

Logophoric Systems in Chadic

ZYGMUNT FRAJZYNGIER

1. INTRODUCTION

1.1. The aim and scope of the paper

The term logophoric, widely accepted since its introduction by Hagège in 1974, is used here to refer to syntactic contexts of complements of the verbs of saying, the contexts most often known as "indirect speech". It is also used in reference to pragmatic contexts which involve a report of someone else's speech, without necessarily being a complement of a verb of saying.

The aim of the present paper is to propose, for the first time, a comparative study of the form and function of logophoric systems in Chadic languages, and to formulate a hypothesis regarding logophoricity in Proto-Chadic. It will also offer, for the first time, a description of the logophoric system of Mapun, which differs in an important respect from descriptions of the related languages, Angas and Sura, and which proves to be illuminating for the description of logophoric systems in other Chadic languages.

1.2. Organization of the paper

There are at least two types of logophoric systems in Chadic languages. Both types may exist in one language, as is the case in Mapun, which will be used to illustrate the form and function of the two types. The rest of this paper is organized as follows:

* The work on this paper was conducted while I was a Fellow of the Center for Applied Humanities, University of Colorado. The data on Mapun were gathered with the help of an NEH grant, and also with the help of the Council on Research and Creative Work, University of Colorado. This paper would not have been possible without the help of speakers of Mapun, Mr. Darap Dawurung and Mr. Weslie Damar. I am grateful to an anonymous referee of JALL for drawing my attention to the problem of possible asymmetry in the system and for several other remarks which prompted me to revise substantially the original version of this paper.

1. Presentation of the two systems on the basis of the data from Mapun.
2. Comparative data, presented in centrifugal fashion: Starting with the smallest unit, the Angas group, I will then present data from a larger unit, i.e., the West Chadic branch, and finally data from other branches of Chadic.
3. Problems of possible reconstruction.

2. THE TWO SYSTEMS

2.1. *The three sets of Mapun*

The logophoric system of Mapun consists of the following sets of pronouns:¹

Table 1:

		A	B		C ²
		subj./obj.	subj.	obj.	subj.
3p.	m. sg.	<i>wur</i>	' <i>di</i>	' <i>din</i>	<i>gwar</i>
	f. sg.	<i>war</i>	' <i>de</i>	' <i>de</i>	<i>paa</i>
	pl.	<i>mo</i>	' <i>du</i>	' <i>dun</i>	<i>nuwa</i>

The full set of pronouns from which set A was extracted is the following:

Table 2:

	Subject	Object
1sg	<i>n</i>	<i>an</i>
2m	<i>a</i>	<i>xa</i>
f	<i>yi</i>	<i>yi</i>
3m	<i>wur</i>	<i>wur</i>
f	<i>war</i>	<i>war</i>
1pl	<i>mu</i>	<i>mun</i>
2	<i>wu</i>	<i>wu</i>
3	<i>mo</i>	<i>mo</i>

The first and second person pronouns used with sets B and C (i.e., logophorically) are the same as in Table 2.

For the sake of clarity of presentation I will discuss first the functional relations between sets A and B and then the relations between sets A and C.

2.2. Relations between sets A and B: Reference to subject

In sentential complements following the verb *sat* 'say', set A indicates disjoint reference and set B indicates coreference with the speaker of the main clause, i.e., the subject of the verb *sat*. Compare (1a) and (1b).

- (1) a. *wur/war/mo sat ni wur/war/mo ta dee n jos*
 he /she /they say COMPL he /she /they stop stay PREP Jos
 'He₁/she₁/they₁ said that he₂/she₂/they₂ stopped over in Jos.'
- b. *wur/war/mo sat ni 'di/ 'de/ 'du ta dee n jos*
 'He₁/she₁/they₁ said that he₁/she₁/they₁ stopped over in Jos.'

The object pronouns of the sentential complements behave in the same way as subject pronouns:

- (2) a. *wur/war sat ni n nas wur/war*
 he /she say COMPL I beat him/her
 'He₁/she₁ said that I beat him₂/her₂.'
- b. *wur/war sat ni n nas 'din/ 'de*
 'He₁/she₁ said that I beat him₁/her₁.'

The following examples provide one more piece of evidence for the logophoric only (i.e., coreference with the subject of the verb 'to speak') function of the set B:

- (3) a. **a sat ni ta 'di dee n denva*
 2sg say COMPL stop 3sg stay PREP Denver
 'You said that he stopped in Denver.'
- b. **wu sat ni ta 'du dee n denva*
 2pl 3pl
 'You said that they stopped in Denver.'

The above sentences are ungrammatical because the subjects of the embedded clauses, *'di* and *'du*, are set B pronouns and they cannot be coreferential with the subject of the main clause, which is second person. The requirement of coreferentiality does not apply to the set A pronouns and therefore they can occur in environments in which set B pronouns cannot:

- (4) *a sat ni mo ta dee n denva*
 2sg 3pl
 'You said that they stopped over in Denver.'

The distinction between direct and indirect speech is also marked with the help of the set B pronouns:

- (5) a. *wur sat ni 'di n nas an*
 3m say COMPL 3m FUT beat 1sg
 'He₁ said he₁ will beat me.'
- b. *wur sat ni a n nas xa*
 3 1 FUT 2m
 'He said "I will beat you".'

The system further makes explicit whether or not 3rd p. sg. is a part of the set referred to by the 3rd pl:

- (6) a.† *wur/war sat ni n nas mo*
 'He₁/she₁ said that I beat them₂.'
 ('he/she' is not part of 'them')
- b. *wur/war sat ni n nas 'dun*
 'He₁/she₁ said that I beat them₁.'
 ('he/she' is part of 'them')

- (7) *wur sat ni ta 'du dee n jos*
 stop 3pl stay PREP
 'He said they stopped over in Jos.' ('he' is part of 'them')

When the subject of the main clause is plural and the subject of the embedded clause is singular the distinction between logophoric and non-logophoric reference is neutralized:

- (8) *mo sat ni wur 'be yol kwat lusim*
 3pl 3sg FUT go hunt leopard
 'They said that he will go to hunt a leopard.'

In the above sentence the subject of the embedded clause may, but does not have to be properly included in the subject of the main clause. A similar phenomenon has been noted in Gokana (cf. Hyman and Comrie 1981).

In environments other than those that involve the complements of the verb *sat*, instead of the three sets of pronouns only one set, A, is used in all persons. Unlike the use in the complements of the verb *sat*, such a use more often than not indicates coreference with an argument of the main clause.

- (9) *yak si wur man me takarda wur cin n an n tan*
 then take some book give PREP 1sg 1sg read
 'Then he took a book and gave it to me to read.'
- (10) *n tal pi wur a ni ko ket wur ki la siwol ni*
 1sg ask PREP 3sg COP DEF INTERR 3sg COMPL receive money DEF

a

INTERR

'I asked him whether he has received money.'

In (10) the 3 p.m.sg. pronoun *wur* in the embedded clause may or may not be coreferential with the same pronoun in the main clause.

Although it is implicitly indicated in the content of Table 1, nevertheless, it is worth stating that the second and the first person pronouns have only one set in the logophoric situation:

- (11) a. *n sat xa ni a naa ki n k'es makaranta*
 2m(O) 2f(S)
 b. *n sat yi ni yi naa ki n k'es makaranta*
 2f 2f
 c. *n sat wu ni wu naa ki n k'es makaranta*
 2pl 2pl
 'I told you (m/f/pl), look, I have finished school.'
 d. *n sat wur ni an angu kwat*
 1sg 1sg man hunt
 'I told him that I am a hunter.'
 e. *a sat ni mo nas mun*
 2sg say COMPL 3pl beat 1pl
 'You_{1,2} said that they beat us₁.'
 f. *a sat ni ta mu dee n jos*
 stop 1pl stay
 'You_{1,2} said that we₁ stopped at Jos.'

In e. and f. the person referred to by 2 sg. *a* may or may not be a part of the group referred to by 1 pl. *mu* (subject) or *mun* (object). Like many other Chadic languages Mapun can make a distinction between 1 pl. inclusive and exclusive through a periphrastic construction consisting of: 1sg/pl + associative particle 'with' + 2sg/pl. Quite often the 1sg/pl is omitted and the construction consists only of the associative particle and 2sg/pl. Despite the existence of these constructions, I have not come across their use to disambiguate sentences such as e. and f. in the texts gathered.

It has been shown that the function of sets A and B consists of marking the coreferentiality or inclusion of the third person pronoun in the embedded clause with the third person subject of the verb *sat* in the main clause. In the system of marking, the use of set A pronouns indicates disjoint reference and use of set B pronouns indicates coreference.

2.3. Relationship between sets A and C

Unlike the relatively simple functional relationship between sets A and B the relationship between sets A and C is more complex. There are two types of structures that have to be taken into consideration: one type in which the reference to addressee³ is grammatically encoded and the other in which it is not.

2.3.1. Reference to the addressee

If the third person pronouns in the embedded clause refer to the addressee rather than to the speaker of the main clause, then the pronouns must be drawn from set C but never from set B. If the reference in the embedded clause is made to persons other than the addressee of the main clause then the pronouns must be drawn from set A. Compare the following examples:

- (12) a. *n- sat n- wur ni wur ji*
 1sg say BEN- 3sg COMPL 3sg come
 'I told him₁ that he₂ should come.'
- b. *n-sat n-wur ni gwar ji*
 3sg
 'I told him₁ that he₁ should come.'
- (13) a. *n sat n wur taji wur dim n kaano*
 PROHIB go
 'I told him₁ that he₂ may not go to Kano.'
- b. *n sat n wur taji gwar dim n kaano*
 'I told him₁ that he₁ may not go to Kano.'

Similarly to the pronouns of set B, pronouns of set C cannot be used in non-logophoric contexts, i.e., in complement clauses of verbs other than the verb *sat*. In such contexts only pronouns of set A are allowed:

- (14) a. *n- pet war 'be war/*paa ji*
 1sg call 3f COMPL come
 'I called her and she came'
- b. *n-pet mo 'be mo/*nuwa ji*
 3pl
 'I called them and they came.'

Compare also the following examples:

- (15) a. *n naa wur wur pi dim n kaano*
 see 3sg 3sg PROG go PREP
 'I saw him going to Kano.'
- b. **n naa wur gwar pi dim n kaano*
 3sg
 'I saw him going to Kano.'

The set C pronouns, which refer to third person masculine, feminine, or plural may become forms of address, thus changing for the speaker from third to second person pronouns. Compare the following examples:

- (16) a. *n saɪ n war ni paa naa ki n k'es*
 1sg say BEN 3f COMPL 3f look COMPL 1sg finish
makaranta
 school
 'I told her, look, I have finished school.'
- b. *n sat mo ni nuwa naa ki n k'es makaranta*
 3pl 3pl
 'I told them, look, I have finished school.'
- c. *n sat n wur an ni gwar tan me mbi n an*
 3sg 1sg COMPL 3sg find some thing BEN 1sg
 'I told him that he should find something for me.'

Note that the use of a set B pronoun in the embedded clause would produce an ungrammatical sentence:

- (17) **n sat n wur ni 'di naa ki n kes makaranta*
 3sg(A) 3sg(B)
 'I told him, look, I have finished school.'

The change from the third person referring to addressee into the vocative use, also with reference to addressee, enables the speaker to report a conversation and at the same time to maintain the difference between his present addressee and the addressee of the reported conversation. This development occurred also in Pero, to be described later.

One can use set C pronouns in reference to addressees without having any third person pronoun in the main clause:

- (18) *an ni ko a iri 'dak 'di gwar sin an 'be an*
 1sg COMPL any COP kind work REL 3sg give 1sg CONSEC 1sg
mbi cin ni
 FUT do it
 'I said that any kind of work which he gives me, I will do it.'

This will most often be the case when the embedded clause is in the imperative or prohibitive mood: e.g.,

- (19) *wur sat ni taji paa dim n kano*
 PROHIB 3f go PREP Kano.
 'He said that she should not go to Kano.'

2.3.2. Free variation between sets A and C

Consider now the following examples:

- (20) a. *wur sat ni gwar/wur ta dee n jos*
 3m say COMPL stop LOC
 'He₁ said that he₂ stopped at Jos.'
 b. *war sat ni paa/war ta dee n jos*
 3f
 'She₁ said that she₂ stopped at Jos.'
 c. *dapus sat ni n nas gwar/wur*
 'Dapus₁ said that I beat him₂.'

cf.

- d. *dapus sat ni n nas 'din*
 1sg PAST
 'Dapus₁ said that I beat him₁.'

In the light of what has been stated in the previous section one could expect set C pronouns to refer to the addressee who has not been overtly marked in the main clause, and set A to refer to still another person. This, however, is not the case.

According to my informants, one can use pronouns of either set A or set C in the embedded clauses of (20a,b,c) without any change in meaning of these sentences. Besides the native speakers' intuition there is much more substantial evidence for the free variation between sets A and C in certain syntactic environments:

- (21) a. *wur sat n an ni gwar/wur ta dar n jos*
 PREP 1sg
 'He₁ told me that he₂ stopped in Jos.'

cf.

- b. *wur sat n an 'di ta dar n jos*
 'He₁ told me that he₁ stopped in Jos.'

The importance of this example lies in the fact that the addressee of the main clause is 1sg. and yet in the embedded clause there is a pronoun of set C. If the function of set C were to indicate coreferentiality (21a) would have to be ungrammatical with *gwar*.

2.3.3. *Conclusions about sets A, B, and C*

In logophoric environments, set B pronouns indicate coreferentiality with the subject, set C pronouns indicate coreferentiality with the addressee when they share with it the features of gender and number. Set C pronouns may also refer to the addressee who is not overtly marked in the main clause, when the embedded clause is in either the imperative or the prohibitive mood. In other environments, set C pronouns indicate disjoint reference. Set A pronouns always indicate disjoint reference with either subject or addressee.

2.4. *Origin of the three sets*

The question of the origin of the pronouns of the three sets involved in logophoricity in Mapun is not very important for a description of their syntax, but it is important for a comparative study of logophoric systems in Chadic languages with respect to the question of possible retention or innovation.

As has been shown, set A pronouns are identical to the set of subject or object pronouns of the main clause. For the purpose of this paper there is no need to go beyond this statement, although it does not answer the question about the origin of the subject pronouns.

Set B pronouns all have the same initial consonant 'd' and they differ only in the vowel that follows it. In Mapun there seems to be a cognate morpheme 'di which introduces relative clauses. In Frajzyngier (in press) it has been postulated that relative markers in Chadic derive from demonstrative pronouns. It is therefore possible that the set B pronouns also derive from some demonstrative pronouns.

There is no clear indication about the origin of set C. The word *gwar* occurs as an independent lexeme meaning 'man'. I expect that the remaining elements of the set, i.e., *paa* and *nuwa*, also derive from independent words, although I do not have independent evidence to support this hypothesis.

3. COMPARATIVE DATA

3.1. *Angas group*

At least two other languages of the Angas group have logophoric pronouns. The pronouns in Angas are cognate with the pronouns of Mapun (Burquest 1973:195):

Set B : *dyii* (m) *'da* (f) *'du* (pl)

Set C : *gwa* (m) *pe* (f) *nywe* (pl)

The description of their functions as given by Burquest differs, however, in an important way from the description of Mapun given above. In particular, Burquest postulates that set C has a coreferential function and that it refers to the indirect object of the main clause. Therefore, both set C and set B would have an anaphoric function in Angas.

All the examples that Burquest quotes support his description of these functions. There are, however, no examples given that have set C pronouns in the embedded clause and have no overt indirect object in the main clause. In view of the data from Mapun, only such sentences, grammatical or ungrammatical, should be considered proper evidence. If Burquest's analysis is correct, such sentences are ungrammatical in Angas.

It appears that also in Angas set B derives from demonstrative markers. The initial *'d* is part of the demonstrative locative *'dii* 'there' and the pronoun *'da* 'that'.

Jungraithmayr 1963/64:27 gives only a short description of what appears to be an equivalent of set B, i.e., of anaphoric pronouns, in Sura. The Sura logophoric pronouns *wu 'di*, *'di* (m), *wu 'da*, *'da* (f) and *wu 'dun*, *'dun* (pl) are said to indicate coreferentiality with the subject of the main clause. Since the description of Sura is very short and the language is closely related to Mapun, it is possible that Sura also has pronouns belonging to set C.

On the basis of the three languages belonging to the Angas group one can certainly postulate that logophoricity as described for Mapun was also a feature of Proto-Angas.

3.2. *West Chadic*3.2.1. *The form*

The only West Chadic language outside of the Angas group for which logophoric pronouns have been observed and described is Pero (Frajzyngier forthcoming), belonging to the Bole-Tangale group.

In Pero there are two sets of pronouns, which differ only in the form of

the second person markers. In one system these pronouns are *ka* (m) and *ci* (f) and in the other, *peemu* (m) and *peeje* (f).

3.2.2. Distribution

The most important fact about the distribution of the “peemu” set is that it may be used only in one type of discourse-reported conversation – in reference to the addressee of the reported conversation. In the same type of discourse the “ka” set may not be used. Thus the environment for the use of the two sets of pronouns is determined pragmatically rather than syntactically. In fact, it is the use of one set of pronouns rather than the other that makes it possible to determine whether what is being said is directed to the present hearer or is directed to a hearer of the reported conversation: e.g.:

- (22) a. *'di- ko kan ka daklani-a*
 settle COMPL ASSOC 2m bad INTERR
 'Is it bad that he settled with you?'
 b. *'di-ko kan peemu daklani-a*
 2m
 'Is it bad that he settled with you?'

Given the above conditions for the distribution of the two sets, the “peemu” set may, but does not have to, occur in sentential complements of the verb ‘say’. Examples with the main clause verb-complementizer *ca* ‘say’ follow:

- (23) a. *ca mu kayu peemu*
 said OPT drive away
 '[He₁] said that he₂ should be driven away.'
 b. *ca peemu ta kayu laa mu mijiba*
 said FUT man DEM stranger
 '[He₁] said that he₂ is going to drive the stranger away.'

Note the difficulty involved in translation between two systems that do not encode the same semantic notions. While *peemu* in Pero refers specifically to the addressee of the reported conversation, the pronoun “he” in English may refer to any third person. Contrary to what is implied by the English translation it is not any disjoint reference that is encoded in Pero but rather distinction between a speaker and an addressee of the reported conversation.

Similarly to the situation in Mapun, the addressee of the reported conversation may become subject of a sentence:

- (24) a. *peeje wat-na*
 2f come VENT-COMPL
 'you came'
- b. *peemu ma yi-ko bure*
 2m if make-COMPL fight
 'if you fight'

3.2.3. Classification of the "peemu" set

As the examples quoted above clearly indicate, the "peemu" set refers to the second participant, i.e., to the addressee of the reported speech. The addressee may be mentioned only once, at the beginning of the conversation, and then is referred to by one of the pronouns of the "peemu" set in all kinds of syntactic environments. Thus Pero has only the equivalent of set C of Mapun. In logophoric contexts its function is anaphoric only in the sense that it refers to somebody who was mentioned previously as an addressee of the reported conversation.

Although there is a clear indication that Pero shares a grammatical property with the languages of the Angas group, that does not mean that this property cannot be an independent innovation in Pero. However, there is also an indication of a historical connection between the markers of the logophoric systems. Note that the logophoric pronouns in Pero have the common element *pee-*. Note also that the C sets of Mapun and of Angas have respectively *paa* and *pee* as the markers of the third person feminine. Note also that these sets are equivalents of the Pero logophoric set. I do not think that this similarity is accidental, and therefore, unless it can be shown to be a result of borrowing, it must be considered to be a common retention from Proto-West Chadic.

It is important to note that the second element of the logophoric pronouns in Pero also seems to be derived from a demonstrative marker, for the form *-mu* is similar to the demonstrative suffix *-mo*.

3.3. Other branches of Chadic

In East Chadic a logophoric system has been reported for Kera. Ebert 1979:260 ff. states that there is a set of indirect speech 3 p. pronouns *to* (m), *ta* (f) and *te* (pl) which indicate coreferentiality with the subject of the main clause. These pronouns are identical with the set of independent pronouns in Kera, but different from the set of subject pronouns in unmarked sentences. Interestingly, these pronouns are used in dialogues to indicate switch reference (Ebert 1979:130).

In indirect speech this set corresponds to set B of Mapun, i.e., it has an anaphoric function. The use of the logophoric system in Kera is much more widespread than in the languages of the Angas group. Apparently all

of the *verba dicendi* and some of the *verba sentiendi* allow for the use of these pronouns.

4. WHAT CAN BE RECONSTRUCTED FOR PROTO-CHADIC?

4.1. *Methodology*

The choice of the method that one should follow in answering the question as to whether or not Proto-Chadic had a system of logophoric markers as exemplified in one of the present languages is not a trivial one.

I will use the following very simplified principles: If markers having the same function are found to be cognates, then they are considered to be retentions from an earlier system. If elements of the same functional system are found in different languages with different markers, then there is a possibility that in each language the system emerged independently or that the functions constitute a retention of the same system, the form of the markers having changed.

Since the markers of logophoricity are found to be derived from demonstrative pronouns, showing that they are related amounts to no more than a statement that the demonstrative markers are related. Showing that languages from more than one branch of Chadic have logophoric systems cannot be considered as evidence for the presence of logophoric systems in Proto-Chadic, because languages from different families in Africa have logophoric systems. The only type of evidence that one could use would be very specific non-pronominal markers that would have to be shown to be related. Unfortunately, such markers do not exist.

One should also take into consideration information about the spread of logophoric systems in Chadic languages. If such systems were to be found in many languages from all branches of Chadic, then, more likely than not, they would constitute a retention from a Proto-Chadic system. If, on the other hand, they were to occur only in a few languages, then the possibility that they represent a retention would be greatly diminished. In what follows I will review the evidence available for both the set referring to the speaker (corresponding to set B of Mapun) and the set referring to the addressee (corresponding to set C of Mapun).

4.2. *Reference to speaker*

The set referring to the speaker has been noted in two branches, West and East Chadic. In West Chadic this set was certainly present in Proto-Angas. There are no claims that any other language of this branch has the logophoric system of set B. This set cannot be reconstructed as a retention

from Proto-West Chadic. Although a logophoric system has been reported in Kera, this is the only language in the East Chadic Branch that has it. There is therefore no evidence to show that Proto-Chadic had a set B logophoric system. Unless more Chadic languages are shown to have such a system one would have to assume that set B logophoric systems in Angas languages and in Kera result from borrowing of an areal feature from some non-Chadic languages.⁴

4.3. Reference to addressee

Since no evidence for the existence of set C was found outside of the West Chadic branch one cannot postulate the existence of this set of pronouns in Proto-Chadic. Within West Chadic, however, the markers of set C are cognate, mainly because of the forms involving *p* in the Pero *peemu* set and *paa* in the Angas group. The fact that outside of the Angas group only Pero has set C pronouns argues against reconstruction of set C for Proto-West Chadic. It is possible that this set developed within the West Chadic branch only as a result of borrowing of an areal feature.

NOTES

1. Tones do not bear on the problems discussed and are not marked in the paper. 'b and 'd indicate glottalized labial and alveolar stops.
2. I have no data on whether or not the object forms of the set C are identical with the subject forms or not.
3. I use the term addressee following the proposal by Stanley 1982. The system in Tikar described by her shares certain similarities with the system in Mapun.
4. Compare studies of logophoricity in the Ubangi languages (Cloarec-Heiss 1969), Tuburi (Hagège 1974), Gokana (Hyman and Comrie 1981), Ewe (Clements 1975), and Tikar (Stanley 1982).

REFERENCES

- Burquest, D. 1973. *A Grammar of Angas*. Ph.D. diss., University of California, Los Angeles.
- Clements, G.N. 1975. The logophoric pronoun in Ewe: Its role in discourse. *Journal of West African Languages* 10:141-77.
- Cloarec-Heiss, F. 1969. *Les modalités personnelles dans quelques langues oubanguiennes (Discours direct-Discours indirect)*. Liège: SELAF.
- Ebert, K.H. 1979. *Sprache und Tradition der Kera (Tschad). Teil III: Grammatik*. (Marburger Studien zur Afrika- und Asienkunde, Serie A: Afrika, 15.) Berlin: Dietrich Reimer.
- Frajzyngier, Z. In press. The relative clause in Proto-Chadic. In Proceedings of the 4th International Hamitosemitic Congress.
- . Forthcoming. A Grammar of Pero.

- Hagège, C. 1974. Les pronoms logophoriques. *Bulletin de la Société de Linguistique de Paris* 69:287-310.
- Hyman, L.M., and B. Comrie. 1981. Logophoric reference in Gokana. *JALL* 3:19-37.
- Jungraithmayr, H. 1963/64. Die Sprache der Sura (Maghavul) in Nordnigerien. *Afrika und Übersee* 47:8-89.
- Stanley, C. 1982. Direct and reported speech in Tikar narrative texts. *Studies in African Linguistics* 13:31-52.

*Department of Linguistics
University of Colorado*