



More recently, typologically-driven work (e.g. Aikhenvald 2000, Senft 2000), has given new impulse to the study of gender in a broader, as well as more systemic way. Works such as Crisma, Marten and Sybesma (2011) examine parallels between Indo-European gender systems (such as Italian), Bantu noun class, and the classifier systems characteristic of languages such as Chinese, and argue that each of these systems serves to individuate, turning a predicate noun phrase into a referential expression. Kihm (2005), comparing Niger-Congo and Romance, proposes variations in a shared syntactic structure to account for surface variation between the two distinct phyla. Central to these new approaches is their recognition of gender not as one system dominated by the pattern of surface structures it instantiates (i.e. syntactic), but as an intermodular complex of semantic, syntactic, and morphological mechanisms.

Essential to such analyses is the ability to conduct a principled dissection of any one language's system of nominal agreement. I will follow Harris' 1991 procedure. In his approach to Spanish, Harris states that "[g]ender is only one of three interrelated but distinct and autonomous domains relevant to inflection, namely biological/semantic sex, syntactic gender, and morphological form class. Each of these domains has its own internal organization and formal mechanisms"(65). Subsequently, and employing a method which presages the advent of Distributed Morphology ((Halle and Marantz 1993) (Halle and Marantz 1994) (Marantz 1997)), Harris isolates 7 'word markers', largely nominal suffixes which "mark[] a derivationally and inflectionally complete word, [and] cannot be followed by any other suffix, derivational or inflectional, except for plural -s" (Harris, 1991: 30). These include, among others, the common *-o*, and *-a* of Spanish nouns (e.g. *abuelo* 'grandfather'(m) versus *abuela* 'grandmother'(f)). However, it is established that, far from being a 'masculine gender marker' and a 'feminine gender marker', the *-o* and *-a* word markers are actually much more complex, entering into further gender relations as well (e.g. *mano* 'hand'(f), and *día* 'day'(m)). This approach is salutary for a language such as Gorwaa, where a form such as *-oo* cannot be associated with a single gender value (*baynoo* 'pigs'(F) versus *asloo* 'fires'(N)), nor with a single number value (*hhaysoo* 'tail'(N) versus *asloo* 'fires'(N)). The project of adapting some parts of Harris' 1991 analysis of Spanish to Gorwaa, a South Cushitic language of Tanzania, aims to elucidate what has long been described as an opaque system. This paper represents the first step of this project – that is, identifying the word-markers of Gorwaa.

## 2. The language and the methodology

### 2.1. Gorwaa

Gorwaa (ISO 693-9: *gow*) is a South Cushitic language spoken in central Tanzania by approximately 15,000 people (Mous 2007). Located primarily within the eastern branch of the East African Rift, the most important activities in the area are mixed agriculture and keeping animals including zebu cattle, goats, and sheep. Little documentation of the language has been carried out, with no published dictionary, grammar, texts, or standardized writing system<sup>1</sup>. Furthermore, due to small speaker numbers, sudden, rapid urbanization, and what has been described by Muzale and Rugemalira (2008) as a

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<sup>1</sup> An electronic deposit of approximately 200 hours of elicitation and natural speech, at various states of transcription and translation into English, exists in the archive of ELAR, London (Harvey 2017).

political environment hostile to languages that are not Swahili or English (the national and official languages of Tanzania, respectively), Gorwaa will face considerable challenges to remain viable into the next century.

## 2.2. Data collection

Data used for this paper was collected in Babati District, Manyara Region, Tanzania, on fieldtrips undertaken in 2012-2013 as part of Masters-level studies, and during 2015-2016 as part of PhD-level research<sup>2</sup>. Approximately 1000 nouns were elicited in three distinct frames: (1a) to determine their citation pronunciation, (1b) to determine gender, subgender, and number (as shown through agreement on the adjective and (partially) the verb), and (1c) to determine lexical pitch-accent, for all of their forms, singular and plural<sup>3</sup>. Elicitation was primarily carried out via translation exercises where I would provide a phrase in Swahili, and the consultant would reply in Gorwaa. This exercise was conducted twice: first as a (non-recorded) “warm-up”, and then recorded. Elicitation required to determine all the pertinent information for the noun *maa'oo* ‘cat’ is illustrated in (2) below<sup>4</sup>:

- (2) a. *to maa'oo kilós*  
say cat only  
‘say ‘cat’ only’
- b. *maa'oór uur i qwala/amís*  
cat.LF big.F Aux make.happy.F.Pres  
‘a big cat makes one happy’
- c. *maa'oo -woó*  
cat -Top.Q  
‘a cat?’
- d. *to ma'u kilós*  
say ‘cats’ only  
‘say ‘cats’ only’
- e. *ma'ú uren i qwala/amiis -iyá'*  
cats.LF big.N.Pl Aux make.happy.3 -N.Pres  
‘big cats make one happy’
- f. *ma'u -woó*  
cats -Top.Q  
‘cats?’

## 3. Preliminaries

<sup>2</sup> PhD-level work was funded by an ELDP Postgraduate Award, as well as support from the Philological Society.

<sup>3</sup> The total number of consultants numbers approximately 130, of whom about 25% were female and 75% were male. Age ranged from 7 years old to over 100. Special thanks here are due to Mchj. Hezekiah Kodi, for acting as chief consultant in this part of the research.

<sup>4</sup> In this paper, the convention for writing Gorwaa is thus: q = [q'], ts = [ts'], tl = [tɬ'], x = [χ], ' = [ʔ], / = [ʃ], hh = [h], sl = [ʃ], qw = [qʷ], xw = [χʷ]. A doubled vowel (e.g. aa) indicates a long vowel, a vowel with an acute accent (e.g. á) indicates rising pitch accent, and a vowel with a circumflex accent represents rising-falling pitch accent. If the vowel is long, the diacritic is written on the second character (e.g. aá, aâ).

Before listing the morphological word-markers of Gorwaa, I will give short comment on the two systems underlying these forms, namely gender and number.

### 3.1. Gender

This section gives brief comment to the limited semantic foundation upon which gender is based, followed by a more detailed examination of semantic gender: gender as manifest in its agreement.

#### 3.1.1. Biological/semantic sex

Kießling (2000) identified some correspondence with syntactic gender (established below as M, F, and N) and semantic sex – that is, many female beings are feminine in gender, and many male beings are masculine.

- (3) a. Feminine: /ameeni ‘woman’; hho’oo ‘sister’; koonki ‘hen’  
 b. Masculine: hhawata ‘man’; hhiya ‘brother’; gurtu ‘male goat’

It was also noted, however, that some “remarkable deviations” (ibid.) existed: male organs tend to be feminine in gender and female organs tend to be masculine in gender.

- (4) a. Feminine: na/ani ‘penis’; gudo ‘testicle’; poo/i ‘Adam’s apple’  
 b. Masculine: gwalay ‘vagina’; isamó ‘breast’

Beyond these tendencies, however, other semantic groupings do not seem to produce any sort of obvious patterns.

#### 3.1.2. Syntactic gender

Gorwaa has three syntactic gender values: (M)asculine, (F)eminine, and (N)euter. This is consistent with Mous’ analysis for the closely-related language Iraqw (irk; Tanzania) (1993, 2007, 2008), but differs from others, including Corbett (e.g. 2005: 126-129), and Di Garbo (2014: 119) for whom gender in these languages has two values: M and F. N gender is subsumed under Pl number marking.

Under a two-gender analysis, agreement morphology on the verb becomes a division between M and F gender, and Pl number. As such, a verb form such as *qwala/amiis* (level pitch accent, long vowel) is M, the form *qwala/amís* (rising pitch accent, short vowel) is F, and the form *qwala/amisiyá’* (suffix *-iyá’*) is Pl. This analysis breaks down, however, when adjectives are introduced, which show agreement for both gender *and* number. Consider the following, in which *hhaysoo* in (5a) is N gender, and the adjective *tleer* shows N gender and Sg number, and *hhaysusu* in (5b) is N gender and the adjective *tlet* shows N gender and Pl number. Under a two-gender analysis, both nouns are plural (as shown by the *-iyá’* agreement on the verb), and so there is no principled way to justify the two different adjectival forms. In (5b), it could be argued that the adjective is somehow double-marked for Pl number, but in (5a), the adjective would have to be simultaneously marked for both Sg *and* Pl number -- a highly curious state of affairs indeed.

- (5) a. *hhaysoó tleer i qwala/amiis -iyá'*  
 tail.LF long.N Aux make.happy.3 -N.Pres  
 'A long tail makes one happy.'
- b. *hhaysusú tlet i qwala/amiis -iyá'*  
 tails.LF long.N.Pl Aux make.happy.3 -N.Pres  
 'Long tails make one happy.'

Furthermore, recent psycholinguistic work on the Cushitic language Konso (kxc: Ethiopia) (Tsegaye 2017) investigating how native speakers process grammatical gender and number shows that, for this language at least, the equivalent of N in Gorwaa is indeed processed as a gender value, rather than a number value. As such a three-gender analysis will be adopted in this work.

Within this three-gender system, each gender exhibits subgender – that is, a second agreement pattern within the larger pattern that functions only for a small number of nouns, and only in a small number of environments. Specifically, subgender is only instantiated in long-form morphology<sup>5</sup>. All long-form morphology is instantiated by suprasegmental rising pitch accent. Segmentally, Mo-type morphology is instantiated by the suffix -o; Mk-type morphology is instantiated by the suffix -ku; Fr-type morphology is instantiated by the suffix -r; Ft-type morphology is instantiated by the suffix -ta, NØ-type morphology is instantiated by the suffix -∅; and Na-type morphology is instantiated by the suffix -a. Examples are given below:

- (6) a. *hhawata* 'man' (M)  
 b. *hhawató aako* 'grandfather's man' (Mo-type)  
 c. *muu* 'people' (M)  
 d. *muukú aako* 'grandfather's people' (Mk-type)  
 e. *qaymo* 'field' (F)  
 f. *qaymór aako* 'grandfather's field' (Fr-type)  
 g. *asla* 'fire' (F)  
 h. *asltá aako* 'grandfather's fire' (Ft-type)  
 i. *hhaysoo* 'tail' (N)  
 j. *hhaysoó slee* 'the cow's tail' (NØ-type)  
 k. */éw* 'west' (N)  
 l. */ewá saaw* 'the far west' (Na-type)

Again, subgender is overtly marked solely in these kinds of environments, and does not affect agreement patterns on adjectives, verbs, or other parts of speech (i.e. Mo-type nouns induce the same agreement morphology as Mk-type nouns, Fr-type nouns induce the same agreement morphology as Ft-type nouns, and NØ-type nouns induce the same agreement morphology as Na-type nouns). Numerically, there are more Mo-type

<sup>5</sup> This pattern has been referred to by many names in the South Cushitic literature, including 'construct case' (Mous, 1993), and antigenitive (Mous, 2007). Because of evidence requiring too long an analysis for this paper, I will simply state that I have interpreted this pattern to be a form of *liaison* in which the end of a word is pronounced if it exists within a prosodic phrase (such as a noun phrase, etc.), and therefore refer to the fully-pronounced form of the noun as the 'long form', versus the elided 'short form'.

nouns than Mk-type nouns, there are more Fr-type nouns than Ft-type nouns, and there are more NØ-type nouns than Na-type nouns<sup>6</sup>. The precise subgender taken by any given noun is largely unpredictable.

The final pattern of which to take note is that syntactic gender has a stable association with the word-markers. In other words, each word-marker has a fixed gender value. As can be seen in (7) below, the word-marker *-i* consistently triggers Fr agreement, the word-marker *-amó* consistently triggers Mo agreement, and the word-marker *-eeri* consistently triggers NØ agreement.

- (7) a. i) *sakweelír tleer*  
ostrich long.F  
'a tall ostrich'
- ii) *tlangasír tleer*  
quiver long.F  
'a long quiver'
- iii) *gidondoorír tleer*  
k.o.instrument long.F  
'a long stringed instrument'
- b. i) *siyumó tleér*  
fish long.M  
'a long fish'
- ii) *sandukumó tleér*  
box long.M  
'a long box'
- iii) *digirmó tleér*  
footprint long.M  
'a long footprint'
- c. i) *xareemí tlet*  
horns long.N.Pl  
'long horns'
- ii) *meheerí tlet*  
arrows long.N.Pl  
'long arrows'
- iii) *tle/iseerí tlet*  
logs long.N.Pl  
'long logs'

### 3.1.3. Review of gender

- A) Many animals receive gender commensurate with their biological sex  
 B) Gorwaa possesses three major syntactic genders: (M)asculine, (F)eminine, and (N)euter  
 C) Of these three genders, the (M)asculine gender exhibits two subgenders (Mo-type and Mk-type), (F)eminine gender exhibits two subgenders (Fr-type and

<sup>6</sup> In his *Iraqw Grammar*, Mous (1993:84) describes Mk-type and Ft-type nouns as historical hold-overs from an earlier stage of Proto-West Rift, before the application of the rule  $ku \rightarrow w$  and  $ta \rightarrow r$ .

Ft-type), and (N) neuter gender exhibits two subgenera (N $\emptyset$ -type and Na-type). Subgender is only visible in long-form morphology.

- D) The syntactic gender has a stable association with the word-markers. Each word-marker has a fixed gender value.

### 3.2 Number

As with gender, number may be divided into two parallel systems: a syntactic system, and a semantic system. Each of these will be detailed in turn below.

#### 3.2.1 Syntactic number

Notably, the only element that shows number agreement in Gorwaa is the adjective. This is true in modifier adjective constructions (as in (8)), as well as predicate adjective constructions (as in (9)). The number value expressed is singular (Sg) versus plural (Pl). As can be seen in (8b,c) and (9b,c), some nouns can appear with either Sg or Pl agreement.

- (8) a. *tsir/ir tleer*  
bird tall.F  
'a tall bird'
- b. *tsir/oór tleer*  
birds tall.F  
'a tall species of bird'
- c. *tsir/oór tlet*  
birds tall.F.Pl  
'tall birds'
- (9) a. *tsir/i ka tleer*  
bird CopAdj.F tall.F  
'the bird is tall'
- b. *tsir/oo ka tleer*  
birds CopAdj.F tall.F  
'the species of bird is tall'
- c. *tsir/oo ka tlet*  
birds CopAdj.F tall.F.Pl  
'the birds are tall'

Nouns which may appear with either Sg. or Pl. agreement are argued to be inherently unvalued for number. Perhaps, then, the best gloss for forms such as *tsir/oo* above, is actually "bird" in the general sense. This phenomenon is described in Corbett (2000) as *general number*.

#### 3.2.2 Semantic number

These three syntactic values (Sg, Pl, and zero) belie a system of considerable complexity. That is, though the agreement exhibits only two values, Gorwaa nouns can express more number distinctions than this. Several configurations exist, each of which will be exemplified. It should be kept in mind that the labels used here are *semantic* in nature, not

*syntactic*. Whatever the number configuration described here, the only agreement available is Sg, Pl, or either.

When a noun can take two different suffixes, the values expressed are either *singular* vs. *plural*, as in (5.5), *singulative* vs. *collective*, as in (5.6), or *collective* vs. *plurative*, as in (5.7). Collective refers to an undifferentiated group of an entity, singulative refers to one entity singled out from among a group, and plurative refers to many entities dispersed from a group. Note that the internal consistency of a collective may be further modified by an adjective, as the distinction between *loo/oór ur* and *loo/oór uren* in (5.7) and the distinction between *piiró úr* and *piiró uren* in (5.8) (as well as the distinctions represented for *tsir/oo* in (5.4 and 5.5 above).

(10) SINGULAR VS. PLURAL

'ROOSTER'	
SINGULAR	PLURAL
<i>kookumó</i> <i>kookumó úr</i> rooster big.M 'a big rooster'	<i>kookuma'</i> <i>kookumá' uren</i> roosters big.N.Pl 'big roosters'

(11) SINGULATIVE VS. COLLECTIVE

'LEAF'		
SINGULATIVE	COLLECTIVE	
<i>loo/i</i> <i>loo/ír ur</i> leaf big.F 'a big leaf'	<i>loo/oo</i> <i>loo/oór ur</i> leaves big.F 'many leaves (foliage)'	<i>loo/oo</i> <i>loo/oór uren</i> leaves big.F.Pl 'big leaves'

(12) COLLECTIVE VS. PLURATIVE

'DRAGONFLY'		
COLLECTIVE		PLURATIVE
<i>piiró</i> <i>piiró úr</i> dragonfly big.M 'a big dragonfly'	<i>piiró</i> <i>piiró uren</i> dragonfly big.M.Pl 'a big (group of) dragonflies'	<i>piireema'</i> <i>piireemá' uren</i> dragonflies big.N.Pl 'big dragonflies'

When a noun can take three different suffixes, the values expressed are *singulative* vs. *collective* vs. *plurative*.

## (13) SINGULATIVE VS. COLLECTIVE VS. PLURATIVE

'CROWNED CRANE'			
SINGULATIVE	COLLECTIVE		PLURATIVE
<i>qoonqalumó</i> <i>qoonqalumó úr</i> crane big.M 'a big crowned crane'	<i>qoonqál</i> <i>qoonqaló úr</i> cranes big.M 'a big (flock of) crowned cranes'		<i>qoonqalima'</i> <i>qoonqalima' uren</i> cranes big.N.Pl 'big crowned cranes'
	<i>qoonqaló urén</i> cranes big.M.Pl 'many crowned cranes (flocks)'		

When a noun takes only one suffix, it may be *mass*, as in (14), *singularia tantum*, as in (15) or *collective* (16). Properties associated with Gorwaa mass nouns recorded so far (and based on Chierchia (1998)) are their inability to take cardinal numerals without use of an obligatory measure (17), the choice of adjectives of quantity available to them (18), and their independence from structure of the matter at hand (19).

## (14) MASS

'WATER'
MASS
<i>ma'áy</i> <i>ma'áy yaariir</i> water much 'much water'

## (15) SINGULARIA TANTUM

'SKY'	
SINGULAR	PLURAL
<i>dawri</i> <i>dawrír ur</i> sky big.F 'the great sky'	

## (16) COLLECTIVE

'EARTHQUAKE'	
COLLECTIVE	
<i>kuunseeli</i> <i>kuunseelír ur</i> earthquake big.F 'a big earthquake'	<i>kuunseeli</i> <i>kuunseelír ur</i> earthquake big.F.Pl 'big earthquakes'

## (17) MASS NOUNS CANNOT TAKE CARDINALS WITHOUT A MEASURE

- a. \**ma'áy wák*  
water one  
(intended meaning) 'one water'
- b. *ma'áy chupadú tám*  
water **bottles.LF** three  
'three bottles of water'

## (18) MASS NOUNS AND QUANTITY ADJECTIVES

- a. \**tseereér*    *uren*  
 blood            big.F.Pl  
 (intended meaning) ‘much blood’
- b. #*tseereér*    *ur*  
 blood            big.F  
 (intended meaning) ‘much blood’
- c. *tseereér*      *yaariir*  
 blood            much.F  
 ‘much blood’

## (19) MASSES ARE INDEPENDENT OF THE STRUCTURE OF THE MATTER

- karkari*            vs.    *naanagumó*    |    *naanagí*  
 ‘grubs’                    ‘a (single) larva’    ‘larvae’

In some cases, however, masses may be *plurativized*, in which case, they come to mean the substance of the mass has been dispersed. They gain all the properties of count nouns. As demonstrated in (18), the mass noun *tseeree* most naturally takes the quantity adjective *yaariir*, and is ungrammatical with the quantity adjective *uren*. In (20), the pluralized form of *tseeree* can take the quantity adjective *uren* with grammaticality as a result.

## (20) MASS VS. PLURATIVE

‘BLOOD’	
MASS	PLURATIVE
<i>tseeree</i>	<i>tseerdu</i>
<i>tseereér yaariir</i>	<i>tseerdu uren</i>
blood            much.F	blood.spots    big.N.Pl
‘much blood’	‘big spots (or pools) of blood’

As mentioned above, the syntactic gender has a stable association with the word-markers. Because each word-marker has a fixed gender, the gender value of a noun may change when that noun is changed for number (and hence given a different word-marker). For example, a singular noun which triggers (F) agreement on target adjectives, verbs, etc. can pluralize to a noun which triggers (M) agreement on those same target adjectives, verbs, etc. Compare the verbal agreement of *desu* ‘girls’ with that of *garma* ‘boy’ in (21) below:

- (21) a. *desír tleer i qwala/amís*  
 girl.LF tall.F Aux make.happy.F.Pres  
 ‘a tall girl makes one happy’
- b. *desú tlét i qwala/amiis*  
 girls.LF tall.M.Pl Aux make.happy.M.Pres  
 ‘tall girls make one happy’

c.	<i>garmá</i>	<i>tleér</i>	<i>i</i>	<i>qwala/amiis</i>
	boy.LF	tall.M.Sg	Aux	<b>make.happy.M.Pres</b>
	‘a tall boy makes one happy’			

Indeed, this process is widespread, and results in forms of any gender resulting in forms of almost any other gender.

(22)	a.	siyó(M) ‘fish’	→	siyumó(M) ‘one fish’
	b.	gufú(M) ‘smouldering stick’	→	guffee(F) ‘smouldering sticks’
	c.	dakw(M) ‘procedure’	→	dakwi’i(N) ‘procedures’
	d.	desi(F) ‘girl’	→	desu(M) ‘girls’

### 3.2.3. Review of number

A) Number has two syntactic values, visible in agreement: singular (Sg) and plural (Pl). Nouns may also be inherently unvalued for number (neither singular nor plural), and therefore may occur with adjectives with either Sg or Pl morphology.

B) Semantically, several different number values exist, which may be rudimentarily defined as follows:

- i. Singular: one of an entity
- ii. Plural: many of an entity
- iii. Collective: an entity as a group or whole
- iv. Singulative: one entity singled out from a collective
- v. Plurative: more than one entity dispersed from a collective or mass
- vi. Mass: an undifferentiated entity
- vii. Singularia Tantum: a unique entity

C) Because each word-marker has a fixed gender, the gender value of a noun may change when that noun is changed for number (and hence given a different word-marker).

The above data would suggest that, rather than in the root, the controllers of syntactic gender exist in the word-marker itself. It is this process of identifying word-markers and determining the gender they control that will occupy the remainder of this paper.

## 4. Word-markers<sup>7</sup>

All the word-markers of Gorwaa are displayed in Table 1.

42 different word-markers have been identified in Gorwaa thus far, and may be grouped according to the type of number agreement they trigger: 1) those which consistently trigger Sg agreement, 2) those which are variable but usually trigger Sg agreement, 3) those which are variable, 4) those which are variable but usually trigger Pl agreement, and 5) those which consistently trigger Pl agreement. Word-markers have been organized according roughly to their occurrence with Sg versus Pl (i.e. *syntactic*) morphology: ‘consistent Sg’ word-markers occurring toward the top, and ‘consistent Pl’ word-markers occurring toward the bottom. Those suffixes in between are organized on a cline with

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<sup>7</sup> In all subsequent examples, word-markers are underlined on the first line.

those which are ‘usually Sg’ bleeding into the ‘variable’ word-markers, which in turn bleed into the word-markers which are ‘usually Pl’. This continuum is based on frequency in the sample: as shown above, the *-oo(F)* suffix of *lo/oo* in (5.6) and the  $\emptyset(M)$  word-marker of *qoonqál* in (5.8) can both take either a Sg or a Pl adjective: a different (or larger) sample could indeed yield a different arrangement of these in-between cases. What is certain is that there are three broad groups: word-markers that are consistently Sg, word-markers that are consistently Pl, and word-markers that are, more or less, both Sg and Pl. If a word-marker has an allomorph, the allomorph has been presented along with it<sup>8</sup>.

Word-markers are shown with their gender, as well as their subgender. This morphology is only ever instantiated on the gender linker, but each word-marker is linked with one and only one subgender. This is why, for example, the morpheme *-a* is considered three different word-markers, one word-marker *-a* triggers Mo agreement, another word-marker *-a* triggers Mk agreement, and a third word-marker *-a* triggers Ft agreement.

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<sup>8</sup> The so-called ‘gentilic suffixes’ – those suffixes used to derive agentive nouns from verbs, are, due to their de-verbal nature, not included in this list.

Table 1: The Word-Markers of Gorwaa

	SUFFIX	GENDER	EXAMPLE
CONSISTENT SG	-(a)mó	Mo	<i>gasesmó</i> ‘a black snake’
	-ito’o	Fr	<i>makito’o</i> ‘an animal’
	-imo	Mo	<i>nanahhumo</i> ‘a skull’
	-iimi	Fr	<i>se’eemi</i> ‘a strand of hair’
	-aaC <sub>z</sub> i	Fr	<i>balaali</i> ‘a grain of millet’
VARIABLE (USUALLY SG)	-o	Mo	<i>aako</i> ‘a grandfather’
	-í	Fr	<i>fuufi</i> ‘a weasel’
	-í	Ft	<i>hhinhhini</i> ‘pumpkins’
	-ó	Mo	<i>boohoontó</i> ‘a hole’
VARIABLE	-a	Mk	<i>dawa</i> ‘a hand’
	-a	Mo	<i>niinga</i> ‘a drum’
	-i	Ft	<i>luki</i> ‘a reed mat’
	-i	Fr	<i>ba’aari</i> ‘bees’
	-∅	Mo	<i>gumbayaya</i> ‘a kidney’
	-ay	N∅	<i>fu’unay</i> ‘meat’
	-ú	Mo	<i>/aamú</i> ‘fruit’
	-oo	Fr	<i>tsir/oo</i> ‘birds’
	-a	Ft	<i>asla</i> ‘fire’
	-aa	Fr	<i>/ameenaa</i> ‘women’
	-ee	Fr	<i>yaa’ee</i> ‘a river’
	-á	Mo	<i>niingá</i> ‘green pigeons’
	-ay	Mo	<i>na/ay</i> ‘a child’
	-u	Mo	<i>daawu</i> ‘an elephant’
	-aangw	Mo	<i>kwu/uungw</i> ‘a wall’
-oo	N∅	<i>daqoo</i> ‘herds’	
VARIABLE (USUALLY PL)	-áy	Mo	<i>fiitsáy</i> ‘brooms’
	-u!	N∅	<i>gamu</i> ‘an underside’
	-a’(!)	N∅	<i>gongoxa’</i> ‘elbows’
	-a’i	N∅	<i>tsati’i</i> ‘knives’
CONSISTENT PL	-náy	Mo	<i>ga/atanáy</i> ‘fevers’
	-iya’	N∅	<i>tsi/iya’</i> ‘shins’
	-(a)ma’	N∅	<i>tla/ama’</i> ‘ditches’
	-iyoo	N∅	<i>kuriyoo</i> ‘anuses’
	-aaC <sub>z</sub> i’i	N∅	<i>aamaami’i</i> ‘grandmothers’
	-<ee>-aC <sub>z</sub> u	N∅	<i>tla/eefufu</i> ‘living quarters’
	-eemoo or -<ee>-oo	N∅	<i>hhafeetoo</i> ‘large reed mats’
	-aawee	Fr	<i>himtaawee</i> ‘owls’
	-eeri	N∅	<i>kwa/eeri</i> ‘hares’
	-eema’	N∅	<i>murungeema</i> ‘bellybuttons’
	-(a)du	N∅	<i>laydu</i> ‘branding irons’
	-aC <sub>z</sub> ee	Fr	<i>hingtete</i> ‘metal necklace’
	-aC <sub>z</sub> u	N∅	<i>/ampupu</i> ‘platforms’

#### 4.1. Consistent Sg. word-markers

As the label implies, this group of word-markers form nouns which only occur with<sup>9</sup> Sg agreement. Put differently, these word-markers *never* occur with Pl agreement on the adjective (23). Note that, crucially, this is not the case with other groups of word-markers (24).

- (23) a. *gasesmó* *tleér*  
black.snake **long.M**  
'a long black snake'
- b. \**gasesmó* *tlét*  
black.snake **long.M.Pl**  
'long black snakes'
- c. *gasesima'* *tlet*  
black.snakes **long.N.Pl**  
'long black snakes'
- (24) a. *slanú* *tleér*  
python **long.M**  
'a long python'
- b. *slanú* *tlét*  
python **long.M.Pl**  
'long python' (i.e. as a species, versus short kinds of python)

Each member of the 'consistent Sg' group is further examined below.

##### 4.1.1. -(A)MÓ (Mo)

-(a)mó is one of the most common word-marker, with approximately 190 tokens identified. The initial vowel is epenthetic, and rarely has a consistent identity.

- (25) a. *gasesmó* 'a black snake'
- b. *bee/amó* 'a flycatcher'
- c. *piindimó* 'a door plank'

The primary difference between the word-markeres -(a)mó and -imo is in the presence of rising pitch accent.

A similar form -mo exists in Iraqw (Mous 1993: 63), which is probably cognate, but has lost the rising pitch accent. No such word-marker is reported in Alagwa (wbj; Tanzania) (Mous 2016).

##### 4.1.2. -(I)TO'O (Fr)

-(i)to'o occurs only 7 times in the sample.

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<sup>9</sup> The choice of the term 'occur with' rather than 'trigger' is used advisedly, as it seems as if number agreement (seen on the adjective) consistently comes from an element other than the noun.

- (26) *makito'o* 'an animal'

The Iraqw cognate is identical (Mous 1993: 67). No equivalent exists in Alagwa.

#### 4.1.3 -IMO (Mo)

*-imo* is rare, with just 2 occurrences in the sample.

- (27) a. *bambarimo* 'a grain of bulrush millet'  
 b. *nanahhumo* 'a skull'

In Iraqw, the form may have been subsumed into the more widespread *-mo*. In Alagwa, the cognate *-imoo* (Mous 2016: 98).

#### 4.1.4. -IIMI (Fr)

*-iimi* occurs 10 times in the sample.

- (28) a. *se'eemi* 'a strand of hair'  
 b. *ya'eemi* 'a stream'  
 c. *gitsiimi* 'a single leaf'

There is no recorded cognate in Iraqw. In Alagwa, the cognate is identical, but only has 1 form (Mous 2016: 96).

#### 4.1.5 -AAC<sub>Z</sub>I (Fr)

The word-marker *-aaC<sub>Z</sub>i* (where the C<sub>Z</sub> is a consonant reduplicated from the last in the stem) occurs on a single noun in the sample.

- (29) *balaali* 'one grain of millet'

The cognate is identical in Iraqw (Mous 1993: 69), as well as in Alagwa (Mous 2016: 96).

## 4.2. Variable (usually Sg) word-markers

This group of word-markers falls between those word-markers that are consistently Sg, and those that are variable in number agreement. Nouns formed with these word-markers *usually* occur with Sg agreement only (30), but when they exist in a pair with a noun formed with a consistently Sg word-marker (31), or a noun formed with a consistently Pl word-marker (32), they may occur with either Sg or Pl agreement.

- (30) a. *fuufir tleer*  
 weasel long.F  
 'a long weasel'  
 b. *\*fuufir tlet*  
 weasel long.F.Pl  
 'long weasels'

- c. *fuufeemoó* *tlet*  
weasels long.F.Pl  
'long weasels'

## (31) CONSISTENT SG AND VARIABLE (USUALLY SG)

‘FISH’		
<i>siyumó</i>	<i>siyó</i>	
<i>siyumó úr</i> fish big.M 'a big fish'	<i>siyó úr</i> fish big.M 'a big (species of) fish'	<i>siyó urén</i> fish big.M.Pl 'big fishes'

## (32) VARIABLE (USUALLY SG) AND CONSISTENT PL

‘DRAGONFLY’		
<i>piiró</i>	<i>piireema’</i>	
<i>piiró úr</i> dragonfly big.M 'a big dragonfly'	<i>piiró urén</i> dragonfly big.M.Pl 'a big (group of) dragonflies'	<i>piireemá’ uren</i> dragonflies big.N.Pl 'big dragonflies'

Each member of the ‘variable (usually Sg) group is examined below.

**4.2.1. -o (Mo)**

Nouns formed in the word-marker *-o* are found only twice in the sample.

- (33) a. *aako* ‘a grandfather’  
b. *tsoyo* ‘a dikdik’

This word-marker is slightly different from the rest in this group, in that, though there are recorded cases of it in nouns which may occur with either Sg or Pl agreement (as the examples in (5.33)) there are no recorded cases of it occur withing *only* Sg agreement. This trait makes it more similar to the ‘variable’ word-markers (to be discussed below). In addition to this, there exists little evidence for formally differentiating this word-marker from *-u*. No cognates are identified in either Iraqw or Alagwa. Ultimately, this morpheme is not well-represented in the sample, and because of this, it is hard to classify it exactly based on its behavior.

**4.2.2. -í (Fr)**

There are 23 occurrences of nouns taking the word-marker *-í* (Fr) in the sample.

- (34) a. *bi/iní* ‘a silky blesmol’  
b. *loosí* ‘beans’  
c. *fuufí* ‘a weasel’

The word-marker *-í* (Fr) and the word-marker *-í* (Ft) may be distinguished chiefly based on the subgender they display in the gender linker. This seems a legitimate basis for

making the division, in that there are no general patterns by which to predict which *-í* word-marker will be Fr and which will be Ft.

- (35) a. *loosír uren*  
beans big.F.Pl  
'big beans'
- b. *babitá uren*  
k.o.insect big.F.Pl  
'big insects'

The word-marker *-í* (Fr) and *-i* (Fr) are different based solely on their pitch accent. Morphological ramifications of pitch accent can be seen most clearly in 'topic' morphology, which (among other environments), occurs obligatorily after *umó* 'every'. If a noun has rising pitch accent, the form will be *-ee*, if a noun has level pitch accent, the form will be *-oo*.

- (36) a. *umó bi/iní -hee*  
every silky.blesmol -Top  
'every silky blesmol'
- b. *umó ba'aarí -roo*  
every bee -Top  
'every bee'

*-í* (Fr) does not seem to be separated from the larger *-i* (Fr) suffix in Mous' (1993) grammar, but in the dictionary (Mous, Qorro, Kießling: 2002), many forms appear with the word-marker: *awkí* (p.17), *busí* (p.23), and *qulmí* (probably cognate with the Gorwaa *qaalimí*) (p.88). No such cognate is evident for Alagwa.

#### 4.2.3. *-í* (Ft)

4 nouns take the word-marker *-í* (Ft) in the sample.

- (37) a. *naanagí* 'larvae'  
b. *ma/a/ayí* 'insects'  
c. *hhinhhiní* 'pumpkin'

As detailed above, the word-marker is distinct from *-í* (Fr) in the subgender it takes, and is distinct from *-i* (Ft) in its tone.

The forms *-i* (Fr), *-í* (Fr), *-i* (Ft) and *-í*(Ft) are not differentiated in the Iraqw grammar. A cursory look through the Iraqw dictionary do not yield any *-í* (Ft) forms. No cognate is evident for Alagwa.

#### 4.2.4. *-ó* (Mo)

The word-marker *-ó* occurs with 11 nouns in the sample.

- (38) a. *piiró* 'a dragonfly'  
 b. *loomó* 'a k.o. plant'  
 c. *amayó* 'plants'

-ó is differentiated from -o in tone. As for -o vs. -u, there exists little evidence for formally differentiating -ó from -ú. No cognates are identified in either Iraqw or Alagwa.

#### 4.3 Variable word-markers

The variable word-markers consist of forms which may occur with Sg or Pl morphology (39).

- (39) a. *tsir/oór* **hatlee**  
 birds other.F.Pl  
 'other birds'  
 b. *tsir/oór* **hatlá'**  
 birds other.F  
 'another bird (species)'

As a general pattern (and excluding the word-markers -i (Fr) and -i (Ft)), these word-markers do not commonly form pairs with each other. As an exhaustive list, the variable word-markers -ú and -aa pair once, and -a (Ft) and -oo (N) pair 9 times (40).

- (40) a. THE SINGLE -Ú (MO) AND -OO (N) PAIR  
 i. *puundú* 'a plant sp.'  
 ii. *puundaa* 'plant sp. (many)'  
 b. EXAMPLE OF AN -A (FT) AND -OO (N) PAIR  
 i. *asla* 'fire'  
 ii. *asloo* 'fires'

Common to all variable forms is that they have at least one noun which has no other form. Whether such forms are mass, singularia tantum or pluralia tantum is unclear. The other group that shares this pattern are the 'variable (usually Pl)' word-markers.

- (41) EXAMPLES OF 'ONE FORM NOUNS' WITH VARIABLE WORD-MARKERS  
 a. *bahhi* 'excessive noise'  
 b. *tsoobú* 'liquid honey'  
 c. *boohhaa* 'bundle of firewood'  
 d. *ageengw* 'the dry season'  
 e. *siigan(d)* 'grasshoppers'

##### 4.3.1 -A (Mk)

The word-marker -a (Mk) occurs 4 times in the sample.

- (42) a. *dawa* 'a hand'  
 b. *qara* 'gall, bile'  
 c. *afa* 'mouth'

In an examination of nouns elicited in verbal contexts, the *-a* (Mk) word-marker is somewhat commoner (43). I am hesitant to call these forms ‘nominalisations’, because it is not at all clear what the entire range of syntactic properties of these forms are. Suffice it to say that, though there is significant overlap between noun suffixes and the set of suffixes used for this type of noun, many of the suffixes are entirely different.

- (43) THE *-A* (MK) WORD-MARKER FOR NOUNS ELICITED IN VERBAL CONTEXTS  
*tsu'á* ‘sweetness’ (c.f. *tsuí* ‘be sweet’)

The word-markers *-a* (Mk), *-a* (Mo), and *-a* (Ft) all take different gender linkers, and can therefore be established as separate suffixes.

- (44) *-A* (MK), *-A* (MO) AND *-A* (FT) ARE DIFFERENT WORD-MARKERS
- |    |                  |                               |
|----|------------------|-------------------------------|
| a. | <i>afkú úr</i>   | (word-marker: <i>-a</i> (Mk)) |
|    | mouth big.M      |                               |
|    | ‘a big mouth’    |                               |
| b. | <i>niingó úr</i> | (word-marker: <i>-a</i> (Mo)) |
|    | drum big.M       |                               |
|    | ‘a big drum’     |                               |
| c. | <i>asltá ur</i>  | (word-marker: <i>-a</i> (Ft)) |
|    | fire big.F       |                               |
|    | ‘a big fire’     |                               |

The word-marker *-a* (Mk) is not listed as a separate suffix in the Iraqw grammar, but is attested on several forms (Mous 1993: 84), all of which have identical cognates in Gorwaa. *-k* is identified as one of the gender linkers in Alagwa (Mous 2016: 49).

#### 4.3.2. *-A* (Mo)

The word-marker *-a* (Mo) occurs on 19 nouns in the sample.

- (45) a. *yaqamba* ‘a buck’  
 b. *goranga* ‘hero’s song’  
 c. *hima* ‘rope’

The word-marker *-a* (Mo) is different from the word-markers *-a* (Mk) and *-a* (Ft) because each realize separate gender linkers. The word-marker *-a* (Mo) is different from the word-marker *-á* (Mo) because of pitch accent.

- (46) A MINIMAL PAIR FOR THE WORD-MARKERS *-A* (MO) AND *-Á* (MO)
- |    |               |                 |
|----|---------------|-----------------|
| a. | <i>niinga</i> | ‘a drum’        |
| b. | <i>niingá</i> | ‘green pigeons’ |

*-a* (Mo) is not recognized as a separate word-marker in Iraqw, but cursory examination of the Iraqw dictionary (Mous, Qorro, and Kießling 2002) produces forms such as *bela* (p.21), *daanda* (p.26), and *musa* (p.75), all of which seem to be good evidence of a

cognate *-a* (Mo) in this language. *bi/ina* (p.275), *muuna* (p.301), and *uma* (p.321) are possible cognates from the Alagwa grammar (Mous 2016).

#### 4.3.3. -i (Ft)

The word-marker *-i* (Ft) occurs on a total of 58 nouns in the sample.

- (47) a. *bu'i* 'a cosmetic burn mark'  
 b. *iingigi* 'locusts'  
 c. *deli* 'a mushroom'

This word-marker is different from the other 'variable' word-markers in that it freely pairs with other word-markers of this group.

- (48) a. THE VARIABLE WORD-MARKERS -I (FT) AND -OO (F) AS A PAIR  
 i. *tsisi* 'a spark'  
 ii. *tsisoo* 'sparks'  
 b. THE VARIABLE WORD-MARKERS -I (FT) AND -AA (F) AS A PAIR  
 i. *kuti* 'a mole' (i.e. the rodent)  
 ii. *kutaa* 'moles'

As mentioned above, the word-marker *-i* (Ft) differs from the word-marker *-i* (Fr) in pitch accent. The word-marker *-i* (Ft) differs from the word-marker *-i* (Fr) in the form of the gender linker it takes.

The word-marker *-i* (Ft) is included in the suffix *-i* in the Iraqw grammar, which includes both the *-i* (Ft) and the *-i* (Fr) word-markers (Mous 1993: 68). There is no cognate in Alagwa.

#### 4.3.4. -i (Fr)

The word-marker *-i* (Fr) occurs on a total of 194 nouns in the sample.

- (49) a. *fiitsi* 'a broom'  
 b. *ba'aari* 'bees'  
 c. *wa'ami* 'bone marrow'

This word-marker is different from the other 'variable' suffixes in that it freely pairs with other word-markers of this group.

- (50) a. THE VARIABLE WORD-MARKERS -I (FR) AND -Ø (MO) AS A PAIR  
 i. *sakweeli* 'an ostrich'  
 ii. *sakwél* 'ostriches'  
 b. THE VARIABLE WORD-MARKERS -I (FR) AND -Ø (MO) AS A PAIR  
 i. */urfi* 'a skink'  
 ii. */urfaa* 'skinks'

As mentioned above, the word-marker *-i* (Fr) is included in the word-marker *-i* in the Iraqw grammar (Mous 1993: 68).

#### 4.3.5. -Ø (Mo)

The word-marker -Ø (Mo) occurs on 71 nouns in the sample.

- (51) a. *magá'* 'leech'  
 b. *tlangás* 'quivers (i.e. for arrows)'  
 c. *poohám* 'baboon'

Together with a zero suffix -Ø, this word-marker has the associated suprasegmental effects of shortening long vowels and adding high tone. The fact that these suprasegmental features are *not* present in the stem can be seen in examining the other member of a pair (52). In most every case, the long vowel and level pitch accent seem to indicate that it is the word-marker -Ø (Mo) which is adding these effects.

#### (52) LONG VOWEL, LEVEL PITCH ACCENT IN THE MATE OF -Ø (Mo)

- a. *sakweeli* 'an ostrich'  
 b. *sakwél* 'ostriches'

This form is not mentioned in the Iraqw grammar, but is clearly present, in both the grammar and dictionary.

#### 4.3.6. -AY (NØ)

The word-marker *-ay* (NØ) occurs on a 3 nouns in the sample.

- (53) a. *fu'unay* 'meat'  
 b. *makay* 'animals'  
 c. *ma'ay* 'water'

It is difficult to see the difference between the word-marker *-ay* (NØ) and the word-marker *-ay* (Mo), and the suffix *-áy* (Mo) because the gender linker, due to vowel coalescence, will often appear the same (i.e. a rising pitch accent on the final vowel). As shown in (54), when comparing *fu'unay* (*-ay* (NØ) suffix), *sookitáy* (*-áy* (Mo) suffix), and *tsa/atay* (*-ay* (Mo) suffix), the gender agreement on the adjective provides the most salient difference.

- (54) a. *fu'unáy* **naa/**  
 meat **fresh.N**  
 'fresh meat'  
 b. *sookitáy* **naá/**  
 green.vegetable **fresh.M**  
 'fresh greens'

- c.     *tsa/atáy*        *naá/*  
           egg.yolk        **fresh.M**  
           ‘fresh egg yolk’

The *-ay* (NØ) suffix is not identified as a word-marker in the Iraqw grammar, but is clearly present in cognates of the 3 forms given above.

#### 4.3.7 -ú (Mo)

The word-marker *-ú* (Mo) occurs on 34 nouns in the sample.

- (55) a.     /*aamú*         ‘fruit’  
        b.     /*awtú*         ‘butterfly’  
        c.     /*duú*         ‘fat’

As mentioned above, the word-marker *-ú* (Mo) can be differentiated from the word-marker *-u* (Mo) on the basis of pitch accent. What is less certain is that the word-marker *-ú* (Mo) and the word-marker *-ó* (Mo) are different.

The Iraqw dictionary (Mous, Qorro, Kießling 2002) records several forms with this ending, including */awtú* (p.17), *danú* (p.27), and *tsamú* (p.107), all of whose word-markers are cognate to the one at hand.

#### 4.3.8. -oo (Fr)

The word-marker *-oo* (Fr) occurs on 51 nouns in the sample.

- (56) a.     *tsir/oo*         ‘birds’  
        b.     *daka’oo*        ‘baobab trees’  
        c.     *hho’oo*         ‘sister’

This word-marker can be differentiated from the word-marker *-oo* (NØ) based on the gender agreement it triggers.

- (57) a.     *tsir/oór*         *tsár*  
           birds            two  
           ‘two birds’  
        b.     *dageenoo*        *tsár*  
           young.women     two  
           ‘two young women’

The cognate of the word-marker *-oo* (Fr) is identified in Iraqw as *-o* (Mous 1993: 60), and in Alagwa as *-oo* (Mous 2016: 87).

#### 4.3.9. -A (Ft)

The word-marker *-a* (Ft) occurs on 15 nouns in the sample.

- (58) a. *asla* ‘fire’  
 b. *hhafa* ‘ceiling poles’  
 c. *fara* ‘bone’

In an examination of nouns elicited in verbal contexts, the *-a* (Mk) affix is somewhat commoner (59).

- (59) THE *-A* (MK) WORD-MARKER FOR NOUNS ELICITED IN VERBAL CONTEXTS
- a. *ara* ‘seeing’ (c.f. *aár* ‘to see’)  
 b. *da/a* ‘burning’ (c.f. *daa/* ‘to burn’)  
 c. *kwahha* ‘throwing’ (c.f. *kwaáhh* ‘to throw’)

In Iraqw, the word-marker *-a* (Ft) is grouped together with the word-marker *-a* (Fr) as a productive ‘nominalizing suffix’ (Mous 1993: 76). In Alagwa, an identical word-marker is also identified as a nominalizer (Mous 2016: 107). Its nominalizing status forces one to review the stems of what were considered in (58) to be entirely ‘nominal’, and draw some interesting associations: in (58.b), the stem *hhaf-* seems to be the same as the verb *hhaáf* ‘to lay out’; in (58.c), the stem *far-* and the verb *faár* ‘to count’ are also temptingly similar. No such parallel could be found between *asl-* the stem in (58.a) and any other verb.

#### 4.3.10. *-AA* (Fr)

The word-marker *-aa* (Fr) occurs on 132 nouns in the sample.

- (60) a. *hhanslaa* ‘cornstalks’  
 b. *deeqwaa* ‘a razor’  
 c. */aantaa* ‘a termite mound’

The word-marker *-aa* (Fr) is grouped with the *-a* word-marker in Iraqw, discussed above in its ‘nominalizing’ function, and discussed in its function as noun suffix in (Mous 1993: 60). The only comparable suffix in Alagwa is once again the ‘nominalizer’ (Mous 2016: 107).

#### 4.3.11. *-EE* (Fr)

The word-marker *-ee* (Fr) occurs 19 times in the sample.

- (61) a. *bambaree* ‘bulrush millet’  
 b. *tseeree* ‘blood’  
 c. *iimpee* ‘a trough’

The word-marker *-ee* (Fr) is the same as what Mous identified as *-e* in Iraqw (1993: 50), and as *-ee* in Alagwa (2016: 82).

#### 4.3.12. *-Á* (Mo)

The word-marker *-á* (Mo) occurs on 11 nouns in the sample.

- (62) a. *niingá* ‘green pigeons’  
 b. *filá* ‘anteater’  
 c. *kuumbá* ‘brother-in-law’

The Iraqw grammar does not list *-á* (Mo) as a separate word-marker, but a cursory look through the Iraqw dictionary (Mous, Qorro, and Kießling 2002) yields forms such as *aaará* (p.15) and *il/ará* (p.55).

#### 4.3.13. -AY (Mo)

The word-marker *-ay* (Mo) occurs on 34 nouns in the sample.

- (63) a. *na/ay* ‘a child’  
 b. *tsaxway* ‘a grasshopper’  
 c. *tsuhay* ‘lower back’

The word-marker *-ay* (Mo) is identified in Iraqw as the suffix *-aay* (Mous 1993: 48). No such word-marker is identified for Alagwa.

#### 4.3.14. -U (Mo)

The word-marker *-u* (Mo) occurs on 24 in the sample.

- (64) a. *daawu* ‘elephant’  
 b. *desu* ‘girls’  
 c. *musu* ‘a pestle’

The Iraqw dictionary (Mous, Qorro, Kießling 2002) records several forms with this ending, including *awu* (p.17), *qaytsu* (p.86), and *yuundu* (p.122).

#### 4.3.15. -AANGW (Mo)

The word-marker *-aangw* (Mo) occurs on 36 nouns in the sample.

- (65) a. *se'eengw* ‘hair’  
 b. *diraangw* ‘a lion’  
 c. *kwu/uungw* ‘a wall’

The word-marker *-aangw* (Mo) is identified in Iraqw as *-angw* (Mous 1993: p.49). No similar word-marker exists in Alagwa.

#### 4.3.16. -OO (NØ)

The word-marker *-oo* (NØ) occurs on 23 nouns in the sample.

- (66) a. *dageenoo* ‘young women’  
 b. *daqoo* ‘herds’  
 c. *gwe'edoo* ‘a buttock’

The word-marker *-oo* (NØ) is identified as *-o* in Iraqw (Mous 1993: 57), and as *-oo* in Alagwa (p.87).

#### 4.4. Variable (usually Pl) word-markers

This group of word-markers falls between those word-markers that are variable and those that are consistently Pl in number agreement. Nouns formed with these word-markers *usually* occur with Pl agreement only (67), but when they exist in a pair with a noun formed with a consistently Sg word-marker (68), or a noun formed with a consistently Pl word-marker (69), they may occur with either Sg or Pl agreement.

- (67) a. *purusáy* *tlét*  
insect.sp. long.M.Pl  
'long insects'
- b. *\*purusáy* *tleér*  
insect.sp. long.M  
'a long insect'
- c. *puruseér* *tleér*  
insect.sp. long.M  
'a long insect'

#### (68) CONSISTENT SG AND VARIABLE (USUALLY PL)

‘ORPHAN’		
<i>panimó</i>	<i>panáy</i>	
<i>panimó úr</i> orphan big.M 'a big orphan'	<i>panáy úr</i> orphans big.M 'a big (group of) orphans'	<i>panáy urén</i> orphans big.M.Pl 'big orphans'

#### (69) VARIABLE (USUALLY PL) AND CONSISTENT PL

‘EVENING’ <sup>10</sup>		
<i>xweera</i>		<i>xweerdu</i>
<i>xweerá tleer</i> evening long.N 'a long evening'	<i>xweerá tlet</i> evening long.N.Pl 'a long (series of) evenings'	<i>xweerdu tlet</i> evenings long.N.Pl 'long evenings' (i.e. isolated evenings, not in series)

#### 4.4.1. -ÁY (Mo)

The word-marker *-áy* (Mo) occurs on 121 nouns in the sample.

- (70) a. *deeláy* 'kids' (i.e. baby goats)  
b. *fiitsáy* 'brooms'  
c. *yaaháy* 'soft rain'

<sup>10</sup> The noun in the example *xweera* 'evening' is, on the surface, a noun ending in *-a*. However, because of the NØ agreement it triggers, it is assumed that the word-marker is *-a'(!)*, and that the final glottal stop has undergone apocope.

The word-marker *-áy* (Mo) is identified in Iraqw as the word-marker *-aay*, following a tone-spreading operation. This signals a significant difference in the classification of word-marker to that undertaken in this work, and will be expanded upon.

Mous (1993: 49) notes that the word-marker identified here as *-áy* (Mo) is actually the suffix *-ay* (Mo) (discussed above), and is realized with rising pitch accent (RPA) because of tone spreading from high tone on the lexical root (modeled in (71)). The argument seems valid for two primary reasons: i) high-toned word-marker may be paired with other high-toned suffixes (72), which creates the appearance of a common high-toned stem spreading RPA to the word-marker underlyingly, and ii) when a high-toned word-marker is paired with the word-marker  $-\emptyset$  Mo (73), which could be interpreted as a bare root, rather than a suffixed form.

(71) PROGRESSIVE TONE SPREAD TO THE WORD-MARKER (Mous 1993: 49)

SURFACE SUFFIX	STEM + SUFFIX	SURFACE FORM FOLLOWING HIGH TONE SPREAD
-ay (Mo)	na/ + ay (Mo)	na/ay ‘a child’
-áy (Mo)	deél + ay (Mo)	deeláy ‘kids’

(72) HIGH-TONED PAIRS, CREATING THE IMPRESSION OF A HIGH-TONED STEM (Mous 1993: 49)

<i>xuúntl-</i>	+	-u	=	<i>xuuntlú</i>	‘unusual protuberance’
		-ay		<i>xuuntláy</i>	‘unusual protuberances’

(73) HIGH-TONED SUFFIX PAIRED WITH WORD-MARKER  $-\emptyset$  (Mo), CREATING THE IMPRESSION OF A HIGH-TONED STEM (MOUS 1993: 49)

<i>tsaxweél-</i>	+	-i	=	<i>tsaxweelí</i>	‘spring trap’
		$-\emptyset$		<i>tsaxwél</i>	‘spring traps’

In both of these configurations, the rising pitch accent could be viewed as inherent to the stem, and undergoing *progressive* tone spread to the word-marker.

It is argued in this work that, contra Mous (1993) tone is, in fact, not a property of the *stem*, but a property of the *word-markers*.

Though the ‘high tone on the stem’ (demonstrated in 71-73) argument holds well for pairs in which tone is the *same* on both members (as above), it fares less well for pairs in which tone is *different* (74). This is rendered especially problematic when in some cases, the word-marker can bear RPA, and in other cases, it does not (75).

(74) PAIR WITH DIFFERING TONE VALUE

<i>bi/in-</i>	+	-i	=	<i>bi/iní</i> (RPA)	‘silky blesmol’
		-aa		<i>bi/inaa</i> (LPA)	‘silky blesmols’

## (75) ONE SUFFIX, TWO TONAL REALIZATIONS

a. -I OF *FIITSI*: LEVEL PITCH ACCENT

<i>fiits-</i>	+	-i	=	<i>fiitsi</i> (LPA)	‘spring trap’
		-ay		<i>fiitsáy</i> (RPA)	‘spring traps’

b. -I OF *DO/Í*: RISING PITCH ACCENT

<i>dó/-</i>	+	-i	=	<i>do/í</i> (RPA)	‘cane rat’
		-ay		<i>do/áy</i> (RPA)	‘cane rats’

The progressive tone spreading argument could be saved by positing that, in some cases, tone spreading is blocked, as it must be in cases such as *-aa* in (3.96), but this is a harder argument to make when the word-marker is phonologically the same, as in the *-i* of *fiitsi* and the *-i* of *bi/iní*. Essentially, one would have to posit two different kinds of *-i* word-marker, one that allows tone spreading, and one that does not. This yields the same number of word-marker as proposed in the current work, but has the additional complexity of either i) having to store information on tone in the root/stem (e.g. to achieve the correct surface forms, the (otherwise identical) *niinga* ‘drum’ and *niingá* ‘green pigeon’, would have to exist as two separate underlying stems, *niing-* and *niíng-*, respectively); or ii) having to store one noun of an otherwise identical pair as a lexicalized entry (e.g. *niinga* ‘drum’ and *niingá* ‘green pigeon’, would have to exist as two separate underlying stems, *niing-* and *niingá-*, respectively). The system envisaged in the current work proposes that tonal information is stored neither on the root, nor in its spell-out rules in List 2, but that this work is carried out by the suffix in a principled, regular way. In addition to this, lexical entries (including many proper names) are minimized, and left to be derived constructionally. As such, suffice it to say at this point that the difference between *-áy* (Mo) and *-ay* (Mo) (and of other high-tone, low-tone word-marker pairs) is not due to progressive tone spreading, but is because the word-marker themselves are different, and their tone pattern is inherent to them.

No equivalent to the word-marker *-áy* (Mo) is identified in Alagwa.

## 4.4.2. -U! (NØ)

The word-marker *-u!* (NØ) occurs on 34 nouns in the sample.

- (76) a. *gamu* ‘underside’  
 b. *bolu* ‘days’  
 c. *manu* ‘zombies’

Together with a *-u*, this word-marker has the suprasegmental effect in the preceding syllable of shortening a long vowel (5.80), eliminating a glide (5.81) as well as changing [w] to [b] and [r] to [d] in a process of fortition (5.82). Following a convention begun by Kießling (1994), this effect is represented by the symbol !. The fact that this

suprasegmental effect is *not* present in the stem can be seen by examining the other member of a pair.

(77) SHORTENING EFFECT OF -U! (NØ)

- |    |     |               |           |
|----|-----|---------------|-----------|
| a. | i.  | <i>booloo</i> | ‘a day’   |
|    | ii. | <i>bolu</i>   | ‘days’    |
| b. | i.  | <i>yaa’ee</i> | ‘a river’ |
|    | ii. | <i>ya’u</i>   | ‘rivers’  |

(78) GLIDE-ELIMINATION EFFECT OF -U! (NØ)

- |    |              |          |
|----|--------------|----------|
| a. | <i>qaymo</i> | ‘field’  |
| b. | <i>qamu</i>  | ‘fields’ |

(79) FORTITION EFFECT OF -U! (NØ)

- |    |     |               |             |
|----|-----|---------------|-------------|
| a. | i.  | <i>siiwaa</i> | ‘protocol’  |
|    | ii. | <i>sibu</i>   | ‘protocols’ |
| b. | i.  | <i>fara</i>   | ‘a bone’    |
|    | ii. | <i>fadu</i>   | ‘bones’     |

The word-marker -u! (NØ) is identical in Iraqw (Mous 1993: 55), as well as in Alagwa (Mous 2016: 92).

#### 4.4.3. -A’(!) (NØ)

The word-marker -a’(!) (NØ) occurs on 37 nouns in the sample.

- |      |    |                   |          |
|------|----|-------------------|----------|
| (80) | a. | <i>laqeela’</i>   | ‘thorns’ |
|      | b. | <i>gongoxa’</i>   | ‘elbows’ |
|      | c. | <i>giitsee/a’</i> | ‘a face’ |

The group of suprasegmental effects ! that accompany the word-marker -a’ do not consistently apply, and are therefore represented as (!). Effects can be seen when comparing members of a pair (5.84).

(81) SUPRASEGMENTAL EFFECTS OF -A’(!) (NØ)

a. EFFECTS OBSERVED

- |     |                 |            |
|-----|-----------------|------------|
| i.  | <i>gongooxi</i> | ‘an elbow’ |
| ii. | <i>gongoxa’</i> | ‘elbows’   |

b. EFFECTS UNOBSERVED

- |     |                |                   |
|-----|----------------|-------------------|
| i.  | <i>akeesi</i>  | ‘a cooking stone’ |
| ii. | <i>akeesa’</i> | ‘cooking stones’  |

Sometimes, the final glottal stop isn’t present. This is due to word-final apocope.

## (82) WORD-FINAL APOCOPE OF GLOTTAL STOP

- a. /ayla 'wedding song'  
 b. xweera 'an evening'

The word-marker *-a'(!)* is identified in these forms, as opposed to other *-a* word-marker (*-a* (Ft), *-a* (Mk) or *-a* (Mo)) because of agreement patterns present on the gender linker as well as adjective (83).

- (83) a. *dungá ur* (word-marker: *-a'(!)*, with word-final apocope)  
 nose big.N  
 'a big nose'  
 b. *afkú úr* (word-marker: *-a* (Mk))  
 mouth big.M  
 'a big mouth'  
 c. *ningó úr* (word-marker: *-a* (Mo))  
 drum big.M  
 'a big drum'  
 d. *asltá ur* (word-marker: *-a* (Ft))  
 fire big.F  
 'a big fire'

The word-marker *-a'(!)* is identical in Iraqw (Mous 1993: 57), and *-a* in Alagwa (Mous 2016: 94).

## 4.4.4. -A'I (NØ)

The word-marker *-a'i* (NØ) occurs on 33 nouns in the sample.

- (84) a. *tloomi'i* 'mountains'  
 b. *na/i'i* 'children'  
 c. *himi'i* 'rope'

In virtually all cases, the [a] of the word-marker has undergone regressive assimilation across the glottal consonant, thus resulting in a word-marker whose form is typically *-i'i*.

In some cases, the final vowel and the glottal consonant are not present. This is due to word-final apocope.

## (85) WORD-FINAL APOCOPE OF GLOTTAL STOP AND [i]

- a. *bihh<sub>i</sub>* 'side' (i.e. of the body)  
 b. *amsi* 'night'

The word-marker *-a'i* is identified in these forms, as opposed to other *-i* word-marker (*-i* (Fr), or *-a* (Ft)) because of agreement patterns present on the gender linker as well as adjective (86).

- (86) a. *amsí tleer* (word-marker: *-a'i*, with word-final apocope)  
 night long.N  
 ‘a long night’  
 b. *mulkír tleer* (word-marker: *-i* (Fr))  
 scar long.F  
 ‘a long scar’  
 c. *lukitá tleer* (word-marker: *-i* (Ft))  
 reed.mat long.F  
 ‘a long reed mat’

The word-marker *-a'i* (NØ) is identical in Iraqw (Mous 1993: 52), and *-(a)a'i* in Alagwa (Mous 2016: 83).

#### 4.5. Consistent Pl. word-markers

This group of word-marker form nouns which only occur with Pl agreement. These word-marker *never* show Sg agreement on the adjective (87). This is a crucial difference from all other groups of word-marker (88).

- (87) a. *tlapteemá'* **tlet**  
 falcons **tall.N.Pl**  
 ‘tall falcons’  
 b. *\*tlapteemá'* **tleer**  
 falcons **tall.N**  
 ‘a tall falcon’  
 c. *tlaptumó* **tleér**  
 falcon **tall.M**  
 ‘a tall falcon’
- (88) a. *sirooraár* **tleer**  
 canaries **tall.F**  
 ‘tall canary’ (i.e. as a species, versus short kinds of canary)  
 b. *sirooraár* **tlet**  
 canaries **tall.F.Pl**  
 ‘tall canaries’

Each of the word-markers of the ‘consistent Pl’ group will be examined in detail below.

##### 4.5.1. -NÁY (Mo)

The word-marker *-náy* (Mo) occurs on 6 nouns in the sample.

- (89) a. *ga/atanáy* ‘fevers’  
 b. *tsetse/imáy* ‘open places’  
 c. *afurtlumáy* ‘simple knots’

As can be seen from (89.b) and (89.c), the word-marker is often realized with an [m] instead of an [n].

The word-marker *-náy* (Mo) has no identified equivalent in either Iraqw or Alagwa.

#### 4.5.2. -IYA' (NØ)

The word-marker *-iya'* (NØ) occurs on 4 nouns in the sample.

- (90) a. *slufiya'* 'lips'  
 b. *tsi/iyá'* 'shins'  
 c. *tsiniya'* 'ends'

The fourth occurrence of the word-marker *-iya'* (NØ) involves word-final apocope of the glottal stop.

- (91) WORD-FINAL APOCOPE OF THE GLOTTAL STOP OF WORD-MARKER *-IYA'* (NØ)  
*laqayiya* 'thorns'

The equivalent of the word-marker *-iya'* (NØ) in Iraqw is identical (Mous 1993: 57). No similar form is identified in Alagwa.

#### 4.5.3. -(A)MA' (NØ)

The word-marker *-(a)ma'* (NØ) occurs on 61 nouns in the sample.

- (92) a. *tla/ama* 'ditches'  
 b. *kitangeerima'* 'drying racks'  
 c. *kiintima'* 'thickets'

The word-marker *-(a)ma'* is identified as *-ma'* in Iraqw (Mous 1993: 52). There is no equivalent form in Alagwa.

#### 4.5.4. -IYOO (NØ)

The word-marker *-iyoo* (NØ) occurs on 2 nouns in the sample.

- (93) a. *kuriyoo* 'anuses'  
 b. *tsariyoo* 'clitorises'

Equivalents to the word-marker *-iyoo* (NØ) have been identified neither in Iraqw, nor in Alagwa.

#### 4.5.5. -AC<sub>Z</sub>I'I (NØ)

The word-marker *-aC<sub>Z</sub>i'i* (NØ) (where the C<sub>Z</sub> is a consonant reduplicated from the last in the stem) occurs on 2 nouns in the sample.

- (94) a. *akoki'i* 'grandfathers'  
 b. *aamami'i* 'grandmothers'

No similar form is identified in Iraqw or Alagwa.

#### 4.5.6. -<EE>-AC<sub>z</sub>U (N∅)

The word-marker -<ee>-aC<sub>z</sub>u (N∅) occurs on 4 nouns in the sample.

- (95) a. *tlaqeesusu* ‘millet mashes’  
 b. *hhafeetutu* ‘large reed mats’  
 c. *tsa/eetutu* ‘yolks’

The -<ee> part of the suffix refers to an infix *ee*, which breaks the final consonant from the stem. Interestingly, this suffix is only ever applied when the consonant concerned is *t*, *m*, *s*, all of which serve as verbal derivational morphemes (-*t* the middle, -*m* the durative and -*s* the causative). It is predicted that the consonant -*r*, missing from the current sample, would also undergo this process, as it is also a durative verbal suffix. In his section on verbal derivational morphemes, Mous (1993: 190) observes the ability of certain operations to reanalyze the content of their bases, several operations seeming to treat the consonants *t*, *m*, *s* or *r* as if they were indeed the derivational morphemes. For example, the verb *lakiiit* ‘to wait’ has no underived form (therefore \**lak*), but the *iit* of the stem seems to be reanalyzed and treated as the middle suffix -*iit* in the reduplicative durative construction (hence *lakmaamiit* ‘to be waiting’). Perhaps the same operation is taking place in this nominal operation, thus the stem of (95.c) *tsa/at* is reanalyzed as *tsa/-t*.

No similar word-marker is identified for Iraqw or Alagwa.

#### 4.5.7. -EEMOO or -<EE>-OO (N)

The word-marker -*eemoo* (N) or its allomorph -<ee>-*oo* (N) occur 21 times in the sample.

- (96) THE SUFFIX -EEMOO (N)  
 a. *uuneemoo* ‘laws’  
 b. *fuufeemoo* ‘weasels’  
 c. *slareemoo* ‘armpits’

The allomorph -<ee>-*oo* (N) occurs only when the final consonant of the stem is *t*, *m*, or *r*. It is predicted that -*s* would also behave the same, but this is not recorded in the sample. Reminiscent of the pattern discussed above, this may represent the same operation of reanalysis.

- (97) THE SUFFIX -<EE>-OO (N)  
 a. *ya/eetoo* ‘shoes’  
 b. *wa'eemoo* ‘bone marrow’  
 c. *anxeeroo* ‘phlegm’

This operation does not occur for every case of a stem-final *t*, *m*, or *r*, however.

- (98) */aanteemoo* ‘termite mounds’

An identical word-marker is identified in both Iraqw (Mous 1993: 58) and Alagwa (Mous 2016: 85).

(99) TWO DIFFERENT SUBGENDERS FOR *-EEMOO* OR *-<EE>-OO*

a. NØ SUBGENDER

*fuufeemoó*      *uren*  
weasels      big.N.Pl  
'big weasels'

b. NA SUBGENDER

*ayeemá*      *uren*  
lands      big.N.Pl  
'big lands'

**4.5.8. -AAWEE (Fr)**

The word-marker *-aawee* (Fr) occurs on 16 nouns in the sample.

- (100) a. *himtaawee*      'owls'  
b. *tsuhaawee*      'lower backs'  
c. *xeeraawee*      'scorpions'

Identical word-marker exist in Iraqw (Mous 1993: 51) and Alagwa (Mous 2016: 82).

**4.5.9. -EERI (NØ)**

The word-marker *-eeri* (NØ) occurs on 25 nouns in the sample.

- (101) a. */areeri*      'tobacco balls'  
b. *kwa/eeri*      'hares'  
c. *tsifireeri*      'languages'

Identical word-marker exist in Iraqw (Mous 1993: 53) and Alagwa (Mous 2016: 80).

**4.5.10. -EEMA' (NØ)**

The word-marker *-eema'* (NØ) occurs on 35 nouns in the sample.

- (102) a. *murungeema'*      'bellybuttons'  
b. *poohameema'*      'baboons'  
c. *tlapteema'*      'falcons'

An identical word-marker exists in Alagwa (Mous 2016: 81). No such word-marker is recorded for Iraqw.

**4.5.11. -(A)DU (NØ)**

The word-marker *-(a)du* (NØ) occurs on 55 nouns in the sample.

- (103) a. *baqaydu*      'chambers'

- b. *laydu* ‘branding irons’  
 c. *ga/aledu* ‘shields’

The word-marker *-(a)du* (NØ) has identical forms in Iraqw (Mous 1993: 53) and in Alagwa (Mous 2016: 89).

#### 4.5.12. -AC<sub>z</sub>EE (Fr)

The word-marker *-aC<sub>z</sub>ee* (Fr) occurs on 23 nouns in the sample.

- (104) a. *himtetee* ‘metal necklaces’  
 b. *thuwe/e/ee* ‘upper arms’  
 c. *tuumbebee* ‘pools’

A process of vowel assimilation of the [a] of the word-marker allows a process of haplological syncope to take place ( $V \rightarrow \emptyset / C_i \_ C_i$ ). This results in many of these reduplicated forms reducing to feature geminate consonants.

- (105) a. *furree*  
           *fureree*  
           *fureree* → *furree*      ‘twigs’  
 b. *uffee*  
           *ufefee*  
           *ufefee* → *uffee*      ‘piles’  
 c. *kaneee*  
           *kanenee*  
           *kanenee* → *kaneee*    ‘piles’

One interesting piece of evidence that this is indeed the path to geminates in Gorwaa exists in a Gorwaa text recorded by Martin Heepe in 1929. Kießling (2002:54) was the first to point out that, in this source, there are reduplicated forms where present-day Gorwaa has gemination.

The word-marker *-aC<sub>z</sub>ee* (Fr) has an identical form in Alagwa (Mous 2016: 79). No such form exists in Iraqw.

#### 4.5.13 -AC<sub>z</sub>U (NØ)

The word-marker *-aC<sub>z</sub>u* (NØ) occurs on 22 nouns in the sample.

- (106) a. */aampupu* ‘bird-watching platforms’  
 b. *yandudu* ‘hammers’  
 c. *afeeatlu* ‘waists’

As for the word-marker *-aC<sub>z</sub>ee* above, a process of vowel assimilation of the [a] of the word-marker allows a process of haplological syncope to take place ( $V \rightarrow \emptyset / C_i \_ C_i$ ). This results in at least two of these reduplicated forms reducing to feature geminate consonants.

- (107) a. *kinnu*  
 kinunu  
 kinunu → kinnu ‘small clay water pots’
- b. *kunnu*  
 kununu  
 kununu → kunnu ‘mortars’

The word-marker *-aC<sub>2</sub>u* (N∅) has an identical form in Alagwa (Mous 2016: 92). No such form exists in Iraqw.

#### 4.6. A note on loans

##### 4.6.1. Loans from Datooga

17 nouns in the sample have been identified as loans from Datooga (tcc; Tanzania), identifiable by their pattern of ending in a stop and possessing RPA. Nouns of this group can be either Mo or Fr in gender.

- (108) a. *gewoó(d)* ‘disease’  
 b. *qereé(g)* ‘infant’  
 c. *kiinsororó(q)* ‘snail’

##### 4.6.2. Loans from Swahili (and possibly English)

This second group of loans is numerous, and is distributed throughout the sample. These loans tend to exist on a continuum, from those whose endings have been completely reanalyzed into word-marker (nativized loans) (5.113), to those whose endings are sometimes analyzed as word-marker, and sometime analyzed as part of the stem (unnativized loans) (5.114).

##### (5.113) NATIVIZED LOANS

- a. DAAWA
- |                            |                |                |             |
|----------------------------|----------------|----------------|-------------|
|                            | <i>daawa</i>   | suffix: -aa    | ‘medicine’  |
| Sw. <i>dawa</i> ‘medicine’ | → <i>daaw-</i> |                |             |
|                            | <i>daawudu</i> | suffix: -(a)du | ‘medicines’ |
- b. BAMIYA
- |                         |                    |                   |              |
|-------------------------|--------------------|-------------------|--------------|
|                         | <i>bamiyito’oo</i> | suffix: -(i)to’oo | ‘okra fruit’ |
| Sw. <i>bamia</i> ‘okra’ | → <i>bamiy-</i>    |                   |              |
|                         | <i>bamiya</i>      | suffix: -aa       | ‘okra’       |

##### (5.114) UNNATIVIZED LOANS

- a. SULEE
- |                           |                |                |           |
|---------------------------|----------------|----------------|-----------|
|                           | <i>sule</i>    | suffix: -ee    | ‘school’  |
| Sw. <i>shule</i> ‘school’ | → <i>sule-</i> |                |           |
|                           | <i>suledu</i>  | suffix: -(a)du | ‘schools’ |
- BUT: [e] still present on stem**

## b. KATAANI

		<b>BUT: [i] still present on stem suffix: -(a)mó</b>	
Sw. <i>katani</i>	'sisal'	→	<i>kataanimó</i> 'sisal plant'
			<i>kataani</i> suffix: -i(Fr) 'sisal'

**5. Conclusion****5.1. Summary**

At this point, we return to Harris (1991), recapitulating that, in Spanish, word-markers are suffixes which “mark [...] a derivationally and inflectionally complete word, [and] cannot be followed by any other suffix, derivational or inflectional, except for plural *-s*” (p.30). In Gorwaa, the word-markers isolated above function in the same way, allowing an incomplete root such as *na/-* ‘√child’ to function as a meaningful noun such as *na/ay* (M) ‘child’, *na/i’i* (N) or *na/a’* (N) ‘children’. Crucially Gorwaa word-markers and their number morphology are fused, the individual morphemes not separable in any immediately evident way. In identifying the word-markers of Gorwaa, this paper is the first step toward a morphosyntactic description of the Gorwaa noun.

First, some important preliminaries about gender in Gorwaa were established, namely A) that many animals receive gender commensurate with their biological sex; B) that Gorwaa possesses three major syntactic genders: (M)asculine, (F)eminine, and (N)euter; C) that, of these three genders, the (M)asculine gender exhibits two subgenres (Mk-type and M∅-type), and (F)eminine gender exhibits two subgenres (Fr-type and Ft-type), and D) that syntactic gender has a stable association with the word-marker. Each word-marker has a fixed gender value.

Second, comment was made about number in Gorwaa, specifically A) that number has two syntactic values, visible in agreement: singular (Sg) and plural (Pl) and nouns may be unvalued for number (neither singular nor plural), and therefore may occur with adjectives with either Sg or Pl morphology; B) that, semantically, several different number values exist: singular (one of an entity), plural (many of an entity), collective (an entity as a group or whole), singulative (one entity singled out from a collective), plurative (more than one entity dispersed from a collective or mass); mass (an undifferentiated entity), and singularia tantum (a unique entity); and C) that, because each word-marker has a fixed gender, the gender value of a noun may change when that noun is changed for number (and hence given a different word-marker).

Third, the 42 word-markers of Gorwaa were enumerated and described, and justifications were given for considering some formally similar suffixes as different (such as *-i* (Fr) versus *-í* (Fr) and *-i*(Fr) and *-i*(Ft)).

**5.2. Next steps**

Firstly, all of the ‘consistent Sg.’ and ‘consistent Pl.’ word-markers listed above seem decomposable into two subparts: one of the ‘variable’ word-markers, and a series of

morphemes isomorphic with verbal derivational suffixes. For example, the consistent Sg. suffix *-amó* (Mo) yields the variable word-marker *-ó* (Mo), and *-am*, a morpheme recognizable as durative verbal morphology. This represents a fascinating pattern, perhaps related to classification and quantification morphosyntax, as discussed in Borer 2005 (96).

A second area of real interest is in the paradigms into which the word-markers enter. Only fleetingly implied in the examples above, paradigms in Gorwaa seem to play an important role in the number values expressed by individual word-markers, as well as the semantic meanings of nouns. The concept of the paradigm has been usefully employed and elaborated in several West African languages, perhaps best represented by Pozdniakov (2010), Cobbinah (2013), and Watson (2015), whose work provides exciting impulse for future inquiry.

## 6. Abbreviations

Aux	=	auxiliary;
Indef.	=	indefinite article;
k.o.	=	kind of;
LF	=	long form morphology;
Pres.	=	present tense;
Q	=	interrogative morphology;
sp.	=	species;
Top.	=	topicalizer

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