

Journal of West African Languages XVII, 1 (1987)

ENCODING LOCATIVE IN CHADIC

Zygmunt Frajzyngier

Department of Linguistics

University of Colorado

The paper constitutes a first attempt at reconstruction of the syntax of stative and directional locative expressions in Proto-Chadic. A locative complement that did not contain an inherently locative expression was marked in Proto-Chadic by a preposition *a*, whose sole function was to mark the following NP as a locative expression. This preposition did not have any spatial or directional meaning. It is postulated that stative locatives did not have a copula in Proto-Chadic. Spatial orientation of the locative expression in Proto-Chadic was marked by words denoting body parts or geographic location. Direction was marked by directional verbs of movement in a manner similar to serial verb constructions. In many contemporary languages the directional verbs of movement became locative extensions to the verb.

Cette étude est une première tentative de reconstruction de la syntaxe d'expression locative statique et directionnel en proto-tchadique. Une expression qui n'avait pas de caractéristique locative en soi pouvait être marquée comme telle à l'aide de la préposition *a*. Cette préposition était dépourvue de toute signification spatiale ou directionnelle. Les expressions locatives statiques n'avaient pas de copule en proto-tchadique. L'orientation spatiale était exprimée par des mots désignant les parties du corps ou l'orientation géographique. La direction de mouvement était exprimée par le verbe directionnel qui avec le verbe principal de la phrase formait une construction sérielle. Dans plusieurs langues contemporaines ces verbes sont devenus des extensions locatives.

1. PURPOSE AND SCOPE OF THE STUDY

The aim of this study is to provide a first attempt at the reconstruction of the system in Proto-Chadic for encoding various semantic notions loosely characterized as locative. Individual grammatical devices will be reconstructed only when necessary to provide support for the reconstruction of the general patterns.

The study includes locative stative sentences and sentences involving a verb of movement. Both types of sentences contain all the grammatical devices to encode the locative, but the description of one type has no bearing on the description of the other. The two types are described simply because they exist in the grammatical systems of Chadic languages. The data are drawn from some thirty languages.¹

The major sections of the study are stative locatives, verbal extensions, and the prepositional phrases, which differ significantly from their equivalents in IE languages. An overall view of forming locative constructions will be provided in the summary.

2. STATIVE LOCATIVES

By stative locatives I understand expressions equivalent to English 'X' is located in/at Y.' They can be independent sentences, such as 'John is at home', or phrases such as 'at home' in 'I saw John at home', e.g.,

- 1 a. **dàdərwaixà à-m Káanò**
father Prep.
'My father is in Kano'
- b. **Pita àmbálvà à-m mākárántà**
learn school
'Peter studies in school' Mandara (field notes)

The only interesting question with respect to stative locatives is whether they did or did not have a copula in Proto-Chadic. Because a copula occurs in some languages and not in others, the question to be answered is whether the locative copula is an innovation or a retention. In the majority of contemporary languages there is no copula in locative sentences. The general form of such sentences is

SUBJECT PREP-NP, e.g.

- 2 a. **takini goro panda**
shoes under mat
'the shoes are under the mat'
West, Kanakuru (Newman, 1974:32)
- b. **Kúḅér Cáci ləg àgá Làsà**
near(preop.) with
'Kubur Caca is near Lasa'
Central, Margi (Hoffmann, 1963:239)
- c. **wə apəy-à**
he up-Loc
'he is up'
East, Kera (Ebert, 1979:189)
- d. **dz á mbwà**
he Prep room
'he is in a room'
Cibak (Hoffmann, 1955:143)

Although most languages in the three branches form stative locatives without a copula, there is at least one language, Bolewa, that appears to have a copula in locative sentences, and Fyer, a Ron language, has a morpheme that may be analyzed as a locative copula, e.g.:

- 3 a. **sùḅá-nò à kò révé**
shirt-lsg on tree
'my shirt is on a tree'

- cf. b. zéeti sùṭá gà kó révé
 put shirt Prep on tree
 'put a shirt on a tree' Bolewa (field notes)
- 4 a. yít-a-ṅ tá á
 she-Cop?-Prep there
 'she is there'
- b. ma-á -na
 he-? -here
 'he is here' Fyer (Jungraithmayr, 1963:78)

Jungraithmayr mentions (op.cit.) the possibility that the function of /a/ is linked with the locative preposition {a} with the meanings 'at, in', although no examples are given of the unambiguously prepositional function.

The possibility that the locative copula in Bolewa and Fyer constitutes an innovation rather than a retention has been discussed in Frajzyngier 1986. It is supported by the following arguments: It is more likely that one branch of West Chadic, Ron, has innovated and that the majority of languages preserved the Proto-Chadic system. Claiming that the majority of languages have innovated would require explaining why they have innovated in exactly the same way. In languages that have locative copulas one often finds copulas in equational sentences as well. Yet among the languages examined, only in the Angas group and in Ron is there an equational copula identical with the locative copula or with a preposition, e.g., in Mopun:

- 5 m̀̀n a ǹ̀n k̀̀m̀̀k̀̀m̀̀
 we Cop people teaching
 'we are teachers'

But even in those languages equational sentences without a copula are very frequent, e.g., Mopun:

- 6 m̀̀n ṭál
 'we are strong'

In most languages the equational sentence does not have a copula, e.g.:

- 7 m̀̀r cib̀̀k
 'we are Cibak' (Hoffmann, 1955:143)

We see then that Chadic languages historically do not exhibit a copula in locative stative sentences, and that those languages that do so today have innovated.

3. DIRECTIONAL LOCATIVES

3.1 GRAMMATICAL DEVICES AVAILABLE IN CHADIC

In contemporary Chadic languages the notion of locative is realized by at least four different grammatical devices:

- (1) DEICTICS
- (2) VERBAL EXTENSIONS
- (3) SERIAL VERB CONSTRUCTIONS
- (4) PREPOSITIONAL PHRASE

Serial verb constructions, verbal extensions, prepositional phrases, and phrase final particles may co-occur. Some languages have all four devices; others have only some of them. However, if two devices have exactly the same function, such as indicating the same direction of movement, etc., they will not co-occur in the same environment. In what follows I will discuss the function of each of these devices and the possibility of reconstructing the device for PC.

3.2 DEICTICS

Deictic locative markers are similar to IE deictic adverbials with the general meaning 'here', 'there', etc. In Chadic the deictic markers occur in sentence final position and they indicate the direction of movement with respect to the speaker or to some other previously defined place, e.g.:

8	<p>gwàr d'á wùr sù s'á man RE1 3sg run there 'the man who ran away'</p>	Mopun
---	--	-------

These markers occur in languages of the Angas subgroup of the West branch, and in Hona, Ga'anda, and Cibak of the Central branch. In the languages listed above, the place, 'here', is marked by sə and the place away, 'there', is marked by several devices, including ɖi. If we assume that the subgrouping of Chadic languages based solely on phonological data obtained by lexical comparisons is correct (cf. Newman, 1977; Jungraithmayr, 1978), then we will be justified in concluding also that sentence final particles were part of the PC grammatical system. The phonological near identity of devices in two branches is unlikely to be a product of independent innovation. The phonological similarity of the clause final markers, however, may be a reflex of the same source from which these markers have developed. In particular, for at least one language, Mopun, it has been shown that clause final deictic and anaphoric locative markers are ultimately derived from verbs 'to go' and 'to come' (cf. Frajzyngier in press c.). A similar origin of clause final particles in languages of the Central branch could then explain the phonological similarity of the markers.

3.3 LOCATIVE EXTENSIONS AND SERIAL VERB CONSTRUCTIONS

There already exists relatively abundant literature on verbal extensions in various Chadic languages as well as some comparative studies (cf. Mirt, 1971; Lukas, 1970 etc.; Newman, 1983). The following is an example of a typical locative extension:

9 a.	<p>yaa fit-oo 3sg go out-Vent 'he came out to here'</p>	
cf.b.	<p>yaa fita 'he came out'</p>	Hausa

Serial verb constructions attracted the least attention in synchronic descriptions of contemporary languages, but they are nevertheless rather common, e.g.:

- 10 n-dùul àkwàatí-ná sín jì sà
 lsg-pull box Def give come here
 'I pulled the box in here' Mopun

Constructions involving movement to and from involve verbs rather than prepositions before the locative NP in Mopun, Pero (West), Mandara (Central), e.g.:

- 11 a. dá nkà dóm màkàrántà
 go-1sg-Neg go school
 'I did not go to school'

- cf. b. pítà à dàm kánò
 Peter Aux go Kano
 'I Peter went to Kano' Mandara (field notes)

I have shown (Frajzyngier, in press a.) that ventive and centrifugal verbal extensions are derived from a specific type of verb construction. There are two pieces of evidence for this choice. Locative extensions and serial verb constructions with a locative function do not co-occur in Chadic languages. The other piece of evidence rests on phonological similarity between locative verbal extensions and verbs 'to come' or 'to return' from which the extensions are derived historically. Therefore for the purpose of reconstructing the system of encoding the locative in PC, I will treat these devices as two historical stages of the same grammatical form.

In a number of languages prepositions and the deictic locative markers may be attached to the verb, thus forming verbal extensions. Compare the following examples in which, due to the aspect differences, the same semantic notion is once expressed by a ventive extension (12a.) and another time by a prepositional phrase (12b.) with the same form of the extension and the preposition:

- 12a. Ykəs-atsa mayʃhəyə sə Múra
 take-to-here I corn under Mora
 'I carried the corn here from Mora'
- A Ykəsə həyə́ yá Ytsa sə Múra
 V.m. take corn I here under Mura
 'I am carrying the corn here from Mora'

Podoko (Jarvis, 1983:314)

The functions of the locative extensions can be divided into two groups: one oriented with respect to the speaker or some other previously defined place, and the other for the lack of a better term, 'non-speaker oriented.' The first group consists of two forms: the ventive, always marked, and the non-ventive, unmarked form. The ventive indicates that the action occurred at some place away from the speaker with a subsequent movement toward the speaker. The non-ventive form does not indicate movement away from the speaker but rather is unspecified with respect to the

direction, e.g., *saukoo* 'arrive here' vs. *sàuka* 'arrive (somewhere else)' (Hausa, Hodge and Umaru, 1963:268). There are, however, languages with three-way contrast: ventive, centrifugal (efferential in Newman 1983), i.e., action away from the speaker, and the unspecified direction, e.g.:

- 13 a. 'à á yà
'he carried (it)'
- b. 'à ɔ̀-gre báyá dà gàyá
carry-away mother Prep house
'the mother carried it off into the house'
Dghwede (Frick, 1978:20)
- c. nánà tlùve zè-dgre gè
meat carry-toward
'here is the meat I brought'
(ibid. p. 21, all glosses mine, Z.F.)

The ventive centrifugal extensions frequently occur with the verbal root having the general meaning 'to trade'. The suffixes then specify whether the transaction is that of selling or buying, e.g.:

- 14 a. ʒálmà nam tɔ̀ zɔ̀r nì tárà ɔ̀l-ʒà
yam Dem Rel boy Def trade-Vent
'the yam that the boy bought'
- b. ʒálmà nam tɔ̀ ɔ̀r nì tárà ɔ̀l-ntà
'the yam that the boy sold' Cibak (field notes)

The second group contains all other extensions, such as movement upward or downward. These extensions are not oriented in relation to the speaker and indeed may be oriented in relation to the object, as is the case in Mandara (cf. Mirt, 1969/70). The extensions of the second group occur only in the Central branch. In some languages, such as Dghwede and Gude, the extensions from the two groups can be combined, e.g.:

- 15 ndərə 'climb'
ndərga-gərə 'climb down'
ndərə-gi 'climb up'
ndərə-və 'climb to that place'
ndira 'climb toward speaker'
ndira-gərə 'climb down toward speaker'
ndira-gi 'climb up toward speaker'
(Hoskison, 1983:100)

One of the questions that must be answered concerning extensions is whether the two functional groups, viz., extensions oriented toward the speaker and non-speaker oriented, should be considered as two distinct structural sets or merely as members of the same structural set with different semantic values. The second question that must be answered is which locative extensions occurred in the PC verb phrase.

Extensions oriented with respect to the speaker are not easily derivable within each language, while extensions not so oriented are. The following example shows the form of verbal extensions and their possible sources in Dghwede.

16	Source	Extension
	sàgé 'foot'	-sàgè 'underneath'
	gré 'head'	-gré 'away from'

We thus have the first argument for the existence of two sets rather than one. Moreover, the co-occurrence of the extensions of the two groups, as in Gude, would provide an additional argument for the distinction between the two sets.

We can also make a distinction between the two sets based on a relative chronology of their emergence. Set A, oriented with respect to the speaker, is older than set B. This conclusion is again based on the fact that the origin of the markers of set B is transparent; they are synchronically derivable in each language from some other morphemes (cf. ex. 16 above). The set A markers are not synchronically derivable (except for languages that have innovated recently such as Dghwede), and they can be reconstructed only through comparative study (cf. Frajzyngier, in press a.)

There appear to be no compelling reasons to postulate the existence of extensions belonging to set B in Proto-Chadic, because the markers are synchronically derived in each language. In Frajzyngier (in press a.) it is argued that extensions of set A did not exist in Proto-Chadic either. The main argument against reconstruction of Set A extensions for Proto-Chadic is based on the fact that they are derived diachronically from directional verbs of movement or synchronically from prepositions, as is the case in Podoko, as illustrated by the example 12 above.

The function that is performed by the locative extensions of sets A and B was most probably performed in PC by the morphemes and constructions from which the contemporary extensions derive, viz., by words indicating spatial or geographical location (up, down, North, South, etc.) and by serial verb construction in which the direction of movement or action was indicated by appropriate verbs, as is still the case in the Angas group of the West branch, and in the Bura group of the Central branch, e.g.:

- 17 a. wùr dél sé dám jipári
 3m pass go away go to Jipari
 'he passed by [here] on his way to Jipari'
- b. mó kà lè án áji féer
 3pl ascend put 1sg grade four
 'they came up and put me in grade four'
- c. mó siam lè án áji féer
 descend
 'they came down and put me in grade four'
- d. mó dám lè án áji féer
 go
 'they put me in grade four' Mopun
- 18 n-yít tül sé n-dám már
 1sg-leave home depart 1sg-go field
 'I went from home to the farm' Mopun

19 a. à azrá sí vì
 go come
 'come home'

b. à zrá lí vì
 go go
 'go home'

Cibak (field notes)

I do not know all the conditions that were necessary for a serial verb construction to become a verb-extension construction. But one of the factors that constitutes an obstacle to such a change is the word order of the directional verb with respect to the other verb in the clause. The change from a directional verb to an extension occurred when the directional verb followed the non-directional verb. It appears that the change did not occur in languages in which the directional verb could occur either before or after the non-directional verb, as is the case in Mopun.

4. PREPOSITIONAL PHRASE

4.1 HYPOTHESES

In contemporary languages (cf. Chart) there are several locative prepositions, for such meanings as 'at', 'to', and 'from'. The first question to be answered in this section is: How many locative prepositions were there in PC? The second question is: What was the function of preposition(s) in PC? The answer to one question can be falsified by the answer to the other.

I would like to propose that in Proto-Chadic there was only one locative preposition {a}. I would like to propose that the only function of the locative preposition in PC was to indicate that the following NP is a locative phrase; i.e., it denotes the place at which something happened, toward or from which the movement is directed. Note that although this hypothesis may sound trivial, the function of the locative preposition in Proto-Chadic would actually differ significantly from the functions of locative prepositions in IE languages, which not only indicate that the following NP is a locative complement, but also indicate the spatial configuration of an event with respect to some argument in the sentence, such as 'below', 'above', 'inside', 'outside' of an object. Note that hypotheses similar to the ones stated above have been already stated for individual Chadic languages. Hoffmann 1963:237 postulated for Margi: 'Generally speaking, Margi local prepositions do not indicate whether the place mentioned is the starting-point or the end of movement, or whether it is the location of an object... Similarly [to wú] ár may mean 'on', 'on to' or 'down from''. Similarly Newman (1974:24) stated that Kanakuru does not overtly distinguish 'to' from 'at' phrases. The two statements above may be considered to provide some support for the proposed hypotheses for Proto-Chadic. But much stronger evidence will be presented next.

4.2 THE EVIDENCE

4.2.1 The nature of the evidence

Grammars of various Chadic languages often give separate forms for the prepositions meaning 'at', 'to', and 'from' as illustrated in the Chart. We have to proceed, therefore, with the reconstruction of what for the time being appears to be three different prepositions. If we can show that instead of the three different prepositions there was only one, then the hypothesis about the number of prepositions in PC will be proved. If we can show that the preposition was {a} rather than something else, then the hypothesis about the form of the preposition will be proved. If we can show that {a} was used in many different contexts, such as indicating 'in', 'out', 'to', etc., then the hypothesis about the locative only function of this preposition will be proved. Here then is an attempt at reconstruction of, for the time being, three different prepositions.

4.2.2 Stative preposition 'at'

There is little doubt that this should be reconstructed as /a/. The tones should probably be left open, as the morpheme has different tonal values in different languages. There are several languages in each group where the stative preposition is other than /a/. Thus in Pero it is {ti}; in Mopun, {n} with a few petrified instances of {a}; in Bole, {ga}; and in Angas, {ka}. In the Central branch and East branch we can see morphemes that could be cognates of the above, such as Kapsiki {te}, Masa {tá}, Lamang {n}. There can be no doubt that {a} should be reconstructed as the stative locative preposition, and the forms {tV} and {n} should be considered as innovations. It is also possible that the innovations {tV} and {n} occurring in some languages could have all come from the same source. I will discuss the problem of the possible sources in section 5.

4.2.3 Directional 'to'

There is more variation in the form of the prepositions 'to' than of the preposition 'at'. There are essentially three possible candidates for the reconstruction: /n/, /tV/, and /a/. Of the three, /a/ is by far the most frequent form because it occurs in three out of four branches. One would therefore postulate /a/ as the preposition occurring in constructions involving directional locative complements. As in the case of stative locatives, one also has to postulate that various innovations involving /a/ and /ti/ had only two sources, one for /a/ and the other for /ti/. What is important, however, is the obvious fact that we reconstruct the same form /a/ to occur as both stative and directional locative complements. Even when we have some marker other than /a/, frequently the same marker is used for both kinds of complements, e.g.: Bole /ga/, Pero /ti/, Mopun /n/, Podoko /da/.

4.2.4 Directional 'from'

The most interesting fact about the equivalents of the preposition 'from' is that quite often there is no preposition at all. When, however, a preposition occurs, it is either some form of /dV/ or /a/. We can reconstruct both of these possibilities, but we must also allow for the possibility that there was no preposition meaning 'from' in PC. A hypothesis concerning the form /dV/ will be offered in a later section. Postulating /a/ as a morpheme occurring in directional locatives provides sufficient argument for the claim that there was only one locative preposition.

4.2.5 Summary of the reconstruction of prepositions

If we have to postulate that the same preposition occurred in constructions meaning 'at', 'to', and 'from', then of course the preposition could not have the separate meanings 'at', 'to', and 'from' but rather had a general locative meaning indicating that the following argument is a locative phrase, as in the following examples from two languages:

- 20 a. wúf iyà à húkàsù-d'
 mother return Loc market-Dist
 'My mother returned to the market'
- b. ɓaíɓà à húkàsù
 'I came from the market'
- c. tsáwdi à Maiduguri
 'I stayed in Maiduguri' Hona
- 21 a. wùr wáa á n-Kaguu
 he return Foc Prep-Kaguu
 'He returned from Kagu'
- b. wùr wáa séet dóm a n-Kaguu
 return go-away go
 'He returned to Kagu' Mopun

The notions of direction were realized by some other devices, in particular by the serial verb constructions discussed earlier.

4.3 NON-REDUNCANCY OF THE LOCATIVE FUNCTION

Now that it has been shown that there was only one preposition in the PC and that it had only one function -- locative, it is important to observe that the preposition was used only when the locative function was not implied by the inherent features of either the nouns or the verbs involved in a construction. When the locative function was implied by nouns or verbs, the preposition was not used.

Locative constructions in many Chadic languages allow us to classify some nouns as inherently [+LOCATIVE] and others as [-LOCATIVE], with a possibility of the existence of nouns that have no inherent value for this feature. [+LOCATIVE] are all names of towns and villages. [-LOCATIVE] are all animate nouns, but also those objects that are not salient enough to serve as point of reference.

The data from languages in all branches indicate also the existence of two types of verbs with respect to locative constructions. Certain verbs of movement inherently also indicate unique direction: Thus equivalents of 'go' and 'come' in many Chadic languages require a locative complement without any preposition. When a [+LOCATIVE] noun occurs as a complement of a directional verb of movement, it is not marked by any preposition. The evidence for this hypothesis consists of the fact that there are prepositionless locative complements in all branches of Chadic, e.g.:

- 22 a. à w tup a-moro Shelej
 they-Fut send-her
 'they will send her to Shellen'
Kanakuru (Newman, 1974:25)
- b. pa 'yá dzaa Tekí
 then I go
 'then I went to Teki'
Kapsiki (Smith, 1969:92)
- c. dibinim ten kóore kúpòr
 tomorrow I go
 'tomorrow I am going to Kupor'
Kera (Ebert, 1979:199)
- d. nam i suk-ɲa
 he goes market-Def
 'he goes to the market'
Musey (Platiel, 1972:86)
- e. mó wáa kano
 they return
 'they returned from Kano'
Mopun

The occurrence of this type of construction in all four branches of Chadic cannot be attributed to similar innovations, but rather represents a retention of the PC type.

A preposition would occur only when the verb is not [+MOVEMENT], and therefore the noun would have to be marked as a locative rather than as some other complement.

- 23 a. gami à tukwe-ni la gawi
 ram Aux hide-ICP in room
 'the ram hid in the room'
- b. à wui gami la gawi
 'he put the ram in the room'
Kanakuru (Newman, 1974:25)

If the noun was [-LOCATIVE], as is obviously the case with all animates (and pronouns referring to them), then in the locative function it must be marked by a special morpheme, which in some languages is cognate or even identical with a lexeme meaning 'place'. This phenomenon is noted in languages from all groups. Thus in Kanakuru it is yí 'at place of', in Ngizim the added word is rai ~ rii (medially) 'place', e.g.:³

- 24 ná dée-w gaad'a-k nya ii Barno ii rii-k Seehu
 'I came to Bornu to Shehu'
(Schuh, 1972:66)
- 25 a. wùr sé dàm pá màt dè ká dée sá
 he go-away go-to Prep woman Rel Asp be there
 'He went to that woman over there'

b. *wùr sé dám màt dè ká dée s'á

Mopun

Note that 25 b. is ungrammatical because the locative complement is not preceded by the morpheme *pá*, which may be related to the lexeme *pee* 'place'.

In other languages the locative marker for [-LOCATIVE] nouns may be derived from other lexemes such as 'body' or 'mouth', e.g.:

26 *wáat-nà cìg tójè*
go-Vent body horse

'he/she came to a horse'

Pero (field notes)

In Logone when the object is human it must be marked by a preposition, e.g.:

27 a. *nd u wàgər ga gənəm*
I went to woman
'I went to a woman'

b. *nd u wágər u (a'á)*
'I went to the village'

(Lukas, 1936:54)

In Kera, when the locative complement is a person, it must be preceded by a 'relator' *gèr* or *sár*.

4.4 SPATIAL RELATIONSHIP

If the preposition {a} marked only the following noun as a locative argument, then how were the spatial relationships such as in, out, under, behind marked?

As in a number of languages from the area, these relationships were marked by the names for parts of the body, which preceded the noun. The form of the locative complement with a spatial specifier was therefore the following:

a + Spatial Specifier + N
[-Place]

Constructions with spatial specifiers derived from names of parts of the body are present in the majority of contemporary Chadic languages, and the following examples from Angas (Burquest, 1973:139) are fairly typical:

28 a. *Musa ka-ke kì -lu*
M. at-head of-hut
'Musa is on top of the hut'

b. *Musa ka-ɓwiin kì lu*
back
'Musa is behind the hut'

5. OTHER PREPOSITIONS

In this section I will offer an explanation for some of the prepositions that occur in various languages (cf. Chart) but are not postulated as having a prepositional function in Proto-Chadic.

5.1 FROM NAMES OF BODY PARTS TO PREPOSITIONS

There are two sources for the prepositions. One source is rather obvious, and it has been pointed out already in some synchronic descriptions. The spatial markers that originated from

terms for body parts became reanalyzed as prepositions. For this to have happened at least two other processes must have occurred. The construction 'spatial marker-NP' became grammaticalized and acquired a form different from the similar possessive construction 'term for part of body-NP'. In Kanakuru, where all prepositions derive from parts of the body, the differentiation applies to the constructions with *ko* 'on' and *yó* 'at the foot of' where the differences are marked by tone, e.g.:

29 a. à wúí kô-ró
'he put it on her'

b. kó-ró
'her head'

(Newman, 1974:91)

The other process that must have occurred is the loss of the preposition *a*. I cannot say with any certainty what the sequence of these processes was. But since not all constructions 'spatial marker-NP' differ from constructions 'body part NP', quite possibly the loss of the preposition preceded the structural changes in the construction.

5.2 FROM VERB TO PREPOSITION: THE ORIGINS OF {tV} AND {dV}

Two of the most frequent prepositions that remain to be explained are {tV} and {dV}. The explanations I provide have not been proposed in any synchronic description, and they are more speculative than the explanations provided for the prepositions derived from spatial markers. I hope that this discussion will provoke some other explanations.

I would like to propose that the preposition of the form {tV} derives from a verb of the same form and that the meaning of this verb must have included a notion of 'stopping at, in'. The evidence for this hypothesis consists of the fact that in many languages there is such a verb. In Mopun, it is the verb *ta* 'to fall, stop by'; in Kanakuru there is a morpheme *da* that Newman describes as 'via' and that is used in exactly the same function as Mopun *ta*. In Gude it is the verb *taɣi* 'cross, cross over'. Compare also Hausa *ta* 'via'.

Concerning the preposition *dV*, which usually has the meaning 'from', I would like to propose that it derives from the verb *dV* 'go' that occurs in Lamang, Mofu, Ngizim and in many other contemporary languages. There is only one problem here but it is serious: there are no indications that in many of these languages the verb involves the meaning of 'going from'. Only in Hoskison (1983:173) we find a statement that *dəmə* means 'go in or out'.

Thus, in Chadic as in many other languages, the original locative expressions would have had a form of a serial verb construction of the type 'X goes stops at Y' for constructions that eventually gave the preposition *tV* and 'X goes leaves Y' for constructions that eventually gave the preposition *dV*.

The process of change from verb to preposition is well documented in other language groups, e.g., in Kwa by Lord (1973). in Chinese by Li and Thompson (1981).

6. RECAPITULATION OF ALL SYSTEMS

The role of marking direction 'to' or 'from' was carried not by prepositions but by serial verb constructions, and later in some languages by speaker-oriented extensions. We therefore have systemic motivation for the existence of the two types of grammatical devices. The same kind of argument can be used as systemic evidence for the existence of serial verb constructions and eventually extensions indicating movement 'upward', 'downward', etc.

The serial verb constructions must have existed already at the PC stage to provide a more precise realization of those notions that were not realized through the system of prepositions.

The stative locatives were marked in PC by apposition of subject and locative, which was marked by the preposition *a*. Note that this marking was important, because in the absence of the preposition the sentence would have been interpreted as equational (cf. Frajzyngier, 1986).

The directional locative complement was not marked when the verb was inherently directional. In other circumstances, the locative complement was marked by the same preposition as in stative locative sentences.

Nouns that were inherently [-LOCATIVE], such as all animate nouns and the pronouns referring to them, were made locative through the addition of special morphemes, sometimes derived from lexemes meaning 'place'.

The spatial reference to the locative complement was marked through the set of markers derived from the names of body parts, or locative adverbs. Note that the system of locative marking in Chadic is not unusual in the world languages and actually is quite similar to the system in Thai described in Kolver (1984).

An important implication of the study is that different elements of grammatical structure constitute a system in which the properties of one element motivate the existence of another element. The fact that prepositions are not marking direction motivates the existence of serial verb constructions and verbal extensions, or alternatively, the existence of serial verb constructions and verbal extensions motivates the limited function of preposition.

CHART: LOCATIVE PREPOSITIONS

<u>Language</u>	<u>at</u>	<u>to</u>	<u>from</u>	<u>Place marker</u>	<u>Copula</u>
Hausa	à	zuwa	daga	wuri/waje	na
Bole	ga	ga	ka		--
Pero	ti	ti	Verb	pudi(place)	--
Kanak.	lâ	--	--	yi(place)	--
Angas	ka	n	--		--n
Mapun	n	a	--		a
Ngizim	àa	li	dà	rai	áa
Pa'a	á	--	daga(Hausa)		--

Tera	--	nə	--	(yes)	a
Ga'anda	ə, kə				--
Hona	a	a	a		--
Cibak	ka, a	a			a
Margi	a	a	a	(yes)	--
Kapsiki	te	--	kva		--
Mandara	àm	dəm(go)			--
Podoko	da	da	da		--
Lamang	-n, má	-dá	--		--
Mofu	á	á	dà(from,in)		--
Zulgo	a	a	--		--
Gisiga	i	i, a			--
Gude	a də	a	də		--
Logone	na	ga	na		--
Munjuk	a	a	a...pár		--

Kera	a---a	a	a	Body parts	--

Musey					a
Mesme	á	á			--
Masa	tá		Verbs of movement		--

NOTES

¹The work on this study was supported by the Center for Applied Humanities, University of Colorado and by NSF Grant Nr. BNS-84 18923. The data were taken from the following sources: Kanakuru--Newman 1974, Bole--Lukas 1971, my own fieldnotes, Pero--Frajzyngier in Press b., Angas--Burquest 1973, Mopun--my own fieldnotes, Ngizim--Schuh 1972, Pa'a--Skinner 1979, Tera--Newman 1970, Ga'anda--Ma Newman 1971, Hona--my own fieldnotes, Cibak--my own fieldnotes and Hoffmann 1955, Margi--Hoffmann 1963, Kapsiki--Smith 1979,

Podoko--Jarvis 1983, Lamang--Ekkehard Wolff, p.c., Mofu--Daniel Barreteau, p.c., Zulgo--Haller et al. 1981, Gisiga--Lukas 1970, Bachama--Carnochan 1970, Gude--Hoskison 1983, Logone--Lukas 1936, Buduma--Lukas 1936, Munjuk--Henry Tourneux, p.c., Kera--Ebert 1979, Mokilko--Herrmann Jungraithmayr, p.c. and Lukas 1977, Mesme--Fischer 1980, Musey--Platiel 1972, Masa--Theda Schumann, p.c., Zime--Michka Sachnine, p.c. My profound thanks to all colleagues who generously shared with me their knowledge of various languages.

I would also like to thank an anonymous reader of a previous version of this paper for the careful checking of my quotes and to a referee of the *Journal of West African Languages* whose comments prompted me to change the organization of the paper.

In the presentation I will use the term West to refer to West Chadic, the term Central (proposed by Jungraithmayr, 1978) to refer to Central Chadic (Newman's 1977 Biu-Mandara), East to refer to East Chadic, and Masa to refer to the Masa branch.

²For a description of change from preposition to the equational copula see Frajzyngier (1986).

³The phenomenon of having a special morpheme to mark the inherently non-locative nouns as locative complements is by no means an exclusive property of Chadic languages. Thilo Schadeberg has pointed out to me the existence of the same phenomenon in Bantu languages.

REFERENCES

- Burquest, Donald A. 1973. A Grammar of Angas. Ph.D. Dissertation. UCLA.
- Chao, Yun Ren. 1968. A Grammar of Spoken Chinese. Berkeley: Univ. of California Press.
- Cohen, Marcel. 1924. Le système verbal sémitique et l'expression du temps. Paris: Imprimerie Nationale.
- Ebert, Karen H. 1979. Sprache und Tradition der Kera (Tschad). Teil III: Grammatik. Berlin: Reimer.
- Ebobissé, Carl. 1979. Die Morphologie des Verbs im Ost-Dangaleat. Berlin: Reimer.
- Fischer, P.R. 1980. Untersuchungen zur Sprache der Mesme. M.A. Dissertation. Marburg.
- Frajzyngier, Zygmunt. 1974. Postpositions in Awutu. *Journal of West African Languages* 9.2:61-70.
- _____. 1986. From preposition to copula. *Proceedings of the 12th Annual Meeting of the Berkeley Linguistics Society*. Vassiliki Nikiforidou, Mary Van Clay, Mary Niepokuj, and Deborah Feder (eds.), 371-386.
- _____. in press a. Ventive and centrifugal in Chadic. *Afrika und Übersee*.
- _____. in press b. A Grammar of Pero.
- _____. in press c. From verb to anaphora. *Lingua*.
- Frick, Esther. 1978. The verbal system of 'Dghwede'. *Linguistics* 212:5-43.
- Haller, Beat, S. Hedinger and Ursula Wiesemann. 1981. The verbal complex in Zulgo. *Africana Marburgensia*. Special Issue 5, Chadic Language Studies in Northern Cameroon. 17-54.
- Hodge, Carleton T. and Ibrahim Umaru. 1963. Hausa: Basic Course. Washington, D.C.: Foreign Service Institute.
- Hoffmann, Carl. 1955. Zur Sprache der Cibak. *Afrikanistische Studien*. ed. by Johannes Lukas. Berlin. 146-178.

- _____. 1963. A grammar of the Margi language. London: Oxford Univ. Press.
- Hoskison, James Taylor. 1983. A Grammar and Dictionary of the Gude Language. Ph.D. Dissertation. Ohio State University.
- Jarvis, Elizabeth. 1983. Podoko Verbal Directionals. *Studies in Chadic and Afroasiatic Linguistics*, ed. by Ekkehard Wolff and Hilke Meyer-Bahlburg. Hamburg: Buske. 317-328.
- Jungraithmayr, Herrmann. 1970. Die Ron-Sprachen. Glückstadt: Augustin.
- _____. 1978. Les langues tchadique et le proto-tchadique: documentation, analyse et problèmes. Préalables à la reconstruction du proto-tchadique. Paris: SELAF.
- Kolver, Ulrike. 1984. Local prepositions and serial verb constructions in Thai. *Arbeiten des Kölner Universalien-Projekts* Nr. 56.
- Li, Charles N. and Sandra Thompson. 1981. Mandarin Chinese. Berkeley: Univ. of California Press.
- Lord, Carol. 1973. Serial verbs in transition. *Studies in African Linguistics* 4.3:269-296.
- Lukas, Johannes. 1936. Die Logone-Sprache im Zentralen Sudan. Leipzig:DMG.
- _____. 1970. Studien zur Sprache der Gisiga. Glückstadt: Augustin.
- _____. 1971. Über das erweiterte Verb im Bolanci (Nordnigerien). *Journal of African Languages* 10:1-14.
- _____. 1977. Beitrage zur Kenntnis des Mukulu. *Afrika und Übersee* 61.1-2:1-58 and 192-229.
- Mirt, Heide. 1969/1970. Zur Morphologie des Verbalcomplexes im Mandara. *Afrika und Übersee* 54:1-76.
- Mouchét, Jean. 1967. Le parler daba.
- Newman, Paul. 1970. A Grammar of Tera. Berkeley: University of California Press.
- _____. 1974. The Kanakuru Language. Leeds: Institute of Modern English Studies and West African Linguistic Society.
- _____. 1977. Chadic classification and reconstructions. *Afroasiatic Linguistics* 5.1:1-42.
- _____. and Roxana Ma. 1966. Comparative Chadic: phonology and lexicon, *Journal of African Languages* 5:218-251.
- Newman, Roxana Ma. 1971. A Case Grammar of Ga'anda. Ph.D. Dissertation. UCLA.
- Platiel, Suzanne. 1972. Esquisse d'une étude du Musey. *Informations. Bulletin de la SELAF*, 6.
- Schuh, Russell G. 1972. Aspects of Ngizim Syntax. Ph.D. Dissertation. UCLA.
- Skinner, Margaret G. 1979. Aspects of Pa'anci Grammar. Ph.D. Dissertation. Univ. of Wisconsin.
- Smith, D. 1969. The Kapsiki Language. Ph.D. Dissertation. Michigan State Univ.
- Tourneux, Henry. 1978. Le mulwi ou vulum de Mogroum. Paris: SELAF.