GENDER AND NUMBER IN BAYSO*

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Bayso is an East Cushitic language with complex systems of gender and number. Nouns mark four categories of number (unit reference, singulative reference, paucal reference and multiple reference). Agreeing elements have only three distinct forms, showing the considerable syncretism typical of Cushitic. The agreement class approach of Zaliznjak establishes that there are eight classes of nouns in Bayso. However, it is demonstrated that only two genders should be recognised in Bayso (contrary to earlier work) and that remaining classes have small membership and should be handled by features indicating irregularity in number agreement. These small groups of irregular nouns prove valuable for comparison with related languages, notably Dasenech, Elmolo, Arbore, Rendille and Boni. It is shown how various changes in Bayso have conspired to produce a system which, for all its apparent complexity, is simpler than that of related languages. Of special note is the fact that it has adopted a particular multiple reference suffix for use as a paucal reference form; this suffix consistently takes plural agreements, while regular multiple reference forms take masculine agreements.

1. Introduction

Bayso shows a particularly complex interaction of the categories of gender and number. In this paper we offer a reanalysis of previously available data, which we believe is of significance as a general approach to intricate gender-number systems and which suggests interesting comparisons with other

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Cushitic languages. After giving the essential background facts about Bayso (section 2), we present the data together with the original analysis (section 3). This is followed by a reanalysis (section 4), a discussion of its implications for comparative work (section 5), and a brief conclusion.

2. The Bayso and their language

The Bayso constitute one of the many minority ethnic groups of Ethiopia. Their traditional home is the settlement of Bayso at the southern end of Gidicco, an island some eight kilometers long situated towards the north of the large Rift Valley lake known as Abaya. The Bayso are also to be found in a number of villages on the shores of Lake Abaya. There is, nevertheless, a good deal of contact, trade and movement between the mainland and Gidicco Island, such communication being accomplished by means of the wolaabo, a type of boat or raft distinguished by its high curved prow.

Descriptions of the islands of Lake Abaya and their inhabitants begin with Vannutelli and Citerni's (1899) account of Bottego's expedition into this territory in 1896. However, the most detailed treatment to date of the social and material culture of the Gidicco Islanders is that of Haberland (1963: 678–717). Haberland estimates that the number of people inhabiting the settlement of Bayso is of the order of seven hundred (Haberland (1963: 686)). Even if we are generous in our calculations and double that figure to allow for the Bayso living on the lake shores, it is clear that the present day population of Bayso speakers is a very small one indeed. Given, moreover, the present government administrative policies for resettlement, it is not difficult to foresee that the language of the Bayso will soon be extinct.

For the historical linguist, no less than for the prehistorian, the main interest of the Bayso is the fact that in stark contrast to the other island dwellers of Abaya (who speak Ometo languages)² their language belongs to the Omo-Tana division of East Cushitic, a group whose best known members are the various Somali languages and dialects. The linguistic affinity of Bayso and Somali was first recognised over eighty years ago by Neumann (1902: 384), and all subsequent comparative linguistic work (e.g. Fleming (1964), Hayward

Abaya was formerly known as Lake Marguerita and this is the name that appears on all earlier maps.

² Ometo is the name given to a large group of quite closely related languages and dialects belonging to the Northern division of Omotic, an exclusively Ethiopian language family generally classified as a part of Afroasiatic.

(1979b), Ehret and Mohamed Nuuh Ali (1984)) has confirmed this, even to the extent of claiming that within the Omo-Tana group Bayso is actually a descendant of Proto-Somali; see Ehret and Mohamed Nuuh Ali (1984). Interest in the Bayso language as a synchronic system has lagged behind concern for it as comparative data for the historical reconstruction of East Cushitic, the only account of Bayso grammar being an outline sketch published by Hayward following a very brief period of fieldwork carried out at the lakeside village of Alge during 1976 (Hayward (1978,1979a)). In spite of its very limited scope this description brings to light a number of interesting features, one of which constitutes the topic of the present paper.

3. The data

The description here follows closely the relevant section of Hayward (1979a); readers are referred to that source for more examples and a vocabulary list. The categories at issue – gender and number – are reflected in agreement. Agreeing elements distinguish three agreement markers, as shown in the following examples of agreeing verbal predicates:

- (1) lúban gira lion is 'There is a lion.'
- (2) kimbir gitta bird is 'There is a bird.'
- (3) ilkoo giran tooth/teeth are 'There is a tooth/are teeth.'

Forms like gira in (1) cooccur not only with liban 'lion', but also with nouns such as ódo 'father', abbi 'brother', abide 'boy'. Gira is therefore said to be a masculine agreement form (m) and the nouns which require this form are said to be of masculine gender. Substitutes for kimbir 'bird' in (2) are aa/aayo 'mother', abba 'sister' and abaade 'girl', among others. Gitta is therefore a feminine agreement form (f) and the nouns are of feminine gender. Surprisingly, however, aabos 'father-in-law' is grammatically feminine too. Substitutes for ilkoo 'tooth/teeth' in (3) are typically non-singular, and so giran is called a plural agreement form (p). Following a not uncommon practice in

Cushitic studies, Hayward calls nouns like *ilkoo* plural and treats plural as a third gender. This part of the analysis will be revised later. Hayward's original point in using the noun *ilkoo* 'tooth/teeth' for illustration was to highlight the 'relative arbitrariness' of the assignment of nouns to this class: it includes some nouns which are semantically mass or non-count (*eenoo* 'milk', *soo* 'meat') but not all nouns of this type are included (*iig* 'blood' and *ees* 'grass' are masculine).

Agreement is also found in the associative particle (prt):

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(4) áni ka (m) dee lúban ...

I prt saw lion

'The lion which I saw ...'
(5) áni a (f) dee kimbír ...

I prt saw bird

'The bird which I saw ...'
(6) áni o (p) dee ilkoo ...

I prt saw tooth/teeth

'The tooth/teeth which I saw ...'
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Similarly the demonstrative (which can occur with the noun or in place of it) distinguishes three forms:

- (7) hikki (m) lúban this lion(8) hitti (f) kimbír this bird
- (9) hini (p) ilkoo these tooth/teeth 'this tooth/these teeth'

Note that the three agreeing elements presented – verbal predicate, associative particle and demonstrative – each have three distinct forms, which are distributed according to the same criteria (and can therefore, though they are phonologically dissimilar, be given the same labels, (m), (f) and (p)). The different agreeing elements do not lead to any further cross-classification of nouns.

Let us now turn to the way in which number is indicated on the noun. The number system contains four terms: unit reference, multiple reference, paucal reference, and singulative reference. A noun form may be recognised as belonging to one or other of these categories by the presence or absence of specific suffixes. Notionally the unit reference form is used to denote either an individual member or the class of the referent. It has no suffix while the other three number categories are all marked on the noun. The multiple reference form denotes a plurality of individual members or units. The paucal reference form denotes a small discrete number of individuals (from two to six), while the singulative denotes a particular member only. An example of these forms is given in (10):

(10) unit reference lúban 'a lion/lion'
multiple reference lubanjool 'lions'
paucal reference lubanjaa 'a few lions/some lions'
singulative reference lubantiti 'a/the particular lion'

The motivation for the original analysis in which gender (shown by agreement) and number (marked morphologically on the noun) were treated as separate systems was that gender appears not to be a constant property for nouns—rather it seems to vary with number. This is illustrated in table 1 (Hayward (1979a: 103)), which shows eight nouns, selected in order to represent the full potential for variation exhibited in the gender and number systems. The nouns (which are numbered throughout for identification) are: (1) lúban 'lion', (2) baal 'feather/leaf', (3) aar 'ox/bull', (4) kimbír 'bird', (5) nébe 'ear', (6) abba 'sister', (7) saé 'cattle', (8) ilkoo 'tooth'.

Table 1 should be read as follows: *lúban* takes masculine agreement when in the unit reference form and when in the multiple reference form, plural agreement when in the paucal reference form, and masculine agreement when in the singulative reference form. *Baal* takes masculine, plural, plural and masculine agreements respectively, and so on. Note that several nouns have alternative paucal reference forms; the distribution of the different suffixes is described by Hayward (1979a: 105) and does not affect the discussion here. The phonological transcription, including the marking of tonal accent, used for Bayso forms cited here is the same as that employed in Hayward (1978, 1979a). Although the majority of symbols correspond to general IPA usage, the following letters and diacritics may perhaps require some clarification.

(a) A subscript point (superscript in the case of ' \dot{p} ') indicates glottalization. In the case of obstruents, glottalization is manifested as an ejective, but in the case of sonorants, it involves a preceding or following glottal stop.

Table 1 Essential data on gender and number in Bayso.

	Gender			
Number	Masculine	Feminine	Plur	al
	(1) lúban	(4) kimbír	(7)	saé
Unit reference	(2) baal	(5) nébe	(8)	ilkoo
	(3) aar	(6) abba		
	(1) lubanjool	(3) aaraar	(2)	baalallo
Multiple reference	(4) kimbirjool	(6) abbalaal	(5)	nebebboo
	(7) saejool		(8)	ilkool
			(1)	lubanjaa
			(2)	baaljaa
				∼ baaljejaa
				∼ baalallojaa
			(3)	aaraajaa
Paucal reference			(4)	kimbirjaa
			(5)	nebejaa
				~ nebebboojaa
			(6)	abbajaa
				∼ abbalaaljaa
			(7)	sacjaa
			(8)	ilkoojaa
	(I) lubantiti	(4) kimbirtiti		
Singulative reference	(2) báaltiti	(5) nebeti		
•	(3) áartiti	(6) abbati		

- (b) c, c, δ and j are employed in place of the IPA symbols for the palatoalveolars $[\widehat{y}]$, $[\widehat{y}]$, and $[\widehat{d_3}]$, respectively.
- (c) Geminate consonants and long vowels are represented with double letters.

The table certainly suggests a complex picture, particularly in the relationship between the agreements taken by unit reference and multiple reference forms. A common way of representing such systems is to list the agreement forms taken by nouns in the different numbers and to join the possible combinations, as in figure 1. Each line represents a class of nouns with different agreement possibilities.

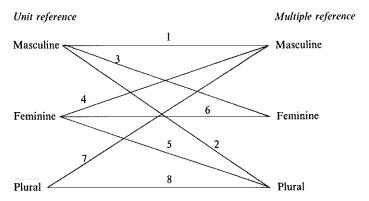


Fig. 1. Matching of agreement forms.

Figure 1 is merely an alternative representation of some of the information in Table 1; the numbers refer to the same nouns as there. Figure 1 represents a 'crossed' gender system (Heine (1982a: 197)); given the agreement form used by a particular noun in either number one cannot from this predict the agreement form to be used in the other number. The system could be more complex only if there were nouns which took plural agreement when in the unit reference form and feminine agreement for the multiple reference form.

Complex crossed systems do occur, in languages of the north Caucasus, for example. Nevertheless, given such a complex picture it is natural to look for possible alternative analysis. This is what we attempt in the next section.

4. Reanalysis of the data

One of the principles underlying the analysis so far is that gender can be postulated only on the basis of agreement evidence. This view is now widely held (see, for example, Dixon (1982: 159–164)). Further, nouns should be classified according to the agreements they take; the eight nouns given in table 1 differ from each of the others in at least one of the agreements which they control. This general approach was worked out particularly clearly and consistently by Zaliznjak (1964). He operates with the notion of 'agreement class', which may be defined as follows:

An agreement class is a set of nouns such that any two members standing in any grammatical form (but the same for both) require that any given agreement target in any agreement domain must take the same form (or the same set of stylistically variant forms). This definition is based on Zaliznjak (1964: 30) but does not follow his terminology. The intuitive content is that for two nouns to be in the same agreement class, then if they are in the same grammatical form (same case, same number) they must take the same agreements no matter what else changes. Any element which can agree with them (any agreement target), in any syntactic construction in which agreement operates (agreement domain) must take the same form.

If we apply this definition of agreement class to the Bayso data, we must recognise eight agreement classes, since no two nouns in table I take exactly the same agreements. It should be stressed, however, that Zaliznjak (unlike some who have adopted his approach) took the establishing of agreement classes to be the first stage in an analysis. Not all agreement classes were necessarily to be recognised as genders. Of course, for general theoretical reasons we should recognise as few genders as possible. (A set of principled reasons for not accepting certain agreement classes as genders is given in Corbett forthcoming.) Let us therefore look again at the Bayso data in this light.

We begin from the notion of 'grammatical form'. The definition takes for granted the establishment of categories such as case and number. The particular interest of the Bayso data is that number, like gender, is a complex category. Nevertheless, it is sensible to start with number, since it typically bears a closer relationship to semantics than does gender, and second (partially resulting from the first reason), many accept the postulation of a number category purely on the evidence of different forms of the noun itself, which is not so for gender. As we saw in (10), regular nouns distinguish four number forms: unit reference, multiple reference, paucal reference and singulative reference. When we attempt to correlate the number forms of nouns with the agreement forms, the clearest regularity is that all paucal reference forms take plural agreement (Hayward (1979a: 102)), as is evident from table 1. That is to say, they take forms of agreement like giran (3), o (6) and hini (9); we return to the appropriateness of the label 'plural' below. While all nouns which are in the paucal form take this plural agreement form, the converse appears not to be the case. In (3), ilkoo takes plural agreement, though it does not have paucal form; moreover, it can be glossed 'tooth' or 'teeth', i.e., it does not necessarily carry paucal meaning. Given Hayward's word list, we can isolate all the nouns of this type, as shown in table 2.

This list has several interesting features. Kalaljaa 'kidneys' has the appearance of a paucal form synchronically; however, no form is attested without the

Table 2			
Nouns taking plural	agreement:	for unit	reference.

ilkoo	'tooth, teeth'3	moo	'hips, lumber region'
saé	'cattle'	eenoo	'milk'
kalaljaa	'kidney(s)'	ogorroo	'hair'
luķķaa	'foot, feet, leg(s)'	800	'meat'
iloo	'eye(s)'	udú	'faeces'
keleroo	'sandal(s)'		

paucal ending. A likely explanation for this is that kidneys typically occur in pairs; the same is true of feet (lukkaa), sandals (keferoo), eyes (iloo) and hips (moo). Most of the remainder of the list are non-count nouns. Finally, it is significant that seven of the eleven nouns end in oo, a point taken up in section 5. We claim therefore that the eleven nouns in table 2 should be lexically marked as taking plural agreement (in place of the expected agreement) for unit reference, although this might not be necessary for kalaljaa. Such marking is to be seen as comparable to the widely attested phenomenon of pluralia tantum nouns. The main difference is that we are here dealing with an overlap within a four number system. As mentioned above, several of the nouns involved are non-count; for these nouns number distinctions are not required and they can just as well be paucal as unit reference, the second possibility having been illustrated earlier in section 3 with respect to such nouns as iig 'blood' and ees 'grass'.

We have labelled eleven nouns as lexical exceptions (though most are not surprising exceptions). As a result we can dispense with the notion of a 'plural' gender. All unit reference and singulative reference forms now take what we have termed masculine or feminine agreements and, for any given noun, the agreements for unit reference and singulative reference are the same. We have also explained a gap in table 1 – the fact that there are no singulative reference forms which take plural agreements. This is because singulative reference forms are derived from unit reference forms and retain the same gender. Since the nouns listed in (11) do not have *regular* unit reference forms they cannot derive singulative reference forms. They would be the only possible source for singulative reference forms taking plural agreements; since such forms cannot be derived the gap in table 1 is explained.

³ Contra Hayward (1979a: 122) it is not absolutely clear that saė is the multiple reference form of se; see discussion in section 5.

Given that we have now established a match between singulative reference and unit reference forms, they can tell us no more about the agreement system. We should therefore turn to the relationship between the two of them and the multiple reference forms. Multiple reference forms are of two basic types. First there are various irregular patterns, restricted to small numbers of nouns (details in Hayward (1979a: 104–105)). All other nouns may take *-jool* or *-jolaal*, which are in free variation. For nouns with a stem ending in a vowel there is a third option which is *-l*. All nouns with regular multiple reference forms take 'masculine' agreement and indeed many irregular ones do so too. Leaving aside the exceptions for a moment, we may set up the consistent agreement patterns as in table 3 (using the forms of the associative particle for illustration).

Table 3
Consistent agreement patterns in Bayso.

	Unit reference	Singulative reference	Multiple reference	Paucal reference
Masculine	ka (m)	ka (m)	ka (m)	o (p)
Feminine	ta (f)	ta (f)	ka (m)	o (p)

As already established, for a given noun, masculine or feminine, agreements with the unit reference and multiple reference forms are identical. The unexpected thing about table 3 is that it shows agreement with multiple reference form nouns to be identical to that for agreement with the unit reference form and singulative reference form of masculine nouns.⁴ Furthermore there is a

Table I Syncretism in the German article.

	Singular	Plural	
Masculine	der	die	
Feminine	die	đie	
Plural	das	die	

The plural form is identical to the feminine singular. German has many more forms which show agreement than Bayso; the syncretism is found in some but not all of them. In Cushitic languages such syncretisms are common (see for example Serzisko (1982)).

⁴ This syncretism may appear surprising. Yet similar syncretisms can be found in Indo-European, as in the German article:

single agreement form (the plural) for paucal reference forms of both genders.

At this point it is worth considering the labels we have used. In one sense they are unimportant: a, b, c would serve equally well. But labels should be as helpful as possible. The point which is important from the theoretical point of view, is to distinguish between features on agreement controllers (the nouns in this case) and the forms of agreement targets (the associative particle here). While in some languages the two match in straightforward ways, in others they do not and confusion arises unless the two are carefully distinguished. (See Corbett (forthcoming) for languages in which controller and target genders do not coincide.)

In Bayso the controller features are clear. For nouns, the category of number includes four values (unit reference, singulative reference, multiple reference and paucal reference), examples in (10). For the vast majority of nouns morphological marking and meaning coincide. As far as gender is concerned, there are two features, masculine and feminine, which are set up on the basis of agreement data, and which can be derived from semantic information in some but certainly not the majority of nouns.

It is the forms shown by agreement targets which are more difficult. Ta and similar forms occur with feminine nouns when they are in the unit reference form or the singulative reference form. It is natural therefore to call such forms 'feminine'; 'feminine singular' would be equally good. Ka and similar forms, however, occur not only with masculine nouns (when in the unit reference form or the singulative reference form) but also with nouns of either gender in the multiple reference form. Masculine' is therefore a convenient label to avoid fuller but more cumbersome names. This leaves forms like o, which occur with paucal reference forms. We have labelled them 'plural' rather than 'paucal'. The main reason is that plural is the traditional term, and a change would lead to confusion. Plural is the term used in Hayward (1978, 1979a); furthermore, for comparison with other Cushitic languages, which we undertake in section 5, it is greatly preferable to retain the accepted term. And finally, in a synchronic description of Bayso, the use of the term 'plural' is

⁵ It is also used for 'neutral' agreement – agreement with elements which are not classified for gender and number, as in the following example, which has an infinitive phrase as subject: (Hayward (1978: 567)):

⁽i) ibaaddo boçaano ka-meelan-ya person to beat bad'To beat people is bad.'

Ka is the associative particle in the masculine form and ya is the clitic copula, third singular masculine.

motivated by the behaviour of the personal pronouns, which we have ignored until now. The subject/object forms of the third person pronoun given in Hayward (1979a: 110) are presented in table 4.

Table 4
Third person pronouns in Bayso.

	Singular	Plural
Masculine	úsu	iso
Feminine	ése	iso

The important point is that the form iso takes plural agreement. Hence we retain the term 'plural' for agreement forms like o, which are required by the plural pronoun iso, though it must be remembered that such forms normally occur with paucal reference form but not multiple reference form nouns.

What is particularly noteworthy about Bayso in this regard is that it is number rather than gender which is problematic. As mentioned earlier, there are various languages in which controller and target genders do not match. In Bayso it is rather that controller and target numbers do not match; in particular, the multiple reference forms take the same agreement as one of the genders (for the unit reference and singulative reference forms). On top of this, the number systems of nouns and pronouns diverge.

Given the pattern of gender and number agreement markers presented in table 3, let us return to the original agreement classes (see table 1). Of these, class 1 nouns like hiban 'lion' are straightforward masculines, while class 2 nouns like kimbir 'bird' are normal feminines. Saé 'cattle', and similar nouns (class 7), require a marker of irregularity [+plural], which prevents their taking masculine or feminine agreement when used for unit reference. This marker also prevents the formation of a singulative reference form. Otherwise such nouns are regular (taking the expected agreement in the paucal reference and multiple reference forms) and no extra gender need be postulated. The remaining agreement classes still require an account, if they are not to be recognised as separate genders. In fact we shall maintain that there are only two genders, masculine and feminine, and that the remaining agreement classes are to be dealt with in ways similar to class 7. Note that in all of them there is some sort of morphological irregularity.

Let us first consider together classes 2, 5 and 8. These all take plural agreement instead of the expected masculine singular agreement with their multiple reference form. All the nouns involved are given in table 5.

Agreement class	Gender	Unit reference form	Multiple reference form	Meaning
2	Masculine	baal	baalallo	'feather, leaf'
2	Masculine	suul	suulallo	'nail, claw'
2	Masculine	fer	fererroo	'finger, toe'
2	Masculine	gílib	gilboo	'knee'
5	Feminine	nébe	nebebboo	'ear'
5	Feminine	aayo	aayoos	mother'
8	_	ilkoo	ilkool	'tooth/teeth'

Table 5 Nouns taking plural agreement when in the multiple reference form.

Note first the small number of nouns in question. The fact that the same irregularity (use of plural agreement instead of expected masculine) is found with nouns of three different types produces three extra agreement classes. The first five nouns in the list all have irregular multiple reference forms ending in -o. We have already noted forms ending in -o in certain of the irregular nouns which, like paucal reference forms, require plural agreement. Moreover, the nouns in table 5 are almost all of the semantic type which would commonly be used to denote small groups (one talks of two knees and two ears more frequently than of larger numbers, and similarly nails, fingers and mothers are found in smaller rather than larger groups). The last noun ilkoo 'tooth/teeth' is doubly irregular. Its unit reference form takes plural agreement (hence it cannot be assigned a gender) and its multiple reference form similarly takes plural agreement; it is the only noun of this type.

The irregularity of the nouns in table 5 is therefore one of number: they must be marked as taking plural agreement when they are in the multiple reference form. But these nouns must in any case be marked as irregular. The first six take an irregular suffix to form the multiple reference form. The last takes one of the regular suffixes (-I), but must still be marked as irregular because it takes irregular agreement with the unit reference form. Since these nouns require irregular markers in the lexicon in any case, and since they are few in number, their irregular agreement for multiple reference should be handled in the same way: these three agreement classes do not give grounds for postulating a separate gender.

We now move to the two remaining agreement classes given in table 1, which we do not wish to recognise as genders. All the nouns in these classes are listed in table 6.

The four nouns in table 6 take feminine agreement when in the multiple reference form. The last two take the suffix -laal and are the only two nouns to

Agreement class	Gender	Unit reference form	Multiple reference form	Meaning
3	Masculine	ааг	аагааг	'ox, bull'
3	Masculine	jarsa	jaarsolee	'old man'
3	Masculine	abbi	abbilaal	'brother'
6	Feminine	abba	abbalaal	'sister'

Table 6
Nouns taking feminine agreement when in the multiple reference form.

do so. It is not implausible that this suffix may originally have had collective meaning and that it imposed feminine agreement, irrespective of the gender of the root. Jaarsolee can also be seen as a collective. These three multiple reference forms are therefore to be treated as collectives; their morphological irregularity must in any case be indicated in the lexicon and the agreement irregularity of these three nouns should be marked in the same way. Then too aaraar could be marked as a collective, though this use of the feature would be a purely arbitrary device in this case. (Note in passing that such collective formations, taking singular agreement, are well known from Indo-European.) It appears that, in Bayso, collectives of this type were formed only from normal unit reference forms: there are no nouns taking plural agreement for the unit reference form and feminine agreement for the multiple reference form.

There are two more nouns, not given in table 1, which under the strict definition of agreement class do not fit into any of the eight classes given there. *Marti* 'guest' and *hebelo* 'so-and-so' take masculine, feminine or plural agreement, depending on the sex and number of the referent(s). Nouns of double gender (often called common gender when the choice of agreement depends on sex) are not unusual. These two nouns are interesting in that number agreement as well as gender is determined by the referent. They can simply be marked as having either gender and contextually determined number – there is no reason to postulate a separate gender.

We have now covered all the recorded nouns that do not fit directly into the scheme in table 2. Each of the agreement classes not recognised as a gender has relatively few members; there are morphological as well as agreement

⁶ There are numerous instances in South Slavonic languages. Serbo-Croat has *brat* (masculine singular) 'brother', *braća* (feminine singular) 'brothers'. The latter can be seen as a collective ('brotherhood'). The agreement system is much more pervasive in Serbo-Croat than in Bayso and though *braća* is listed as feminine singular, not all the agreements are of this type. Similarly *dete* (neuter singular) 'child' has the form *deca* 'children' which, depending on the construction, takes feminine singular, neuter plural or masculine plural agreements (for details see Corbett (1983: 76–88)).

irregularities and there is at least a partial explanation for the composition of each class. We have therefore justified the analysis of table 3, and claim that Bayso has two grammatical genders. This reanalysis has been possible because the membership of the classes could be worked out from the word-list in the original article. It is often the case that systems which are claimed to be complex cannot be considered in this way since no indication of the relative size of the agreement classes is given.

5. A comparative perspective

In our reanalysis of the number/gender system of Bayso we have, in effect, drawn a sharp distinction between the regular system of the language and certain irregularities which arise on account of a handful of words. With respect to the morphology of number categories this regular system is summarized in table 7.

Table 7
The regular morphology of number in Bayso.*

Grammatical number	Morphological characteristics	
Unit reference form	Base form (X)	
Singulative reference form	$X+-ti \sim -titi$	
Paucal reference form	X+-jaa ~-jejaa	
Multiple reference form	$X + -jool \sim -jolaal \sim -l$	

The distribution of the alternants listed here is a matter either of phonological determination or of free variation.

The regular morphological system presented in table 7 correlates with the regular usage of agreement forms as exemplified in table 3.

In section 2 Bayso was said to belong to the Omo-Tana group of East Cushitic languages. Now quite generally within East Cushitic the relationship between gender and number is a complex matter (see, for example, Heine (1982b: 24 ff.), Hayward (1984: 159 ff.)). The morphology of number marking

⁷ There are generally reckoned to be three divisions of East Cushitic languages. These are known as Dullay, Highland East Cushitic, and Lowland East Cushitic. The last named division contains the language group we have been referring to as Omo-Tana. It comprises: Dasenech, Elmolo, Arbore, Bayso, Rendille, the various Boni dialects, and all the Somali varieties. There are two other groups within Lowland East Cushitic: Saho-Qafar, and Oromoid, to which Dirayta and Oromo (both referred to in this paper) belong.

is also often complicated (see, for example, Amborn, Minker and Sasse (1980: 85 ff.), Parker and Hayward (1985: 227 ff.), Andrzejewski (1960,1967)). In view, therefore, of the relative simplicity of the core system of Bayso (as depicted in tables 3 and 7) it could be of interest to look at the language from a diachronic perspective. The fundamental question is whether the situation found presently in Bayso represents a continuation of an earlier one, or a simplification of a more complex proto-system.

Unfortunately there is as yet no standard work on the comparative/historical grammar of East Cushitic to which the reader could be referred. Furthermore, nothing has been published concerning the history of number morphology in these languages. We are thus obliged to consider the individual markers in more detail than would be usual in a paper of this type.⁸

A singulative number category is found in every branch of East Cushitic, and several quite distinct formations have evolved for marking this category. However, as Zaborski (1986: 57) has pointed out, within Omo-Tana the Somali languages have largely lost the singulative category, although various relics of it persist in the morphology. There seem to be good grounds for following Ehret and Mohamed Nuuh Ali (1984) in according Bayso a greater affinity with the Somali languages than with those Omo-Tana languages spoken further to the west, namely, Dasenech, Elmolo and Arbore. In the matter of the singulative category, however, Bayso shares in the retention of an ancient singulative marking element. Each of the three Western Omo-Tana languages has a singulative formative containing t^9 and these are clearly cognates of the Bayso suffix, as shown in table 8.

Table 8
Singulative reference forms in certain Omo-Tana languages.

	Unit reference form Singulative reference		e form	
Dasenech	híí	hìi-tì	'thorn'	
Elmolo	dôrr	dór-te	'feather'	
Arbore	?izze	?izze-t (m) ?izze-té (f)	'gazelle'	

⁸ Unless indicated otherwise, Arbore forms are taken from Hayward (1984), Benadir Somali from Zaborski (1986), Boni from Heine (1982b), Dasenech from Sasse (1974), Dirayta from Hayward (1981), Elmolo from Heine (1980), Oromo from Andrzejewski (1960) and Rendille from Oomen (1981). The transcription of language forms cited from published works is the same as that employed in those sources.

⁹ Forms containing a t are by no means the only type of singulative found in Omo-Tana; see Hayward (1984: 179 ff.).

Since singulative suffixes in t occur in East Cushitic languages which are in most other respects far removed from Omo-Tana, it is clear that we are dealing with an archaic feature.

All East Cushitic languages have a multiple reference or 'plural' category, and this is marked morphologically in a great many ways (for an excellent overview of the forms, see Zaborski (1986)). With respect to the marking of this category, Bayso certainly looks as if its links are with the Somali languages. Indeed, for Bayso -jool \sim etc. there are only two plausible cognates from the whole of East Cushitic, and both of them are confined to the Somali languages. One of the two possibilities is the suffix -yaal. In Northern Somali, on which Standard Somali is based, the occurrence of -yaal is restricted by both morphological and phonological factors. Moreover, forms with -yaal take agreements which match those of the feminine gender. However, according to Zaborski's summary of the statements made in the literature on this suffix (see Zaborski (1986: 68 ff.)) it appears to be much commoner in other varieties. Furthermore, here (i.e. in Benadir, Dabarro, Bay, Jabarti) forms in -yaal are masculine, which is the agreement form demanded in Bayso by -jool ~ etc., e.g. Dabarro: eder: ederyaal 'paternal uncle/s, middi: middiyaal 'knife/ knives'. The vowels in the suffixes -jool and -yaal are, of course, different, and it is not obvious how this could be explained.

A second possible cognate for -jool is -yo, e.g. Northern Somali: magas: magasyo 'name/s', subah: subahyo 'morning/s'. Here the vowel quality matches, and the fact that citation forms of nouns with this suffix carry a complex (rising) tone (i.e., -yδ) suggests that this was originally a double vowel. How then do we explain the l in the Bayso suffix? It is clear that final l in Bayso has often to be recognised as a multiple reference formative in its own right. (It will be recalled that -l can function alone to mark multiple reference in vowel-final polysyllables.) In view of the fact that 'double plural' marking occurs so frequently in languages of this family, it is not unreasonable to suggest that -jool is, in fact, a composite form, i.e. -joo-l. With respect to gender, plurals in -yo pattern rather like those in -yaal, for as Zaborski (1986: 61) points out, this type of multiple reference form often takes masculine agreements in dialects other than Northern Somali.

Systematic marking of a paucal number category, such as is seen in Bayso

¹⁰ In general double vowels do not occur finally in polysyllabic words in Somaloid languages. (However, there appear to be a high number of exceptions to this statement as far as Af-Jiddu is concerned.)

is, to the best of our knowledge, a phenomenon without any parallel elsewhere in East Cushitic. However, it is not difficult to find a likely cognate for -jaa, the marker of this category.¹¹ Lamberti (1981: 37 ff.) records the regular - indeed, virtually the only - multiple reference form marker in Af-Jiddu as being a suffix -daa. A stop j((di)) does occur in Af-Jiddu, but it seems that as a phoneme this sound is on the verge of extinction, for according to Lamberti (1981: 6), j can generally be pronounced identically to d or y; the reverse situations do not hold. Af-Jiddu is in many ways the most aberrant of the Somali languages, and the recognition of certain lexical peculiarities which it shares uniquely with Bayso provided the basis for the claim that these two languages are the sole surviving members of one of the branches created by the initial split in Proto-Somali (Ehret and Mohamed Nuuh Ali (1984)). However, -daa in Af-Jiddu has to be seen as a marker of multiple reference in general, since this language does not appear to distinguish two degrees of 'plural'. Therefore, it may be conjectured either that Bayso has uniquely preserved a distinction which operated productively in the number system of Proto-Somali, or that it innovated by creating a fully productive system of paucal marking, co-opting one of the available multiple reference form markers for this function. The second suggestion presents less problems, since to posit a distinction in plural categories in Proto-Somali would oblige us to ask whether such a distinction was a Proto-Somali innovation or an Omo-Tana (East Cushitic?) retention. In view of the absence of attestations of such a systematic distinction elsewhere, it seems safer to conclude that the novelty began with Bayso.

We turn now to those aspects of the Bayso gender/number system which create the impression of complexity expressed in table 1. When factored out, as in section 4, the complicating elements were identified as:

- (a) a small handful of nouns the base (citation) forms of which require plural agreement, and
- (b) a small handful of multiple reference forms which require plural agreement.

¹¹ A *- $c\dot{\sigma}$ multiple reference form suffix requiring masculine agreement has been reconstructed for Proto-Boni (Heine (1982b: 73)). Since final $\dot{\sigma}$ in the Boni dialects corresponds to a variety of vowels in other Omo-Tana languages (cf. Heine (1978: 21)), it is not at all clear whether or not this can be regarded as cognate with Af-Jiddu -daa (and Bayso -jaa); in some cases the suffix looks as if it could be cognate with -yo occurring in Somali dialects, to which reference has already been made.

What can be said about these irregular forms from a comparative point of view?

In section 4 it was observed that seven out of the eleven nouns requiring plural agreement terminate in oo, thus: ilkoo 'tooth, teeth', iloo 'eye(s)', keferoo 'sandal(s)', moo 'hip(s), lumbar region', eenoo 'milk', ogorroo 'hair', soo 'meat'. Now throughout the Omo-Tana group we find a multiple reference form suffix with this form. (Since most of the languages concerned have undergone truncation of a vowel mora in double vowels in final position, the suffix now has a single vowel.) Examples are given in table 9, together with the agreement forms they take.¹²

Table 9
Multiple reference forms in -o in certain Omo-Tana languages.

	Unit reference form	Multiple reference	form
Elmolo		séér-o	'rain cloud/s'
	'ilik (f)	ʻilk-o	'tooth/teeth'
Arbore	naan (f)	naan-ó (p)	'spear/s'
	?ilig (f)	?ilk-ó (p)	'tooth/teeth'
Rendille	ilím-e (f)	ilm-ó (p)	'tear/s'
	iláh-e (f)	ilk-ó (p)	'tooth/teeth'
Benadir Somali	walāl (m)	walāl-o (m)	'brother/s'
	ilik (m)	ilk-o (m)	'tooth/teeth'

There need be no hesitation, therefore, about reconstructing *-oo as one of the multiple reference form markers of Proto-Omo-Tana. Moreover, it is likely that this suffix required plural agreement. Consideration of the relevant forms in the examples of table 9 reveals Bayso ilkoo to be a straightforward descendant of Proto-Omo-Tana *?ilk-oo.

We now consider in turn the remaining exceptional nouns. *Iloo* clearly has the same ending *oo*, but the comparative evidence presented in table 10 suggests strongly that this word originally had a suppletive root in multiple reference forms, but that a regularization took place at some point in the history of the form presently found in Bayso.¹³

¹² Unfortunately the agreement forms required by multiple reference forms in Elmolo are not available.

¹³ Within Omo-Tana the root *?il- appears to have had a second meaning, namely 'spring (of water)'. With this meaning we do find a non-suppletive multiple reference form in Northern Somali, viz. iló 'springs'.

Table 10 Forms for 'eye' in certain Omo-Tana languages.

	Unit reference form	Multiple reference form
Elmolo	il	ínna
Arbore	?il (f)	?inḍá (p)
Rendille	íl-e (f)	indó (p)
Proto-Boni	*il (f)	*indo (m)

We have found no satisfactory cognates for the root in *keferoo*, but consideration of the behaviour of forms of the root *kob-/*kab- 'sandal' show that the same multiple reference form suffix is involved (table 11).

Table 11 Forms for 'sandal' in certain Omo-Tana languages.

	Unit reference form	Multiple reference form
Elmolo	kôp (ſ)	kóp-o
Arbore	kob (f)	kob-ó (p)
Rendille	kób-e (f)	kob-ó (p)
Bireeri Boni	kob (f)	kob-ə
Directi Doill	100 (1)	KOO B

Soo and eenoo are interesting, far from a semantic point of view there is no reason why they should have a multiple reference form marker. Yet, due consideration of cognates of these words in languages right outside of Omo-Tana (e.g., Dirayta and Oromo) suggests very strongly that the ancestral East Cushitic forms of the non-count nouns *so?- 'meat' and *faan- 'milk' must have controlled plural agreement (table 12).

Table 12 Forms for 'meat' and 'milk' in certain Omo-Tana languages.

	'Meat'	'Milk'	
Elmolo	sóo (m)	énu (m)	
Arbore	so? (m)	?eenú (p)	
Rendille		haanú (p)	
Proto-Boni		*àànə (p)	
Dirayta	sóh-a (p)	?áànn-a (p)	
Oromo	fóòn (p)	áanani (p)	

At some time in the prehistory of Bayso these roots received an -oo suffix in recognition of their agreement peculiarity. It might even be possible to pinpoint the relative chronology of this development, since Ehret and Mohamed Nuuh Ali (1984: 229) see the suffixation of the *-o (= our *-oo) multiple reference form marker to the simple stem as a specific Proto-Bayso-Jiddu innovation.

A similar thing may be hypothesized concerning ogorroo 'hair'. Semantically it is plausible to regard this as a collective. (This, moreover, is precisely how the Qafar-Saho cognate of this word still behaves, viz., dágoor: dagór-ta 'hair/strand of hair'.) In view of the fact that collectives have 'non-singulative' reference it is easy to see how such a word would receive multiple reference form marking, and whatever agreement feature went with the particular marker adopted. This development did not take place in Af-Jiddu, however, viz. dogor 'hair'.

Moo 'hip(s), lumbar region' is an item without other Omo-Tana attestations so far, but it seems likely that its history may have been like that of soo, 'meat' and eenoo, 'milk'. Even if the details were not entirely the same, it is clear that at some stage final oo in moo was identified as the multiple reference form marker and so was assigned the agreement property entailed by that marker.

This same -oo element is manifestly nothing other than a multiple reference form marker in the morphologically irregular multiple reference forms seen in gilib: gilboo 'knee/s', fer: fererroo 'finger/s' and nébe: nebebboo 'ear/s'. In two of these forms there is clear evidence of an older multiple reference form marking device, namely reduplication; thus, addition of the suffix brought about a double marking of the multiple reference form category. Comparison shows that for these three roots this suffix was the usual multiple reference form marker, as shown in table 13.

¹⁴ An exactly parallel development must have taken place in Oromo, for here we find that these same words have acquired the multiple reference form suffix -aani ~ -ani, viz. áanani (<*saan-aani), fóòn, (<*so?-aani). It is of relevance too for the situation we are considering in Bayso to note the following (Borana dialect) words: ilkaani 'tooth, teeth', údaani 'facces', lóòni 'cattle'. These items contain the same suffix as that found in 'milk' and 'meat', and, like them, require plural agreement while having to be regarded as base forms. It is highly significant too to note here the forms of 3rd person plural pronouns: where Bayso has is-o (cf. table 4) Oromo has is-aani.

	Unit reference form	Multiple reference	form
Rendille	jílib (m)	jilb-ó (p)	'knee/s'
	far (m)	far-ó (p)	'finger/s'
	nabáh-e (f)	nabħ-ó (p)	'ear/s'
lmolo	fårr (f)	fárr-o (p)	'finger/s'
	nêp (m)	nép-e	'ear/s'
rbore		farr-ó (p)15	'finger/s'

Table 13
Forms for 'knec', 'finger' and 'ear' in certain Omo-Tana languages.

There is evidence for other multiple reference form suffixes in Proto-Omo-Tana, which are relevant to a consideration of the remaining irregular nouns of Bayso. One of these suffixes is *-Ca(a). It is reconstructed mainly on account of a few Arbore forms (see table 14).

Table 14 Arbore multiple reference forms in -Ca.

Unit reference form	Multiple reference form	
?ćel (m)	?el-lá (p)	'water-hole/s'
kóol (m)	kol-lá (p)	'leaf/leaves'

The one recorded case of a Bayso cognate of this suffix occurs in *lukkaa* 'leg(s)'. Other Omo-Tana languages do not correspond in their multiple reference forms for this word, as can be seen from table 15.

Table 15 Forms for 'leg/foot' in certain Omo-Tana languages.

Unit reference form	Multiple reference form	
lûk	núŋka – suppletive	_
lukk (f)	hundá (p) – suppletive	
lúh-e (f)	luh-ló (p)	
	lûk lukk (f)	lûk núŋka – suppletive lukk (f) hunḍá (p) – suppletive

The suffix has to be seen as a retention from East Cushitic. Of significance here, however, is the fact that Arbore multiple reference forms in -Ca control plural agreement.

¹⁵ There is a singulative form faar-it here in Arbore, but no unit reference form.

Saé 'cattle' is an oddity. The 'cow' root *sas- does not usually occur with multiple reference form suffixes, and the word for 'cattle' (assuming this to be the appropriate multiple reference form for 'cow') involves another root; examples are given in table 16.

Table 16
Forms for 'cow' and 'cattle' in certain Omo-Tana languages.

	'Cow'	'Cattle'	
Arbore	se? (f)	ķoll (ľ)	
Rendille	sáh-e (f)	lólyo (f)	
Proto-Boni	*sa? (1)	*lói (f)	

There is evidence, however, for yet another Omo-Tana multiple reference form suffix, i.e. *-e, as shown in table 17.

Table 17 Multiple reference forms in in -e in certain Omo-Tana languages.

	Unit reference form Multiple reference		e form	
Elmolo	min (m)	min-e	'house/s'	
Arbore	kunúf (m)	kunuf-é (p)	'claw/s'	
Rendille	éhel (m)	ehél-e (f)	'donkey/s'	

Here again the Arbore multiple reference forms should be noted, since they have plural agreement. We suggest that in saé we have the only recorded relic of this suffix in Bayso.

In kalaljaa 'kidney(s)' we witness perhaps the first case in which the new paucal suffix belongs to the citation form of a noun. It is worth noting that, as in the case of fer, gilib and nébe, the suffix is attached to a stem that, on account of its reduplicated structure, can be recognised as having at some time been marked as a multiple reference form (see also the Proto-Boni form in table 18).

Table 18
Reflexes of Proto-Omo-Tana *kal- 'kidney/hip'.

	Unit reference form	Multiple reference form
Elmolo	kâl (m)	kál-e
Arbore	kal-anté (f) 16	kalan-ó (p)
Proto-Boni 'hip'	*kàláál (f)	*kalaal-cə

¹⁶ Kal-antė is a singulative; there is no unit reference form.

It is not clear whether or not it is possible to reconstruct a multiple reference form suffix in -u for Proto-Omo-Tana. For our present purpose it would only be required for the one word $ud\dot{u}$ 'faeces'. It seems likely that this is one of those non-count nouns, like soo and eenoo, that idiosyncratically required plural agreement, 17 as the data in table 19 suggest.

Table 19
Reflexes of Proto-Omo-Tana *?ud- 'dung, faeces'.

Elmolo	útu (m) – no multiple reference form
Arbore	?udú (p) - no multiple reference form
Rendille	údu (f) – no multiple reference form
Proto-Boni	ùddó (p)

Finally we may note that for the irregular multiple reference forms baalallo 'feathers' and suulallo 'claws' there are very similar multiple reference forms in (at least) Northern Somali, viz. baal: baalal, suul: suulal, and it seems unlikely that this could have come about by chance. In Northern Somali baalăl and suulăl are not alone, for according to Andrzejewski (1967) all masculine monosyllabic nouns ending in l form their multiple reference forms in -al; Andrzejewski treats this formation as a special case of reduplication. unfortunately it is not at all obvious how we should account for the differences between the forms in the two languages; nor is it clear whether or not Bayso -allo and Northern Somali -al have to be connected in some way with the Bayso regular multiple reference form suffix -l. What is clear, however, is that, like all other irregular multiple reference forms in Bayso these words control plural agreement.

The comparative evidence considered above is compatible with a historical interpretation such as the following.

In ancestral Omo-Tana the great majority of (singular) unit reference forms of nouns required either masculine or feminine agreements. For the multiple reference forms of these words, however, there were three possible requirements for agreement:

- (a) an agreement identical to that for masculine unit reference forms,
- (b) an agreement identical to that for feminine unit reference forms, and
- (c) a plural agreement, i.e. an agreement identical to that required by the 3rd person plural pronoun.

¹⁷ Cf. the development of this word in Oromo; see fn. 14.

The agreement required by a given multiple reference form was a morphologically determined matter, i.e. agreement depended upon the particular formative employed. Three of the formatives that required plural agreement were *-oo, *-Ca(a), and *-e. In addition to the preceding there were a number of morphologically distinct singulative reference forms, the agreement requirements of which were again subject to morphological factors.

This system seems to have been complicated by the fact that there were some nouns – quite few in number – which required plural agreement, even though they were not marked as multiple reference forms. For some of these (e.g. the items for 'milk', 'meat', 'faeces', 'hair', etc.) this property is understandable from a semantic point of view, and could well have been inherited from an earlier period of East Cushitic.

Languages such as Arbore and Rendille have clearly preserved a good many features of the Proto-Omo-Tana system. Bayso, however, has undergone a number of changes. Taken collectively these changes have conspired towards creating a comparatively regular system. In particular we may note the following.

- (a) The variety in singulative marking was narrowed down to just one suffix.
- (b) Together with (a) there came a simplification of gender agreement for singulatives, such that a singulative form would automatically require the gender agreement of the unit reference form from which it derived.
- (c) The number of marking devices for multiple reference forms was progressively whittled down, so that now there is effectively just one morpheme involved though the allomorphs of this may originally have been two or more distinct multiple reference form suffixes.
- (d) One particular multiple reference form suffix was adopted for a specific function of distinguishing a small set of discrete referents (i.e. for a paucal function).
- (e) This new paucal reference suffix came to require plural agreement.

Concerning this last point, we may observe that this suffix may perhaps always have required plural agreement. (We have already noted other multiple reference form suffixes with this property.) Whether this was or was not the case, it is not surprising that *-jaa* came to have this property. This is what happened in the Somali languages, where all multiple reference forms of count

nouns now require plural verb agreements. 18 Moreover, in Oromo and Wolaitta, the two major languages with which the Bayso have long been in contact, it is always the case that multiple reference forms require plural agreement.

What is surprising, then, is that multiple reference forms in $-jool \sim -jolaal \sim -l$ have adhered to the old principle of morphologically determined agreement. Perhaps it was the emergence of a clear (semantically grounded) distinction of paucal vs. multiple reference categories that enabled $-jool \sim$ etc. to maintain the property of requiring masculine agreements.

Although great regularity has been achieved in Bayso, a few fossil forms have persisted in the shape of words which contain reflexes of earlier multiple reference form suffixes of a sort that had required plural agreement. While some of these words obviously possess such suffixes now on account of their having been genuine multiple reference forms, others may have acquired the suffix at some time on account of their (otherwise) idiosyncratic property of requiring plural agreement. We have in mind nouns such as eenoo, soo, ogorroo, saé, and also possibly moo. But in the case of udú such regularization did not occur. Items such as eyes, teeth, sandals, legs, kidneys, etc. occur in small sets, and it is more usual to refer to such sets, rather than to their component entities. It is almost certainly to such usage that we have to attribute the persistence of old multiple reference forms such as iloo, lukkaa, fererroo, nebebboo, ilkoo, etc. It should be noted that certain other old multiple reference forms have also persisted. Thus, we find a handful of reduplicated multiple reference forms, e.g. aar: aaraar 'ox/oxen', ker: keroor 'dog/s', ira: iraar 'field/s', viis: viisaas 'child/children'. But in these, and in a few other cases not involving reduplication, the agreements required by the multiple reference forms are either masculine or feminine - never plural. In view of their semantics (in the case of some of them), plus the fact that the suffixes both in nouns like eenoo and in nouns like iloo retain their original Proto-Omo-Tana agreement property, they have doubtless been reanalysed as paucal forms; their only remaining irregularities being morphological ones.

¹⁸ Agreement with respect to the selection of masculine or feminine determiners within noun phrases seems still to reflect the earlier situation in which certain multiple reference form suffixes require masculine agreements, while others require feminine. To a certain extent the original gender requirements of various suffixes have been changed. The resultant system is one which has often been described as exhibiting 'polarity' (cf. Tucker and Bryan (1966: 513), Serzisko (1982)).

6. Conclusion

We have seen that the apparently complex gender system of Bayso is in fact relatively simple. Starting from the approach of Zaliznjak, we identified eight agreement classes. However, of these only two are to be recognised as genders. The major complicating factor is number, since there is a systematic syncretism of the agreement forms for the multiple reference form and the masculine singular. Exceptional nouns remain, but these are few in number and exhibit irregularities of types well-known from other languages (including languages not related to Bayso).

This small group of irregular nouns provides a valuable tool for investigating the relationship of Bayso to other East Cushitic languages. Comparative study shows that Bayso has undergone a series of changes which have produced a fairly regular system, while retaining a handful of archaic irregular forms.

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