

GENDER AGREEMENT IN CHICHEWA*

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Gender in Chichewa is described as a complete system. First the basic data on gender agreement are presented and it is shown how the available agreement markers correlate with the noun genders (and how the system has changed in the recent past). There follows a discussion of interesting phenomena which do not fit easily into the main gender system. Next structures involving conjoined noun phrases headed by nouns from various genders are analysed in detail. The rules required to account for the Chichewa system prove particularly complex; rules proposed for other Bantu languages do not cover all the Chichewa facts. The data are important for comparative work within Bantu and for typological claims which go beyond.

0. Introduction

In this paper we give an overall view of the gender system of Chichewa. We distinguish between the genders into which nouns are divided and the agreement markers used to agree with them, and we show that the relation between them is not straightforward. We also cover phenomena on the fringe of the gender system, such as nouns which do not fall completely into a single gender,

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and we relate these data to more general typological claims. The most interesting problem is that of gender agreement with conjoined noun phrases (gender resolution). This question has been the subject of several studies on different Bantu languages. Chichewa is particularly instructive and we relate our findings both to work in Bantu and to relevant data outside.

The paper is structured as follows: after brief background notes (section 1), we outline the gender agreement system (section 2), then discuss problems at the margin of the system (section 3), before turning to the major problem, that of gender resolution (section 4).

1. Background

This study is essentially a description of the gender system of one native speaker of Chichewa (the second author) as spoken in Malawi in Central Africa. The dialect examined here corresponds fairly closely to the "Standard" dialect of Malawian Chichewa; it is one of the dialects of what is called "Chinyanja" in neighbouring countries like Zambia, Zimbabwe, and Mozambique. Since, for socio-political as well as linguistic reasons, the term "Chichewa" is used only in Malawi, we will continue in this paper to employ this name to refer to the Malawian dialect, as opposed to other terms (such as Chinyanja/Chichewa as used by some other authors, including Mapanje [forthcoming]).

Chichewa belongs to the Bantu group of languages of Africa; it is classified by Guthrie as N31B. Like many other Bantu languages, Chichewa is a tone language; lexical (and, in some cases, grammatical) contrasts may be signalled by variations in pitch levels. There are two level tones in Chichewa, high (H) and low (L). One may also find contour (gliding) tones which are obtained only as a combination of the two level tones. Thus, a low tone followed by a high tone on one syllable (\widehat{LH}) yields a rising tone while the reverse sequence (\widehat{HL}) gives a falling tone.

Since our interest in this study is in the system of gender in Chichewa, we will ignore details of tone; examples will therefore be given without tone markings. Besides, none of the arguments given crucially hinges on tone. A detailed discussion and analysis of tone in Chichewa within an autosegmental model is available in Mtenje [1986].

Another salient structural property which Chichewa shares with other Bantu languages is the division of nouns into genders, traditionally referred to as noun classes. Nouns can be assigned to genders in part on semantic grounds but phonological and morphological factors also play a part. It is this gender system which is the focus of our paper.

2. Basic Agreement Facts

We take as our starting point the clear account given by Watkins [1937]; data from Price [1943] have also proved useful, particularly as the basis for examples. First we present the forms acceptable to Mtenje within the descriptive scheme of Watkins, then we give the differences in detail between this idiolect and that described by Watkins; we also relate the description to the traditional Bantu schemes of noun classes. Watkins recognises ten classes (we shall call them genders) and a similar scheme is adopted by Mapanje [forthcoming]. We take agreement evidence to be crucial in setting up the genders. The following sentences illustrate the ten genders in turn, using subject agreement forms as a diagnostic; we label agreements simply as "ag":

- (1) a. munthu a-ku-thamanga 'the person is running'
 person ag-pres-run
- b. anthu a-ku-thamanga 'the people are running'
 people ag-pres-run

In this first gender, the subject agreement marker *a* is the same for singular and plural. However, object markers are distinct; (1c) and (1d) are continuations of (1a) and (1b) respectively:

- c. ndi-ku-mu-ona 'I see him/her'
 1st sg-pres-ag-see
- d. ndi-ku-wa-ona 'I see them'
 1st sg-pres-ag-see

The first gender is exceptional in having this coincidence of singular and plural for subject agreement, as well as in having considerable allomorphic variation for different agreeing elements. In the other genders, the singular and plural subject agreement forms are distinct, as in the following exam-

ples (from genders 2, 3 and 4):

- (2) a. mudzi u-ku-kula 'the village is growing'
village ag-pres-grow
- b. midzi i-ku-kula 'the villages are growing'
villages ag-pres-grow
- (3) a. tsamba li-ku-bvunda 'the leaf is rotting'
leaf ag-pres-rot
- b. masamba a-ku-bvunda 'the leaves are rotting'
leaves ag-pres-rot
- (4) a. ulendo u-dza-tha 'the journey will end'
journey ag-fut-end
- b. maulendo a-dza-tha 'the journeys will end'
journeys ag-fut-end

In the fifth gender, number is again differentiated in the agreement markers, but not in the noun itself:

- (5) a. njoka i-ku-gona 'the snake is lying flat'
snake ag-pres-lie flat
- b. njoka zi-ku-gona 'the snakes are lying flat'
snakes ag-pres-lie flat

In the sixth gender, number is typically marked on noun and verb in the same way:

- (6) a. chipatso chi-ku-bvunda 'the fruit is rotting'
fruit ag-pres-rot
- b. zipatso zi-ku-bvunda 'the fruits are rotting'
fruits ag-pres-rot

This phenomenon, sometimes termed "alliterative concord", is often treated as the norm in Bantu languages, even a defining feature. When we view the Chichewa gender system as a whole, however, we see that while there is often some relation between the morphology of nouns and the agreements they take, the two by no means coincide.¹ (The situation is not so different from Indo-

¹Semantic factors clearly have a role in that most nouns denoting humans

European languages like Latin or Russian.) The seventh gender also shows alliterative concord. It is a special gender in that it comprises mainly nouns formed from nouns of other genders. Original prefixes are retained, and a new prefix is added to give diminutive meaning. Thus besides the noun *mwana/ana* 'child/children' (gender 1), we find *kamwana/tlana* 'infant/infants':

- (7) a. *kamwana ka-li bwino* 'the infant is well'
 infant ag-be in good order
- b. *tlana ti-li bwino* 'the infants are well'
 infants ag-be in good order

The remaining three genders are all to be distinguished from the genders we have discussed so far. They are the so-called locative genders. They each have one agreement form, not a singular-plural pair like the other genders. And there are very few nouns which are restricted to these genders. Gender 8 is used to show position (roughly 'at/on'):

- (8) *panyumba pa-ku-tentha* 'it is hot at the house'
 at house ag-pres-hot

Nyumba 'house' is an ordinary gender 5 noun. There are a few nouns, often body parts, which typically occur in this gender, such as *pakhosi* 'neck' and *pakamwa* 'mouth'; *pa* is felt to be the normal prefix and similarly *pa* the normal agreement marker. It is not, however, possible to add a second *pa* to ensure locative meaning (**papakhosi*).

Gender 9 is for location within:

- (9) *munyumba mu-ku-tentha* 'it is hot in the house'
 in house ag-pres-hot

The final gender, number 10, can designate more general location:

belong to gender 1. But phonological and morphological factors also play a part in gender assignment. For instance, it is generally the case that nouns whose initial prefixes have the palatal affricate ([č]) belong to gender 6. Similarly, most nominals with initial nasals belong to gender 5, just as most nouns beginning with aspirated plosives are members of gender 3.

- (10) kudambo ku-ku-nunkha 'it smells about the marsh'
 about marsh ag-pres-smell

The tenth gender also includes verbal nouns:

- (11) kuthamanga ku-ma-pweteka 'running hurts'
 running ag-habitual-hurt

These last three genders are clearly different from the others and there might be some question as to whether they should be called genders at all. For the present, our purpose is to record the forms. For a convincing account of the reasons for special treatment of these genders in ChiBemba see Givón [1972:12-13, 28-34]; for a discussion of locatives in OluLuyia, see Dalgish [1976].

We now bring together the data on Watkins' ten classes (as illustrated in the sentences above) and relate them to the traditional Meinhof numbering scheme. We thus follow Doke's recommendation [1935:64] of grouping singular and plurals together for studying an individual language, while also referring to the Meinhof numbering.

Table 1: Subject concord markers in Chichewa

Watkins class	Common Bantu class	agreement markers	
		singular	plural
1	1/2	a	a
2	3/4	u	i
3	5+11/6	li	a
4	14/6	u	a
5	9/10	i	zi
6	7/8	chi	zi
7	12/13	ka	ti
8	16	pa	
9	18	mu	
10	15+17	ku	

The Watkins numbers are straightforward; the concords are illustrated in sentences (1)-(10), gender 10 also being illustrated in sentence (11). The tra-

ditional Bantuist numbering separates singular and plural, hence Watkins' class 1 would be class 1 singular and class 2 plural. This scheme has advantages for historical and comparative work. Nouns of class 11 (singular) appear to have joined class 5, and the two functions of Watkins' class 10 were originally fulfilled by two different classes.

In Table 1 we have given only subject agreement markers, rather than a large table with all agreement markers listed separately (for a particularly impressive example of this genre see Laws [1885]). The point is that the different agreement markers (for different agreeing elements) almost all involve automatic alternations,² and listing these variants would obscure rather than clarify the issues we wish to address. The gender where alternations tend to be irregular is the first, as we saw in sentences (1c) and (1d). Besides the main allomorph *a* and the allomorph *mu* for object agreement, there is another allomorph *u* found, for example, with certain pronouns and with the perfect tense.

We now turn to the differences between Mtenje's idiolect and that described by Watkins, which are as follows:

1. Watkins gives βa (orthographic $\hat{w}a$; \hat{w} is an unrounded bilabial glide) as the plural for genders 1, 3, and 4. Mtenje has $\hat{w}a$ as a more marked alternative to *a* in all three cases.
2. Watkins has *bu* as an alternative to *u* for singular agreement with gender 4. He states that *bu* is used more frequently by older people [1937:34]. This alternative is not used by Mtenje, but only *u*.
3. For singular object agreement with gender 4, besides the alternative *bu* as for subject concord, Watkins gives only *u*, while for singular object concord with gender 2 he gives $(w)u$. In fact the appearance or not of *w* is a phonetic problem; there is variability as to when *w* is possible, but *u* and *wu* cannot constitute a minimal pair. Hence there are no grounds for differentiating between the singular concords of the second and fourth genders, since when *w* is possible in one it will also be possible in the other.

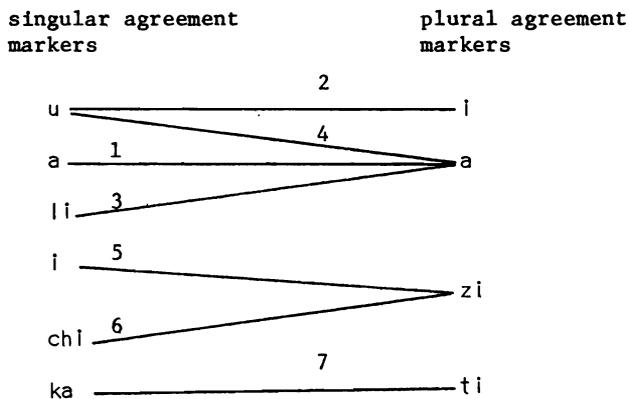
²The morphological processes involved are described with relation to specific examples in footnotes 4, 9, and 10 below.

4. For the plural concord of gender 6, Watkins has *vi* while Mtenje has *zi*. *Vi* is maintained in some dialects, particularly in the northern part of the Chichewa speaking area, but for Mtenje the plural concords of genders 5 and 6 are identical.
5. For the plural concord of gender 7 Watkins has *tu* while Mtenje uses *ti*.

It is also worth recording a difference as compared to the table at the end of Price [1943], which links to point 1 above. For the perfect tense prefix for the plural of gender 1, Price gives *wa*, while for the plurals of 3 and 4, he gives *a*. This is probably just an error. For Mtenje the unmarked form for all three is *a*, while *wa* is an alternative; *wa* is not possible for any of the three.

If we now look back to Table 1, we can claim that the three plural markers *a* are indeed identical. Their allomorphs for the different agreeing elements have identical distribution (recall, however, that this is not the case for the singular *a*). Similarly the two singular markers *u* are identical, as are the plural markers *zi*. We can therefore redraw Table 1 to give a more accurate picture of the gender system of Chichewa, by including agreement markers (or target gender forms) once only, and by representing sets of nouns taking identical agreements (controller genders) by lines drawn linking the relevant agreements:

Table 2: The gender system of Chichewa



The numbers of course represent the genders according to Watkins' scheme. It is interesting to note that there are seven genders (we omit genders 8-10 here since they are outside the singular-plural opposition), though there are not seven distinct agreement forms in either number. There are in fact six singular forms and four plural forms. This pattern is in accord with Greenberg's [1963:112] Universal number 37: "A language never has more gender categories in nonsingular numbers than in the singular." The relation between the singular and plural forms is also of interest; given the concord taken by a noun in the singular, one cannot determine unambiguously the form it takes in the plural; similarly, given the plural, the singular cannot be uniquely determined. Such systems have been termed "crossed systems" [Heine 1982:197]. The appearance of this complex system is quite recent; as long as the singular agreements of gender 4 were distinct from those of gender 2, the system was not crossed. Given the singular agreement form, the plural could be predicted (though not vice versa). Heine calls systems like this earlier one "paired", though we would prefer the term "convergent". If we postulate an even earlier system in which the Common Bantu classes given in Table 1 had distinct agreement forms, then the system was even simpler in the sense there was a clearer matching of singular and plural agreement forms (though conversely it was more complex in the sense that there were more actual agreement markers).

3. Marginal Gender Phenomena

Having described the core of the gender system, we now turn to two problems: the first concerns nouns whose semantics and morphology are in conflict and the second is the problem of agreement in gender when there is no noun as head of the noun phrase controlling the agreement (neutral agreement).

3.1. Semantic agreement. The vast majority of nouns belong to a particular gender and consistently take all the expected agreements. However, as is normally the case in gender systems, there is a small number of nouns which are not completely consistent. These are nouns for which the different principles of gender assignment come into conflict.³ There is a semantic principle ac-

³There are also instances in which nouns do not take the expected number

ording to which nouns denoting humans are in gender 1. And, as mentioned earlier, there is a morphological principle which determines the gender of a noun according to the prefixes it takes. Nouns which take no prefix in either singular or plural (and which therefore do not differentiate the numbers) normally belong in gender 5. There are a few nouns which denote humans (and so would be expected to be in gender 1), but which have the morphological form of gender 5. In Chichewa these normally take gender 5 agreements. Similarly, there are nouns denoting humans with the prefixes *chi-/zi-* (the morphological form of gender 6) which normally take gender 6 agreements; in addition there are diminutives formed from nouns denoting humans which normally take the agreements of gender 7.

agreement. Singular nouns denoting humans may take plural agreement, which indicates respect:

- (i) *bambo a-ku-yenda* 'father is walking'
 father ag-pres-walk

Bambo belongs to the first gender and so the *a* is ambiguous; object agreement (*wa*) is unambiguously plural:

- (ii) *ndi-ku-wa-ona* 'I see him' (literally 'them')
 1st sg-pres-ag-see

The singular object marker *mu* would be grossly impolite. In fact all agreements will be plural:

- (iii) *bambo anga* (< *a + a + nga*) 'my father'
 father my

Again the singular *wanga* (< *u + a + nga*) would be inappropriate. Of course, the use of the plural for politeness is a widespread phenomenon in Bantu, in Dravidian languages, and in Indo-European. What is particularly interesting here is that plural agreement is usual for all agreement targets, including the nominal predicate:

- (iv) *bambo ndi aphunzitsi* 'father is a teacher'
 father is teachers

The use of the singular (*mphunzitsi*) would be a bald statement of fact, while (iv) identifies with father and is polite. The singular in (iv) is, however, less bad than in (iii). Note that the copula *ndi* does not inflect for number. The interest of (iv) is the plural nominal predicate as a politeness marker; the nominal predicate thus shows syntactic agreement with the subject, a phenomenon which Comrie [1975:410-412] in his survey of different predicate types, found extremely rare.

Let us begin with the diminutives. Kamwana is a small child or infant.

It takes agreements of gender 7:

- (12) kamwana ko-kongola ka-ku-gona
 small child ag-pretty ag-prea-sleep
 'the pretty small child is sleeping'⁴

Gender 1 agreements are ungrammatical:

- (13) *kamwana a-kongola a-ku-gona
 small child ag-pretty ag-pres-sleep
 'the pretty small child is sleeping'

Similarly with the relative pronoun:

- (14) kamwana ka-mene ka-ku-gona
 *kamwana a-mene a-ku-gona
 small child ag-who ag-pres-sleep
 'the small child who is sleeping'

Subject pronouns are normally dropped; however, the form of emphatic pronouns, and of the subject agreement marker when no pronoun is included, are both normally of gender 7. Yet gender 1 agreements are also possible when sufficiently separated from the noun:

⁴The form ko on kokongola is derived as follows. The initial stage is the attachment of the infinitive prefix ku (which is justified by the fact that it appears on the surface in the case of monosyllabic roots). Then the adjectival prefix a and the agreement marker ka are attached:

ka	+	a	+	ku	+	kongola
ag		adj		infin		verb root
		prefix				

Vowel coalescence reduces the identical vowel sequence a + a to a and the resulting structure ka + ku undergoes a regular morpheme fusion rule which changes a + ku into o if the verb is not monosyllabic, yielding the required surface form kokongola. For details of the (morpho-)phonological rules referred to here, see Mtenje [1986; forthcoming]. Note that, for simplicity, we do not separate the final vowel from the stem throughout.

- (15) kamwana ka-mene ka-ma-gona mu-nyumba umu ka-mene ka-ma-pita
 small child ag-who ag-habit-sleep in house this ag-who ag-habit-go
 ku sukulu ku London, mai ake a-ma- {ka} -konda {iko(ko)}
 to school in London, mother his ag-habit-ag-love him
 'the small boy who sleeps in this house who goes to school in London,
 his mother loves him'

In (15), ka and iko (which has the optional extension ko) show agreement as for gender 7, while mu and iye(yo) are gender 1 forms. A similar effect can be observed in the plural (we change one of the nouns to avoid ambiguity in the agreement markers):

- (16) tiana ti-mene ti-ma-gona mu-nyumba umu ti-mene ti-ma-pita
 small children ag-who ag-habit-sleep in-house this ag-who ag-habit-go
 ku sukulu ku London, galu wa-wa a-ma- {ti} -konda {ito(to)}
 to school in London, dog ag-their ag-habit-ag-love them
 'the small children who sleep in this house who go to school in London,
 their dog loves them'

Again the emphatic pronoun and the object agreement marker can be of gender 7 (syntactic) or of gender 1 (semantic), provided they are sufficiently far from the noun.

When we substitute the word *chitsilu* 'fool' (morphologically gender 6), then the switch to semantic agreement is not possible in an example similar to (15):

- (17) chitsilu chi-mene chi-ma-gona mu-nyumba umu chi-mene chi-ma-pita
 fool ag-who ag-habit-sleep in-house this ag-who ag-habit-go
 ku sukulu ku London, galu wa-ke a-ma- {*mu} -konda {*iye(yo)}
 to school in London, dog ag-his ag-habit-ag-love him
 'the fool who sleeps in this house who goes to school in London,
 his dog loves him'

However, when the pronoun is yet further removed from the noun, semantic agreement becomes a possible alternative:

of interest; it is the object agreement marker which agrees with, or, more accurately, shows the failure of agreement with, the element in object position, *mayo*. Note that in all these examples the form *ku*, which is found with infinitives, is unacceptable. The last example demonstrates that the acceptable form is in fact the singular of gender 1; this is surprising, since the first gender is associated with humans (though not exclusively). The syntactic effect with such neutral agreement mentioned earlier, is that conjoining forms which take neutral agreement usually does not produce a plural. Indeed, the same effect is observed in Chichewa:

- (23) 'mayo' ndi 'aaa' wa-ke ti-na-mu-mva kutali
 crying-sound and 'aaah' ag-his ag-past-ag-hear far away
 'we heard his crying sound and "aaah" far away'

The *wa* (*u+a*) of *wake* is a gender 1 singular marker; *ti* is first plural subjective concord; the *mu* is again gender 1 singular objective concord. Thus elements which are outside the gender system take gender 1 singular agreement as the neutral agreement form; this remains the only acceptable form even when such elements are conjoined. Chichewa (and, we assume, various other Bantu languages) is interesting typologically in this respect, since there is a special agreement form for infinitives, but this form does not function as the neutral agreement form.⁵ Whereas, from comparisons beyond Bantu, we might have expected elements outside the gender system to take the same agreements as infinitives, the role of neutral agreement marker is, rather surprisingly, filled by the marker for the singular of gender 1.

⁵This construction should be distinguished from that in which there is an implied locative such that the noun phrases present in surface structure do not control verb agreement, as in the following:

- (i) *ku-li mphepo ndi mitambo* 'there is wind and clouds'
 ag-be wind and clouds

Ku is the gender 10 locative marker, indicating general location. In suitable contexts, similar examples with *pa* and *mu* are also possible. The word order is fixed as in (i); noun phrases which precede the verb must control subject-verb agreement.

4. Gender Resolution

Gender resolution is one of the most interesting areas of Bantu syntax; given the relatively high number of genders it is natural to ask what happens in conjoined structures. Provided agreement is with all the conjuncts, then rules are required to specify both number and gender. The number rule is straightforward (there is no complication of the dual number, for example): conjoined noun phrases take plural agreements. (However, a restriction will be imposed on this rule at the end of section 4.1.)⁶

Gender is, of course, much more complex. Interest in this area was stimulated by the important work of Givón [1970; 1972:80-93]. Givón coined the term "gender resolution", though it is important to realise that gender reso-

⁶Note too that resolution does not always apply; the usual alternative is for agreement to be controlled by the nearest conjunct (see Brauner [1979: 425], Corbett [1983b:179-182], and Bokamba [1985:44-45]). Resolution or lack of it is an instance of semantic versus syntactic agreement, resolution representing semantic agreement. Again Chichewa provides data to support the Agreement Hierarchy (cf. section 3.1). In attributive position, resolution is not possible. Both conjuncts must take identical modifiers:

- (i) lalanje la-bwino ndi tsamba la-bwino 'a good orange and a good leaf'
 orange ag-good and leaf ag-good

The adjectives (labwino < li + a + bwino) are singular. If either is omitted then the referent of the noun phrase without the adjective is not understood to be "good". The more important point for our purposes is that the plural (resolved form) is ungrammatical:

- (ii) *lalanje ndi tsamba za-bwino 'a good orange and leaf'
 orange and leaf ag-good

Placing the plural adjective after lalanje is equally bad, as is the use of the gender 3 plural form a-bwino in place of za-bwino. However, in all other positions on the Agreement Hierarchy, plural forms are normal:

- (iii) lalanje ndi tsamba zi-li apo 'the orange and leaf are there'
 orange and leaf ag-be there
- (iv) Lalanje ndi tsamba zi-mene zi-li apo za-gul-idwa ku msika.
 orange and leaf ag-which ag-be there ag-buy-passive at market
 lzi ndi zakudya za-ana.
 pronoun-ag be plural-food ag-children

'The orange and leaf which are there were bought at the market.
 They are foodstuffs for children.'

lution rules may operate even when there is no "clash"; as we shall see below, if all conjuncts are headed by nouns of the same gender it does not follow that agreement will be in that gender. Givón's work has led to several publications on the problem, and we too will use his account as the framework for our analysis. Givón analyses Luganda and ChiBemba. Voeltz [1971] considers problematic data in Xhosa, where gender resolution is more restricted than in Luganda and ChiBemba. Roberts and Wolontis [1974] modify and extend the rules proposed by Voeltz, and also widen the range of languages to include Tswana and Zulu. Brauner [1979] gives examples of gender resolution (mainly for non-human conjuncts but also cases of human and non-human conjoined) from written Swahili sources. The brief description of gender resolution in Mateene [1980: 332-333] suggests that Nyanga is broadly similar to ChiBemba. Givón's data were considered in a general typology of resolution rules in Corbett [1983b]. Finally Bokamba [1985] extends the languages considered to include Dzamba, Likila, and Lingala.

Given the different patterns of gender resolution found in the languages investigated to date there is clearly some challenging comparative and typological work to be done. As preparation for this we require data on as many different languages as possible. Chichewa appears to be an interesting case, being more restrictive than ChiBemba but less so than Xhosa. In some cases the judgements are not clear-cut; various combinations cause problems. And there is variation between speakers in the acceptability of some sentences. In view of the need for comparative data, we have concentrated on trying to describe the system of one speaker (Mtenje) as accurately as possible. It is perhaps worth pointing out that for those examples for which we have the judgements of three speakers, Mtenje's judgement is "average", in that he usually accepts more examples involving gender resolution than one of our three main informants and fewer than the third. In this description we include

|zi is an emphatic personal pronoun, consisting of i (root) + zi (plural agreement marker) + i (proximate marker); i + i becomes i by vowel coalescence. Thus, semantic (resolved, plural) agreement is found in the predicate and in the positions to the right on the Agreement Hierarchy (the relative and personal pronouns), but not in attributive position. This is fully in accord with its predictions.

problems which are often disregarded in accounts of gender, such as the agreements used with conjoined infinitive phrases.

We begin with Givón's scheme of rules, which may be reformulated as follows:

1. If all the conjuncts are semantically [+human], the plural of gender 1 (a in Chichewa) will be used.
2. If none of the conjuncts is semantically [+human], the plural of gender 6 (zi in Chichewa) will be used.
3. If the conjuncts are semantically mixed, the comitative construction is preferable; if gender resolution is forced, the form will be as in rule 2.

It is worth pointing out that similar rules (but without any mention of difficulty in conjoining animates with inanimates) were proposed by Horton [1949: 189] for Luvale. The important thing about these rules is that they have a semantic basis: it is the noun's meaning rather than its grammatical gender which counts. For ease of exposition we shall consider in turn examples in which none of the conjuncts denotes a human (section 4.1), those where only humans are involved (section 4.2), and those in which the conjuncts are semantically mixed (section 4.3); finally we summarise the rules for gender resolution (section 4.4).

4.1. No conjuncts denoting humans. When none of the conjuncts denotes a human, we would expect the agreement marker to be zi (traditional class 8). Since this form serves as the plural of gender 5 as well as of gender 6 in Chichewa, it would be reasonable to suppose that it would be, if anything, more generally used for gender resolution in Chichewa than in ChiBemba. However, though zi is indeed the main form for agreement with conjoined noun phrases denoting non-humans, there are several complications, as we shall see below. Let us consider first the straightforward cases:

- (24) ukonde ndi chipatso zi-ku-bvunda
 4 sg 6 sg ag-pres-rot
 net and fruit are rotting
- (25) mtengo ndi masamba zi-ku-kula
 2 sg 3 pl ag-pres-grow
 tree and leaves are growing

- (26) malalanje ndi zikuni zi-ku-bvunda
 3 pl 6 pl ag-pres-rot
 oranges and pieces of wood are rotting

In each of these there is a clash of genders. But this is certainly not a requirement for gender resolution, resulting in the use of *zi*. In the next example we have two nouns from the second gender, but *zi* is still the required form:

- (27) mpeni ndi mphika zi-ku-sowa
 2 sg 2 sg ag-pres-missing
 knife and pot are missing

The plural of gender 2 (**ikusowa*) is quite unacceptable. Similarly with two nouns from gender 3:

- (28) lalanje ndi tsamba zi-ku-bvunda
 3 sg 3 sg ag-pres-rot
 orange and leaf are rotting

The plural of gender 3 (**akubvunda*) is not possible. There are thus good grounds for the claim that non-human conjuncts require the *zi* form. Not all combinations are so readily accepted. There was some hesitation over the following, but *zi* was the only possible form:

- (29) munda, ng'ombe ndi khasu zi-li uko
 2 sg 5 sg (or pl) 3 sg ag-be
 garden, cow and hoe are there

There was also considerable uncertainty when a diminutive was included, whether singular or plural:

- (30) (?) ukonde ndi kakhasu zi-li uko
 4 sg 7 sg ag-be
 net and little hoe are there
- (31) (?) ukonde ndi timakasu zi-li uko
 4 sg 7 pl ag-be
 net and little hoes are there

Though these combinations were less readily accepted than those given earlier, *zi* was still the only possible form. We suggest the following reason for the difficulty with (30) and (31). The overall scheme of the resolution rules

genders 3 and 4, which both have *a* as the plural marker. The second hypothesis predicts that *a* will be used, while the first makes no prediction (and so we would expect the regular form *zi*):

- (35) malalanje ndi maukonde { *a* }-li uko
 3 pl 4 pl ag-be
 oranges and nets are there
 **zi*

This demonstrates that the second hypothesis is correct: when plural nouns which take the same agreement form (target gender form) are conjoined, that form will be used (*zi* may be an alternative). We can confirm this view by considering non-humans in gender 1. First an example with two nouns of that type:

- (36) amphaka ndi agalu { *a* }-ku-thamanga
 1 pl 1 pl ag-pres-run
 cats and dogs are running
 **zi*

Then a non-human from gender 1 together with a plural noun from gender 3 (which would also take *a*):

- (37) amphaka ndi malalanje { *a* }-li uko
 1 pl 3 pl ag-be
 cats and oranges are there
 **zi*

Note that when animate class 1 nouns are conjoined, as in (36), **zi* was not accepted. With the few inanimates, *zi* was not excluded:

- (38) akatundu ndi akabudula { *a* }-ku-sowa
 1 pl 1 pl ag-pres-missing
 the pieces and the pairs are missing
 of baggage of shorts
 ?zi

Gender 5 has the added complication that the noun does not mark number. For this reason we include modifiers. Not surprisingly, all possibilities, singular and plural, take *zi*, since the general rule and the special rule for plurals both predict the *zi* form:

Since Serbo-Croat has only three genders, the neuter plurals appear as exceptional. Sets of masculine plural or feminine plural conjuncts behave like the singulars and can, at least at first sight, be covered by the ordinary rules.

The analysis offered for the neuter plurals was as follows [Corbett 1983a: 208-209]. We cannot claim that gender resolution rules operate only when the conjuncts are of different genders, since two neuter singulars take a masculine plural verb. Nor can we claim that gender resolution operates only as a consequence of number resolution, since the combination feminine plural plus neuter plural requires a masculine plural verb, which must result from gender resolution. The correct generalization appears to be that gender resolution can be triggered in two ways. First it must operate if number resolution operates. There is a very general principle that if one resolution rule operates, all must operate if possible.⁷ This solution requires a stipulation in the number resolution rule that number resolution can operate only provided there is at least one singular conjunct. (This is the restriction mentioned at the beginning of section 4.) The second possible trigger for gender resolution is the presence of different genders in the subject. It can be seen that (45) above meets neither condition: number resolution could not operate, since there is no singular conjunct, and gender resolution could not operate without this trigger since the conjuncts are of the same gender. It followed as a logical consequence of this analysis that examples with conjoined masculine or conjoined feminine plurals also do not undergo resolution; however, in Serbo-Croat there was no way to prove this claim. In Chichewa, on the other hand, there are two agreement forms (*i* and *ti*) which are not specified in

⁷There is often the option not to apply the resolution rules and have agreement with one conjunct only, typically the nearest, but it is not possible to select from among the resolution rules. Thus, 1st singular and 3rd singular will not produce 3rd plural, which would result from the operation of number resolution but not of person resolution, agreement in person being with the nearer conjunct. Similarly, masculine plural plus neuter singular will not give rise to masculine singular, by the operation of gender resolution, with agreement in number being with the nearer conjunct.

the output from any of the gender resolution rules and yet, as we have already seen, any of the plural agreement forms can occur, provided each conjunct individually would require that form. For Chichewa, more obviously than for Serbo-Croat, the general conditions on the operation of resolution rules are a more economical solution than a long list of individual rules specifying a large number of possible combinations of conjuncts and the required agreement forms.

There are two differences between Chichewa and Serbo-Croat which are of importance here. Serbo-Croat has a "parallel" gender system, i.e. there is a one-to-one mapping of the (three) singular target genders onto the target genders in the plural. Nouns are divided into three controller genders, matching the three target genders. As we saw in section 2, the situation in Chichewa is considerably more complex. Hence, it makes a difference whether we refer to controller (noun) genders or target genders. Thus, for Chichewa the possible triggers for gender resolution are as follows:

1. Number resolution (number resolution specifies plural agreement; it can operate provided there is at least one singular conjunct).
2. The presence of conjuncts which would require different target gender forms.

Note that the examples considered at the beginning of this section involving singular conjuncts of the same gender are covered by the first trigger: the presence of a singular conjunct triggers number resolution, which dictates the plural; number resolution in turn triggers gender resolution, which specifies *zi-* when all conjuncts denote non-humans. The second difference between the two languages is that in the cases of plural conjuncts requiring the same agreement form, resolution is excluded in Serbo-Croat while, as we have seen, it is sometimes an alternative, less favoured, possibility in Chichewa. There is no unambiguous evidence as to where this option should be stated. One possibility is merely to state that gender resolution may apply optionally even when not obligatorily triggered. An alternative would be the optional dropping of the condition on number resolution (hence simplifying that rule); number resolution could then apply even if all conjuncts are plural (still speci-

ndi is the copula 'is'/'are' (which does not take prefixed agreement markers) There is a further ndi which is the first person singular agreement marker; this has low tone, unless high is assigned by a tense marker.

In the next example the zI form is also unacceptable:

- (48) kukwatira ndi kumanyenga akazi ena nthawi yomweyo ndi { koipa }
 to be married and to flirt women other time same is { *zoIpa }
 'being married and flirting with other women at the same time is bad'

In both these examples, in place of koipa, we could have chinthu choipa 'a bad thing', but not *zinthu zoIpa 'bad things'. The point, of course, is that in both sentences it is doing the two things together which is considered bad.

When it is clear that the actions are considered separately, then the judgements are reversed:

- (49) mai a-ku-dwala ndipo kuonera TV ndi kudya ndi
 mother ag-pres-sick and so to see TV and to eat are
 { zomwe } a-ku-chita basi¹⁰
 { *chomwe }
 ag-what ag-pres-do only
 'mother is sick, and watching TV and eating are the only things she can do'

- (50) kuphunzira sukulu ndi kulemera ndi { zobvuta }
 to learn school and to be rich are { *chobvuta }
 'being educated and being rich are difficult (to achieve)'

(Zobvuta < zI + a + ku + bvuta; see footnote 9.) Thus conjoined infinitives are an exception to the general rule, in that when they are construed as a joint activity the gender 10 form is used; otherwise the zI form is used as normal. Some examples (like (46) above) allow either interpretation.

¹⁰The forms chomwe and zomwe are derived as follows: to the basic form omwe are added the agreement forms chi and zI. The rule of final vowel deletion referred to in the previous footnote then deletes the i of the agreement markers resulting in chomwe and zomwe respectively.

Other agreements, including *zi*, are excluded. Gender 9 will not permit conjunction with other genders as shown by (53) above and by (56):

- (56) munyumba ndi kunjja $\left. \begin{array}{l} *pa \\ *mu \\ *ku \\ *zi \end{array} \right\} -ku-tentha$
 in house and at outside ag-pres-be hot
 'it is hot in the house and outside'

Gender 10, the least specific of the locatives, also allows conjunction with forms of the same gender:

- (57) kudambo ndi kuthengo ku-ku-tentha
 at marsh and at bush ag-pres-be hot
 'it is hot at the marsh and in the bush'

No other agreement, including *zi*, is acceptable; thus locative gender 10 differs from infinitive gender 10 in this respect. Locative gender 10 cannot be conjoined with other locatives as (54) and (56) show.

We have seen that the locative genders do not follow the general rule for inanimates, since *zi* is excluded. Gender 8 does not allow conjoining, 9 and 10 allow conjoining only within the gender. Thus the locative genders, once again, behave differently from the normal noun genders; nevertheless, a full account of the agreement system must include the conditions for conjoining them and the form to be used where conjoining is possible.

4.2. Conjuncts denoting humans. When all conjuncts denote humans, then on the basis of patterns established elsewhere in Bantu, we expect the target gender form used for the plural of gender 1, that is the form with *a* in Chichewa. When both nouns are from the first gender then indeed not surprisingly, the *a* form is accepted without query:

- (58) mkazi ndi mwana a-ku-yenda
 1 sg 1 sg ag-pres-walk
 woman and child are walking

Of course, the more interesting cases are those involving at least one noun from a different gender. The following includes a noun from gender 7; again

three informants had no difficulty in selecting the a form:

- (59) mkazi ndi kamwana a-ku-yenda
 1 sg 7 sg ag-pres-walk
 woman and infant are walking

Even with two nouns of gender 7, a is found:

- (60) kamkazi ndi kamwana a-ku-gona
 7 sg 7 sg ag-pres-lie
 little woman and infant are lying down
- (61) kamkazi ndi tlana a-ku-gona
 7 sg 7 pl ag-pres-lie
 little woman and infants are lying down

In both of these sentences Mtenje rejects the ti form (plural of gender 7). When both are plural the picture changes:

- (62) tlakazi ndi tlana ti-ku-gona
 7 pl 7 pl ag-pres-lie
 little women and infants are lying down

Here a was accepted with different degrees of reluctance; ti is considered the normal form. This links immediately to the similar examples involving inanimates; both conjuncts require the same plural gender form and so this is used. The following includes a noun from gender 5:

- (63) mkazi ndi mfumu a-ku-yenda
 1 sg 5 sg ag-pres-walk
 woman and chief are walking

(Note that for Mtenje mfumu could also be plural; some speakers have a plural form mafumu.) While this example is unproblematic, others involving nouns from genders 5 and 6 often prove more difficult:

- (64) ??mbala ndi kamwana a-li uko
 5 sg (or pl) 7 sg ag-be
 thief and infant are there

While a is questionable, there is no better alternative. Since nouns in gender 5 have no distinct plural form, we include numerals in the following examples of genders 5 and 6 conjoined:

(65) mbala i-modzi ndi chitsilu chi-modzi { a } -ku-meny-ana
 { ??zi }
 5 sg ag-one 6 sg ag-one ag-pres-hit- recip
 'one thief and one fool are fighting'

(66) mbala i-modzi ndi zitsilu zi-tatu { a } -ku-meny-ana
 { ?zi }
 5 sg ag-one 6 pl ag-three ag-pres-hit- recip
 'one thief and three fools are fighting'

(67) mbala zi-tatu ndi chitsilu chi-modzi { a } -ku-meny-ana
 { ?zi }
 5 pl ag-three 6 pl ag-one ag-pres-hit- recip
 'three thieves and one fool are fighting'

(68) mbala zi-tatu ndi zitsilu zi-tatu { zi } -ku-meny-ana
 { ??a }
 5 pl ag-three 6 pl ag-three ag-pres-hit- recip
 'three thieves and three fools are fighting'

The most obvious point is that, as with non-humans, plural conjuncts which would each require the same target agreement marker take that marker (as in (68)); note once again that it is not a question of the nouns themselves belonging to the same controller gender. In all the other examples we find a, as expected. But it is surprising that zi is considered to be an alternative, albeit not a favoured one. This option should probably be seen in the light of the data presented in section 3.1, where we saw that semantic agreement with single nouns is a very marginal phenomenon in Chichewa; it is syntactic gender which counts. In conjoined expressions, where the overriding rule is a semantic one (based on the human/non-human distinction), syntactic gender is not totally excluded. The fact that zi is better in (66) than in (65) or (67) is to be explained by the fact that in (66) the conjunct nearer to the verb would require zi.

Summarizing our discussion of conjoined noun phrases denoting humans, we may say that the situation is not so clear-cut as in some other Bantu languages. Nevertheless, once plural conjuncts requiring the same agreement form are left out of account, the basic rule requiring the a form for humans is confirmed.

4.3. Conjuncts denoting humans and non-humans. Givón found that for semantically mixed noun phrases, informants prefer to avoid conjoining the noun phrases and to use the comitative construction instead. If conjoining is forced, however, then the same form as for non-humans is used. In view of the results obtained with plural nouns which require identical agreement forms, it is worth investigating what happens with such nouns when they are semantically mixed. Our first example includes two diminutives, one human and one not:

(69) tiana ndi tlmiphika ti-ll apo
 7 pl 7 pl ag-be
 infants and little pots are there

This sentence was found fully acceptable, while *zi* was excluded. The same was true of the next example:

(70) anthu ndi abakha { a } -ku-thamanga
 { *zi }
 1 pl 1 pl ag-pres-run
 people and ducks are running

Though these two examples include nouns of the same gender, this is not required; the requirement once again is that the nouns should be plural and require the same plural target gender agreement marker, as the following example proves:

(71) ana ndi malalanje a-ku-sowa
 1 pl 3 pl ag-pres-missing
 children and oranges are missing

Though of different genders, both take the plural marker *a* and the sentence is acceptable; *zi* is totally rejected. The phenomenon is illustrated nicely by this example involving a human noun of gender 5:

(72) mbala ndi zinthu zi-ll apo
 5 pl 6 pl ag-be
 thieves and things are there

Recall that nouns of gender 5 do not distinguish number. Mtenje accepted this sentence, but when asked how many thieves were involved, he said that there must be more than one. If *imodzi* 'one' is added after *mbala* to

make it singular, then the sentence is unacceptable, whether *zi* or *a* is chosen as the agreement marker.

Other examples involving singular nouns were also rejected:

- (73) *munthu ndi ng'ombe zi-ku-yenda
 1 sg 5 sg or pl ag-pres-walk
 person and cow(s) are walking

A different informant, however, accepted this sentence as unproblematic, irrespective of the number of cows involved (he was the informant who, in general, was most willing to accept conjoined structures). The interesting point about (73) is Mtenje's reaction to the alternative *akuyenda*. There was some uncertainty at first, but it was considered bad. The use of *a* gets better if a numeral is included after *ng'ombe* (whether *imodzi* 'one' or a higher numeral). Consider then the following variant:

- (74) munthu ndi ng'ombe zi-tatu a-ku-yenda
 1 sg and 5 pl ag-three ag-pres-walk
 'a person and three cows are walking'

Zi is again rejected by Mtenje. The sentence as it stands is accepted or rejected, depending on its interpretation. If the person and the cows are walking separately, then *a* is also rejected. But if they are together, say the cows are on ropes being pulled along by the person, then *a* is fully acceptable. The inclusion of a possessive, which favours this type of interpretation, also makes *a* acceptable:

- (75) anthu ndi ng'ombe zawo a-ku-yenda
 1 pl 5 pl poss ag-pres-walk
 'the people and their cows are walking'

Now *a* could be a singular or a plural marker; the crucial example is the following:

- (76) chitsilu ndi ng'ombe yake chi-li uko
 6 sg 5 sg poss ag-be
 'the fool and his cow are there'

The agreement marker *chi* is unambiguously singular; both *zi* and *a* are

rejected by Mtenje. This example demonstrates that agreement is with the first noun phrase only (and this must also be the analysis for the examples involving a). We might be tempted to think that this is a case of agreement with the first conjunct, or "distant" agreement, which is rare but which nevertheless does occur [Corbett 1983b:180]. However, given the data on the interpretations which make this agreement possible in Chichewa, we must conclude that these examples do not in fact include conjoined noun phrases. Recall that *ndi* means both 'and' and 'with'. It appears that in the examples where agreement is with the first noun phrase, *ndi* should in fact be glossed as 'with'. We are dealing with a comitative construction (and so agreement with the first noun phrase is accepted). Note that the construction is possible without the need to postpose the second noun phrase (for comparable data from Xhosa see Roberts and Wolontis [1974:240-241]).

To sum up our analysis of noun phrases denoting humans and non-humans, we may say that if both are plural and each requires the same plural gender agreement form, that form will be used giving a fully acceptable sentence. In other examples the form *zi*, which was expected to be marginally possible, is in fact excluded (though one informant accepts it). Instead the comitative construction is used, in appropriate contexts, though this is not immediately obvious since both noun phrases may still stand in front of the verb.

4.4. Summary of gender resolution. The essentials of the strategies for dealing with conjoined noun phrases in Chichewa are as follows:

1. If all conjuncts are plural and require the same plural agreement marker, then this form will be used.

As we saw, this principle operates irrespective of the type of noun involved. In section 4.1 we treated instances of this type as not coming under the jurisdiction of gender resolution (though for some examples gender resolution was a less good alternative). Nevertheless it is surprising that this syntactic principle takes precedence over the semantically based gender resolution rules which follow.

2. If all conjuncts denote humans then the *a* form will be used.

While there are numerous examples to support this rule, it is not quite straightforward. In section 4.2 we noted several examples (typically involving gender 5 nouns) in which the *a* form was not fully acceptable (though there was no better alternative).

3. If none of the conjuncts denotes a human then the *z* form will be used.

Again this holds for many examples, but there are also exceptions. Nouns from the diminutive gender (gender 7) are problematic. Genders 8, 9 and 10 also require special provision as follows:

- 3a. If infinitive phrases are conjoined and the interpretation is of simultaneous action, then *ku* will be used; otherwise *z* as in the main rule.
- 3b. Conjoined structures involving the locative genders are unacceptable unless all are from gender 9 and the form *mu* is used, or all are from gender 10 and the form *ku* is used.

An interesting point here is that though there is a single agreement form for gender 10, locatives and infinitives do not always behave in the same way with regard to agreement. The remaining possibility is the conjoining of humans and non-humans:

4. Conjoined structures involving noun phrases denoting humans and non-humans are unacceptable (unless covered under 1 above). Provided that the comitative interpretation is possible, a comitative construction may be used, in which case the head noun phrase controls the agreement. (Other noun phrases are not necessarily postposed.)

5. Conclusion

We have attempted to describe the gender system of one native speaker of Chichewa as a whole, including phenomena on the fringe of the system, which are often omitted. This approach has considerable advantages. For example, the study of the interrelation between agreement markers which express gender and the genders into which nouns are divided facilitates the analysis of gender resolution. By analysing plural gender markers like *a* and *z* as single forms we can make sense of the rule which allows the conjoining of some plural noun phrases but not others.

We have seen that Chichewa has a particularly interesting gender system, especially in its rules for gender resolution. These do not coincide with any of the sets of rules which have been proposed for other Bantu languages, though there are areas of overlap. Throughout the paper the relevance of the data to typological claims (based on languages within and beyond Bantu) has been amply demonstrated.

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