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MARKING SYNTACTIC RELATIONS IN PROTO-CHADIC

1. Introduction

In comparative studies of Chadic languages there is a gap in the fundamental area of syntax, viz., we do not have any attempts to describe how syntactic relations were marked in P(roto)-C(hadic). The purpose of the present paper is to provide an answer to this question[1].

The term P.C. is used here to indicate the product of reconstruction from the data available from contemporary languages. It is the stage directly preceding the split into the contemporary groups. By no means does this term designate the oldest possible form of P.C. Some of the elements of older stages are also reconstructible from the contemporary Chadic languages; however, the amount of material which can be reconstructed is much smaller (cf. Frajzyngier, in press, a).

This paper deals only with the distinction between subject and object, the term *subject* designating either the subject of an intransitive or transitive verb. For transitive verbs, the term *subject* always stands for the argument with the semantic role Agent.

The data for this study were taken from some 60 languages representing all four branches of Chadic as postulated in Newman's 1977 classification.

The results of this study would not be affected if one were to accept Jungraithmayr's 1978 classification (see Caprile and Jungraithmayr 1978) in which the Chadic languages are divided into three rather than four branches.

Some of the most widely used devices for marking syntactic relations in language are: nominal inflection, pre- or post-position, word order, and appropriate coding on the verb.

Since the nominal inflection does not exist in Chadic only the last three devices must be considered as possible retentions from P. C. The rest of this paper will examine each of these devices in turn. For each, I will discuss its possible form, function, the change that the device has undergone, and some of the effects it might have had on other aspects of language structure.

2. Marking of syntactic relations on verbs

In some Chadic languages the verb stem, i.e. the root with its various tense/aspect affixes, may also have markers whose occurrence is linked to the nature of the following argument. This phenomenon will be illustrated with examples from Hausa without, however, any implication that other languages, when marking the syntactic relations on the verb, do it in the same way.

In Hausa, whenever a Grade II verb is followed by a nominal object it is marked by the vowel -i[2]. Whenever a verb of grade II is followed by a pronominal object it is marked by the long vowel -ee. Whenever there is no direct object following the verb the final vowel of the verb is -aa. Compare the following examples from Zima 1972:25 (the Hausa transcription and translation as in the source):

1. Awdu yaa sàyi dookii	Audu bought a horse
2. Awdu yaa sàyee shi	Audu bought it
3. dookîn da ya sàyaa, faRii nêe	the horse that he bought is white.

What is interesting about these forms in Hausa is the fact

that there is no functional explanation for the existence of the three markers. The identity of the morpheme following the verb is never in doubt and, in fact, Grade II is the only form that has this alternation. Other verbs do not change the final vowel when followed by a nominal object.

Chart 1 represents the distribution in Chadic of those verbal markings whose presence or absence depends on the nature of the argument following the verb. It also summarizes the occurrence of prepositions which will be described later. Note that in most languages, as in Hausa, there is no functional justification for the occurrence of these markers. There is an notable exception, however, and that is Dghwede, where both subject and object can follow the verb. The distinction between the two is marked by tone alone. A low tone on the last syllable of the verb indicates that the following argument is subject, e.g.

4. ´à wàyèdù dádá rejected father	the father rejected it
5. ´à wàyèdú dádá rejected father	he rejected the father

(Examples and analysis from Frick 1978:10).

Chart 1[3]

Morphological markers of syntactic relations.

LANGUAGE	VERBAL MARKER	PREPOSITION
Hausa	Grade II verbs -i nomin. -ee pron.	
Galambu	Vowel and tone changes before nominal D.O.	
Gera	Tonal changes before pronominal and some nominal D.O.	
Kirfi	Perfective suffix -ko becomes -ki and -wo → wu before nominal D.O.	
Fyer	-a before nomin. D.O. (one class of verbs)	ti with some verbs
Kulere		t pronominal
Tera		t before some pron. D.O.
Glavda		ka and ks before nomin. and pron.

LANGUAGE	VERBAL MARKER	PREPOSITION
Dghwede	Tonal changes on verb	
Gisiga		a before pron. D.O.
Bachama	Tonal changes on verb	
Gude		tə before D.O. -nə before Subject
Lamang		ta
Logone	Vowel change a → e/___nom. a → i/___nom./pron. obj.	
Dangla	In punctual perfect a class of verbs changes tone before object.	
Mokulu	Tonal change H, F → L /___nom. obj.	

The presence of markers of this type on the verb in languages from different branches of Chadic indicates that similar markers must have been involved in marking the syntactic relation of an argument with the verb in P.C. The exact function of this device in P.C. cannot be described on the basis of synchronic descriptions for particular languages, for in most of them, as in Hausa, there is no functional load attached to the verbal markings.

It is not possible to reconstruct a single phonological form of the verbal marker, for at least two devices must have been involved: one, tonal changes on the verb and the other, vocalic changes. For neither of these devices does the amount of material available allow the reconstruction of its form with any degree of confidence.

3. Use of prepositions to indicate the role of arguments

As Chart 1 indicates, there are two prepositions that are involved in marking syntactic relations: one is ks- or ka-; it occurs only in Glavda, and therefore may be considered an innovation in this language. The other is a preposition which, for the time being, will be designated as tV-, for the nature of the final vowel has not yet been determined. The use of this preposition before pronominal arguments has been described in

Frajzyngier, in press, b. It was shown there that in many of the languages involved the use of a preposition in marking the pronominal direct object is redundant and cannot be functionally justified by synchronic analysis. There are also languages in which the use of a preposition to mark the nominal direct object is redundant. One such language is Fyer, from the West Chadic branch. Certain verbs require that a nominal (as well as a pronominal) direct object be introduced by the preposition ti, e.g.:

6. yáà hênîn ti lɔ́ I refused, declined the meat.

There is another class of verbs that introduces the nominal object with the particle a, which may be suffixed to the verb (examples and explanation from Jungraithmayr 1970:51, 73ff.):

7. mî dí-a ɓarès he saw his young one.

Some of the verbs that have the object marked by a are verbs meaning to see, surpass, give, catch, say, and hear.

Again, as in the case of Hausa Grade II verbs, there is no functional justification for these markers, since the role of the following noun is never in doubt.

In Lamang and Gude, however, the D.O. markers have a syntactic function, being the only markers of the nominal arguments. In Lamang (E. Wolff, p.c.) the preposition is used whenever there are no other means to identify the role of an argument. In Gude (Hoskinson 1975) the prepositions ne and tə are the only means to identify the function of arguments when the focusing device, a fronting rule, is applied.

On the basis of available data it appears that prepositions were not a prime device to mark syntactic relations in P.C. The main argument for this conclusion is the fact that the preposition tV, which marks a direct object, has been shown to be derived (Frajzyngier, in press, b.) from a locative preposition most probably via the function of marking dative/benefactive.

In most languages, whenever the preposition tV- marks the direct object, it also marks the dative/benefactive. The opposite, however, is not the case. There are many languages in which the dative/benefactive is marked by the preposition tV, but the direct object is not. Moreover, even in languages in which the direct object is marked by the preposition tV, this

marking is a nonsystematic device. Thus, in Fyer, whether or not the direct object is marked by a preposition seems to depend on some as yet unspecified features of individual verbs. Similarly, in Tera, direct object pronouns are only sometimes marked by a preposition. In all Chadic languages the locative and dative, however, are always marked by prepositions (with the exception of certain verbs which take dative as their natural argument, such as the verb 'to give', and with the exception of nouns which have the inherent feature locative). Thus, while the direct object in only exceptionally marked by a preposition, the benefactive/dative and locative are only exceptionally not marked by a preposition. These facts indicate the existence of the functional change by which the marker of locative became the marker of dative/benefactive and, in some languages, in certain syntactic contexts only, the marker of direct object.

If tV in P.C. was primarily the marker of the locative, then it could not also have been the primary marker of direct object. Prepositions were not, therefore, the primary means of marking syntactic relations in P.C. The main argument against assigning this role to prepositions remains the fact that in all contemporary Chadic languages, the use of prepositions is redundant in the neutral word order. There remains, therefore, only one possible device for indicating the role of sentential arguments in P.C.: word order.

4. Word order

4.1. Possibilities and the nature of evidence

There are no studies devoted to word order in P.C.; nor are there any studies of word order in contemporary Chadic languages which use data from all four branches. Westermann and Bryan 1952 state that most of the Chadic languages have SVO word order. Schuh (in press) discusses word order in the West Chadic branch, and there are studies of word order in particular languages, mainly, as in the Schuh's work, in connection with focusing devices, such as Hoskinson 1975, Jarvis 1981, and grammars, too numerous to list. None of these works, however, makes any claims concerning word order in P.C.

In the known Chadic languages, the main device for indicating

the syntactic relations of agent and patient is word order. Most of them indicate agent by its position before the verb, and patient by its position after the verb; resulting in the SVO word order. In some languages, however, the neutral word order is VSO. The term neutral refers to a sentence in which the only function of its form is to indicate the relationship between the verb and its arguments. A non-neutral word order will be one which indicates some other semantic relation, such as new versus old information, focus, topic, emphasis, etc. The term neutral is different from the term basic, for the latter may sometimes involve statistical considerations, such as frequency of occurrence. It is also different from the term underlying, which belongs to the transformational model of linguistic description.

The languages that have neutral VSO order all belong to the Biu-Mandara group of Newman's classification. They are all from the A sub-branch of this group: Ga'anda, Hona, Glavda, Guduf, Dghwede, Lamang, Gude and Padoko. The question to be resolved is whether the neutral word order of P.C. was SVO or VSO. An immediate answer would be that SVO was the neutral word order in P.C., and that in some languages of the Biu-Mandara group this order was changed to VSO. The justification for such an answer is the often-found argument that it is much more likely for one branch to have innovated than for two or three branches to have innovated in such a way that the product of innovation is the same in each case. This type of argument amounts to nothing more than a statement of probability and then, of not very persuasive nature, given the number of branches of Chadic, three or four depending on the classification one accepts.

This argument is not very persuasive for yet another reason. When dealing with word order, we deal with the same 'segments' as it were (S, V, and O), and the only innovation possible is a change in the sequential ordering of these segments. Starting with the same word order in two or more languages we may find the product of independent innovation to be exactly the same, i.e., once again the two languages will have the same order, but different from the word order they used to have at some earlier stage. The possibility of having identical products of innovation is increased when the change in word order is caused

by the same functional considerations, such as emphasis, 'theme'/'rheme' distinction, etc.

What is going to be considered as evidence in such a study is not a trivial question, for we do not have written records old enough to be of any value in the reconstruction of P.C. In lieu of direct evidence, I propose the use of explanations, which provide reasons for the change from one word order to another, and which would eventually provide a reason for the existence of some of the redundant markers of syntactic relations in contemporary Chadic languages.

4.2. Arguments for SVO as the neutral word order in P.C.

If we accept that this was indeed the P.C. word order, we must find an explanation for the VSO order in some of the languages of the Biu-Mandara group. The first thing that comes to mind is some rule by which the subject was moved to the position immediately after the verb. Movement rules, or, alternative word orders, are known in Chadic languages, and they are almost always triggered by focusing, topicalization, or some other semantic factors, often described in the literature as 'emphasis'. In most of the Chadic languages, the alternative word order results from placing the focused, emphasized, or tropicalized element in the initial position. Only in a few languages is the position of emphasis other than initial. Some of these languages are: Kanakuru, Pero, Bade, Ngizim, from the West branch, and Musgu from the Biu-Mandara branch. A common characteristic of the focusing devices in these languages is the position of the focused subject at the end of the sentence. Compare the following pairs of neutral and focused sentences in Kanakuru:

8. Balau à at ɗenoi Balau ate peanuts

9. at ɗenoi Balau Balau ate the peanuts (Newman 1974:63).

(All prepositional phrases including I.O. in Kanakuru follow the focused subject.)

In Musgu, the focused construction has virtually the same form, viz., the focused subject at the end of the sentence, e.g.:

10. à sɨ-ŋ-kɨ s áa (àtəŋ) pay it is the chief who gave it to you (pay = chief)

11. à sə-ŋ-àa sɨ à tənɨ âp-à it is my father who gave it to me (Meyer-Bahlburg 1972:195); lit., he gave it to me it is my father (Henry Tourneux p.c.).

It thus appears that the subject occurring at the end of the sentence constitutes a part of the phrase 'it is x'. What is involved, therefore, is a periphrastic device by which the subject is introduced by a separate phrase.

It is quite possible that the postposed subjects in other languages, usually introduced by a particle, derive from phrases similar to the one exemplified in Musgu. The evolution of the derivation of the postposed subject construction in these languages would then have the following history (X designates subject, Y designates object):

X verb Y → Pro verb Y it is X → Pro verb Y X →
stage 1 stage 2 stage 3
verb Y X.
stage 4

One cannot postulate this derivation as anything more than a hypothesis because the crucial stage 2 is attested only in Musgu. The change from stage 3 to stage 4 would have occurred as the result of a reanalysis of the function of the phrase 'it is' from copula to marker of a focused subject. Note, however, that Harries-Delisle 1978 claims that all emphatic clauses derive from equational sentences.

In Ngizim and Bade, the postposed subject is marked by a preposition consisting of an alveolar nasal and a vowel, e.g., Duwai dialect:

12. dée nə̀ Sáaku/Múusá Saku/Musa came (Schuh, in press 3.1.)

13. tlə̀rmə̀-g zənitìi nə̀'ɨidə̀m wood will tear my gown
tear my gown wood

In Pero, the focused subject occ rs at the end of the sentence and, if it is nominal, it is preceded by the particle nin. Pronominal focused subjects are also postposed, but they are not preceded by any particle.

Schuh (in press) claims that subject postposing must have been a Proto-West Chadic focusing device, since the two subbranches that have it, Bole-Tangale and Bade, are very distant from each other, and therefore could not have developed the same word order independently. This reasoning suffers from the methodological error discussed in 4.1. There is no reason why several languages with the same word order could not undergo the same change, resulting in an identical word order different from the original one. One could argue that focusing devices similar to those shown above for Kanakuru, Bade-Ngizim, Musgu, and Pero might have given rise to the VSO order found in some of the languages of the Biu-Mandara group. But there is a serious problem with this hypothesis. In all the languages in which focusing is achieved by postposing the subject, the focused subject always occurs after the object, never before it.

Thus, accepting the hypothesis that the neutral word order in P.C. was SVO would imply that in some languages this word order has become VSO. The only movement rules that we have attested in contemporary SVO Chadic languages are movement toward the end of a sentence, viz., SVO → VOS, or toward the beginning of the sentence, viz., SVO → OSV for object focus. No language has a rule by which SVO becomes VSO.

Thus, although most Chadic languages now have SVO order, while only a few have VSO, we can find no explanation by which SVO could have become VSO. One has, therefore, to examine a statistically less likely hypothesis, viz., that the neutral word order in P.C. was VSO, and that it was eventually replaced by the SVO order found in the majority of contemporary languages.

4.3. Arguments for VSO as the neutral word order in P.C.

Again, the main argument for this word order will be the availability of an explanation of how VSO could have become SVO. We will be looking thus at a mechanism which would have moved the subject from the position following the verb into the position preceding the verb.

While it is expected that in an SVO language the focus position for the object willbe the beginning of the sentence, it is not obvious that this should also be the focus position for the subject. And yet this is exactly the case for most of the languages examined (those described in 4.2. are exceptions).

The subject is usually focused by putting a particle after it. Hausa is in this respect a typical language, e.g.,

14. nii nèe na tàfi — It is me who went

15. ɗaanaa nèe ya kaawoo làabaarii — It was my son who brought the news (Kraft & Kraft 1973:358).

The information provided by the constituent in focus denies an assumed presupposition of the hearer and provides instead the 'correct' information, which is always new information. This conception of the focus function is not always explicitly stated in the consulted descriptions of Chadic languages. It is nevertheless supported by the translation of the examples to be found in the descriptions. Thus, in Musgu:

16. a sá-a mbày ɗà tôní — c'est lui qui m'a donné le manioc

17. à yîmà-ŋ ɗà àtəŋ bárú — c'est la variole qui l'a attrapé (Meyer-Bahlburg 1972:195).

In most of the languages that have the VSO neutral order, subject preposing is used for subject focusing. Compare the following examples from Lamang, Gude, Ga'anda and Hona.

18. Tuwake mbəɗəb t ogo — A sheep changed into a goat (Wolff 1980:72)

vs. neutral:

19. mbəɗəb tuwak (ta) ogo.

-e is the focus marker and ta is the object marker whenever the identity of arguments is in doubt. The neutral sentence is a presumed form, confirmed by E. Wolff (personal communication).

Gude: In a neutral construction, the subject is marked by the preposition ne and the object is marked by the preposition tə. When the subject is focused it precedes the verb and occurs without the preposition. Compare (20.a) neutral, and (20.b) with the subject focused:

20.a) agi bələ-nə nə John tə bwaya endzii — John is killing a leopard now.
Aspect kill J. leopard now

b) John ci a-bələ bwaya əndzii — John is killing a leopard now.
Aspect

There is also another focusing construction in Gude, in which the subject, which is also proposed, is followed by the postposition ne. (Examples and analysis from Hoskinson 1975:228).

Ga'anda and Hona, which belong to the same subgroup of the Biu-Mandara branch, appear to have a split system in which both word orders are allowed. Thus, in the progressive and future tenses, the neutral word order is SVO, while in the Past tense, the neutral word order is VSO. Ga'anda (R. Newman 1972:69-71):

SVO

21. ngət ce awun pukomnda sə tə xafta — I am shooting a rabbit for you with an arrow
I shoot you rabbit for with arrow

22. na wat-an 'yə + i + ta kaɗə kə xeera — The fire will burn me on the hand
Fut the fire burn me away on hand

VSO

23. tləf + incə ndə kə inda — I hit him on the head.
Perf hit I him on head

The emphatic construction in Ga'anda differs from the neutral construction in having the emphasized element at the front of the sentence, e.g.:

24. ϕ xiy- incə cemscə cap → ngət ϕ xiy-cə cemscə cap
aor buy I chicken two I aor buy rel chicken two
= 'I bought two chickens' (analysis and examples from R. Newman 1972:131).

The focusing mechanism in Hona consists of putting the subject at the beginning of the sentence and marking it with the particle ni. Compare the following sentences (in broad phonetic transcription, from my field notes):

25. wúɗ íyâ á hûkâsúɗ — my mother returned to the market
return mother loc. market

26. íyáaní wúɗə á hûkâsúɗ — it is my mother who returned to the market.

Hona also has subject fronting without any implied focus. The alternative, with fronted subject in the past tense, was given without any additional semantic interpretation. Thus, 25 had an alternative:

27. íyâ wuɗ hûkâsûɗ — my mother returned to the market.

Compare also the following pairs each apparently having the same meaning:

28. fànâŋ núnâ wánâ — my wife washed my child
wash my wife child

29. núunâ fánánd wánâ — my wife washed my child

30. ngwâlân pàshín-nâ tlú-díyâ — my friend finished the meat
finish friend mine meat-Def

31. pàshín-nâ ngwâlân tlú-díyâ — my friend finished the meat.

The importance of the data from Hona rests in the fact that one may have the subject in the front of the sentence, without any additional marker and without any implication of it being in focus. Hona, thus, presents an intermediate stage between a language that has VSO order in the neutral sentence, and SVO in the focused construction, and a language in which SVO has become the neutral construction. This intermediate stage, however, is consistent with either direction of change, viz., from SVO to VSO or from VSO to SVO.

There is only one VSO language in which the reported focus position for the subject (and for all other arguments) is not sentence initial. According to Jarvis (1981), Padoko, which she analyses as a VSO language, has two possible word orders. One is VSO, the only possible order in the tense which she calls Monologue Perfective, the tense that occurs in narrative. The other order is VOS, and it occurs in the Dialogue Perfective and in the Imperfective. According to Jarvis, there is no possibility of focusing a constituent through a change of word order in the Monologue Perfective, i.e., the VSO order cannot be disturbed. No means for focusing a constituent in the Monologue Perfective are described.

In the Dialogue Perfective and in the Imperfective, the focus position is the one following the verb. Since Jarvis says that in the Dialogue Perfective and in the Imperfective the VSO order is also possible (no examples given, however) it would appear that, in many cases, there is no distinction between focused and nonfocused subjects. Compare the following sentence, given as an example of a focused subject in Dialogue Perfective:

32. a təla mala — my mother cooked it.
cook mother my

The evidence that the above sentence is an example of a focused construction is provided solely by the fact that it is a response to a question,

33. A təla wa sləβə ma — Who cooked the meat?
cook who meat int.

It is important to note that the function of this 'focus' construction is radically different from that of the other 'focus' constructions described previously for other languages.

In the case of Padoko, we are dealing with the position of arguments in the answer to a question; in the case of other Chadic languages, we are dealing with contrastive emphasis. The structures are not only different in form, but also have different functions. Whatever the function of the constructions described as 'focus' in Padoko, the movement rules that are involved are V S O → V O S resulting from the movement of object.

There are, however, in Padoko examples of the SVO word order in "conclusion sentences at the end of paragraph and in purpose clauses, both with a special subject pronoun", e.g. (Jarvis, 1981):

34. Ngaye təla sləβa — And so I cooked the meat
I meat

35. A taka yə te sləβə la — I was not cooking the meat.
I cook meat not

It appears, therefore, that there must have been some movement rules in Padoko which moved the subject from the

position after the verb to the position preceding the verb. Although the amount of material available on Padoko does not allow us to state what these rules were, it appears that the data in Padoko do not contradict the hypothesis about the change from VSO to SVO neutral word order.

When, in a VSO language, an argument is moved into the front position, there is really no way to determine its semantic role, for both subject and object can be focused in this way. Therefore, one would expect there to be some other means, apart from the word order, for indicating the role of the arguments whenever the word order is disturbed. In the consistently VSO languages, Lamang, Gude and Glavda, such markers do occur. Thus, in Lamang and Gude, the direct object is marked by a preposition tV. In Glavda it is marked by a preposition ka, which also marks the indirect object.

If one were to take the situation in these languages as similar to the one that occurred in P.C. one would expect to find some traces of these additional markers in some presently non-VSO languages. The redundant syntactic relations markers listed in Chart I could be taken to constitute such traces. In particular, the widespread use of the preposition tV to mark the direct nominal object with some verbs in Fyer, before pronominal object in a number of West Chadic languages, such as Scha, Kulere, Fyer, and some Biu-Mandara languages, such as Tera, is evidence of an earlier system of marking syntactic relations. When the order was changed to SVO, the function of these markers became redundant, and they have been preserved only as lexical characteristics of some verbs. The above is the first explanation for the redundant markers that has been offered either for a single language or for comparative Chadic.

Tone and/or final vowel changes on the verb may be also taken to be old markers of syntactic relations markers, whose functional load became insignificant after the changes in word order were completed. There is no lack of evidence that the tonal/vowel changes in the verb were involved in marking syntactic relations. Among the present VSO languages, only Dghwede uses tone differences in verbs to mark the role of the following argument.

We thus have in most VSO languages a construction that may give rise to an SVO syntax, viz., the focusing construction. Note that in the SVO languages no construction that would have given VSO word order could be found. The presence of the SVO order in focus constructions is not, however, in itself, an explanation of why this order became the neutral word order for most Chadic languages. Although one can conclude that there must have been a reanalysis of order from 'emphatic' into 'neutral', we do not have an explanation of why such a reanalysis occurred if indeed this was the reason for the change. One such reason may be the fact that the construction occurs frequently in the language with the effect that new generations of speakers would consider it to be basic, and hence neutral. There are no well documented cases in which the mere frequency of occurrence would have been the cause of reanalysis.

When a construction X has a semantic function Y, for it not to be interpreted as a marker of this semantic function there must be some other reason besides the mere fact that the construction occurs frequently. One such reason may be the existence of another construction in the language, formally similar to the construction X but not having the semantic function Y.

There appears to be more than one construction in Chadic languages which not only could have motivated the required reanalysis, but in itself could have caused a change from the VSO to the SVO word order. These constructions are the structures involved in the formation of the future tense, progressive aspect/tense, and possibly some other non-past tenses.

In more than one Chadic language the future tense is formed through the use of a form of the verb meaning 'to go'. The progressive is often formed through the use of the verb meaning 'to be', 'to sit', etc. In this type of construction the verb 'to go' or 'to be' is the main verb and whatever follows it is its complement, which is another verb with or without its own complement. We have, therefore, the following structure for the future or progressive tense in the VSO languages:

verb	subject	verb	(subject)	object
[go/be]				

The second occurrence of the term subject is in parentheses, for it is not altogether clear that this subject must occur, since it already occurs after the verb 'to go'. So we already have the object following the verb in what is obviously, semantically, the main clause. The verb 'to go' very soon is not perceived as a verb anymore, but rather as an auxiliary and eventually as a grammatical morpheme indicating future. And thus we have a situation in which the order of elements becomes Fut-subject-verb-object. This scenario of events involving the future tense is not inconsistent with the scenario described earlier in which the change of word order was seen to come about via the focusing process. Instead, each process reinforces the tendency toward word order change presented by the other process. The justification for the two processes contributing to the change of word order is the following: the subject in the VSO neutral word order is moved to the front of the sentence for focusing. The construction indicating the future tense also has the subject before the main verb , i.e. in the same position as in the focusing construction, and yet it does not serve a focus function. The presence of the same word order, once to indicate that the subject is in focus, and in another context, without this indication, affects the reanalysis of the word order in question from marked to the unmarked. In this way, what was a marked word order, indicating an element in focus, becomes a neutral word order.

Do we have evidence that indeed the future tense was formed with the verb 'to go'? A random check of three branches of Chadic shows that in each branch there are languages whose future tense marker is etymologically related to the verb meaning 'to go'. The best known Chadic language, Hausa, has it in the form of the marker za, which is agreed to be related to zoo, jɛ "to come, go" (cf. Newman and Schuh 1974). A similar situation exists in a number of other Chadic languages.Although it is not impossible that a number of Chadic languages developed the future form simultaneously through the use of the verb 'to go', that does not rule out the possibility that the same construction was used in P.C.

Chart II presents the result of the random check of indivi-

dual languages to determine whether or not the verb 'to go' is used to form the future tense.

Chart II

	Fut	'go'
Hausa	zaa-	zo, je, za
Angas	met	met
	(before sentential objects only)	
Ngizim	ya	ya
Mandara	da	d-
Daba	va-ka	va
Logone	l	ul
	(sporadic)	
Musgu	ga	ga
Dangla	aa	daa?

It appears that the progressive tense was also formed through the use of an 'auxiliary' verb such as 'to be', 'to stay', etc. and it could also have contributed to change of word order, in essentially the same way as the future tense formation.

The hypotheses concerning the formation of the future tense and VSO word order in P.C. also contribute to the explanation of some of the unusual facts in contemporary Chadic languages. To take just one: the form of the future marker in Hausa. Unlike the other tense and aspect markers, the future is formed through suffixing, rather than prefixing, of pronouns to the tense marker. The question why this should be so has puzzled a number of Hausa scholars, and a number of interpretations for this fact have been proposed.

Newman and Schuh 1974 reject the Parsons 1960/61 analysis of the future tense formation through the suffixation of subject pronouns to the verb 'to go'. They also reject Gouffé's analysis of 1967/68 in which the pronouns are treated as object pronouns. Instead they propose that the unusual form of the future tense formation is due to the suffixation of Intransitive Copy Pronouns. However, in Frajzyngier 1977 it has been shown that the so-called Intransitive Copy Pronouns are not syntactic devices devoid of semantic function. Whenever they occur in Chadic languages, the sentence has a very specific meaning, most often indicating a sudden change of state, the

beginning of an action, etc. While the ICPs occur sporadically in Hausa, and in very specific environments, Newman and Schuh would have them occurring regularly after the verb 'to go' when it serves as the marker of the future.

There is no reason, at least Newman and Schuh do not give one, for which a marked construction were to be frozen and used as a future marker. Instead of this proposal by Newman and Schuh, I believe that it is simpler to consider the future tense formation as an instance of the preservation of the old word order, in which the unmarked construction consisted of the verb (in this case 'go') and the following subject pronoun. What has been frozen is not a marked construction with the Intransitive Copy Pronoun, but rather the syntax of the neutral sentence, in which the subject followed the verb.

5. Conclusions

We have attempted to reconstruct the system for differentiating between subject and object in P.C. Three devices were taken into consideration: (1) the marking of syntactic relations on verbs; (2) the use of prepositions; and (3) word order. In those languages in which they are used, the first two devices are used sporadically and, in most cases, redundantly. Only word order has the non-redundant function of differentiation between the subject and the object of a transitive verb.

There are two word orders used in contemporary Chadic languages: SVO and VSO the first one being the most frequent. Two hypotheses concerning P.C. word order were examined: first, that the neutral word order in P.C. was SVO, and that it eventually has become VSO in some languages; and second, that the neutral word order in P.C. was VSO and that it eventually became SVO in the majority of the contemporary languages, presumably via the changes in immediate descendents from P.C. In no Chadic language could a mechanism be found for effecting the change from SVO to VSO. The only alternate word order in SVO languages is VOS. With respect to the second hypothesis, there were at least two mechanisms that could bring about an SVO word order from VSO.

These mechanisms are subject focusing by fronting and the future (and possibly progressive) tense construction. In the

latter, the verb meaning 'to go', followed by its subject, occurs at the beginning of the sentence. The lexical meaning of the verb comes in time to be replaced by its grammatical function, and we thus have a situation in which what was once the subject of the preceding verb becomes the subject of the following verb, producing the word order SVO.

In view of the fact that there is no mechanism to explain the change from SVO to VSO, and that there are at least two mechanisms to explain the change from VSO to SVO, the hypothesis that the neutral word order in P.C. was VSO seems to be preferable to the hypothesis that it was SVO.

The VSO hypothesis helps to explain the presence of the now redundant direct object markers in a number of contemporary languages. The VSO hypothesis also explains the unusual sequence of morphemes in the future tense formation in Hausa.

Notes

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None of the many people who helped in one way or another is responsible for the reasoning or conclusions contained in this paper, to say nothing about the errors of analysis. Those are my sole responsibility.

2. Analysis and terminology from Parsons 1960. For alternative analyses of the verb-final vowel in Hausa and other Chadic languages, see Newman 1975 and Frajzyngier (in press, c).

3. The following are the sources used for this Chart and for Chart II to follow later in the text: Hausa: Parsons 1960; Galambu, Gera, Kirfi: Schuh 1978; Fyer, Kulere: Jungraithmayr 1970; Glavda: Rapp 1966; Dghwede: Frick 1978; Gisiga: Lukas 1970; Bachama: Carnochan 1970; Gude: Hoskinson 1975; Logone: Lukas 1936; Lamang: Wolff 1980 and personal communication; Dangla: Ebobissé 1979; Angas: Burquest 1973; Ngizim: Schuh 1971; - Mandara: Mirt 1969/70; Daba: Mouchet 1967; Mokulu: Lukas 1977.

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ON MONO- AND TRIRADICALITY IN EARLY AND PRESENT-DAY CHADIC
- How reliable are reconstructions? -*

1. In *general*, Chadic languages are viewed as mainly belonging to the biradical (diconsonantal) structure type. Consequently, triradicality is considered to be most atypical for this southwestern branch of Hamitosemitic. Cp. the following statement (Newman 1977a:20):

> "The general appearance of the PC [Proto-Chadic] reconstructions is very much in line with our usual impressions of Chadic languages. For example, we find diconsonantal words to be the norm, monoconsonantal words to be less numerous but still quite common (but mostly with verbs and function words), and triconsonantal words to be rare and limited almost exclusively to nouns."

2. Accordingly the percentage of *triradical roots* (nominal and verbal) reconstructed in Newman's PC (1977a) lies under 10, i.e. 8.66%; for verbs only it is even lower still: out of 64 reconstructed verbal roots only 2 - namely *səwnə 'to dream' and *gamsə 'to laugh' - are shown to have three radicals, i.e. just over 3%.

3. The real *evidence* in a number of present-day languages - at least as far as the verb is concerned - is quite different, even contrary to the above-mentioned general