Number as an exponent of gender in Cushitic

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1. Introduction

Gender in Cushitic is interesting because of its interrelatedness with number. I adhere to the Cushitic practice of recognizing "plural" as a value of gender for those languages that have this third value. After presenting the properties of gender and of number separately I return to the issue of gender's interrelatedness with number. The Cushitic family includes more than thirty languages spoken in North-Eastern and Eastern Africa.

2. Cushitic gender systems

Gender is a property of nouns in terms of agreement. For Cushitic languages there are three main type of agreement systems in which nouns have to be divided into the same sets. These are (1) agreement with the subject on the verb, (2) agreement with the head noun for demonstratives and possessives including possessive nominals, and (3) agreement of adjectives with head nouns. In order to familiarize ourselves with Cushitic gender systems I present a short overview of gender in two divergent cases in the family: Iraqw and K'abeena.

A note on terminology: In order to minimalise the confusing use of "plural" as a value for gender, I will use the abbreviations (f), (m), and (p) when I refer to the values of gender, and I will use multiple reference (m.r.) and singular reference (s.r.) for the values of the feature number, following Hayward (1984). Number, as we will see, is a derivational category for which I use the terms singulative and plurative for the

derivational processes.

Terminology:

Gender: f, m, p

Number: m.r., s.r.

Number morphology: base; singulative, plurative.

2.1. Iraqw gender system

Iraqw nouns fall into three gender classes on the basis of agreement of the subject on verbs within the clause, of modifiers with the head noun within the Noun Phrase, and of adjectives with the head noun. The third value for gender is "plural". Agreement on the verb is purely with gender, not with number. Thus in (1a) the (masculine) word *daaqay* 'boys' triggers the verb form that expresses the third-person singular masculine; in (1b) the (feminine) word *hhaysee* 'tails' triggers the verb form that expresses the third-person singular feminine, and in (1c) *hhayso* 'tail' triggers the verb form that expresses the third-person plural.

(1) Iraqw subject gender agreement on the verb (Mous 1993)

a.	daaqay	i	harweeriir-ín.	i	harweeriir-ín	
	boys	3	make.circles-DUR:3SG.M	3	make.circles-DUR:3SG.M	
	'The boys is making circles.'			'He is making circles.'		
b.	ħaysee	i	harweeriir-íin.	i	harweeriir-íin	
	tails	3	make:circles-DUR:3SG.F	3	make:circles-DUR:3SG.F	
	'The tails are making circles.'			'She is making circles.'		

c.	ħayso	i	harweeriir-iná’.		i	harweeriir-iná’
	tail	3	make:circles-DUR:3PL		3	make:circles-DUR:3PL
	‘The tail is making circles.’				‘They are making circles.’	

Note that the Iraqw singular word for ‘tail’ requires (p) agreement and its multiple reference form ‘tails’ requires (f) agreement. This word is specifically chosen to highlight the fact that the agreement is not with semantic number but with morphological gender. The **total number** of words in Iraqw that have singular reference and require (p) agreement is limited; those that are multiple in number reference and require (f) agreement are plentiful.

2.2. K’abeena gender system

K’abeena subject agreement on the verb makes a two-way distinction in the third person: the ending *y* or zero is used for masculine words (and first person) and the ending *t* is used for feminine words (and also for second person and for the third-person plural pronoun; second-person plural is based on second-person singular and first-person plural has a distinct third form). The word *wuu* ‘water’ triggers the agreement of third-person masculine. A word like *faangoo* ‘thief’ can refer to either singular or multiple reference and can trigger either masculine or feminine gender. The interpretation is multiple reference to the exclusion of singular reference if the feminine verb form is used and either singular or multiple reference if the verb has the masculine ending. Words with multiple reference can require masculine gender, as is the case with *lal*^{u} ‘cattle’ in (2d), examples from Crass (2005: 273-75).

(2) K'abeena subject agreement.

a. wuu bokki 'aazi 'a'yiyo

water:NOM house:GEN interior:ACC enter:PERF:3M

'The water has entered the house.'

b. faangoo lalu 'aa'iyo

thief:NOM cow:ACC take:PERF:3M

'A thief/Thieve(s) stole cattle.'

c. faangoo lalu 'aa'ito

thief:NOM cow:ACC take:PERF:3F/P

'Thieves stole cattle.'

d. lal^{u} faangaan^{i} 'aa'ammo

cow:NOM thief:LOC take:PASS:PERF:3M

'Cattle was stolen by thieves.'

The following properties of Cushitic gender are already evident from the two languages:

1. Subject agreement is with gender only.
2. If there is a third value of gender, this is (p) and not neuter singular.
3. Gender is a property of the word; not of the lexeme.

Before we continue the discussion of Cushitic gender I need to explain the essentials of Cushitic number.

3. Properties of number

The feature "number" has a completely different status from the feature "gender" in Cushitic for a number of reasons. First, a feature "number" is often difficult

to establish on the basis of agreement. Several Cushitic languages do show agreement with number. In those that do, number agreement is marginal, and when it occurs it is semantically based. Second, number is a feature that is not obligatorily expressed. I shall elaborate a bit on these two properties, starting with the second. One can use an underived basic form of the noun that is neutral for number in situations where the specification of number is considered irrelevant; this is reported, for example, by Savà (2005: 61) for Tsamakko and by Crass (2005: 63) for K'abeena. In Oromo most nouns do not have plural forms, and even if they do, it is most common not to use a plurative noun in connection with a higher numeral. When number is already expressed in the noun phrase, no plurative form of the nouns is used.

Within the noun phrase there may be number agreement on the adjective. Number agreement in adjectives is quite common in Cushitic; it occurs in Oromo, Somali, Dhaasanac, Alagwa, Burunge, Iraqw, Konso, Bilin, and K'abeena; 'Afar and the Dullay languages do not really have adjectives; there is no number agreement in Boni and Elmolo. Other modifiers such as demonstratives and possessives do not to show number agreement. When subject agreement on the verb is with gender rather than number, number agreement on adjectives is the only place where the category of number needs to be evoked for agreement as separate from gender. But number agreement on adjectives is not strictly obligatory. The nature of this agreement is semantic rather than morphological. For example, in Iraqw one can say *notóo úr* /paper.money (=notes) big/ 'a lot of money' or *notóo ur-én* /paper.money big-PL/ 'large denomination notes' with a distributive reading when the plural form of the adjective is used.

The morphological expression of number is a complex area of Cushitic

derivational morphology. A full discussion of the properties is beyond the scope of this paper, but see Zaborski (1986) for such an account. Nominal number morphology has the following properties which are briefly illustrated below in the words for 'gourds' in Konso and in Iraqw.

1. The derivational patterns are complex: Lexemes may have one number form, which can be either of singular or of multiple reference. Many lexemes have two number forms, but often the multiple reference form is basic and the singular reference form(s) are derived. Lexemes with three or four number forms occur.
2. Languages have rich inventories of singulative and plurative derivations, with complex morphology.
3. Number derivations impose a gender value, and thus gender is a property of the word form, not of the lexeme.
4. There are correlations between the formal properties of the base and the choice of the plurative ("polarity of gender").

The Tables 1 and 2 illustrate some of these properties, specifically properties 2 and 3, and, to some extent, 1.

Tables 1 and 2 near here.

4. Agreement of gender: Domain is the noun phrase

Internal agreement for which the domain is the noun phrase is primarily noun - modifier agreement. This agreement shows two to three values for the feature gender in

Cushitic languages. In Iraqw, the gender markers preceding the demonstratives in Table 3 show *u*, *r* and zero as the (m), (f) and (p) agreement markers, while the gender markers in demonstrative and possessive pronouns are *ka* for (m/p) and *ta* for (f). Thus various agreement systems require the same nouns to be divided into the same gender classes.

Table 3 near here.

In Arbore, the common pattern is m/p versus f with a *h* element for (m) and (p) nouns and a *t* element for (f) nouns. **Only two values for gender are distinguished** in genitive noun constructions and demonstratives, but possessive pronouns and the modifying question word 'which?' distinguish three values for gender (see Hayward 1984: 184-200). Gender agreement on adjectives has a different neutralization and distinguishes (m)/(f) versus (p). **See Table 4.** Oromo agreement within the NP has two values, (m) and (f).

Table 4 near here.

The forms of internal gender agreement markers often involve *ku* for masculine, *ta* for feminine, *ka* for (p) or forms developed out of those, with often only a *k* (m) and (p) versus *t* (f) distinction surviving (see Bryan 1959).

Some languages have noun phrase-internal agreement only for some modifiers. 'Afar has no agreement in demonstratives (Bliese 1981); K'abeena has no agreement in possessives. There are also languages that have no noun phrase-internal agreement at all. This is the case in the geographical area **that includes** Konso, Dirayta, and Dhaasanac, where there is no noun phrase-internal gender agreement. These languages do have the feature gender but only on the basis of external or clausal agreement.

In K'abeena there is no agreement for possessive suffixes, but definite and

demonstrative suffixes show two different agreement systems. Demonstratives distinguish two values, *k* for (m) and *t* for (f), while definites distinguish three genders s^i (m), s^e (f), ss^a (m.r.). The definite suffixes are identical to third-person possessor suffixes which distinguish among male, female, and plural possessors but show no agreement with the gender of the head noun. Multiple reference words trigger masculine agreement in the demonstratives, m.r. agreement in the definite markers, but feminine agreement on the verb in external, clausal agreement.

The values for gender on the basis of internal NP agreement of possessives and demonstratives in Cushitic languages are summarised in Table 5.

Table 5 near here.

Gender agreement in adjectives often takes different formal markers from other agreement on nominal modifiers. Here we have to distinguish between agreement on the head noun and agreement on the adjective itself. Agreement on the head noun, i.e. "construct form" or "antigenitive", is similar in formal expression and characteristics to the agreement system discussed above. Gender agreement on the adjective itself takes different forms but is not very common among Cushitic languages for two reasons. First, the category of adjective is problematic in a number of languages; second, not all languages with adjectives show gender agreement. Dullay has no clear category of adjectives. The adjectives in Tsamakko are in fact a subcategory of nominals (Savà 2005). In Khamtanga, there are only two adjectives defined by such agreement. Somali has no gender agreement on adjectives, nor does Rendille. Among closely related languages such as Iraqw and Alagwa, one does (Iraqw, by tone), and the other does not (Alagwa). In Arbore the agreement only occurs in modifying adjectives but not when they are used predicatively. In Oromo adjectives agree in gender in the final vowel. In

Dhaasanac adjectives agree in gender (and number). Recall that Dhaasanac has no NP-internal agreement for the other modifiers. An overview of Cushitic agreement markers for adjectives is presented in Table 6, and the values for gender on the basis of agreement on adjectives are given in Table 7.

Tables 6 and 7 near here.

In summary, for the domain of the noun phrase there are two types of agreement systems: those on adjectives and those on other nominal modifiers. Most Cushitic languages show gender agreement in the domain of the noun phrase and distinguish three values for gender, (m), (f) and (p). Those that consistently show only two values for gender are Oromo, Somali, Rendille and Dhaasanac.

5. Agreement of gender: Domain is the clause

A typical example of **a language with** gender agreement in the clausal domain is Arbore, where gender is marked on the subject clitic, (m/f) versus (p), and on the verb: *y* for (m/p) and *t* for the prefixing verb 'come' in (3a) and zero for (m/p) versus *t* for (f) on the suffixing verb 'to be present' in (3b). Note that there is an additional tonal difference for the (p) form of this verb.

(3) External agreement in Arbore (Hayward 1984)

a.	néek	’íy	yeecce	‘A lion came’
	lion	M/F:PAST	M/P:came	
	komayté	’íy	teecce	‘A tortoise came’
	tortoise	M/F:PAST	F:came	
	’úmmo	’íso	yeecce	‘The children came’
	children	P:PAST	M/P:came	

b.	daac	’ay	gíra	‘There is a rat’
	rat	M/F	be:M	
	’ingiré	’ay	gírta	‘There is a louse’
	louse	M/F	be:F	
	bíce	’asó	gira	‘There is water’
	water	P	be:P	

Other languages with this pattern of gender agreement for the subject of the verb with three agreement classes and the third one being (p) are the Southern Cushitic languages Iraqw, Alagwa and Burunge, and the Southern Lowland languages Bayso, Konso, Dirayta, Tsamay, Rendille, **and** Boni. I follow the classification of Cushitic presented in Tosco (2000).

There are also three gender systems where all (p) nouns are multiple reference, in other words, (p) gender is semantically predictable. This is the case for the Agaw languages Awngi, Bilin, Kemant, and Khamtanga; and for the Dullay languages.

A third kind of Cushitic gender system is one in which there are two values of gender, (m) and (f). **Nevertheless,** such a system is very different from the familiar European system due to the fact that gender **in Cushitic languages** is a property of the

word and not of the lexeme. Thus we have systems like that of ‘Afar where all nouns, singular and multiple reference nouns, are either (m) or (f) but not necessarily the same gender in singular and multiple reference. There are, however, three third-person forms of the verb, but the only **the pronoun ‘they’ and the** nouns ‘people’, ‘women’ and ‘children’ **require a third-person plural agreement.** Thus ‘Afar is a three-gender language with a very limited set of (p) words that have all multiple reference.

In Oromo, nouns have one of two values for gender, (m) or (f). Verbs have three third-person values, 3m, 3f, 3pl. Agreement with multiple reference words is either 3pl or 3f; the choice is semantically based, with 3f agreement conveying collective meaning for the subject.

The situation is similar in Somali, where m.r. nouns take 3pl agreement on the verb, and only s.r. nouns are distinguished in 3m and 3f agreement values. NP-internal agreement is different in that there are only two agreement forms and m.r. nouns are either (m) or (f), e.g.*dúmar-**kii** wày teg**een*** ‘the-woman they left’. Subject number agreement on the verb is to some extent lexically determined in Somali: mass nouns have either singular or plural agreement on the verb depending on the lexeme; those that require plural agreement end in *ó* which is a plural suffix (Saeed 1999: 57).

There is small group of Somali nouns that has a choice for agreement in the verb for a multiple reference controller. These nouns do not have a recognizable multiple reference morpheme (they have a change of tone which is otherwise characteristic of (m) to (f) gender shift, or they constitute Arabic plural forms, or contain an archaic non-productive m.r. suffix *-an*). Their preferred agreement is (f), but optionally they have agreement with 3pl. In order to understand these exceptions we have to realize that the subject pronoun *way* is ambiguous between (f) and (p). These m.r. subject nouns that do

not look like other m.r. nouns are followed by a subject pronoun which can be interpreted as (f)**:** consequently the verb also shows (f) agreement. It is a surface phenomenon that is linked to these m.r. word forms, not to the lexeme, since other m.r. forms in the same lexeme will have regular semantic agreement. The phenomenon is described by Hetzron (1972: 259-261) from which the following example is taken.

(4) External agreement in Somali

babùur-**k**ii wùu teg**ay** ‘the truck he left’

truck-DEF:M:NOM FOC:M leave:M:PAST

babuurrá-**d**ii wày teg**een** ‘the trucks they left’

trucks-DEF:F:NOM FOC:F/PL leave:PL:PAST

náag-**tii** wày teg**tay** ‘the woman she left’

woman-DEF:F:NOM FOC:F/PL leave:F:PAST

naagí-**hii** wày teg**een** ‘the women they left’

women-DEF:M:NOM FOC:F/PL leave:PL:PAST

díbi-**gii** wùu teg**ay** ‘the ox he left’

ox-DEF:M:NOM FOC:M leave:M:PAST

dibí-**dii** wày teg**tay**/teg**een** ‘the oxen she/they left’

oxen-DEF:F:NOM FOC:F/PL leave:F:PAST leave:PL:PAST

dibidiyá-**dii** wày teg**een** ‘the [few] oxen they left’

oxen-DEF:F:NOM FOC:F/PL leave:pl:past

nijàar-**ki**i wùu teg**ay** ‘the carpenter he left’

carpenter-DEF:M:NOM FOC:M leave:M:PAST

nijaaríin-**t**ii wày teg**tay**/teg**een** ‘the carpenters she/they left’

carpenters-DEF:F FOC:F/PL leave:F:PAST leave:PL:PAST

More radical two-gender languages are those that have only two verb forms for third-person subject. Such languages are K’abeena, Elmolo, and Dhaasanac. In K’abeena (Crass 2005) all multiple reference words are (f) on the verb, **and** there are only two exponents of gender: the third person of the verb has only two forms, (m) and

(f). Recall, however, that K'abeena has three values for gender in definites. In Dhaasanac (Tosco 2001) agreement with m.r. words is (m); some m.r. words are (f) due to a historical process in those lexemes of reinterpretation of the base form as plural and singulative as singular. Closely related Elmolo is similar in that all m.r. words are (m); the only exceptions that Heine (1976) recorded are *óho* (m) 'mouth', pl: (f), and *sóono* (m) 'nose', pl: (f).

The definite agreement markers of possessive origin in K'abeena are related to the dependent pronouns in the verb in the closely related Kambaata language. Kambaata does not distinguish between m and f/p on the verb itself but in the pronouns see (Treis 2005).

Dhaasanac (Tosco 2001) has simplified marking of person on verbs to two forms, (m) and (f), for all persons. The third-person plural pronoun and multiple reference words take the (m) agreement. Dhaasanac has also lost all gender agreement in the noun phrase dependent forms, except for adjectives which show optional gender agreement. In Table 8 the number of gender values and their distribution on the basis of (external) subject agreement on the verb are summarized.

Table 8 near here.

The differences between the Cushitic languages are not so much in the number of values for the feature gender that is defined by agreement, be it on the verb or on the nominal modifiers. The number values defined by these are nearly always three. The major differences are in the number of genders that have to be recognized in multiple reference words. For example, the number is 3 for Iraqw, 2 for Somali, 1 for Agaw.

As we saw in the case of 'Afar, where only three nouns required 3pl agreement, the difference between the two first columns is not so rigid if we take into account the

number of nouns that require being lexically marked for (p) gender. In the next section we look into these issues.

6. Distribution of feature values; underived and derived; across number

The lexicon is usually unevenly distributed over the values for gender. If we look at m.r. nouns only, there is a range of values that these words take in the individual languages. Let us first look at the domain of the Noun Phrase. Some languages have the full three-way distinction of (m), (f) and (p) in m.r. nouns and a reduced (m/p) versus (f) distinction in certain phonologically reduced agreement contexts. In other languages the value for gender is predictable for m.r. nouns, but this need not be (p): in some languages it is (m) and in others (f). The variation is presented in Table 9.

Table 9 near here.

If we look at the domain of verb agreement, we see a similar pattern (see Table 10).

Table 10 near here.

Since number formation is derivational and the number derivations impose gender, it is worthwhile to examine whether the situation is different when we limit ourselves to underived nouns. Thus we distinguish between nouns that are underived for number and those that are derived (plurative or singulative). The distinction is not always easy to make. Tables 11–15 present the distinctions in gender for derived and underived nouns and for singular and multiple reference in several languages; the values between brackets represent a relatively small set of nouns.

Tables 11, 12, 13, 14, and 15 near here.

It is clear from **the** examination of these tables that the general picture of gender in m.r. is that derived singulars are never (p), derived plurals tend to be (p), but often some of the m.r. derivations are (m) or (f).

In order to get a fuller picture, we should look **not only** at the distinctions that are made in gender for m.r. words but also into the number of words that have (m) or (f) gender in m.r. and (p) gender in s.r. In Tables 16 and 17 we can see that there is a clear numerical tendency in Iraqw for underived s.r. words to be (m) or (f) but not for underived m.r. words to be (p). The vast majority of (p) words in Iraqw are derived and have m.r. In Iraqw the **number** of underived s.r. (p) words is limited**;** (p) is semantically motivated in words such as 'cattle', in liquids such **as** 'water' and 'milk', and possibly also in semantic fields such as time indications (parts of the day), geographical hyperonyms such as 'sky' and 'earth'; in addition **,** body parts are recognizable as a semantic field with (p) words for items such as nose, back, chest, waist, **and** buttocks. In Konso there is a considerable higher number (130) of underived s.r. words that are (p)**,** and a semantic motivation for why these words are (p) is more difficult to find. On the other hand, m.r. words in Konso tend to be derived and (p).

Tables 16 and 17 near here.

Iraqw s.r. (p) words include *'ameetleemu* 'midday', *'ayla* 'song improvised for the occasion', *'aymadu* 'midday, lunch time', *'uwa* 'west', *aai* 'journey', *afeetlo* 'waist, loin', *aldafiri* 'interest, sth **.** returned with what was borrowed', *alu* 'behind, reverse', *amsi* 'midnight, night', *axweeso* 'evening, night (8-10 P.M.)', *baloqa* 'day after tomorrow', *baray* 'down (on a slope), low, inside', *baynu* 'pigs (wild and domestic)', *bihhi'* 'side', *buhaaree* 'rainy season (February - April), insect sp.', *da'ata* 'red of blood, n.pr.pers.masc.', *da'awa* 'chest', *da'ri* 'witchcraft', *dara'ma* 'roasted meat and

intestines for the skinners', *de'ema* 'time, duration', *diidaa* 'boasting, pride', *dimbé* 'side, far, separate, different', *doori* 'sky, heaven', *duunga'* 'nose', *duwa* 'milk from plant', *fayda* 'profit', *fu'naay* 'meat (for eating)', *gila* 'quarrel, fight', *gitsee'a'* 'forehead, face, luck', *gwe'eedo* 'buttocks', *hhayso* 'tail, penis', *hhurwa'i* 'bad maize grains', *hinqeereeri* 'saliva', *huwaa* 'burden', *ibyaa* 'pointless activity with the hands', *iilo'* 'weight, load', *ilwa* 'milk', *inooín* 'they', *irqwá da'áw* 'n.pr.loci (mountaineous area southeast of Mbulu)', *ki'ima* 'turn, time, coming back', *kundi'i* 'bundle to carrry, bale', *kuuko* 'mumps', *loeemaa* 'truth', *maanda* 'Nyiramba, Bantu (land and people)', *ma'ay* 'water', *matlo* 'tomorrow', *qatsuwa* 'heroic success (in hunting or war)', *sihhú'* 'far land', *slaahhareri* 'aroma, k.o. tree', *slahhoo* 'mucus, catarhh', *tsaxwa* 'danger', *tsee'a* 'outside', *tsiindo* 'evening (before dark)', *tsunqaa* 'saliva as blessing, gifts in the form **of** money to newly weds', *waaqooda* 'hypocrisy', *waayaa* 'work of different kind, not heavy, routine', *xaatli* 'afterbirth, placenta of an animal, trees', *xaxardu* 'palate', *xweeraa* 'night', *yaamu* 'earth, world, below'.

Iraqw underived m.r. (p) words are *afi* 'scrapings of stiff porridge at the sides of the pot', *haywa* **'**term to address children**'**, *kumbeeri* 'women accompanying the bride's mother during the wedding ceremony', *kuungá'* 'you (plural)', *kwaslu* 'beads', *laqaya'* 'thorns', *makay* 'animals', *maraay* 'houses', *war'ee* 'boys and girls escorting the bride', *yakwaa ~ hikwaa* 'cattle'.

7. Motivation of gender assignment

Gender is not predictable on the basis of **the** meaning of **a** word. Words with male connotations can be feminine and the other way around. For most words the choice of gender has no semantic base at all, as is clear from the words for gourds

~~above~~ **(Tables 1 and 2)**. We will come back to the association of (p) with multiple reference.

There are parts of the lexicon where gender clearly has a semantic base in all languages: (1) agentives distinguish male and female sex which correlates with the gender of the derivational suffix; (2) derived singulars for animates are often sex specified in the gender.

There is some evidence for semantic associations with gender in terms of size and endearment/pejoration, as is common in the Omotic and Semitic languages of Ethiopia. Gender denotes the semantic notion of social significance (masculine) versus social insignificance (feminine) (Tucker and Bryan 1966: 511, Castellino 1975: 352ff, Sasse 1984: 117). This is the case in the Western Oromo dialects in which the gender system has developed into one with masculine as basic gender and the use of **the** feminine gender is restricted to females and to express diminutives and pejoratives (Clamons 1999: 392). Western Oromo is in this respect similar to neighbouring Agaw (Hetzron 1976: 14). Clamons (1992: 69) established the following rules for gender assignment in the other Oromo dialects: **(**1**) a** small number of lexically specified words have invariant gender (m) or (f); **(**2**) t**he rest of the words are variable in gender; **i**f the referent is sexed, its sex will determine its gender; **(**3**) i**f the referent is not sexed, unmarked gender is partly determined by the quality of the final vowel: nouns ending in non-low vowels are (f), those ending in low vowels or consonant are (m), but the other gender may be used expressively along the lines explained above; **(**4**) a** number of the nouns in the remaining category have an unmarked gender that is not predictable on the basis of formal properties and have to be lexically specified; still these too may shift in gender for expressive purposes.

Gender assignment on the basis of formal properties of nouns is rarely completely predictable in Cushitic, but for most Cushitic languages there are clear correlations between noun form and gender value, i.e., gender is never really covert, and rarely completely overt. Overtness is due to the following factors: (1) number derivations impose gender; (2) terminal vowels strongly or weakly correlate with gender values for some languages; (3) tone patterns correlate with gender values for some languages. Gender is never fully predictable from form. For example, regarding the gender imposed by number derivation, nouns ending in what seems to be one of the number suffixes may have a different gender, and some homophonous number suffixes differ only in gender. There are also homonyms that differ in gender only, e.g. Arbore *'elló* (m) 'cowrie shell' vs. *'elló* (f) 'fear'.

Typical correlations between word form and gender are those in Afar and Somali: 'Afar stressed vowel-final nouns are (f); consonant-final and nonstressed vowel-final nouns are (m); other nouns with final *o* and *e* are (f) (Hayward 1983). In Somali, nouns ending in *e* are masculine; those ending in *o* are feminine; polysyllabic masculine words ending in a consonant have the accent/high tone on the penultimate vowel; those that are feminine, on the ultimate (Saeed 1999). Final high tone for feminine is also reported for Rendille (except for those feminine nouns that end in a vowel), while masculine nouns have penultimate accent (see Oomen 1981: 39-43); she proposes that the contrastive pitch is caused by the loss of a feminine suffix in feminine nouns. The difference in tone/accent placement is related for word-final reduction processes: In Borana Oromo feminine nouns mostly have long final vowels and masculine, short final vowels (Stroomer 1987: 70).

In Cushitic an analysis of gender-related final vowels can be argued for;

however, in many languages such an analysis is just one of several possible options. Arguments for a special status of the final vowel include the following: (1) The number derivations usually erase the final vowel of the noun. (2) For several languages not all vowels occur word-finally; for example, in Konso nouns end in *a* with the exception of names which may end in *i*, *o* or *e*. (3) For several languages there is a correlation between the quality of the final vowel and its gender. For example, in K'abeena nouns that have a short final vowel *-e* are feminine and those that have *-a, -aa, -o, -oo, -i, -u* or *-ee* are masculine, unless they contain an addition formative $-t^a$ (Crass 2005: 61-62); in Tsamakko nouns that end *-o* are masculine, those that end in *-a* are feminine and those that end in *-e* are feminine or plural in gender; no nouns end in *u* or *i* (Savà 2005: 52). Hayward (1983) distinguishes between terminal and non-terminal ultimate vowels in Saho-Afar on the basis of phonological properties.

8. Number and gender interplay

The interplay between gender and number is in the (p) exponent of gender. This class has to be set up because of words that require 3pl agreement. Underived (p) words comprise a relatively small set of words, 133 in Konso, 70 in Iraqw, 24 in Alagwa, 4 in Afar. Many but not all of these words have some connotation with multiple reference, for example, 'people', 'children', 'women' in Afar (Hayward and Corbett 1988: 265). In Section 6 above these words are given for Iraqw; those for Alagwa are given below in Example (6). Other kinds of words that often appear in this group are words for part of the day. But also clearly singular words appear in this class, e.g. 'tail' in Iraqw. For many languages a large number of the derived multiple reference words are (p). In Bayso all paucal words are (p) (Hayward 1978). However, all relevant languages have

derived multiple reference words that are (f) (Alagwa) or masculine (Arbore), seldom both. For example, Iraqw has (p), (f) and (m) derived multiple reference words, but the (m) derived nouns are ambivalent in terms of number and the derived noun (in *-a(a)y* or *-angw*) refers to either a collection or it can have multiple reference. Derivation for singular reference is never (p) and always restricted to (m) and (f).

(5) Alagwa underived (p) words:

Plural words

daaqaay (p) 'children'

tikay (p) 'women, wives'

yawa (p) 'cattle'

aaraa (p) 'goats'

baaluu (p) 'days'

Liquids and collectives

ilba (p) 'milk'

mintsartú (p) 'fresh (of milk)'

ma'ay (p) 'water'

qubu (p) 'hair'

Time

xwa'i (p) 'evening'

amasi (p) 'night'

aansí (p) 'former times'

piray (p) 'night till dawn'

matlatlee (p) 'morning'

Geographical concepts

tsiindo (p) ‘west’

aluu (p) ‘behind’

pahaa (p) ‘valley’

rawa (p) ‘top, sky’

tsee/aa (p) ‘savanna, grassland’

The rest

fayee (p) ‘marriage settlement, bride price’

kwa/u (p) ‘house of many poles (?)’

neetla (p) ‘devil’

tse/era (p) ‘healed wound’

umpumáy (p) ‘small-pox’

There are additional connotations of (p) and multiple reference in the external agreement phenomena. Many languages show an alternative of semantic multiple reference agreement to morphological gender agreement for the subject of the verb. In particular this is the case of plurative nouns that are (f) in gender. In Alagwa multiple reference words that are (f) can be combined with either a 3sg.f ending verb or a 3pl ending of the verb. In the second case the agreement is on a semantic base.

(6) Alagwa semantic external verb agreement in number (Mous forthcoming)

gooruwaa	ningi	looh-ir,	hara	gooruwa,	hara	galapo.
n.pr.pop.**F**	CS:3	move-**3PL**	to	n.pr.loci	to	n.pr.loci

alagwa slée ninga há'ut, ninga há'ut-ir hara isaabee

n.pr.pop.F also CS:3-ABL leave:F CS:3-ABL leave-3PL to n.pr.loci

'The Gorwa (Fiome) moved to Gorwa, to Galapo. The Alagwa too left from it, they left to Isabe.'

In Oromo "[a] few words allow either singular or plural agreement, though most take only singular agreement, even if they have a plural referent" (Owens 1985: 223); see Example (7). Collective words ending in *-áaní* have (m) or (pl) agreement, while in Boraana Oromo they have (pl) agreement, (Owens 1985: 224).

(7) joolléen sírée-rrá c'iis-t-e / c'iis-an

children bed-on rest-F-PAST rest-PL:PAST

'The children rested on the bed.' (Owens 1985: 223)

Another connotation of multiple reference and (p) agreement is that the same semantic agreement of a 3pl verb is observed in the resolution of gender conflict for a structure of coordinated nouns with mixed gender. In Oromo (Clamons 1992, Owens 1985) and Iraqw (Mous 2004) such coordinated nouns trigger (p) agreement, as in Example (9) where the coordinated noun phrase combining an (m) and (f) word requires plural agreement on the verb.

(8) Oromo gender resolution

angáfaa-f obboléettíi-n tiyya ní d'uf-an

elder.M-and sister.F-NOM my focus come-PL

'My elder brother and my sister are coming.' (Owens 1985: 212).

Gender resolution with coordinated structures does not always trigger (p) agreement. In ‘Afar (f) agreement is equally possible; Example (9) shows that both (f) and (p) agreement are possible with a coordinated structure, here of two (m) nouns.

(9) ‘Afar gender resolution (Corbett and Hayward 1987: 270)

yì	qammii-kee	kày	baxa	temeete	/	yemeeten
my	uncle.M-and	his	son.M	F:came		PL:came

‘My uncle and his son came.’

9. The Cushitic Gender and Number system and alternative analyses

The variation within languages and language groups suggests that there are unstable elements within a general picture of a three-way gender system and an independent number system in which gender is a property of the word, not of the lexeme; partly overt (varying per language); with semantic associations of those languages that are in contact with Omotic and/or Semitic. Agreement with gender is maximally in the verb, in the Noun Phrase and on adjectives. Semantic external agreement occurs in various forms.

Number is derivational and agreement is in adjectives, but semantic in nature. There are two exponents of number for agreement. Various derivational patterns have to be distinguished: base → plural(s), base → singular(s), base → singular and plural derived, derived singular → plural derived, two derived singulars, two derived plurals. The expression of number is seldom obligatory, and there are varying ways in which this phenomenon is realized. M.r. derivation correlates in a number of ways with properties of the base; s.r. derivation does not and is more semantically motivated.

Although I have applied the framework and principles set up by the typological expert on gender and number, Corbett (1991, 2000, 2006), Greville Corbett has a different view on Cushitic "plural" as exponent of gender, as is evident from Corbett and Hayward (1987), Hayward and Corbett (1988), Corbett (1991: 181-185), Corbett (2000: 181-183), Corbett (2006: 172-174) and implicitly in giving the Cushitic languages Iraqw and Alagwa two values for gender in his article on gender for the *World Atlas of Linguistic Structures* (Corbett 2005: 126-129). In his view Cushitic gender has two exponents, (m) and (f). The difference between that and my analysis is due to my application of a more fundamental principle of approach in typological research, namely, that one should not mix independent categories. For example, if we have a language in which first person is marked by high tone, second person by vowel shortening and third person by low tone but only in the past tense, we could claim that past tense is the third value of person. However, this would complicate the analysis. Mixing number and gender equally complicates the analysis. The difference in our approaches is ultimately also linked to scope of the typological exercise. Looking at one language or one group of related languages, as I do, one tends to be reluctant to introduce distinctions that make sense only from a wider typological perspective and not from within the language. Still I adhere to plural as an exponent of gender for Cushitic for the following reasons: (1) it allows for a clearer total picture of the peculiarity of the Cushitic system; (2) it simplifies analyses of individual languages; (3) it highlights the interrelatedness of gender and number as two categorization principles of nouns similar to that of tense and aspect in verbs.

I first argue why I think that an analysis that does not acknowledge (p) as a category of gender results in analyses that are too complex in a number of individual

languages. According to Corbett there are only two values for gender, which means that the agreement with the nouns that I consider (p) is number agreement. Nouns which are semantically of singular reference but take (p) agreement are marked in the lexicon as such. Nouns that are semantically of multiple reference but take (m) or (f) agreement follow gender agreement, not a semantically motivated (p) agreement. This in itself does not complicate the overall analysis very much. A relatively small number of nouns has to be marked as exceptional; for some of those nouns a semantic explanation can be provided that motivates the exceptional behaviour. The alternative analysis of excluding (p) as value for gender would also capture naturally the behaviour of some (f) nouns of multiple reference in a language such as Alagwa which can optionally take (p) external agreement on the verb, but not the (f) agreement of some multiple reference nouns in Somali in Example (5) above.

Problems arise when the number system, specifically number agreement in adjectives which is separate from the gender agreement system, is taken into account. These problems do not arise in Bayso or Afar, the two Cushitic languages that were analysed by Corbett and Hayward in detail, because these two languages do not have such an agreement system. A word in Iraqw that is of multiple reference and (p) has two different agreement markers on the adjective. In Corbett's type of analysis these would be two different kind of number agreements. The nature of the agreement would also be different; the (p) agreement is automatic or morphological, while the m.r. kind of number agreement is semantically motivated. Adjectives agreeing with nouns have in principle six different forms. In Table 18 I schematize the agreement values on adjectives under the two analyses.

Table 18 near here.

This system is valid for a language like Iraqw. Concrete examples and their glosses under the two analyses are given in Table 19. One agreement system (gender) has low tone on the final syllable for (f) and (p) head nouns and high tone for (m) head nouns irrespective of number; the second agreement system has a different form of the adjective for multiple reference nouns; in this example the marking is *t* and vowel shortening; the default value for singular reference is the basic form of the adjective; hence the singular reference gloss is between brackets. On the right hand side is the gloss as it would be under an analysis in which (p) is the plural value of the feature number.

Table 19 near here.

In a language such as Iraqw there is fusion of the agreement forms for the values (f) and (p) in gender agreement in adjectives. However, under an analysis that has two values of gender, this fusion is between the agreement of feminine (in gender) and plural (in number) nouns, but at the same time these nouns agree differently in the number agreement in adjectives. Thus in one slot in the adjective the value for some nouns is f (in gender)/pl (in number) and in another sg (in number). Thus, in such an analysis the same noun has pl (number) agreement in the "gender" agreement slot and sg agreement in the number agreement slot: for conflicting agreement values for number in the two agreement slots, see Table 20. The maximal system as represented in Table 18 above is the one reconstructed for proto West-Rift South Cushitic (Kießling 2002: 406).

Table 20 near here.

For those Cushitic languages that have a three-value gender agreement system and that have a number agreement system in adjectives, an analysis that takes the third

gender value as number becomes exceedingly complicated in the treatment of agreement in adjectives. The complex double agreement system is in fact unstable. The other West Rift Cushitic languages, Alagwa and Burunge, no longer have it. Alagwa lost the tonal gender agreement which is represented by a vowel difference in Burunge (*-u* for m and *-i* for f/p). Burunge has only gender agreement but (p) nouns have two markers of (p) agreement on the adjective: the final vowel *i* and the equivalent of the m.r. form in Iraqw; e.g. *qunqumaad*^{i} short:F, *qunqumaad*^{u} short:M, *qunqumad*^{i} short:P:P (Kießling 1994: 183-184).

Now I want to substantiate my claim that the recognition of (p) as a value of gender rather than number does better justice to the Cushitic situation. Again we have to look at both gender and number. An analysis that has (p) as value of number rather than gender obscures that typical Cushitic feature that gender is property of the word rather than the lexeme. Under such an analysis we have two different kind of noun lexemes: those that are gender specified in the singular but not in the multiple reference where they are (p) and have no gender, and those that are specified for gender in the singular and again specified for gender in the multiple reference, since the gender value need not be the same. As I hope to have shown, the so-called polarity of gender does not resolve this problem, because the idea that the gender in the multiple reference form is simply polar to that in singular reference is untenable for those languages that have the third gender and also fails for the languages for which it is proposed. The two typically Cushitic characteristics of the number system, namely that number is strongly derivational in nature and that, as a consequence, gender is unstable across various number forms of a single lexeme, become less apparent, because they are only valid for half of the lexicon, and unexplainably so.

Finally, gender and number are both categories of nouns. Typologically, that is considerable evidence that both exist independently and that they often interact. This in itself does not exclude the Cushitic situation, namely that there is a categorization in which the values mix. Likewise, tense and aspect can be recognized as two different categories that often interact in individual languages. The Bantu noun class system is an example of a categorization system that disregards number. Although we are used to speaking about singular and plural classes, there is no place in Bantu grammar where plural classes as opposed to singular classes form a group. The noun class of a word is relevant for rule application but never its value for semantic number (see Schadeberg 2001). Also in Bantu it is the individual noun, not the lexeme, that has a value for gender.

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Table 1: Gourds in Konso

PL: d'ahaan-aa (p) gourds'	PL: d'ahaan-add'aa (p)
↓	
SG: d'ahaan-ta (f)	PL: d'ahaant-add'aa (p)
hulp-a (m) 'large gourd for water'	PL: hulp-allaa (p)
hupp-ayyaa (p) 'small gourd'	PL: hupp-add'aa (p)
murraa-ta (f) 'gourd for drinking'	PL: murr-awwaa (p), murr-add'aa (p)
xott-aa (p) 'large water gourd'	PL: xott-ad'aa (p)
shaww-aa (p) 'gourd with handle'	PL: shaww-add'aa (p)
↓	
SG: shaww-ayta (m)	

Table 2: Gourds in Iraqw

daħ-aangw (m) ‘gourd’	PL: daħ-eeri (p) daħeer-áy (m);
	SG: daħ-aari (f) ‘small gourd’
oona (f) ‘beer gourd’	PL: onu (p)
seep-áy (m) ‘small milk gourd’	PL: seep-i’i (p)
	SG: seep-i (f)
ga‘awi (f) ‘gourd as churn’	PL: ga‘<ee>w-o (p)
isaangí (f) ‘gourd for veggies’	PL: isang-aay (m);
	sg: isangaa’-i (f); PL: isaanga’ay (m)
baykwati (f) ‘long milk gourd’	PL: baykwat-ay (m), baykwat-a (f)
PL: sambeħ (m) ‘big serving’	SG: sambeeħ-i (f); PL: sambeeħ-ay (m)
qumi (f1) ‘with long neck’	PL: qum-áy (m)
quruntl’i (f) ‘for carrying water’	PL: quruntl’-áy (m)
qwaree‘-amoo (m) ‘for measure’	PL: qwaree‘-ama’ (p)

Table 3: Iraqw internal agreement patterns: Demonstratives

	hiima (m) ‘rope’ *u*	ħasam (f) ‘dilema’ *r*	gi'i (p) ‘ghost’ ∅
DEM1	hiim**uw**í	ħasama**r**í	gi'iká
DEM2	hiim**u**síng	ħasamasíng	gi'isíng
DEM3	hiim**u**qá'	ħasama**r**qá'	gi'iqá'
DEM4	hiim**u**dá'	ħasamadá'	gi'idá'

Source: (Mous 1993).

Table 4: Internal agreement in Arbore

	Construct **F**orm	**P**ossessive **P**ronouns	**P**ossessives and **D**emonstrative *-átto*	**D**emonstratives *-ló*	**W**hich ?
m	-ha	ha-	-h-	0	bú-
f	-tah	ta-	-t-	t	bíto-
p	-ha	toha	h-	0	to-

Table 5: Possessive and demonstrative agreement

m f p	m/p f	m f	none
Alagwa, Burunge, Iraqw, Arbore, Boni, Dullay, K'abeena definites	Alagwa pronouns, Burunge pronouns, Iraqw pronouns, Arbore genitive,	Elmolo, Oromo, Somali, K'abeena demonstratives	Konso, Dhaasanac, Tsamay, K'abeena possessives

Table 6: Gender agreement markers in adjectives

	Arbore	Iraqw	Oromo	Tsamakko	Bilin	Khamtanga	Dhaasanac
m	-á	L	H-áa	akko	-x^{w}	-u	-u
f	-á	H	H-óo	atte	-r	-w	-iyyu
p	-o	H		ayke	-w	-ik^{w}	

Table 7: Gender agreement in adjectives

m f p	m/f p	m f/p	m f	No	No Adjectives
Bilin, Khamtanga	Arbore	Iraqw	Oromo, Dhaasanac	Somali, Rendille, Konso	‘Afar

Table 8: Exponents of gender defined by verb agreement

m f p	m f | p	m f
Alagwa, Burunge, Iraqw, Konso, Dirayta, Bayso, Rendille, Tsamay, Boni, ‘Afar, Arbore	Agaw, Dullay, Somali, Oromo	K’abeena, Dhaasanac, Elmolo

Table 9: Possessive and demonstrative agreement with M.R. words

m f p	m/p f	m	f	p
Alagwa, Burunge, Iraqw, Arbore, Boni	Alagwa pronouns, Burunge pronouns, Iraqw pronouns, Arbore genitive	K’abeena demonstratives	Elmolo	K’abeena definite, Agaw, Oromo, Somali, Dullay

Table 10: Gender of m.r. words in verb agreement

m f p	f p	m p	m	f	p
Iraqw, Alagwa, Burunge, Arbore; few m, f: Tsamakko, Konso	Somali	-	Dhaasanac, Elmolo (but some (f))	‘Afar, K’abeena	Agaw languages, Dirayta, Dullay, Oromo (plus (f) semantic agreement)

Table 11: Gender in singular and plural reference in underived **and derived** nouns in Alagwa

Underived	Singular ref	f	m	(p)
	Multiple ref	f	m	(p)
Derived	Singular ref	f	m	-
	Multiple ref	f	-	p

Table 12: Gender in singular and plural reference in derived **and derived** nouns in Iraqw

Underived	Singular ref	f	m	(p)
	Multiple ref	f	m	(p)
Derived	Singular ref	f	m	-
	Multiple ref	f	m	p

Table 13: Gender in singular and plural reference in derived **and derived** nouns in Rendille

Underived	Singular ref	f	m	(p)
	Multiple ref	f	m	(p)
Derived	Singular ref	f	?	-
	Multiple ref	f	-	p

Table 14: Gender in singular and plural reference in derived **and derived** nouns in Konso

Underived	Singular ref	f	m	p
	Multiple ref			(p)
Derived	Singular ref	f	m	-
	Multiple ref	-	-	p

Table 15: Gender in singular and multiple reference in derived **and derived** nouns in Bayso

Underived	Singular ref	f	m	(p)
	Multiple ref	f	m	(p)
Derived	Singular ref	f	m	-
	Multiple ref	f	m	p

Table 16: Rough estimate of underived members for gender values in Iraqw

Underived	m.r	s.r
f	25	800
m	58	570
p	8	61

Table 17: Rough estimate of underived s.r. members for gender exponents in Konso

	Underived in *a*	Underived in *aa*	Underived in *e(e)ta* or *o(o)ta*
f	30	1	130
m	200	20	
p	3	130	

Table 18: Values for double agreement features on adjectives

Values for Adjectives When (p) Value of Gender (my analysis)		Values for Adjectives When (p) Value of Number (my version of Corbett's analysis)	
Gender	Number	Gender and Number	Number
p	s.r.	pl	sg
f	s.r.	f	sg
m	s.r	m	sg
p	m.r.	pl	pl
f	m.r.	f	pl
m	m.r.	m	pl

Table 19: Iraqw examples of double adjectival agreement in both analyses

(p) as Value of Gender (my analysis)	(p) = pl Value of Number (my version of Corbett's analysis)
ħayso ki ququmaar tail.p is.P short:p(:s.r.) 'The tail is short.'	tail.PL is.PL short:PL(:SG)
fa'a ka ħeer food.F is.F insufficient:F(:S.R.) 'The food is insufficient.'	food.F is.F insufficient:F(:SG)
tluway ku ħéer rain.M is.M insufficient:M(:S.R.)	rain.M is.M insufficient:M(:SG)
na'ii ki ququm at children.P is.P short:P:M.R	children.PL is.PL short:PL:PL
ħaysee ka ququmat tails.F is.F short:F:M.R.	tails is.F short:F:PL
daaqay ku ququmát boys.M is.M short:M:M.R.	boys.M is.M short:M:PL

Source: Mous 1993: 203-204).

Table 20: Iraqw fusioned values for double agreement features on adjectives

Values for Adjectives	When (p) Value of Gender (my analysis)	Values for Adjectives	When (p) Value of Number (my version of Corbett's analysis)
p/f	s.r.	pl/f	sg
m	s.r.	m	sg
(p/f	s.r	pl/f	sg)
p/f	m.r.	pl/f	pl
m	m.r.	m	pl
(p/f	m.r.	pl/f	pl)