NIGER-CONGO NOUN CLASS AND AGREEMENT SYSTEMS IN LANGUAGE ACQUISITION AND HISTORICAL CHANGE

KATHERINE DEMUTH
Boston University

NICHOLAS FARACLAS
UC Berkeley

LYNELL MARCHESE
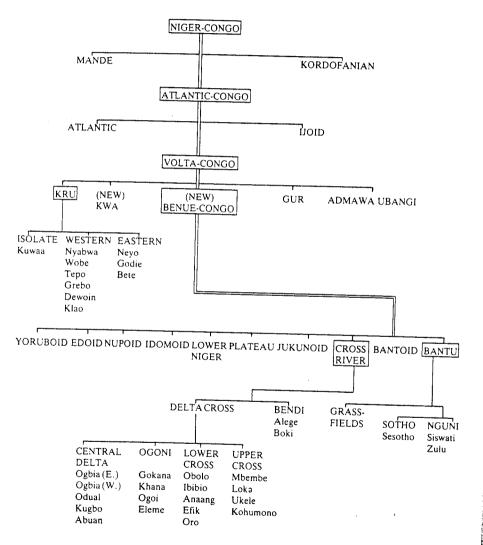*San Jose State University*

1.0. Introduction

This paper investigates noun classes and concordial agreement systems in Niger-Congo languages. It examines comparative language data from Cross River and Kru languages,[1] noting overall characteristic of noun class and agreement systems in both families. It then focuses on problems which first language learners might face in the learning of a full class/agreement system, considering both spontaneous and experimental Bantu language acquisition data and Bantu languages in contact. It is found that historical changes which have resulted in the leveling of gender and agreement distinctions in Niger-Congo in many ways parallel the various stages of acquisition of the system in languages which still maintain these distinctions. Findings from these comparative data sets provide evidence for competing forces of linguistic change, as well as competing theories for how those changes might have taken place. Current findings suggest that the integration of data from historical, comparative, acquisition and language contact data is essential in developing a coherent understanding of dynamic linguistic processes.

The Niger-Congo language family is one of the four language families found on the African continent. Table I below is the latest proposed approximation of the major groups within Niger-Congo. As can be seen here, Bantu and Cross River language groups are quite closely related, while the Kru group is more distant and structurally less similar. In our subsequent discussion of noun class and agreement systems we will mention Proto-Benue-Congo (PBC) and Proto-Bantu (PB). These terms refer to historically reconstructed forms within these language groups. Thus, it has been proposed that Proto-

TABLE I

GENETIC RELATIONSHIP OF NIGER-CONGO LANGUAGES
(based on Benue-Congo Working Group of the West African
Linguistic Society, 1983)

```
                              NIGER-CONGO
                                  |
        MANDE                          KORDOFANIAN
                                  |
                            ATLANTIC-CONGO
                                  |
        ATLANTIC                      IJOID
                                  |
                             VOLTA-CONGO
                                  |
   KRU      (NEW)      (NEW)          GUR   ADMAWA UBANGI
            KWA       BENUE-CONGO

ISOLATE  WESTERN  EASTERN
Kuwaa    Nyabwa   Neyo
         Wobe     Godie
         Tepo     Bete
         Grebo
         Dewoin
         Klao

YORUBOID EDOID NUPOID IDOMOID LOWER PLATEAU JUKUNOID  CROSS  BANTOID  BANTU
                              NIGER                    RIVER

                   DELTA CROSS      BENDI      GRASS-
                                    Alege      FIELDS    SOTHO   NGUNI
                                    Boki                 Sesotho Siswati
                                                                 Zulu

   CENTRAL     OGONI    LOWER    UPPER
   DELTA                CROSS    CROSS
   Ogbia (E.)  Gokana   Obolo    Mbembe
   Ogbia (W.)  Khana    Ibibio   Lokɔ
   Odual       Ogoi     Anaang   Ukele
   Kugbo       Eleme    Efik     Kohumono
   Abuan                Oro
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Benue-Congo languages had, at some initial stage, a full fledged noun class and agreement system. These noun class markers, or slight variants of them,

have also been reconstructed for Proto-Bantu. Classes 1/2, 3/4, 5/6, 7/8, 9/10 are usually singular/plural markers which are affixed to one consistent nominal stem.

Table II.

Noun Class Prefixes in Proto-Bantu (PB) and Proto-Benue-Congo (PBC)
(Hombert 1981)

PB (Meeussen 1967)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	19
mù-	bà-	mù-	mì-	ì-	mà-	kì-	bì	ǹ-	ǹ-	dù-	kà-	tù-	bù-	kù-	pì-

PBC (de Wolf 1971)

ù-	bà-	ú-	í-	li-	à-	ki-	bì-	ì-	í-	lu-	kà-		bù-	ku-	pi-	ti-	mà-

The language families which we consider here reflect variations of these reconstructed forms, indicating certain directions of historical change. The directons in which these changes appear to have taken place are explored in the following discussion.

Let us consider an example of a full noun class/concordial agreement system such as found in Sesotho — a typical Bantu language. In such a system each noun is prefixed with one of a pair of CV- noun class markers, one used for the singular form, the other for the plural:

Table III

Noun Class Prefixes in Sesotho

	sg		pl	
'person'	1	mo-tho	2	ba-tho
'aunt'		rakháli	2a	bo-rakháli
'dress'	3	mo-sé	4	me-sé
'day/sun'	5	le-tsatsí	6	ma-tsatsí
'spring/well'	7	se-liba	8	li-liba
'dog'	9	Ø-ntjá	10	li-ntjá
'bread'	14	bo-hóbɛ	6	ma-hóbɛ
'to cook'	15	ho-phéha		

The more conservative Bantu languages typically have 5 or 6 productive singular/plural noun class or gender pairs, plus a few classes with no alterna-

tion. While productive semantic correspondences have been lost for most of these gender distinctions, classes 1/2 (*mo/ba* above) and 2a (*bo-* the kinship class') are generally known as the human classes. Classes 9/10, in the larger Niger-Congo context, have been called the 'large animal' classes. Most Bantu languages and many other languages in Niger-Congo also have a 'mass noun' or 'liquid' (14 *bo*) class which generally exhibits no singular/plural pairing.

Concordial agreement functions in two ways: 1) to show agreement between subject and verb (subject-concord/subject pronouns), and 2) to show agreement between noun and modifier. Both of these concordial agreement markers have a phonological shape which is nearly identical to the noun class marker. This system of concordial agreement is illustrated by the following Sesotho sentences:

Example 1:

mo-tho	é-mo-holo	ó-rata		Ø-ntjá	é-ntlɛ	eá-hae
1	1 1	1		9	9	9 1
person	big	he/she-like	dog	beautiful	of-his/her

The old man/woman likes his/her beautiful dog.

ba-tho	bá-ba-holo	ba-rata	li-ntjá	tsé-ntlɛ	tsá-bona
2	2 2	2	10	10	10 2
people	big	they-like	dogs	beautiful	of-them

The old people like their beautiful dogs.

Here the numbers refer to the concordial classes which agree with each of the nouns. Note that the concords are largely, though not completely, recoverable from the shape of the noun prefix (2 ba/ba, but 1 mo/e/o, 9 Ø/e, 10 li/tse).

2.0 Cross River Languages

In Proto-Benue-Congo (PBC) (cf. de Wolf 1971, Voorhoeve & de Wolf 1969). nouns typically consisted of a root of the form CVC or CVCV (Williamson & Shimizu 1968) and a class prefix of the form CV- or, more rarely, V-. The Cross River languages, which are fairly closely related to Bantu within Niger-Congo, show varying degrees of conservation of PBC prefix forms ranging from the retention of all prefix types to the complete loss of all prefixes.

Cross River languages fall into 5 major groups, refered to below as

Upper Cross, Bendi, Central Delta, Lower Cross and Ogoni (cf. Faraclas 1984). These groups demonstrate a gradation in the extent of phonological, morphological and morphosemantic (number of gender classes) characteristics they exhibit today. The language groups which are conservative in preserving full CV- prefixes are also those which maintain the most distinctions in both concordial marking and in the number of gender distinctions made. Thus, at the two extremes we find that Upper Cross languages are the most conservative in preserving a fully productive noun class and agreement system, while Ogoni languages have lost productive prefixation, and have little or no concordial agreement or class genders.

2.1 Phonological shape of noun class markers in Cross River languages

Retention rates of prefixes in Upper Cross range from 75% in some languages to only 13% in others. Furthermore, the phonological shape of the prefixes which have been retained varies within one language. The most conservative system allows only prefixes of the form V- beside the CV- prefixes, while the other languages allow N- prefixes, especially in the plural. Bendi languages seem to exhibit a similar range of CV- prefix retention as in Upper Cross. Bendi and Central Delta languages also exhibit a tendency for incorporation of CV- prefixes into roots with subsequent pre-prefixation of a vowel to the collapsed prefix-root form, as seen in the different language examples below:

Example 2.

	'child'		'woman'	
	sg	pl	sg	pl
Lokə	w-ɛŋ	b-ɛŋ	j-ànĕn	b-ànĕ
Boki	w-án	bw-án	ò-ɲiɲi	
Alege	ɔ̀-ŋwá	è-bùaŋ	ɔ̀-ŋɲiŋɲè	ɛ-ŋɲiŋɲè

In some languages coalescence of the noun class marker with the nominal stem results in only the plural marking remaining productive. A similar shift has been observed in some Bantu languages where the noun class system is moving from singular/plural markings on nouns to Ø/plural markings (Stucky 1978).

Prefix loss has affected nouns in most Lower Cross languages, and is even more rampant in Ogoni languages. In all Lower Cross languages, the N- prefix occurs quite frequently on nouns which do not vary in form from

the singular to the plural. Likewise, in most Lower Cross languages prefixing is achieved only with vowels which harmonize to the vowel of the nominal root. In all Ogoni languages, however, independent pronouns bear an initial vowel which agrees in some persons with the vowel quality of the corresponding dependent subject pronoun — an obvious remnant of a fuller concordial system. Thus, gender marking on pronouns is maximally conserved, a tendency also observed in Kru languages.

2.2 Morphophonological variation in Cross River languages

In Upper Cross, Bendi and Central Delta, many languages have complete concordial systems including pronominal, subject-verb, adjectival, determiner-demonstrative, and numeral concord. Numeral concord is, however, most often a relic. In Lower Cross and Ogoni only a few relics of concord have survived, including a few adjectival concords. The following example of Lower Cross Efik illustrates the curious lack of concord, but resurfacing of the nominal prefix when used in conjunction with an adjective:

Example 3.   (Cook & Ita 1967)

noun		adjective + noun		
bjà	'yam'	ákánì	à-bjà	'old yam'
bùd	'shame'	àkámbá	ó-bùd	'great shame'
bjɔ̀ŋ	'hunger'	àkámbá	ɔ́-bjɔ̀ŋ	'great hunger'

2.3 Morphosemantic variation in Cross River languages

The distinctions between the major classes/genders of PBC are maintained in most Upper Cross languages, although non-human genders *9/10 and and *7/8 seem to be merging. One of the Bendi languages preserves PBC class/gender divisions, while another shows a tendency to merge non-human classes to one singular/plural class pair. Central Delta retains BC class/gender distinctions for human genders 1/2 and non-human 5/6 in the cases of CV- prefix coalescence. All non-human plural classes also merge. In contrast, Lower Cross and Ogoni languages show only relics of gender systems. In section 3. below we shall see that Kru languages also exhibit distinctions between human and non-human classes, and that, in some Kru languages, all non-human plurals have also been merged. Data from Bantu languages in contact and experimental language acquisition data demonstrate changes in these same directions.

2.4 Discussion

While the foregoing discussion of Cross River languages is synchronic and comparative in nature, it provides evidence for various stages of historical development with regard to the general reduction of productive gender and agreement systems. Two generalizations can be made from these observations: 1) Within a particular language, a comparative synchronic description may capture a system which indicates a partial loss of gender shape or the reduction in the number of gender distinctions or extent of agreement, with evidence that there was once a fuller system and will probably be further reduction. The loss of such a system is gradual, certain classes appearing to be more resilient than others. 2) Diachronically one can project a number of possible stages whereby a full noun class and agreement system might be lost. From the comparative synchronic data on Cross River languages we find a small range of consistent patterns by which this process appears to be taking place. It is not just *any* genders which persist, but rather the human 1/2 and the non-human 9/10 classes which are the last to be lost. CV-prefixes are not simply omitted, but rather incorporated into the stem with new prefixes occasionally added. The number of plural classes tends to collapse, becoming distinguished by one overgeneralized marker. Concord appears to be lost first in numerals and adjectives, while it is maintained longest with subject pronouns. These tendencies for loss and preservation will be reiterated as we examine Kru languages, language acquisition and language contact data.

One might speculate as to what influences have caused some branches of Cross River to be more conservative with regard to retaining gender and agreement systems than others. It appears that the typical shape of nominal prefixes for each group of Cross River languages today corresponds in most cases to the typical shape of prefixes in surrounding non-Cross River languages.

Table IV

Prefix Shape	Cross River	Surrounding Languages
CV- } V- }	Upper Cross Bendi	Eastern Benue Congo (Bantu)
V- } N- } V-	Lower Cross Central Delta	Western Benue Congo (Lower Niger, Edoid)
Ø	Ogoni	Ijoid

This evidence suggests that prefix shape corresponds to a template which specifies the 'prototypical' shape of prefix + noun forms in these languages. Languages which exhibit very reduced gender systems may have sustained more immediate contact with geographically adjacent languages which reflect no such distinctions today, even to the effect of showing no plural marking on nouns (i.e. Igbo). Speakers of Cross River languages who come into close contact with such languages may be more inclined to revise their conceptions of the canonical form of language and simplify the proliferation of morphological agreement marking which is characteristic of their own languages. This influence of 'template' types may in part account for the areal clustering of those languages which have lost these systems as opposed to those which have preserved them.

3.0 Phonological shape of nominal marking in Kru languages

Like Cross River languages, Kru languages represent a reduced version of a wider proto-system. While Kru languages are almost exclusively suffixing, noun class suffixes have all but disappeared through loss or coalescence with the noun stem. Again, we find more and less conservative Kru languages, Eastern Kru showing more preservation of the old system, and Western Kru showing more loss. The result of coalescence in Kru languages is that noun systems are becoming more regularized,[2] with singulars being perceived as unmarked and plurals marked, a tendency observed both in Bantu (Stucky 1978) and in Lower Cross (section 2.1). In the Eastern Kru language Godié, the word for 'water' *ɲú* represents a reduction of stem *ní* + suffix ʋ used for liquids. The following Godié singular/plural pairs demonstrate the coalesced nature of gender suffixing in Kru.

Example 4:

sg	pl	
su	si	'tree'
nyoku	nyokwi	'leaf'
cʋ	cɩ	'moon, month'

Despite this phonological coalescence and seeming 'loss' of noun class suffixes, concord is extensive in Kru. In Eastern Kru languages, concordial agreement occurs on subject, object, possesive, interrogative and relative pronouns, as well as on adjectives, demonstratives and definite markers, as

seen in the Godié examples below:

Example 5: ɲɐkpɔ kʌdɔ nɔ mlʌ̃ ɲú wɔtʋ
man big this drank water cold
This big man drank cold water.

Example 6: ɔ mlʌ̃ ʋ
He drank it.

With one exception, all Kru languages maintain a distinction in the singular between human ɔ and non-human ɛ. Most languages also distinguish these two classes in the plural. As far as the number of classes are concerned, the most conservative Eastern Kru languages maintain up to three gender distinctions in the singular non-human. It appears that the most predominant Kru pronouns correspond to PBC human classes *1/2a and non-human (large animal) classes *9/10.[3]

3.1 Morphosemantic variation in Kru languages

The gender distinction in pronominal systems is maintained longer than any of the other manifestations of concord in Kru. With one exception, all languages still maintian a singular human/non-human distinction throughout the pronoun set.

As class distinctions decrease, there appears to be a corresponding (though not exactly predictable) decrease in concordial agreement. Though most languages do not retain adjective gender agreement, singular/plural distinctions are maintained on *some* adjectives. Numbers and definite markers seem to be affected first (a fact also observed in Cross River (1.2)), with demonstratives and adjectives slowly giving way to loss of concord. Adjectives first lose gender agreement, preserving only the singular/plural distinction, as seen in the Western Kru example of Klao below:

Example 7:   sg   pl
nye plu   nye pli
'man white'   'men white'

Even this concord may be lost eventually, as in languages where number agreement is made only on the lexical item 'big' (R. Thompson, p.c.). Pronominal concord, on the other hand, is the most conservative, being retained the longest. What is striking, however, is that some form of *concord* is main-

tained in most languages even though noun class suffixes are no longer transparent and in many cases are nonfunctional. In section 4. we will see that these findings correlate closely with data from processes of language acquisition.

3.2 Discussion

Kru languages thus represent a case where remnants of gender classess are preserved as coalesced nominal suffixes. While the productivity of nominal classification is minimal, the distinctions which are made correspond to the human classes 1/2a and non-human classes 9/10 - similar to the most dominant class retentions in Cross River languages. Though the gender system is minimally functional, the agreement system is still productive, indicating a primacy of concord over nominal marking.

4.0 Noun class and agreement systems in Bantu languages

Bantu languages have generally been characterized by having a number of CV- noun class prefix pairs plus some non-paired classes for mass nouns, liquids and locatives. While Bantu languages seem to have preserved more of the Proto-Benue-Congo noun class system, Grassfields languages (cf. Hyman et. al. 1980) appear to be in the process of losing many gender distinctions and collapsing plurals. This process is also found in language contact areas with languages such as Spoken and Kinshasa Lingala (Bokamba 1983) where the generalized plural is the class 2a 'relative' marker. Concord is also being lost in these systems and adjectives are now marked with a fixed marker which does not change with the class of the noun. Although gender marking is thought to have been semantically productive at one time, the system is synchronically non-productive with the exception of the human classes. In addition most languages have a class where most loan words are assimilated. Unless the initial part of the noun is similar in phonological shape to an already existing noun class marker, the noun is generally used in a 'catch-all' class, class 9/10 for Sesotho. Thus, we find examples such as the following:

Example 8:

Dutch < stoel 'chair' 7 sę-túlɔ   8 li-túlɔ
Dutch < tafel 'table' 9 Ø-tafólɛ 10 li-tafólɛ

While noun class assignment is still a productive process, there are signs of

potential loss of nominal prefixes, though concord appears to be intact. In Sesotho, noun class markers are frequently omitted when used with a nominal modifier which has the concord agreement marker with it (cf. example 11.). This process has been lexicalized in the case of some locative nouns, where the prefix never surfaces:

Example 9:
lę-saká 'coral' sak-êng 'at/to/from/by the coral'
lę-lapá 'home' lap-êng 'at/to/from/by home'

Thus, though the system is fully productive, in some Bantu languages there are grammatical and sociolinguistic contexts in which gender marking on nouns is omitted.

4.1 Bantu language acquisition data

The language acquisition data from Bantu languages stems from two major sources. The first is from a longitudinal study of spontaneous and natural speech from 4 Sesotho speaking children between the ages of 2 and 4 1/2 years old (Demuth 1983), supported by data from younger Sesotho speaking children (M. Connelly, 1984). The second is from Siswati and includes a spontaneous/naturalistic study of 2 children between the ages of 18 months and 36 months, and an experimental study of 3 children 4 1/2 to 6 years of age (Kunene 1979). We await data from Zulu (Suzman, p.c.) which may show that noun class markers are used productively at an earlier age than that reported for Siswati.[4]

4.2 Predicted acquisition patterns[5]

It has been proposed that there are numerous strategies which a child systematically employs during the language learning process, regardless of the language being acquired. These strategies have been formalized as 'operating principles' (Slobin 1977, 1984) and have been based on and continue to be refined by acquisition data from a variety of languages from different language families. From our current cross-linguistic knowledge of strategies that children employ when learning a language, we have made several predictions about the kinds of phenomena we would expect to find in the acquisition of the Sesotho noun class system: 1) As children tend to acquire word-final morphology easier than word-initial morphology, the learning of noun class prefixes might prove problematic, especially as these markers carry little semantic content, are usually found in unlenghtened (and

unstressed) position, and are usually low tone. 2) In the process of linguistic development children tend to assign one phonological form to one grammatical function. Given the multiplicity of singular/plural forms in these languages, we would predict that children might try to collapse the number of distinctions made, possibly taking the singular form plus prefix as the root and using only one plural marker — probably class 10 (see Table III), as it represents a much larger proportion of the children's vocabulary at this time. Class 9 is marked with Ø in the Sesotho singular and is also the most productive class — the majority of borrowed lexical items being assigned to this class. 3) At another stage of development, children tend to regularize paradigms. Thus, we might expect that, when singular/plural marking becomes productive, class 9 nouns would be assigned a singular marker of some sort, making it 'fit the paradigm'. Likewise, monosyllabic noun stems plus prefix might be mistakenly analysed as CVCV nominal stems, and an additional prefix would be added (not unlike the mergers described for some of the Cross River languages in section 2.1). 4) As regards the concordial agreement system, we would expect a somewhat reduced number of distinctions in the agreement system initially, perhaps surfacing productively as class 9/10.

4.3 The acquisition of noun class markers

Upon considering the spontaneous Sesotho language acquisition data we discover that only some of the predictions made in section 1.2 are upheld. During and before 25.0 months, nouns frequently occur with Ø prefix, then are used alternatively with Ø or a partial prefix until finally, at 30 months they are used fairly consistently with all nouns. Nasal classes 1, 3, 4 and 6 (mɔ, mo, me, ma) appear to be produced with N- or NV- earlier and with more consistency than non-nasal prefixes. Variation in the use of a single noun class prefix by one child during consecutive utterances is illustrated in example 10., with adult forms provided in parentheses below. Notice the inconsistent quality and tone of the prefix vowel at this early age.

Example 10. (25.0 months):

sg	pl
-punkɔ	-phokɔ
à-pɔ́kɔ̀	à-pókɔ̀
e-pɔnkɔ	ma-punkə
(lè-phɔ́qɔ̀)	(mà-phɔ́qɔ̀)
'green corn stalk'	'green corn stalks'

Thus, as with the various stages of loss or incorporation of nominal prefixes found in Cross River languages, children also progress through a stage where a single lexical item may be rendered with no prefix, V- or full CV-, even in consecutive utterances in the same contextual and grammatical environment. Exceptions to this progression of appropriate nominal marking are found in the omission of class 5, 7, 8 and 10 prefixes (Sesotho lɛ, sɛ, (N)li and (N)li, which are all [-grave]) when an adjunct (demonstrative, possessive etc.) follows the noun. The following example illustrates such a case:

Example 11.

pɔ̀:kò	lánè
(lè-phɔ̀qɔ̀	lá-nè)
green corn stalk	that
'that green corn stalk'	

Omission of these particular prefixes when the noun is used with an adjunct is a phenomenon also found in adult Sesotho speech, and may represent an initial stage of prefix loss in transition for Sesotho.

Contrary to our hypothesis, class 9 nouns, which take a Ø prefix, are not overmarked with prefixes from other classes. Likewise, nouns from one class are rarely assigned to other classes. In other words, there is no collapsing of plural distinctions in singular/plural markings. This differs, then, from the tendencies observed in Cross River, Kru and Bantu languages in contact, where plural distinctions are frequently neutralized. The notion that one function (in this case pluralization) is represented by one morphological form (i.e. by one marker) appears not to be as problematic for children learning a full noun class system as we had predicted.

These findings contrast, however, with experimental results from Siswati where children of ages 4 1/2-6 did collapse plural markings. The children were given novel word forms and Siswati nouns out of context and asked to provide the corresponding singular or plural form of the noun. Overgeneralizations occurred in two directions: 1) toward the use of 9/10 class markings for classes 7/8 and 11/10, and 2) toward the overextention of class 2a — the relative human class marker to classes 2, 4, and the liquid/mass class 14 and the infinitival class 15 (apparently analysed only as stems, as they have no singular/plural alternations). Thus, when given a choice of uncontextualized noun class assignment, older children tended to classify plural nouns into loose human/non-human classs. Independent evidence from Kituba (Mfwene 1972) and Spoken and Kinshasa Lingagla (Bokamba 1983) document this

same tendency for overgeneralization of the class 2a human class marker for plural when the noun class system begins to lose gender distinctions. What is perhaps most striking, however, is that these same children did *not* make these or any overgeneralizations in spontaneous speech. This would indicate a major difference in the nature of productive contexts and has implications for how and why linguistic change in noun class and agreement systems has occured or been largely maintained.

4.4 The acquisition of concordial agreement

As regards concordial agreement, we again find a surprisingly systematic acquisitional picture from spontaneous Sesotho data. At 25.0 months, subject concord, focus marking, tense/aspect and object pronouns are collapsed into a nonspecific intonational envelope which surfaces as a:, e, or $\emptyset$. It is thus difficult to determine what the child's representation of subject concord might be at this time. Demonstratives, adjectives and possessives, however, are already being productively used, often showing appropriate concordial agreement with the nouns they modify. There is, however, some tendency for overgeneralization of class 9/10 agreement forms, as shown below. The second line in parentheses provides the appropriate adult prefix and concordial forms:

Example 12.   Bóná   ǹtò eá-ká   é-nkè
               (lè-òtò   lá-kà   lé-lè-tlè)
               look-at foot   my   beautiful
               Look at my pretty foot.

Nominal modifiers which do not agree with their nouns are frequently found when the prefix of the noun has not been specified, as seen in example 12. above.

The acquisition of concordial agreement is a gradual process which has already begun prior to 2 years of age, most notably with demonstratives and possessives. It continues till past the age of 3 when most subject concords and object clitics, demonstratives, possessives, relatives, adjectives and some numerals are used with appropriate gender forms. The learning of the concordial system no doubt plays a role in the gradual acquisition of noun class prefixes, which are acquired gradually with concord, but a bit delayed. Note once again how concord appears to be more 'basic' than noun classes, and that it is concord which persists in Kru languages long after nominal marking has become unproductive (cf. Greenberg 1978).

4.5 Discussion

It would appear that processes of leveling and overgeneralization are accelerated in 'non-natural' language learning environments such as experi mental and language contact situations where linguistic knowledge and/or context is limited. Language learners in these situations may rely much more strongly on a single form/function correspondence. In contrast, first language learners appear to focus not simply on the nouns, but on the entire nomina or verbal phrase where concord is of major importance and nominal marking only secondary. This would account for the relative lack of gender marking errors on the part of Sesotho speaking children, and for the primacy of concord not only in the order of acquisition, but also in its persistance in Kru and Cross River languages where productive gender marking has been lost. Noun and modifier may be conceived of as being a cognitive unit, with concord as the crucial unifying element. It is proposed that young language learners may adopt this unit as a basic learning construct, using concord productively while continuing to experiment with the correspondingly appro priate marking for nouns.

5.0 Conclusions

It is suggested that the differences found between spontaneous Sesotho and experimental Siswati studies represent two extremes in the contexts of language use: on one hand, nouns are used in a productive language context, complete with nominal modifiers, where there is little problem of appropriate noun class attribution of marking. On the other hand, nouns are presented out of context, isolated from the environment of additional grammatical and phonological agreement information, thus rendering the task of noun class assignment much more difficult. It is suggested that it is in cases such as the first, where nouns are used in a fully functional agreement system, that speakers of a language would tend to conserve prefixes and concordial agree ment. In contrast, it is in less normal contexts, such as that provided in language tasks, or in language contact situations, where the productivity of such a system comes into jeopardy. Such evidence, confirmed with the template tendencies discussed in Cross River languages, and the higher reten tion of agreement rather than nominal marking in Kru languages, reinforces the notion that agreement is primary and nominal marking only a secondary issue for the speaker. Rather than being viewed synchronically as a case of gender copy from noun to concord, the system is perhaps more accurately described as a prosodic overlay, where gender marking is a phrasal

phenomena in which the noun is implicated. This view, while not entirely novel in consideration of gender systems cross- linguistically, provides, however, for a deeper understanding of the speaker's intuitive conception of gender and its linguistic function.

The foregoing discussion illuminates numerous types of linguistic processes which are found in both language acquisition and historical change. Several language acquisition and historical linguists have noted the contributions which acquisition data can contribute to the understanding of historical change (Erbaugh, this volume, Slobin 1977, Bybee 1979, Traugott 1973). Baron (1977) suggests that, if diachronic changes are in part a reflection of how we learn language, an examination of language acquisition in progress may prove useful in understanding the process of language change.[6] The first of these conclusions proposes that an understanding of the processes of language acquisition should make it possible to establish strong constraints on the types of hypotheses with which historical data can be explained. In other words, evidence from language acquisition may help to provide directions in which to look for explanations of specific characteristics of linguistic change. Secondly, it should be possible to evaluate competing historical hypotheses by using tendencies found in language acquisition as an evaluative device. Finally, from a consideration of both ontogenetic and diachronic phenomena, it should be possible to develop a common basis for characterizing general processes of linguistic variation and linguistic change. Such a framework would be able to account not only for characteristics of historical change and language acquisition, but also for dynamic processes such as that found in pidgin and creole languages and in language contact situations. The notion of template types here tries to address this last issue. If children are surrounded by well founded and productive noun class and concordial agreement systems and experience no other canonical shape to language, they will persist, to a large degree, in the productive application of such a system. On the other hand, if such a system were in daily contact with languages which have no such system, and indeed which have no singular/plural nominal distinction, as is the case for many Nigerian languages, speakers may develop a canonical view of language which eventually selects a system of reduced morphological specification in this area. The fact that loss and retention of noun class and agreement systems in Niger-Congo corresponds with areal proximity of these languages would appear to lend support to such a hypothesis.

NOTES

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