the previously described paradigms appears in a number of sentences with a question form ending in -i (and thus has tentatively been named Qi):

60 (0145)	íin	áə	íil-ì?	(0019)	íin	áagén	səər-ì?
	2SG	1SG.ACC	remember-Qi		2SG	truthfully	go-Qi
	<i>Do you remember me?</i>				<i>Do you really go?</i>		

Qth (see Section 3.3.6.1) is the only paradigm, where 2SG ends with -i and a relationship between both is indeed plausible: The above forms

could represent assimilation of the [n] of Qth (iil-i < iil + ni or sǽr-i < sǽr + ni).

Another morpheme regarding questions appears in Werner's word list as "yó / yó ò? question morpheme: is it?" (Werner 1993, p.140) and in a few examples like the following:

61 (1685)	pèe	kǽcà-nejòó?	(1683)	nen	kubbaj-ejòó?
	someone	call-Qo?		this	glass-Qo?
		<i>Is someone calling?</i>			<i>This glass?</i> ¹¹

It does not fit any of the described paradigms and is currently glossed Qo to reflect its form. It is not understood in terms of its meaning expressed nor in terms of structure (Can it be analysed in more detail? Are other forms used for other combinations of person and number?).

More question forms can be found that are difficult to assign to a known form and to analyse. One reason might be a lack in detail and precision of the given translations that is necessary for a better understanding¹².

3.3.7 Imperative IMP

Werner (1993, pp.58-9), as well as Thelwall (1983, p.107), lists four different forms for the imperative, different in number and negation. An example is given below:

11 In Werner's word list (1993, p.140) it is translated differently as "Is it a glass?".

12 I.e. a free translation like 'Should we go?' can as well be used to transcribe a question, a hortative or even an imperative form. On the other hand a question form can be used as a rhetorical question and be translated accordingly.

62 (0216)	náan	írí	kògòr-aam!
	2SG.GEN	body	scratch-NEG.IMP.SG

Do not scratch your body.

Werner's recorded paradigms include the four imperative forms for each recorded verb. The forms for two verbs (ə́l, 'eat!' and tii, 'drink!') are given below:

	SG	PL	SG	PL
IMP	ə́l-Ø	ə́l-ic	tii-Ø	tii-jic
IMP.NEG	ə́l-aam	ə́l-aac	tii-jaam	tii-jaac

The four imperative forms exhibit certain characteristics: Negative is marked by -aam (related to NEG -aa), plural is marked by -c (which can be related to the subject plural marker Pj -j). Singular remains unmarked and the combination of both, plural and negation, is -aac, which can be viewed as a combination of both markers – see Table 25 for the resulting forms (including allomorphs).

	SG	PL
IMP	-Ø	-ic
	-u	-jic
	-ə	
IMP.NEG	-aam	-ic
	-jaam	-jic
	-aa	
	-am	

Table 25: IMP: Allomorphs

The allomorphs of the IMP.SG form are especially interesting, since they were neither previously described nor expected. Their phonological conditions seem to be as follows:¹³

$$\emptyset \rightarrow u / VCC_ \text{ or } VVC_$$

$$\emptyset \rightarrow \text{ə} / CVC_$$

$$\emptyset \rightarrow \emptyset / V_ \text{ or } [\text{liquid}]_$$

Other forms can be observed as well: *pagallit* appears as the singular imperative form of *pagallirhem* (I turned). Here probably the ending of the stem *-ir* becomes *-it* word-final. Generally care is required to not interpret a form as imperative that is something different.

Werner (1993, p.59) mentions two special imperative forms: *indor ijok* (come here! (SG), 1069) and *indor iricook!* (come here! (PL), 1070). Examples for similar forms cannot be found.

3.3.8 Hortative HORT

Under the heading of imperatives Werner (1993, p.59) describes that an “adhortative (speaking to 1 pl) is formed by adding *-à* to the stem”. He then translates it as “let us ...”. While this form regularly appears in the recorded paradigms after the imperative forms, only few occurrences can be clearly identified in his collected sentences. Sentences that are translated as “Let us ...” often use a regular imperfective form. Other sentences with the final verb

13 The rules do not fit all samples: *tett-a* (cut!, 0122) and *kakk-u* (break!, 0183) exhibit the same structure but use a different suffix. Possibly all samples with the suffix *-a* are rather hortative, and not imperative.

ending in -a are only in part translated as hortative, and rather often as imperative. The small number of verified sentences makes a clear description difficult. Two examples are given below:

63 (0234) indér tóo-ná(n) koorín koorè sáær-à!
 here let-CVB1 another instance go-HORT

Leave here and go somewhere else!¹⁴

64 (2202) aŋ áddí suug-ire sáær-a.
 1PLI two market-LOC go-HORT

Let us two go to the market.

The form is similar to the 23SG form of Q+ (see Section 3.3.6.6). Can it possibly be one and the same form with a usage and meaning that is not understood yet?

3.3.9 Paradigms overview

From the formal point of view two main groups of paradigms can be described: one that has plural marking with Pj plus (mostly) three forms marking person and TAM (IPFV-type) and a second group with a set of six vowels that mark number and person and additional morphemes marking TAM (PRF-type).

An overview over the suffixes of PRF-type paradigms can be seen in Table 26. An additional column highlights the characteristic pattern for each paradigm: First, the common elements for each paradigm are shown, with ' _ ' as a placeholder for the vowel that marks person and number. Then, the set

14 If it is indeed HORT, it should be translated: “Let us leave here and go somewhere else!”

	1SG	2SG	3SG	1PL	2PL	3PL	pattern, person/ number marking		detailed gloss
PRF	-hem	-hom	-hum	-ham	-hum	-ham	h_m,	eou aua	PRF-1SG-IND
SUBJ	-jen	-jon	-jin	-jan	-jun	-jan	j_n,	eoi aua	IPFV-1SG-SUBJ
PRF-SUBJ	-hen	-hon	-hin	-han	-hun	-han	h_n,	eoi aua	PRF-1SG-SUBJ
PRF-Q1	-heno	-hono	-hino	-hano	-huno	-hano	h_no,	eoi aua	PRF-1SG-Q1
PRF-Q2	-he	-ho	-hi	-ha	-hu	-ha	h_,	eoi aua	PRF-1SG
PRF-Q2	-hee	-hoo	-hii	-haa	-huu	-haa	h_,	eoi aua	PRF-1SG

Table 26: PRF-type paradigms

of vowels is shown that fills this place for each combination of person and number. A last column presents a detailed example gloss (1SG) to show the detail of analysis possible. The result is a very regular system. The amount of variation is minimal (the vowel that marks third person singular varies between [u] and [i]), however some unification was done beforehand – see the corresponding sections for each paradigm for the details. The same comment applies for the following IPFV-type paradigms.

Contrary to the PRF-type paradigms, the elements of IPFV-type paradigms cannot be further separated easily and express TAM, number and person in one fused morpheme. Therefore a more detailed gloss is not possible. Nevertheless interesting patterns can be observed: Pj (or a remnant of it in the question forms) appears on almost all plural forms. The person marking vowels often appear as -a (first person), -e (second person) and -i (third person) or a phonologically related form.

The INT forms with their complete regularity do not exhibit fusion to the extent of the other IPFV-type paradigms, and in this regard rather belong

	1	2	3	pattern	person marking
IPFV	-wa	-we	-m	(w_)	a e ?
IPFV.PL	-j-wa	-j-we	-j-m	(jw_)	a e ?
INT	-tan	-ten	-tin	t_n	a e i
INT.PL	-j-tan	-j-ten	-j-tin	jt_n	a e i
Qth	-nia	-nii	-a	(ni_)	a i a
Qth.PL	-j-a	-j-e	-j-o	j_	a e o
Q1.IPFV	-ne	-ŋa	-ŋa	n/ŋ_	e a a
Q1.IPFV.PL	-na	-ŋaje	-ŋaje	n/ŋ?	a aje aje
Q2.IPFV	-nee	-ŋaa	-ŋaa	n/ŋ_	ee aa aa
Q2.IPFV.PL	-ŋaja	-ŋaje	-ŋaji	ŋaj_	a e i
Q+	-aaja	-a	-a	?	a a a
Q+.PL	-aja	-aje	-aju	aj	a e u

Table 27: IPFV-type paradigms

to the PRF-type paradigms. Because of their three singular forms that are repeated for plural (in combination with Pj), they still belong to this group.

Since the imperative and hortative are not functioning as complete paradigms and are already described in their corresponding chapters, they will not be added here.

3.4 Non-finite verb forms

A number of non-finite verb forms can be identified in Midob. Only some of them are mentioned in the existing literature. Since they are heavily used especially in narratives, a detailed analysis will be crucial to a better

understanding of narrative texts. Currently the different forms can only be listed and where possible a few comments added. Their naming can only be tentative at the current state of research. Two of them have been explicitly named converb. Converbs are “non-finite verb forms marking a clausal dependency relation” (Amha & Dimmendaal 2006, p.393) and are a well known phenomenon for languages of the area.

After a description of the observed non-finite verb forms in the following sections, a short text demonstrates the use of some of the described forms (see Section 3.4.9).

3.4.1 Converb CVB1 (-nan)

The converb marker *-nan* (CVB1) has been called “Connective” by Werner (1993, p.58) and is mentioned as “Infinitive” by Thelwall (1983, p.110). It is a widely used form.

65 (0093)	áj	ekk-ínán	inder	àg-anán	òmdùrmaan-gé
	1SG	can-CVB1	here	sit-CVB1	Omdurman-ACC
		òttì-n-icci-rè		tèe-j-ùwà.	
		foot-GEN-INTS-with		bring-Pj?-IPFV.1	

I can walk from here to Omdurman merely on foot.

A typical use is to express ability like above *ekk-inan* (can-CVB1), but many other uses can be observed as well. Even a connection with adverbs is possible – see Sentence 66 for an example.

66 (0146)	èllàas-nán	so!
	slowly-CVB1	walk

Go slowly!

A number of examples leave the impression that the CVB1 is used as providing additional information to the main event. This use cannot be confirmed for all cases though.

3.4.2 Converb CVB2 (-dn)

The non-finite suffix -dn is a striking feature of many narrative texts, but only appears a few times in the sentence database. It has not been described before and will be glossed here CVB2. Two examples are given below.

- 67 (1966) òŋŋá-r àndèr tèll-er-dn ìirg-íj-u(m).
 3PL there sit,PLR-Per-CVB2 chatter-Pj-IPFV.3

They are standing there and chatter.

- 68 (2041) accìdi-ré tégédé koŋŋ-ídn èŋereb koŋŋ-éek-ij-um.
 bark-with rope build-CVB2 bed build-CAUS-Pj-IPFV.3

By making a rope out of (tree) bark, they construct a bed.

- 69 (2041) nen pəəl eemi-r ètt-atn uur-h-um.
 this dog tail-SBJ? cut-CVB2 lose-PRF-3SG

This dog lost its tail, it was cut off.

CVB2 appears a number of times in the below glossed descriptive text, see Section 3.4.9. From the examples available no clear pattern of use can be observed, although some of the examples suggest that it is used to add detail to the main event.

3.4.3 Connector CONN (-n)

The non-finite verb form, that is glossed CONN (suffix -n), appears in many sentences in conjunction with the verb *oo hem* (I have)¹⁵ as well as in other contexts. One example is given for each of them:

70 (0004) *nen tii àccí ukk-án on-ùm.*
 this sheep lamb bear-CONN have-IPFV.3
 This sheep gave birth to a lamb.

71 (0085) *tìd-ń oor-ár íij-én tæ pocc-íccí-r*
 Midob-GEN mountain-LOC exist-CONN? cow all-INTS-SBJ
 ètt-àn ij-(ùm).
 finish-CONN exist-IPFV.3
 All cows that existed on Jebel Midob have died.

The following allomorphs have been found: -an, -en, -in.

3.4.4 Infinitive INF1 (-e)

The infinitive, characterized by Werner that it “serves as direct object” (1993, p.58), is marked by -e word-final. Here it will be glossed INF1.

72 (0094) *áj ele sáar-e kèll-àwà.*
 1SG now go-INF1 want-IPFV.1
 I want to go now.

15 Its status is open for debate – see Section 3.2.4.1 for a discussion. Werner (1993, p.49) interpreted it together with the supposed beginning of the following verb (*oo hem*, to have) as derivational, marking completive. What Werner sees as one verb I tend to interpret as two.

73 (p035.06) aadí-r nen úccí ídd aand-ir-e kèll-àĩ-wa.
 1PLI-SBJ this child woman take-TRR-INF1 want-Pj-IPFV.1

We want this boy to get married.

A number of examples can be identified, all of them in conjunction with the final verb *kèll-awa* (want-IPFV.1, I want) or derived forms. This raises the question if this association is the only possible use of INF1. Lacking suitable examples (i.e. for related expressions of mode like 'could, should, must'), the question currently cannot be answered.

3.4.5 Infinitive INF2 (-a)

The form, glossed as INF2 is formally identical to HORT and Q+.23SG (all are marked by -a). The vital difference is their use: HORT and Q+ are final verb forms and therefore appear at the end of sentences, while INF2 appears always in conjunction with another final verb form following it. Semantically it cannot be determined, what INF2 typically expresses (certainly not hortatory). In the sentence database only one example can be identified (see below) while the form often appears in narrative contexts (cf. the descriptive text in Section 3.4.9).

74 (1056) áj so-wáag-à pòojí-n pánjátté-reedí-r
 1SG walk-PROG1-INF2 desert-GEN man(old)-NMLZ-SBJ?

 àard-ajén, úó or kumm-uk-h-ùm.
 meet-SUBJ.1SG 1SG.GEN head silent-??-PRF-3SG?

*When I met a lion (lit. old man of desert) while walking along,
 I was petrified.*

3.4.6 Verbal stem

A few examples have been observed where a non-finite verb consists of the verbal stem only. Sentence 76 is very carefully articulated, therefore the phenomenon does not appear to be an artefact of imperfect pronunciation.

75 (0063)	íin	áən	áal-g	əŋŋ-an-áa	torjon	koké
	2SG	1SG.GEN	mouth-ACC	hear-??-NEG	don't	then
	əj	ná	att-ùwà.			
	1SG	2SG.ACC	hit-IPFV.1			

If you don't listen to my word, I will hit you.

76 (0497)	áj	tòo	soor-ŋa	səər-wà.
	1SG	field	hoe-INT2	go-IPFV.1

I go to hoe the field.

77 (2362)	áj	áən	ássi	èeb-àŋa	ii-h-èm.
	1SG	1SG.GEN	hand	wash-INT2	come-PRF-1SG

I came in order to wash my hand.

3.4.7 Nominalizer NMLZ (-eeŋi, -erti)

The nominalizer NMLZ only in part belongs to the verbal morphology, since it results in a noun. Since the resulting words carry at least in a few instances verbal properties, they are still mentioned here (cf. Werner 1993, p.58).

Werner calls them “verbal nouns” and presents an example, that describes a process:

78 (0227)	nèn	kòŋŋ-éeŋi-r	aagéá-r	èerì-jà-m.
	this	build-NMLZ-SBJ	really-SBJ?	difficult-VBLZ-IPFV.3

This building is really difficult (to build).

A similar example can be identified as *tii-jeɛɲi* (the drinking, 0770).

Interestingly a different suffix *-erti* is found to express a similar meaning. It is mentioned by Werner as forming “nomina agentis, often designations of professions” (1993, p.26) but examples can be found where it describes rather a process, comparable to the above suffix:

79 (0495) ìndídí-n soŋ-erti-r əj taff-ìndoo-h-em.
 clothes-GEN wash-NMLZ-SBJ 1SG trouble?-CPL2-PRF-1SG

I disturbed the washing of the clothes.

3.4.8 Other non-finite forms

Since for a number of non-finite verb forms [n] is a typical feature (cf. CONN -n, CVB1 -nan and CVB2 -dn), a clear assignment of the different observed forms (including allomorphs) is difficult. One form that appears at different places can possibly be an allomorph of CVB1: -ɲan or -ɲen. Below an example is given.

80 (2382) oon dukkáan î-n sukkàr-g èed-íɲán ìi-h-ùm.
 3SG shop come-CONN? sugar-ACC buy-CVB1? come-PRF-3SG

He went to the shop to buy sugar and came back.

Another form that also features the [n] and falls into this category is -nin (*tii-nin*, die-CVB1?, 0140). Another case, that appears to be rather related to CONN is -ana in the following sentence:

- 81 (2461) íijeti-r ind ínínán eep-úuc ij-ana
 man.PL-SBJ here come?-CVB1 many-INTS come-CONN?
 tòo-nuur-h-a(m).
 enter-TOT-PRF-13PL

*The people, who passed by here, were many
 (lit. the people, coming here, being many, passed by).*

Similar to this case is probably -ene in ag-ene (sit-CONN?, 2469).

The question form Q- also belongs to the non-finite verbs. It is used in conjunction with a finite verb from the paradigm Q+ (see Section 3.3.6.6) and comes in two forms: -ha for singular and -jha for plural.

3.4.9 A descriptive text: Asiida (87_2-MYAn16)

The text was narrated by Mohammed Yusif Adam and recorded by Roland Werner on 15th August 1987. My understanding of the text is still very limited, but it greatly benefited from comments by Mohamed Issa Mahmoud.

- (MYAn16.01) àaré poón elo tìd-ń oor-ár àldì-ráar
 past_in also now Midob-GEN mountain-LOC porridge-with
 àllì-já-k áapír eejedi tummànicci èl-j-à
 porridge-only-ACC people majority all eat-Pj-INF2

In the past as well as today at Jebel Midob the majority of people eat Asiida...

- (MYAn16.02) poón ájèkooke ìccíd tìi-jà òsòŋ əl-à
 also sometimes milk drink-INF2? meat eat-INF2?
 elá àmbərràni
 now like_this

...sometimes they drink (it with) milk and eat meat as well - life was like that...

(MYAn16.03) allí ógón in taji kèek-ídn
 porridge FOC 2SG grinding_stone grind-CVB2
 keekedì áal-dñ
 flour take_out-CVB2

(to prepare) Asiida you grind (with) the grinding stone, take out the flour...

(MYAn16.04) ele ússi uffa-dn tee-k úss-n
 now fire kindle-CVB2 pot(iron)-ACC fire-GEN
 or-ár ùkùr-dn kèekèd áar-n=gók kúul-in=gok
 top-LOC put-CVB2 flour put-CONN?=if boil-CONN?=if
 àlli owi-j-a(m).
 porridge cook-Pj-IPFV.3

*... then light a fire, put a pot on it, put the flour in when (the water) boils
 - (this way) they prepare Asiida.*

(MYAn16.05) àkkár-dñ iccídí-r íi-ηaa toronk=ógòn
 (after_that)-CVB2? milk-SBJ? exist-Q2.IPFV.23SG if_there_is?=FOC
 iccídí-r tísìη-ja-n ær-dn àl-á
 milk-SBJ? well-VBLZ-CONN? put-CVB2 eat-INF2

After that, if they have milk, they add it - milk is good - and eat...

(MYAn16.06) iccídí-r ìr-aa-ηa toronk=ògòn òwu
 milk-SBJ? exist-NEG-Q1.23SG if_there_is?=FOC soup
 kegg?-àdn (kégr-àdn) əl-j-ùm.
 scoop?-CVB2 (cook?-CVB2) eat-Pj-IPFV.3

*...if there is no milk, but if there is soup (mulaha), they scoop it (cook it?)
 and eat.*

(MYAn16.07) owwí-k òηarr pèet-ń árin òdd-in ò-j-ùm.
 soup-ACC 3PL-SBJ? Berti-GEN from learn-CONN have-Pj-IPFV.3

(Cooking) soup they have learned from the Berti.

Note the use of only three final verbs at the end of line 04, 06 and 07 (and two subordinated question forms in line 05 and 06). A variety of non-finite verb forms can be observed: several occurrences of INF2, CVB2 and CONN. The many question marks that appear in the glossing point to the number of uncertainties involved in understanding the text.

CHAPTER 4

FINDINGS AND OPEN QUESTIONS

In this study I have looked at the various aspects of Midob verbal morphology, starting from the descriptions presented by Thelwall (1983) and Werner (1993) and adding morphemes, evidence and detail from Werner's unpublished material and fieldwork notes.

I have described phonological restrictions and processes that are a necessary prerequisite for an understanding of morphology. Further work in this area should focus especially at syllable structure and at tone, both of which I could not sufficiently include into the present study. A better understanding of syllable structure will be crucial for an appropriate definition of morphemic boundaries. Tone may play an important role to distinguish between different morphemes.

Then I have described four areas of verbal morphology: the root with its few modifications, derivational morphology with a large number of morphemes, inflectional morphology with a number of paradigms and finally a number of non-finite verb forms. I rearranged the data in a way that I hope will provide a helpful overview. Where possible, I have included examples with a detailed interlinear morphemic gloss, to provide evidence for the discussed topics.

This points to a weakness of the present study. Since I had to work mostly without a mother tongue speaker, the evidence for many of the described areas remains weak. For a future study I suggest to look for confirmation (or contradiction) at the many details of this study. One area is

the suspected word boundary in Section 3.2.4.1, but the many question marks across this study are clearly signalling such need for many other areas as well. Confirmation should include evidence from different speakers (the current data is mostly from one speaker), different situations (the current data are almost exclusively elicited sentences) and different locations (including dialectal variation) as well.

Besides the need to confirm what I described in this study, a number of topics will need further investigation, whose description is only rudimentary: From the derivational (and in part rather inflectional) morphemes only a part is described, and even their function is often only little understood. Here especially the quite complex topic of verbal plurality needs to be mentioned (partly encoded in the verbal root, partly in the following morphemes). From the inflectional morphology especially the paradigms connected to questions are little understood. The description of non-finite verb forms is only rudimentary at this stage.

It is my hope that more work on Midob will be done to gain a better understanding of the language. Especially mother tongue speakers might be capable of answering many of the open questions.

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ABBREVIATIONS

1	first person	IND	indicative
2	second person	IMP	imperative
3	third person	INCH	inchoative
13	first or third person	IND	indicative
AR	Arabic	INF1	infinitive (form 1)
ACC	accusative	INF2	infinitive (form 2)
C	consonant	INT	intentional (paradigm)
CAUS	causative	INT2	intentional (form 2)
CONN	connective	INT3	intentional (form 3)
CVB1	converb (form 1)	INTS	intensifier
CVB2	converb (form 2)	IPA	international phonetic alphabet
CPL1	completive (form 1)	IPFV	imperfective
CPL2	completive (form 2)	ITIV	itiv
DETR	detransitivizer	L	low tone
EN	English	LOAN	loanword marker
FOC	focus	LOC	locative
GEN	genitive	M	mid tone
H	high tone	NEG	negation
HAB	habitual	NMLZ	nominalizer
HORT	hortative		

OBJ	object	Qo	question (form 'o')
Pc	plural (form 'c')	Qth	question (from Thelwall)
Per	plural (form 'er')	REFL	reflexive
Pid	plural (form 'id')	SBJ	subject marker, optional (cf. Footnote 5, p.34)
Pii	plural (form 'ii')	SG	singular
Pj	plural (form 'j')	SOV	subject object verb
PL	plural	SUBJ	subjunctive
PNCT	punctual	TAM	tense aspect mode
POA	place of articulation	TOT	totality
PRF	perfect	TRR	transitivizer
PROG1	progressive (form 1)	V	vowel
PROG2	progressive (form 2)	VBLZ	verbalizer
Q-, Q+	pair of question markers	??	unidentified morpheme
Q1	question (form 1)	?	morpheme with questions in analysis
Q2	question (form 2)		
Qi	question (form 'i')		

CONSONANTS AND VOWELS

The following table serves as a reference for the varying notations of Midob consonants and vowels.

IPA	used here	Werner (1993)	Thelwall (1983)	Explanation
p	p	p	p	voiceless bilabial plosive
t	t	t	t	voiceless alveolar plosive
c	c	c	c	voiceless palatal plosive
k	k	k	k	voiceless velar plosive
b	b	b	b	voiced bilabial plosive
d	d	d	d	voiced alveolar plosive
ɟ	ɟ	j	j	voiced palatal plosive
g	g	g	g	voiced velar plosive
m	m	m	m	voiced bilabial nasal
n	n	n	n	voiced alveolar nasal
ɲ	ɲ	ny	ɲ	voiced palatal nasal
ŋ	ŋ	ng	ŋ	voiced velar nasal
f	f	f	f	voiceless labiodental fricative
s	s	s	s	voiced alveolar fricative
ʃ	ʃ	sh	š	voiced postalveolar fricative
h	h	h	h	voiceless glottal fricatives
w	w	w	w	voiced labial approximant
r	r	r	r	voiced alveolar trill
l	l	l	l	voiced lateral approximant
ɬ	ɬ	lh	-	voiceless lateral fricative (not phonemic)

IPA	used here	Werner (1993)	Thelwall (1983)	Explanation
j	j	y	y	voiced palatal approximant
z	z	z	-	voiced alveolar fricative (AR borrowings)
x/χ	x	x	-	voiceless velar/uvular fricative (AR borrowings)
ɣ	ɣ	gh	-	voiced velar fricative (only AR borrowings)
ħ	ħ	H	-	voiceless pharyngeal fricative (AR borrowings)
i	i	i	i	close front unrounded vowel
e	e	e	e	close-mid unrounded vowel
a	a	a	a	open-front unrounded vowel
ə	ə	ə	ə	mid central vowel
o	o	o	o	close-mid back rounded vowel
u	u	u	u	close back rounded vowel