

## Chapter 6

# Gender in Uduk

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Uduk, a Koman language spoken on the border of Ethiopia and Sudan, evinces a number of unusual characteristics in its system of gender marking. Uduk has two gender classes, with agreement displayed primarily in the verbal system and adjacent case-marking particles. In contrast to related Koman languages, however, semantics play a minimal role in class assignment, unrelated to biological sex. Furthermore, as biological sex does not play a role in gender assignment in general, personal pronouns do not differentiate gender in any person. Instead, all personal pronouns are assigned to Class 1 in the same manner that nouns would be. Lastly, Uduk shows some unorthodox aspects in the way it indexes gender on verbs, using what might be considered subtractive morphology.

This article looks at the complexity and features of gender in Uduk from a typological perspective; despite some unorthodox and atypical typological features, however, the system does not appear to be complex.

**Keywords:** Uduk, gender, assignment, Koman, adjacency, ditropic.

## 1 Background

Koman languages form a small language family spoken along the borderland area of Ethiopia, Sudan and South Sudan. The family is comprised of four living languages: Gwama (Kwama) [kmq], T'apo (also known as Opo or Opuo) [lgn], Komo [xom] and Uduk (Tw'ampa) [udu]. A fifth language which is now extinct, Gule, was placed into Koman by Greenberg with relatively little data available (Greenberg 1963), and its placement in Koman is tentative.

The presence of gender distinctions on pronouns in Koman languages was noted early on, but no research until recently has uncovered any signs of a nominal grammatical gender system, which all extant Koman languages have in some



fashion.<sup>1</sup> The data on Uduk presented here is based on thirteen months of field-work between 2011 and 2014 in Ethiopia.

## 2 Introduction

Gender is a noun classification strategy in which nouns are encoded to belong to a particular lexical class, which is further “reflected in the behavior of associated words” (Hockett 1958: 231). This is commonly referred to as *agreement*, a relationship in which one element takes an inflectional form determined by semantic or morphosyntactic properties of another element. Following Corbett (2006), the element which determines the agreement is the *controller*, and the element whose form is determined by agreement is the *target*.

As the notion of agreement implies that the controller is present (cf. Corbett 2006), the term *indexation* is used instead of agreement. Indexation is defined here as the morphosyntactic realization of a controller’s capacity to control a target, with the controller being either present or recoverable or identifiable in some way. This may be done inflectionally through means of an affix or clitic, but this may also occur on a broader level by use of particular constructions, as Uduk does not always index gender on targets through inflectional markers. In particular, when in object position, one class of nouns actually constrains verb paradigms, limiting the possible *subject* cross-referencing markers on the verb. Thus, it is possible to determine the gender of the object from the morphology of the verb, despite there being no affix on the verb expressing gender agreement with the object.

Many other aspects of the Uduk gender system show themselves to be unorthodox in nature. Semantic assignment exists only for a very small part of the lexicon, formal assignment (in terms of word formation rules) for another very small part, with the rest being largely arbitrary. Semantics in general play a smaller role than usual in gender assignment, and Uduk’s cut-off point in the animacy hierarchy for semantic assignment is higher than simply ‘human’.

Furthermore, typical indexation targets of gender cross-linguistically include demonstratives, determiners, personal pronouns, relative pronouns, adjectives and verbs (Di Garbo 2014). For Uduk, the only target in this list is verbs. In addition to verbs, indexation is primarily indicated on a single clitic or particle which immediately precedes the controller, and on prepositions.

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<sup>1</sup>The Yabus dialect of Uduk appears to be an exception to this, and does not have any grammatical gender.

It is worth considering Uduk's gender system in terms of its linguistic complexity.<sup>2</sup>

For some principles governing local complexity, see Di Garbo (2016: 50) or Audring (2019 [this volume], §2.3). In addition to those metrics, there are at least two factors which may play a role, arbitrariness and adjacency, although how they fit precisely remains to be determined. Complexity is discussed further in §5.

### 3 Introduction to gender in Uduk

All nouns in Uduk, including proper nouns, are allocated to one of two possible grammatical gender classes, labeled *Class 1* and *Class 2*.

Gender in Uduk is covert, and not marked directly on nouns. Gender distinctions are seen most commonly through the presence or absence of the Class 2 clitic *à=*;<sup>3</sup> this marker, however, is optional when the noun occurs in isolation. Furthermore, if gender is indexed on a previous word in the phrase, then *à=* is not used with the noun. Vocative use also neutralizes gender distinctions in many instances. When directly addressing an individual, all personal names<sup>4</sup> and most Class 2 kinship terms remove *à=*; a handful of kinship terms may retain *à=* to indicate a type of informality. In all other known instances, Class 2 nouns occur preceded by *à=*.

Gender indexation primarily occurs on case-marking clitics or particles which immediately precede the controller. Prepositions, conjunctions, and complementizers also undergo a simple phonological alternation, depending on the gender of the noun that follows, and verbs also vary in their conjugation paradigms depending on the gender of a postverbal object. In some instances, clitics may be considered ditropic clitics,<sup>5</sup> phonologically attaching to the constituent which immediately precedes the clitic. However, unlike more typical situations of ditropic clitics, phonological hosts are more constrained in Uduk. Further details are discussed in §3.2 below after a general introduction to grammatical relations in Uduk.

<sup>2</sup>Linguistic complexity refers here to the amount of information needed to describe the system, following e.g. Dahl (2004) and Miestamo (2008).

<sup>3</sup>Transcriptions used here follow the IPA, except for <y>, which represents IPA *j*, and <j>, which represents IPA *ɟ*.

<sup>4</sup>All personal names are assigned to Class 2, discussed in more detail in §4.

<sup>5</sup>Ditropic clitics are a type of clitic which occur before a particular lexical class or syntactic phrase functionally related to the clitic in question, but the clitics nonetheless phonologically attach to the constituent on the 'other' side instead. This host generally is structurally and functionally highly variable, and shows little functional relation to the clitic. For more details, see Cysouw (2005).

### 3.1 Grammatical relations overview

Case and constituent order are intertwined in Uduk, and it is not possible to discuss one without the other. The order of constituents frequently changes, and the order of the arguments affects the way in which these are encoded.<sup>6</sup>

Uduk follows a verb-second pattern similar to that of some neighboring Nilotic languages. Intransitive clauses primarily use SV order, with occasional instances of VS order in specific types of subordinate clauses. Transitive clauses regularly alternate between OVA and AVO, and cannot be easily characterized as having a dominant constituent order. Other constituent orders do not occur in main clauses.

The only situation in which an argument triggers the presence of morphological case marking is when it occurs in the position immediately following the verb. Other core relations are not case-marked, irrespective of whether they occur before or after the immediately postverbal position. If the postverbal argument is O, this may be indicated by an Accusative ditropic clitic which phonologically attaches onto the verb. If the argument is A, the verb is marked by a ditropic clitic indicating Ergative case.<sup>7</sup> Note that verbs ending in vowels add a nasal suffix if the argument that follows is marked with Ergative case.

Table 1 shows the different case markers used in Uduk.<sup>8</sup> All case-marking enclitics are ditropic.

Some examples are as follows:<sup>9</sup>

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<sup>6</sup>The framework used here to refer to argument structure is based on a division elaborated on by Dixon (1994), in which participants of a clause are divided into core and peripheral roles. Core functions include the transitive subject (A), the intransitive subject (S), and the transitive object (O); all other participants are treated as peripheral.

<sup>7</sup>The Ergative case primarily indicates the subject of a transitive clause; however, in two instances, namely relative clauses and temporal adverbial subordinate clauses, the same marker is also used with subjects of intransitive clauses as well. In these two clause types, then, Uduk would be considered as having Marked Nominative case marking rather than Ergative. All Marked Nominative examples are nonetheless glossed as *ERG*, however, to simplify matters. For further details, see Killian (2015).

<sup>8</sup>Absolute is not used here to refer to a case encompassing S and O, but is used in a more general sense to refer to most situations in which the noun is not marked for Accusative, Associative, Ergative, or Genitive. This includes all preverbal arguments and second arguments after the verb in ditransitive constructions. Absolute Class 2 *á=* is not used in prepositional phrases, however, and optionally in citation form. Associative is used to refer to a type of noun-noun collocation in which the second noun modifies the first in some way, typically conveying either possession or association. It is similar to the Genitive, but the relationship between the two nouns in the Associative is much broader and less defined. For further details, see Killian (2015).

<sup>9</sup>The underlined argument indicates the topical argument of a transitive clause.

Table 1: Case Markers

	(ABS)	ACC	ASSOC	ERG	GEN
Class 1	∅	∅	∅	= $\bar{a}$	$g\grave{i}$
Class 2	$\grave{a}=\grave{a}$	= $\bar{a}$	= $\bar{a}$	= $m\bar{a}$	= $m\bar{a}$

- (1) Intransitive

$\grave{a}=c'í$                        $k'\bar{u}t^h-\acute{u}d'$   
 CL2=child(CL2) cough:IPFV-3SG  
 ‘The child coughed.’

- (2) Transitive, AVO order

$\grave{a}=páw$                        $\bar{u}r-\acute{u}d=\bar{a}$                        $t'ík^h$   
 CL2=cat(CL2) chase:IPFV-3SG=ACC.CL2 rat(CL2)  
 ‘The cat chased the rat.’

- (3) Transitive, OVA order

$\grave{a}=páw$                        $wúç'=m\bar{a}$                        $k'á$   
 CL2=cat(CL2) bite:PFV=ERG.CL2 dog(CL2)  
 ‘The dog bit the cat.’

### 3.2 Gender and case marking

As mentioned in the previous section, gender differentiations are found in case marking. Uduk encodes gender and case marking cumulatively, with a single combined morph to represent multiple features. Case is generally marked by clitics or particles immediately preceding the noun, and case markers which indicate core arguments only occur in the immediately postverbal position.

All case markers except Class 2 Absolutive  $\grave{a}=\grave{a}$  and Class 1 Genitive  $g\grave{i}$  are ditropic clitics, clitics which form phonological units with the immediately preceding element. Not all markers, however, are as bound as others, and boundedness forms something of a continuum.

Accusative Class 2  $=\bar{a}$  and Ergative Class 1  $=\bar{a}$  both form relatively tight-knit phonological units with the verb, and trigger morphophonological changes on

the verb.<sup>10</sup> If a verb ends in a vowel, however, Accusative =*ā* does behave slightly differently compared to the Ergative =*ā*. Verbs ending in a vowel always add an extra -*n* to the end when occurring before Ergative case markers of either class, before Class 1 =*ā* as well as before Class 2 =*mā*. Accusative Class 2 =*ā* on the other hand simply attaches to whatever the final consonant or vowel is, including other vowels. Associative Class 2 =*ā* behaves identically to Accusative phonologically, but attaches to a noun rather than a verb.<sup>11</sup>

All case markers discussed except for Genitive Class 1 *gi* undergo phonological tonal alternations depending on the immediately preceding tone. This includes Accusative Class 2 =*ā*, Associative Class 2 =*ā*, Ergative Class 1 =*ā*, Ergative Class 2 =*mā*, and Genitive Class 2 =*mā*. The base tone of the case marker is mid, but lowers to low when immediately following a low tone. Neither Ergative Class 2 =*mā* nor Genitive Class 2 =*mā* trigger morphophonological changes, however.

Genitive Class 1 *gi* is not a clitic, but rather an independent particle which does not change tone or affect any consonants or tones around it.

Some simple examples of each form are given below.<sup>12</sup>

- (4) Accusative, Class 2

*k'wānī*      *lōb-ón=ā*                      *k<sup>h</sup>úrā*  
 people(CL1) play:IPFV-3PL=ACC.CL2 ball(CL2)  
 ‘The people are playing football.’

- (5) Ergative, Class 1

*à=k<sup>h</sup>úrā*      *lōb=ā*                      *k'wānī*  
 CL2=ball(CL2) play:IPFV=ERG.CL1 people(CL1)  
 ‘The people are playing football.’

- (6) Ergative Class 2

*à=k<sup>h</sup>úrā*      *lōb=mā*                      *c'í*  
 CL2=ball(CL2) play:IPFV=ERG.CL2 child(CL2)  
 ‘The child is playing football.’

<sup>10</sup>Glottalized consonants in word-final position are unreleased. If any affixes or clitics are placed after them, they undergo a morphophonological alternation described in more detail in Killian (2015: 48).

<sup>11</sup>If the first noun in the Associative construction ends in a vowel and the consonant of the second noun begins with a plosive, a homorganic nasal is used in place of *ā*. For more details, see Killian (2015: 89).

<sup>12</sup>Clauses with Class 1 postverbal objects are not included, as they are a special case discussed in §3.5 below.

- (7) Genitive, Class 1  
*à=nós gi wàtí?*  
 CL2=pot(CL2) GEN.CL1 man(CL1)  
 ‘the man’s pot’
- (8) Genitive, Class 2  
*à=nós=mā bóm*  
 CL2=pot(CL2)=GEN.CL2 woman(CL2)  
 ‘the woman’s pot’
- (9) Associative, Class 1  
*à=rīs k’wānī*  
 CL2=many.PL(CL2) people(CL1)  
 ‘very many people’
- (10) Associative, Class 2  
*à=rīs=ā kúnù?*  
 CL2=many.PL(CL2)=ASSOC.CL2 owl(CL2)  
 ‘very many owls’

### 3.3 Prepositions, conjunctions, and complementizers

In addition to case marking, gender is also marked on prepositions, conjunctions, and complementizers in Uduk through a simple phonological alternation. If a preposition ends in *i*, this changes to *a* before Class 2 nouns, retaining the tone of the original vowel. If a preposition ends in a consonant or another vowel than *i*, then *a* attaches to the end of the preposition. As mentioned previously, if gender is marked on the previous element, then Class 2 marker *à=* is not used.

These alternations are likely based on a type of cliticization similar to case markers, but slightly more grammaticalized. Nonetheless, in occasional careful speech with *ǰàli* ‘and, but’ for instance, it is possible to hear *ǰàli à* before Class 2 nouns instead of *ǰàlà*.<sup>13</sup>

- (11) *ràk<sup>h</sup> tā-∅ kúf mò í mīs*  
 cloud(CL1) COP:PFV-3SG white MO LOC:CL1 sky(CL1)  
 ‘The clouds are white in the sky.’

<sup>13</sup>Note that in the following examples, ‘zero clitics’ =∅ have been added to facilitate understanding.

- (12) *áhā wòl-á=∅ yídé á k<sup>h</sup>ōs*  
 1SG(CL1) pour:IPFV-1SG=CL1 water(CL1) LOC:CL2 cup(CL2)  
 ‘I poured the water in the cup.’
- (13) *é gǎm-∅=∅ tō yán p’éní máná?*  
 2SG(CL1) find:IPFV-3SG=CL1 thing(CL1) DEM.PROX from:CL1 where(CL1)  
 ‘Where did you get this thing from?’
- (14) *gǎm-kā? p’éná Yúsif*  
 find:IPFV-ERG.1SG from:CL2 Yousef(CL2)  
 ‘I got (it) from Yousef.’

Predicative possession constructions also index the gender of the possessed noun on a preposition-like marker. These predicative possessive constructions are formed with the copula *tā* along with the particle *gi*, which becomes *gà* before Class II nouns (unlike Genitive *gi*, which becomes =*mā* before Class II nouns).

- (15) *wàtí? tā gi mì*  
 man(CL1) COP:PFV PP.CL1 goat(CL1)  
 ‘The man has a goat.’
- (16) *áhā tā-ná gà k’á*  
 1SG(CL1) COP:PFV-1SG PP.CL2 dog(CL2)  
 ‘I have a dog.’

Conjunctions and complementizers are preposition-like words used to connect clauses or phrases. Similar to prepositions, the gender of the immediately following word is marked on the conjunction or complementizer by an alternation of *i* to *a* for words ending in *i*, or by adding *a* to the end of words which end in consonants or vowels other than *i*.

The most frequent of these is *kí*, or *ká* for Class 2 nouns. It is a general complementizer which occurs with many different types of complement phrases and clauses, as well as subordinate clauses.

- (17) *áhā t<sup>h</sup>ōf-á kí wàtí? mī-d=i*  
 1SG(CL1) think:IPFV-1SG COMP:CL1 man(CL1) do.AUX:IPFV:AD2-3SG=LNK  
*tā kí p<sup>h</sup>úd mò fwàné?*  
 CF.AUX COMP arrive MO today  
 ‘I thought that the man would have arrived today.’



- (18) *áhā t<sup>h</sup>ōf-á ká fōk' mī-d=i hét'*  
 1SG(CL1) think:IPFV-1SG COMP:CL2 rain(CL2) do.AUX:IPFV-3SG=LNK rain<sub>verb</sub>  
*kāṭ'ámō*  
 tomorrow  
 'I hope it rains tomorrow.'

With some adverbial phrase constructions, *kī* and *kā* with mid tones are used instead of *kí* and *ká* with high tones.

- (19) *únī dōf-ón kī mīs*  
 3PL(CL1) stand:IPFV-3PL with:CL1 sky(CL1)  
 'They stood up.'

- (20) (Beam & Cridland 1970)  
*jàmàs bŭnī k'ó-n kā ris*  
 kind(CL1) POSS.3PL exist.PL:PFV-3PL with:CL2 many(CL2)  
 'There are many kinds of them.'

There are three additional subordinating conjunctions: *wàk<sup>h</sup>kí* for conditional clauses, *gòm* for reason and adversative clauses, and *mèd* for temporal clauses. All of these alternate according to the gender of the noun which follows in the manner described above.

- (21) *wàk<sup>h</sup>kí wàṭí? k'óf-ód=ā shēt<sup>h</sup>, k'úp<sup>h</sup>*  
 if:CL1 man(CL1) kill:PFV-3SG=ACC.CL2 antelope(CL2), head(CL1)  
*tō mí-nù mí=i k<sup>h</sup>ál bwày cōm=á?*  
 thing(CL1) do.AUX:PFV-IMPERS do.AUX=LNK carry to:CL1 his.father(CL1)=Q  
 'If a person kills an antelope, is the head carried to the father's home?'

- (22) *wàk<sup>h</sup>ká c'í p<sup>h</sup>úd-úd mò yil k'úmèd pé kwārā áw*  
 if:CL2 child(CL2) reach:IPFV-3SG MO year(CL1) thirteen or  
*k'úmèd ì pé sú? ádī kī t<sup>h</sup>él mí p'én=i máf mò*  
 twelve 3SG(CL1) NARR begin do.PART behind.PART=LNK marry MO  
 'If the child reaches the year thirteen or twelve then he can start to get married.'

The only native coordinating conjunction is *dàli* (Class 2 *dàlà*) ‘and; but’, and it is very frequent.<sup>14</sup> It may coordinate clauses, noun phrases, and nouns.

- (23) *dàli tōnt<sup>h</sup>é? yīsā di-d yīsā=yà*  
**and:CL1** food(CL1) NEG exist.SG:PFV-3SG NEG=NEG  
 ‘And there was no food.’

- (24) (James 1979, The Birapinya Tree)  
*dàlà bóm nǎŋ-ø=ø gùb fēmēn*  
**and:CL2** woman(CL2) build:IPFV-3SG=ACC.CL1 house(CL1) alongside:CL1  
*bwày*  
 road(CL1)  
 ‘And a woman had built her house alongside the road.’

### 3.4 Prenominal modifiers

Out of all the prenominal modifiers, two of them index the gender of the noun they modify, namely the diminutive *āri* and its irregular plural form *ūfi*. Both the singular as well as the plural diminutive are lexically nouns themselves, with inherent gender (Class 1). However, they alternate their final vowel according to the gender of the following noun: *i* before Class 1, and *á* before Class 2.

- (25) *áhā mif-á=ø āri mī*  
 1SG(CL1) see:IPFV-1SG=ACC.CL1 DIM:CL1(CL1) goat(CL1)  
 ‘I saw the little goat.’

- (26) *áhā mif-á=ø ārá nǎw*  
 1SG see:IPFV-1SG=ACC.CL1 DIM:CL2(CL1) cat(CL2)  
 ‘I saw the little cat.’

There is one special case in regards to prenominal modifiers that should also be mentioned, one of the only instances of non-adjacent indexation of gender. When prenominal modifiers modify a postverbal A argument, the verb does not agree with the inherent gender of the modifier, but rather with the noun that the prenominal modifier is modifying.

<sup>14</sup>Two other conjunctions borrowed from Arabic also exist: *wàlà* and *áw*, both meaning ‘or (used to rephrase something)’. Neither term alternates according to the gender of the noun which follows.

- (27) Class I Noun  
 à=bóm                    mif=à                    wàtí?  
 CL2=woman(CL2) see:IPFV=ERG.CL1 man(CL1)  
 ‘The man sees the woman.’
- (28) Class I Modifier, Class I Noun  
 à=bóm                    mif=à                    ðàn                    wàtí?  
 CL2=woman(CL2) see:IPFV=ERG.CL1 big(CL1) man(CL1)  
 ‘The big man sees the woman.’
- (29) Class II Noun  
 wàtí?                    mif=mà                    bóm  
 man(CL1) see:IPFV=ERG.CL2 woman(CL2)  
 ‘The woman sees the man.’
- (30) Class I Modifier, Class II Noun  
 wàtí?                    mif=mà                    ðàn=à                    bóm  
 man(CL1) see:IPFV=ERG.CL2 big(CL1)=ASSOC.CL2 woman(CL2)  
 ‘The big woman sees the man.’

Constructions of this type have only appeared in elicited circumstances, however, and speakers appeared to be somewhat reluctant to use them. Not all Uduk speakers would necessarily find these grammatical; many would find them odd, at the very least, and would avoid using postverbal A arguments with pronominal modifiers.

### 3.5 Verbs

Finite verbs are the last target for gender indexation presented here; verbs indicate the gender of O arguments in a rather unusual fashion.

In constructions in which the O argument is Class 2 (e.g. marked with the Accusative), the A argument is cross-referenced in the same way that S would be in monovalent clauses. Verbs with a 3SG subject are marked with  $-(V)d$ , and verbs with a 2SG, 2PL, or 3PL subject are marked with  $-(V)n$  on the verb. Verbs with 1SG and 1PL.EX subjects take  $-á$ , and 1PL.IN subjects take  $-à$ .

- (31) Class 2 O, 3SG subject

wàtí? c'ít'-íd=ā yíd  
man(CL1) cut:IPFV-3SG=ACC.CL2 skin(CL2)

'The man is cutting the pelt.'

- (32) Class 2 O, 2SG subject

é gām-án=ā c'í  
2SG(CL1) find:IPFV-2SG=ACC.CL2 child(CL2)

'You have found the child.'

- (33) Class 2 O, 3PL subject

únī gām-án=ā dàwà kā rìs  
3PL(CL1) find:IPFV-3PL=ACC.CL2 baboon(CL2) with:CL2 many(CL2)

'They found many baboons.'

- (34) Class 2 O, 1SG person subject

áhā p<sup>h</sup>ī-ná=ā sū  
1SG(CL1) drink:IPFV-1SG=ACC.CL2 beer(CL2)

'I am drinking the beer.'

Class 1 O arguments not only do not take overt Accusative marking, but they also trigger a reduction of verbal morphology. Subject cross-referencing markers on the verb for second and third person A arguments are suppressed,<sup>15</sup> and cross-referencing on the verb only appears with first person subjects.

- (35) Class 1 O, 3SG person subject

ádĩ c'ít'-ø=ø bùnjè  
3SG(CL1) cut:IPFV-3SG=ACC.CL1 cloth(CL1)

'S/he's cutting the cloth.'

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<sup>15</sup>Under normal circumstances, it is not possible for any other element to intervene between the verb and the noun that follows. There is one instance in my database pointed out to me by a reviewer (example 22), however, in which the aspectual marker *mò* does come in between a verb and a Class 1 noun. In this instance, cross-referencing of A on the verb is actually realized, suggesting that there may be additional factors involved in the suppression of the second/third person suffix. More research is needed to determine if this is indeed the case, and if so, what those might be. This may simply be an intransitive clause, with 'year' functioning adverbially.

- (36) Class 1 O, 3PL person subject  
*únī d'ék'-∅=∅ k'wā*  
 3PL(CL1) pick\_up:IPFV-3PL=ACC.CL1 bowl(CL1)  
 'They pick up the bowl.'
- (37) Class 1 O, 2SG person subject  
*é g'ám-∅=∅ tō yán*  
 2SG(CL1) find:IPFV-3SG=ACC.CL1 thing(CL1) DEM.PROX  
 'You found this thing.'
- (38) Class 1 O, 1SG person subject  
*áhā p<sup>h</sup>ī-ná=∅ yid'é*  
 1SG(CL1) drink:IPFV-1SG=ACC.CL1 water(CL1)  
 'I am drinking the water.'

Examples (35), (36), and (37) are parallel to (31), (32), and (33) in structure, but with the subject cross-referencing markers on the verb suppressed.

First person subjects on the other hand do not change their cross-reference marking, irrespective of the gender of O. The only indication of the gender of O in examples (34) and (38) is the ACC marker.

The phenomenon described above does not apply to Narrative constructions, where arguments are never cross-referenced on the verb. This applies to all persons, with O arguments of either gender. Narrative constructions use non-finite forms of verbs, and the only difference between Narrative constructions with Class 1 objects and Narrative constructions with Class 2 objects is the Accusative case marker.

- (39) Class 1 O, Narrative construction  
*à=cí kí k'ósh=∅ wàṭí? mò*  
 CL2=creature(CL2) NARR hit<sub>NF</sub>=ACC.CL1 man(CL1) MO  
 'He attacks the man.'
- (40) Class 2 O, Narrative construction  
*á'dī kí bùṭ=á c'í ḡàlì k'ósh=ā c'í*  
 3SG(CL1) NARR catch<sub>NF</sub>=ACC.CL2 child(CL2) and hit<sub>NF</sub>=ACC.CL2 child(CL2)  
*mò*  
 MO  
 'She catches the child and beats the child.'

Note that personal pronouns have inherent Class 1 gender,<sup>16</sup> and the gender of a pronoun does not reflect the gender of the noun it denotes.

- (41)  $\acute{a}=k^h\acute{u}r\bar{a}$        $l\acute{o}b=m\bar{a}$        $c'i$   
CL2=ball(CL2) play:IPFV=ERG.CL2 child(CL2)  
'The child is playing football.'

- (42)  $\acute{a}=k^h\acute{u}r\bar{a}$        $l\acute{o}b=\bar{a}$        $\acute{a}d\bar{i}$   
CL2=ball(CL2) play:IPFV=ERG.CL1 3SG(CL1)  
'S/he is playing football.'

Pronominal objects also trigger indexation patterns in which second and third person cross-referencing of A is suppressed.

- (43) Class 2 O, 3SG person subject  
 $w\acute{a}t\bar{i}?$        $k'\acute{o}f-\acute{o}d=\bar{a}$        $R\acute{a}b\bar{i}$   
man(CL1) hit:IPFV-3SG=ACC.CL2 Rabi(CL2)  
'The man hits Rabi.'

- (44) Class 1 O, 3SG person subject  
 $w\acute{a}t\bar{i}?$        $k'\acute{o}f-\emptyset=\emptyset$        $\acute{a}d\bar{i}$   
man(CL1) hit:IPFV-3SG=ACC.CL1 3SG(CL1)  
'The man hits him/her/it.'

## 4 Gender assignment

Gender assignment in Uduk is largely, but not exclusively, arbitrary, with only limited connections to semantic categories such as biological sex, size, shape, and animacy. There are no distinctions based on sex, human vs. non-human, or animate vs. inanimate, and neither sex nor animacy is distinguished in the pronominal system for any person.

Nouns generally considered among the highest in the animacy scale, such as human kinship terms, do not show transparent assignment.

A list of human nouns and their gender may be found in Table 2, with little or no predictability beyond the fact that most suppletive possessive kinship terms appear to fall into Class 1.

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<sup>16</sup>Described more fully in §4 below.

Table 2: Class 1 and Class 2 human nouns

Class 1	
<i>wàtí?</i>	man
<i>yà?</i>	son
<i>ḃwāhām</i>	female sibling or parallel cousin
<i>ḃwā?</i>	daughter
<i>āf</i>	wife
<i>jīl</i>	sisters-in-law, recip.
<i>kūm</i>	his, her mother
<i>kwān</i>	your mother
<i>cīm</i>	your father
<i>cōm</i>	his, her father
<i>sób</i>	his, her father's sister
<i>nà(r̄n)</i>	niece, nephew (sister's children)
<i>sīmīn</i>	father's sister
<i>yāfīm</i>	brother's wife; husband's brother or sister
<i>k'wāskām</i>	cross-cousin
<i>k'wāskīn</i>	your cross-cousin
all personal pronouns	
all plural derived agentive nouns	
Class 2	
<i>à=ḃóm</i>	woman, wife
<i>à=kām</i>	male sibling or parallel cousin
<i>à=bàpá</i>	father
<i>à=tádā</i>	mother
<i>à=māmá</i>	my mother, also vocative
<i>à=kāt<sup>h</sup></i>	husband
<i>à=c'í</i>	child (general)
<i>à=māmà</i>	father's sister
<i>à=tāt<sup>h</sup>á</i>	mother's brother
<i>à=fwákām</i>	mother's brother
<i>à=nàrú</i>	mother's brother
<i>à=?íyā</i>	father's brother; brother's children
<i>à=màrè</i>	wife's parents
<i>à=màr</i>	husband's parents
<i>à=màsé?</i>	sister's husband
<i>à=m<sup>wí</sup></i>	sister's children (for men)
<i>à=dīt<sup>h</sup>í?</i>	elderly woman, esp. father's sister
<i>à=mòpérù</i>	second cousin, more distant relationship
<i>à=pèrgòn</i>	cousin (non-vocative)
all personal names, male and female	
all singular derived agentive nouns	

Dahl (2000: 101) postulates the following:

1. In any gender system, there is a general semantically-based principle for assigning gender to animate nouns and noun phrases.
2. The domain of the principle referred to in (1) may be cut off at different points of the animacy hierarchy: between humans and animals, between higher and lower animals, or between animals and inanimates.

That is, by using a hierarchy such as the one found in Figure 1, one can make predictions on what types of gender systems may occur, and where semantically-based principles apply. Dahl suggests that cross-linguistic cut-off points vary, but are always found below human.

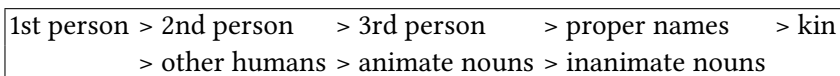


Figure 1: Animacy hierarchy

Semantic assignment is not predictable for human appellatives in Uduk; however, there *are* semantic areas in which predictability does occur: namely personal (and demonstrative) pronouns as well as proper names, both categories above human in the animacy hierarchy.

All personal pronouns show gender assignment in the same way that nouns do, and could be considered a lexical subtype of nouns. Demonstratives and personal pronouns are all assigned to the nominal Class 1 gender; they show no connection to the gender of a noun in anaphoric contexts, and are invariably Class 1. This is partially comparable to Jarawara (Arawan), in which “all pronouns (whatever the sex of their referent) engender feminine agreement on verbal suffixes” (Dixon 2000: 488). Proper names on the other hand are assigned to Class 2. This generalization holds only for personal names; place names can vary. Uduk gender predictability thus appears to apply only to levels higher than human appellatives in the animacy hierarchy.

Below this cut-off point there are limited trends in semantic assignment, but the semantic groups that can be formed all have exceptions. Nouns denoting plural entities, *k'wānī* ‘people’, *ūp<sup>h</sup>* ‘women’, and *ūc<sup>h</sup>i* ‘children’, are Class 1. Furthermore, a limited subset of nouns (primarily proper names and some kinship terms) in Uduk may appear with the Associative Plural prefix *ī-* to denote a person and additional people associated with that person; nouns marked in this way



are also Class 1. This includes plurals which would otherwise be assigned to Class 2, such as proper names.<sup>17</sup>

Most relational nouns, nouns which are primarily used to indicate more detailed types of spatial or temporal relationships, are also Class 1. This includes nouns like *fēmén* ‘alongside’, *p’émèn* ‘end, bottom (of)’, *bwàmán* ‘inside, between’, *bwàmbòr* ‘front (of)’; a few, such as *à=p<sup>h</sup>ó?* ‘on top of’ and *à=píjè* ‘outside’ are Class 2. Lastly, body parts are also more commonly found in Class 1 than Class 2.

Formal assignment in terms of word formation rules also creates limited situations in which gender assignment may be predicted. Nominalizations of stative verbs, marked with the suffix *-gá?*, are invariably assigned to Class 2. Agentive nouns formed with the derivational morpheme *màn-* are also assigned to Class 2. Nouns derived from verbs which use zero derivation, however, are all assigned to the Class 1 gender.

Uduk nouns tend to be fairly rigid in their assignment of gender, and few lexemes seem to have the possibility of occurring in either class. In these instances, there is no change in meaning. This includes intraspeaker variation as well as free variation within the speech of the same speakers.

There are a few instances in which homophonous nouns are assigned to different classes, e.g. *jè*, ‘elephant’, and *à=jè* ‘mud; type of fish’, but these are purely lexical distinctions, and remain rigid in assignment.

There is a markedness relationship between the two classes. In many respects, Class 1 could be considered the unmarked, default class, particularly for less prototypical nouns, such as pronouns. In addition to the lack of overt morphology in many instances, there are other signs that Class 1 is seen as the default. Conjunctions which occur before word classes other than nouns, for instance, use the same form as before Class 1 nouns. However, in other respects, Class 2 could also be considered a default. Class 2 is the default for nouns and adjective-like concepts, and a large number (although not all) of borrowed words appear to be placed into Class 2, e.g. *à=bāsál* ‘onion’, *à=bí/kír* ‘towel’, *à=màsábà* ‘distance’, *á=fábāgà* ‘network’.

## 5 Complexity

Uduk shows itself to have an atypical gender system, and it is worth investigating its complexity in more detail, and how it might compare to gender systems of other languages. Di Garbo (2014: 183) uses six features to determine the

<sup>17</sup>Note that most nouns in Uduk are not normally morphologically marked for number; the Associative Plural is one of very few ways of marking number directly on a noun, and even this is only possible to use with a limited set of nouns.

complexity of a gender system: Number of gender values, Nature of assignment rules, Number of targets, Cumulative exponence of gender and number, Manipulation of gender assignment triggered by number/countability, and Manipulation of gender assignment triggered by size.

In terms of these features as well as some others, Uduk has a relatively simple system. There are only two genders, to which nouns are generally rigidly assigned. No manipulation is possible, and aside from the Associative Plural marker, there are no instances in which number and gender are marked cumulatively. There are three targets: case marking particles, verbs, and adpositions/conjunctions/complementizers (which all form part of a single category), and a marginal fourth in the form of the diminutive (not included here as it does not constitute a word class; see §3.4). Assignment parameters feature higher complexity, however, as assignment is partly semantic, partly formal, but mostly completely opaque.

There were two additional criteria mentioned in §2, arbitrariness in gender assignment and adjacency, which play an interesting role in complexity, although at the moment it is difficult to see precisely how to reconcile them in terms of complexity metrics.

In nearly all instances in which gender is indexed on a target in Uduk, the gender-marked target and controller are immediately adjacent, with the target in the immediate position before the controller. This adds slightly to the descriptive complexity, as it requires an extra rule or constraint specifying this in the description.

Arbitrariness in gender assignment is even more difficult to reconcile, but an arbitrary system is likely also more complex. In principle, assignment would reach maximal complexity if each individual noun required a separate descriptive rule.

Both arbitrariness of assignment as well as adjacency require further research in general. Whether we exclude or include these as factors, however, it would appear that Uduk does have a relatively simple gender system, albeit atypical.

## **6 Discussion**

The Uduk gender system turns out to have a number of intriguing aspects. First, the system makes heavy use of zero marking and in one instance, suppression of subject agreement morphemes to indicate the gender of an object.

Second, almost all targets of indexation are adjacent to the controller. This is not commonly remarked upon cross-linguistically,<sup>18</sup> and by making note of it here, it may encourage other linguists to explore adjacency as a factor at play in gender marking systems.

Third, personal and demonstrative pronouns control gender in the same way that nouns do. And finally, gender is not connected to biological sex or other familiar semantic categories.

As mentioned previously, the last two characteristics are connected in Uduk. Semantic predictability in Uduk occurs at higher levels of animacy than simply human. It parallels some Austronesian languages such as Tagalog and Fijian for instance, which Hockett described as having gender, although later linguists have not.

In Fijian, /mata/ ‘day’ is preceded by /na/ when it is the subject of a clause, but /viti/ ‘Fiji’ is preceded instead by /ko/. /na/ and /ko/ are two distinct particles, not different inflected forms of a single stem. Yet the choice of /na/ or /ko/ establishes a twofold classification of all Fijian nouns and noun phrases: names of specific people and places belong to the /ko/ class, common nouns to the /na/ class. (Hockett 1958: 230)

Even more interestingly, “...independent pronouns [in Fijian] function in many ways like proper nouns, and are frequently marked by the same marker (*ko* or *o*)” (Geraghty 1983: 201).

A comparable system is found in Tagalog (Table 3), which could also be viewed as having a common vs. proper gender system. Tagalog additionally has distinct forms for demonstratives and each pronoun, suggesting that these are internally viewed as a third category, neither common nor proper (and different from Fijian in this respect).

In both cases, Tagalog and Fijian have a higher cut-off point in animacy than human nouns, requiring a more fine-grained approach to the animacy hierarchy. This cut-off point appears to show some parallels to Uduk. Where Fijian for instance differs from Uduk, however, is that in Uduk, proper names and personal pronouns do not occur in the same gender, and thus a proper-common gender differentiation would not be suitable as an analysis. Uduk would instead show two genders, one consisting of personal and demonstrative pronouns and other nouns, and the other consisting of proper names and other nouns.

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<sup>18</sup>One important exception to this is Bernhard Wälchli’s work on Nalca (Wälchli 2018). Wälchli was also the one who pointed out adjacency as a relevant factor in Uduk to me, and I likely would not have noticed or remarked upon this without his input. Additionally, !Xóó also appears to index gender only on adjacent targets; for further details, see Güldemann (2006).

Table 3: Noun phrase markers and pronouns in Tagalog (Himmelmann 2005: 358)

	SPEC	POSS/GEN	LOC/DAT
Common nouns	<i>ang</i>	<i>ng</i>	<i>sa</i>
Personal names	<i>si</i>	<i>ni</i>	<i>kay</i>
1SG	<i>akó</i>	<i>ko</i>	<i>akin</i>
2SG	<i>ikáw, ka</i>	<i>mo</i>	<i>iyó, iyó</i>
3SG	<i>siyá</i>	<i>iyá</i>	<i>kaniyá</i>
1DU.IN	<i>kitá, katá</i>	<i>nitá</i>	<i>kaniotá</i>
1PL.IN	<i>tayo</i>	<i>natin</i>	<i>atin</i>
1PL.EX	<i>kamí</i>	<i>namin</i>	<i>amin</i>
2PL	<i>kayó</i>	<i>ninyó</i>	<i>inyó</i>
3PL	<i>silá</i>	<i>nilá</i>	<i>kanilá</i>
PROX	<i>itó</i>	<i>nitó</i>	<i>dito, rito</i>
MED	<i>iyán</i>	<i>niyán</i>	<i>diyán, riyán</i>
DIST	<i>iyón</i>	<i>niyón, noón</i>	<i>doón, roón</i>

Languages like Tagalog, Fijian, and Uduk give evidence suggesting that predictability may occur at points higher in the animacy hierarchy than previously acknowledged, although Uduk shows itself to be more complex than Tagalog or Fijian, as the gender of its nouns is generally much less predictable. By including Uduk as a typological point of reference, a reconsideration of possible cut-off points in the animacy hierarchy may be in order.

## Special abbreviations

The following abbreviations are not found in the Leipzig Glossing Rules:

AD1	aspect-directional 1	MO	aspect-mood particle
AD2	aspect-directional 2	NARR	narrative
ASSOC	associative	NAS	nasal
CF	counterfactual	NF	non-finite
CL1	class 1 gender	PART	partargument
CL2	class 2 gender	PP	predicative possession
DIM	diminutive	REL	relativizer
LNK	linker	SPEC	specific article

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Any remaining errors are of course the author's own responsibility.

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