INTERROGATIVE SENTENCES IN CHADIC: RECONSTRUCTION AND FUNCTIONAL EXPLANATION

Zygmunt Frajzyngier
University of Colorado

Two types of interrogative sentences are reconstructed for Proto-Chadic. Yes/no questions are marked by tonal changes and/or by a locative copula at the end of the sentence. Specific wh-questions are marked by a demonstrative pronoun at the end of the sentence. The contemporary question words are derived from indefinite words. In Proto-Chadic their role is to indicate which argument of the proposition the question is about.

The paper introduces one theoretical and one methodological innovation. The theoretical innovation consists of postulating the functional reconstruction as a proper object of syntactic reconstruction. The methodological innovation consists of taking into consideration innovations as reliable evidence in syntactic reconstruction.

L'étude tente de reconstruir deux types de phrases interrogatives dans le proto-tchadique: les questions concernant la vérité et les questions concernant des éléments spécifiques de l'énoncé. Les questions concernant la vérité sont formées en moyen d'un changement tonal et de la copule locative à la fin de la phrase. Les questions spécifiques sont formées par un pronom demonstratif placé à la fin de la phrase. Le role des mots interrogatifs, qui sont à l'origine des mots indefinis est d'indiquer l'élément de la phrase sur lequel porte la question.

L'étude montre qu'une reconstruction fonctionelle de la syntaxe est possible et préferable à une reconstruction formelle. Du point de vue methodologique il semble que les innovations puissent avoir autant de valeur dans la reconstruction que les éléments archaiques.

0. INTRODUCTION

There are two interconnected aims of the present study. The first one is to attempt a reconstruction of the form of interrogative sentences in Proto-Chadic. The second is to provide a synchronic and diachronic explanation for several hitherto unnoticed and unexplained facts concerning the form of these sentences in contemporary Chadic languages. This explanation is an example of advantages offered by looking at language as a system whose parts have well-defined communicative functions.

While any scientific work is subject to modification, rejection, or confirmation through the use of different theories or analytic techniques, a work on reconstruction of Chadic is additionally subject to change when new data become available. The present investigation is based on descriptions of and field notes on some thirty languages out of an estimated one hundred and forty Chadic languages.[1] There is, however, a pattern emerging from the present investigation that is not likely to be affected by any new data.

The paper deals with questions concerning truth (in English the so-called yes/no questions) and specific questions, that is, questions relating to a certain element of a proposition (in English the wh-questions). Some elements related to this subject have been touched upon in Schuh 1971 and more recently in Newman and Newman 1981. The scope of the present paper is much larger than the scope of either of the preceding works. It differs from Schuh (1971) in considering a much larger body of data and in providing historical reconstruction and functional explanations for the interrogative sentences. It differs from Newman and Newman (1981) in proposing a different reconstruction and in providing evidence for it and also in offering functional explanations totally missing from both works.

The rest of the paper is divided into the following sections: synchronic picture, formal reconstruction, functional explanation, and implications for the methodology of historical reconstruction and theory of language.

1. SYNCHRONIC PICTURE

Synchronic data are presented in Charts 1-4 for four groups of languages: West Chadic, Biu-Mandana, East Chadic, and Masa. The following conventions are used in the charts. For yes/no questions only two devices are included in the charts: tone and sentence final markers. The tone column indicates that the yes/no question is marked by tone alone or in conjunction with some other device. For specific questions the charts include information on "who" and "what" questions and sentence final markers, which often co-occur with other devices.

Language	yes/no question		Specific question		
	Tone	S-final	who	what	S-final
Hausa	H	length ko	wa	me	
Kanakuru	H	-ru -kwa	mandai	mindai	
Pero	H	-a dee	non	ni	-á
Bole					
Angas		-a	we	me	é
Mapun		-a	wa		yi
Sura		-a	awe	ame	ye

Fyer			ewa(m.) iwa(f.)		kwa
Ngizim			tài	tàam	
Pa'anci	H	wa	asa	mišii	na

Comment: In Hausa sentence final vowel is lengthened i - interrogatives.

Chart 1. West Chadic

Language	yes/no question	Specific question			
	Tone	S-final	who	what	S-final
Ga'anda		wa	wuni	mi	
Tera	Tone	mú	ki	nim	na
		yà			a
	(asking for comfirmation)				kwa
Cibak		yà	wa		
Margi	H	yà	wa	mi	ra
		rà			ri
		(emph.)			(emph.)
Kapsiki		yi wú	wa nde	wa	wa
Padoko		nana	wa	tawi	na
Lamang		re	we (wa ya)	ne (nuwa ya)	ne
Mandara			ware	uwe	
Gisiga		kwa	wa	me	ka(ke)
Mofu-Gudur		dà	wa	me	
Daba		vu	yi	mi	yi
Bachama		yò à	weno	muno	
Gude		a kwa nii	wu	mi	a kwa
Buduma		ba a	wo-ni	mi-ni	
Logone		'da ra	bake (only after "why")	xwani	ne
Mulwi		'dí	siya	ma	'da

Comments: Tera ya is used in questions asking for confirmation. Margi ra and ri and Gisigan ka are used in emphatic questions.

Logone **ne** is used after questions asking "why."

Chart 2. Biu-Mandara

Language	yes/no question	Specific question		
	Tone	S-final	who	what	S-final
Somrai		**mo**			
Kera		**mo**	**minti**	**ma**	**mo**
Dangla			**we**	**me**	

Chart 3. East Chadic

Language	yes/no question	Specific question		
	Tone	S-final	who	what	S-final
Masa		**su**	**gige**	**mige**	
Mesme		**su**			
Zime		**su**	**sa/sasa**		

Chart 4. Masa

The data in Charts 1-4 show the following regularities: the yes/no questions are formed through either tonal modifications of the sentence or addition of a sentence final interrogative particle (i-particle). For example, in Kanakuru:

(1) **gáawì à 'dìktè-ni** [‾_ _ _‾] 'Is the room built?'

cf. **gáawì à 'dìktè-ni** [‾_ _ _‾] 'The room is built.'

Although the tonal structure of affirmative and interrogative is the same, the last high tone in the interrogative ˋ is higher than the last high tone in the affirmative sentence.

(2) **Adáamù à nà nè rú** 'Did Adamu call me?'
cf. **Adáamù à nà né** 'Adamu called me' (Newman 1974:70)

Note that in many languages from different families it is possible to ask a yes/no question and at the same time to narrow the scope of the question from the whole proposition to only a part of it. Consider the following example in Polish:

(3) **Czy tygrysy lubią oset?** 'Do the tigers like thistle?'

If a heavy stress is added to any element of the proposition in (3) it will limit the scope of the question to the stressed element, either the verb, the subject, or the object of the sentence. No information about devices to narrow the scope of the interrogative is available for any of the Chadic languages, although it is difficult to imagine such devices not being available.

The specific questions are formed through the use of "question words" (q-words) and in some languages addition of an i-particle at the end of a sentence.

Note that the specific questions in Charts 1-4 have been labeled as "who" and "what." As in English the two q-words in Chadic encode the semantic distinction between the [+human] and [-human], that

the semantic distinction between the [+human] and [-human], that is, the rest of the vocabulary. The q-words in Chadic, however, never encode the grammatical role, unlike English and most other Indo-European languages (e.g., English **who/whom** or Russian **kto/kogo**). If a language is to encode the semantic role of the arguments in a sentence, it must have some other means to do so. In most Chadic languages the semantic role of arguments in the interrogative sentences is encoded in the same way as in the affirmative sentences (cf. Frajzyngier 1983), that is, by the position of the q-word with respect to the verb. Question words occupy the same position that the non-q-words occupy in the affirmative sentence. Note these Kera examples from Ebert (1079:224ff.).

(4) **Agèlèem lítán mintí mó?** 'Whom did Agele hit?'
cf. (**A. lítan**) **nɨwri** 'Agele hit your sister.'

(5) **A áyá n kúsúkí n á mintí mó?** 'To whom did she give meat?'
cf. (**A áyá n kúsúkí n**) **á hɨ̀lgɨn**. '(She gave the meat) to the woman.'

(6) **A bìn dì mintí mó?** 'With whom did they come?'
cf. (**A bìn**) **dì šeená.** 'They came with their brother.'

The above examples are typical for the majority of languages. There are, however, in each branch, several exceptions to this generalization:

In the West Chadic group Kanakuru q-words can be fronted for emphasis (Newman 1974). In Ngizim q-words relating to subject are in S-final position.

In the Biu-Mandara group a Kapsiki q-word relating to the object is fronted and in Padoko all q-words occur in the focus position, the position after the verb. In Daba a q-word for the subject is fronted and a q-word for the object is in the S-final position. In Logone all q-words are sentence final and in Gude they are all fronted.

In Masa, all q-words except for those related to subject are in S-final position. I have no relevant data for other languages of the Masa group.

The questions about arguments other than subject and object, that is, questions about benefactive, instrumental, locative, etc., differ from the questions about subject and object in the form of the q-words and in the presence of the markers of the grammatical or semantic role. These markers are again the same as in the affirmative sentence; they consist of the same prepositions and they are marked by the same position in the sentence. For example, in Pa'anci:

(7) **mɨna cin sona**
we+cont. go where

'Where are we going?' (Skinner 1979:88)
cf. **mi cin 'hwocu Kano suu**
we+subj we+go go Kano tomorrow

'We will go to Kano tomorrow' (ibid., 42)

(8) **ú dava kaacɨnà**
you+compl came when

'When did you come?' (ibid., 88)

2. FORMAL RECONSTRUCTION

2.1 YES/NO QUESTIONS

2.11 The structure of the yes/no question

The general form of the yes/no question in Proto-Chadic can be reconstructed as consisting of S+ i-particle/tone. There are no other forms of the yes/no questions in contemporary Chadic languages, and therefore there is no reason to postulate any other form as a candidate for Proto-Chadic. The postulated structure, however, occurs in many languages from three branches of Chadic.

2.1.2 The yes/no i-particle

Newman and Newman 1981 postulate, without providing any evidence, that Chadic had a yes/no question marker ***à**, (i.e., a marker consisting of a vowel and a low tone). Although, indeed, [**a**] is a frequent component of the yes/no question markers, one has to note that it occurs with some frequency in two branches only, namely, West Chadic and Biu-Mandara. It certainly can be reconstructed as an interrogative marker (i-marker) for the yes/no questions. But a closer look at Charts 1-4 given earlier will indicate that perhaps **a** was not the only i-marker for these questions. In particular, note that in the West Chadic language, Pero, and in two languages of the Biu-Mandara branch, the i-marker has an initial **'d**. Note also that in two branches there is a yes/no i-marker with initial **mV** (Tera in Biu-Mandara, Kera and Somrai in East Chadic). Instead of the Newman and Newman reconstruction of just one yes/no i-marker it appears unavoidable to reconstruct several i-markers, only one of which will be /**a**/.

The most widespread device to distinguish between affirmative and interrogative sentences in Chadic is the use of tone. Virtually all languages for which data are available can mark the interrogative by tonal changes only. Note the Kanakuru example (1) (repeated here for convenience) in which the last high tone of interrogative is considerably higher than the last tone of affirmative sentence:

(9) **gáawì à 'dìktè-ni** [¯___¯] 'Is the room built?'
cf. **gáawì à 'dìktè-ni** [¯___¯] 'The room is built.'

This contradicts the claim of Newman and Newman that tone was a part of the q-morpheme whose other part was [**a**]. Unfortunately, for languages other than Hausa, the information about the tonal

differences is not very precise (with the notable exception of Leben, in press). Most authors indicate that the final tone, or sometimes the last high tone, becomes higher than in the affirmative sentence. The existing descriptions offer no information about the differentiation between the functions of tone and the functions of other markers. Note, however, that it is often the case in other languages that intonation is an interrogative marker that may be used alone or in conjunction with some other syntactic or morphological devices (cf. Ultan 1978).

With respect to the reconstructable marker ***'dV**, it appears that it had a narrower meaning than /**a**/. In Pero it forms an incredulous question, in Margi it forms an "urgent" question, and in Tera, a negative sentence question. The information concerning the functions of the marker /**mV**/ is very scanty. Note, however, that in Tera and Somrai it is the principal yes/no i-particle. There is some problem concerning the widespread marker **ko** or **kwa**. The number of branches and languages in which it occurs make it an excellent candidate for a Proto-Chadic i-marker. It is, however, also one of the i-markers in Hausa, a vehicular language in Northern Nigeria and a second language for many speakers of other Chadic languages. That makes it entirely possible that the widespread use of **ko** or **kwa** may be due to borrowing from Hausa rather than to retention from Proto-Chadic. A careful look at Charts 1-4 indicates that **ko/kwa** is not used in languages whose speakers usually do not know Hausa, that is, Chadic languages spoken in the Cameroon or Chad, such as Padoko, Mofu-Gudur, Daba, Buduma, Mulwi, Kera and all languages of the Masa group. Even in languages in which **ko** is used it appears to be used along with other markers. Thus in Mapun it is used along with the i-particle **a** in yes/no questions.

2.2 Q-WORD QUESTION

2.2.1 The structure of the specific interrogative in Proto-Chadic

In most of the languages from three branches the q-word occupies the same position as its noninterrogative counterpart. In addition there is an i-particle occurring at the end of the sentence. Since it is unlikely that such a specific construction emerged as a result of independent innovation, it is necessary to postulate it as a construction that represents a common retention from Proto-Chadic. Since Proto-Chadic had the word order VS (for the discussion and documentation in support of this hypothesis see Frajzyngier 1983) I would like to postulate that the specific interrogative sentence in Proto-Chadic had the form:

V (NPi.....NP) i-particle

Any of the NPs, or an adverb, could have been replaced by an appropriate q-word. Languages in which the q-word is at the beginning or the end of a sentence represent innovations in syntactic structures. Such innovations could have been motivated by the rules of focusing, which in Chadic languages most often involve displacement of the focused element (cf. Frajzyngier 1983).

2.2.2 Reconstruction of the q-words

The evidence provided by the Charts 1-4 leaves little doubt that the Proto-Chadic equivalent of "who" was ***wa**. A number of languages have innovated either by replacing ***wa** by some other morpheme or by adding to it some markers. Thus Pero has **non**, Kanakaru has **man-dai**, Ngizim has **tà-i**, Tera has **ki**. I will have more to say about some of these innovations later in the paper.

There is even stronger evidence that the Proto-Chadic equivalent of "what" was ***mi**. The evidence for the vowel is provided by the fact that the vowels of the contemporary markers are [**i**], [**e**], and shwa. The number of innovations for this q-word is much smaller than the number of innovations that replaced ***wa**. One of the most puzzling facts is that in a number of languages, (viz., Pero, Lamang, and Logone) instead of the initial [**m**] there is [**n**]. I do not have any explanation to offer for this difference.

2.2.3 The specific i-particle

Newman and Newman 1981 postulate that the specific i-particle was ***ya**. They do not, however, provide any justification for this claim, to say nothing about evidence. A look at Charts 1-4 clearly shows that out of several possibilities for the Proto-Chadic specific i-marker, ***ya** is not a very likely candidate.

The most frequent component of the specific i-particle is the alveolar nasal [**n**]. Thus Pa'anci in West Chadic, and Tera and Padoko in Biu-Mandara have the specific i-particle [**na**]; Lamang has [**ne**] and Margi has [**r**]. Recall, however, that according to Newman and Ma 1966 and Newman 1977 the Margi [**r**] quite frequently corresponds to [**n**] in other Chadic languages. It would appear therefore that ***na** is a more likely candidate than ***ya** for the specific i-particle. Several particles that occur in other languages, such as **e/yi/ye** in the Angas group, **ka/ke** in Mofu-Gudur, **'da** in Mulwi, and **mo** in Kera would have to be considered innovations. Thus in Kera the specific i-particle is identical with the yes/no i-particle.

There is also a frequent interrogative particle of the form **-kV**. This particle, however, cannot be considered a likely candidate for reconstruction for reason explained earlier.

2.3 SUMMARY OF RECONSTRUCTION

2.3.1 The yes/no questions

For the yes/no question for Proto-Chadic we will reconstruct the following structure: S--i-marker. There were at least three different i-markers:

1. The tonal marker, most probably raising of the last high tone or a high tone on the last syllable.
2. The marker ***a**.
3. The marker ***'dV**.

It appears that the first two were the most general markers, both indicating just a yes/no question. It is possible, however,

that there used to be a functional differentiation between the two, which cannot be reconstructed.

The third marker had a much more narrow function than the preceding markers, perhaps that of indicating an incredulous question.

2.4 THE SPECIFIC QUESTION

The specific question had the following form:

V (Argument [i]...Argument [j]) **na**

And any of the arguments in the sentence could have been replaced by an appropriate q-word.

At this point a traditional reconstruction usually ends. It is, however, quite obvious that such a reconstruction does not contribute to the knowledge of language universals or to the methodology of historical reconstruction and is not illuminating with respect to any possible connections among the various elements of the language structure. Note that it did not pose a single "why" question. As the next section will show, the "why" questions are much more interesting and reveal much more about language structure than traditional reconstruction and at the same time contribute to the knowledge of language change.

3. FUNCTIONAL EXPLANATION

In this section I propose to ask a few questions and in a few cases provide answers, some of them admittedly speculative, concerning the syntax of the interrogative in Proto-Chadic and contemporary Chadic languages.

3.1 WHERE DOES THE SPECIFIC I-PARTICLE COME FROM?

There is always a possibility that a given grammatical morpheme will have only one function, and the question about the origin of the morpheme may not be answered. A close look at the specific i-particles reveals, however, that they are very similar to the markers that in many Chadic languages are associated with the demonstrative/definite function. Thus, many languages have **ni** or **na** as the masculine demonstrative or definite marker. Pa'anci provides excellent evidence for the proposed hypothesis because it actually has two forms of the specific i-particle, **na** and **ya**, the first corresponding to the masculine predicative particle and the second, to the feminine predicative particle. In Tera the demonstrative "this" is **na**, in Logone the demonstrative is **ne**. The best evidence comes from languages that innovated: In Margi one of the specific i-particles is **rì**, and there is a definite marker **ari**. In Mulwi the specific i-particle **'da** is also a definite marker.

Since it has been shown that the specific i-particle is etymologically connected with a demonstrative pronoun, one may ask whether the demonstrative pronoun is derived from the i-particle or the i-particle derives from the demonstrative. It is more likely that the development was from demonstrative to the i-particle rather than the other way around. Note that demonstrative markers are cognate among most Chadic languages, while the interrogative

words are not. It is necessary to ask why a demonstrative pronoun and not some other marker came to be used in the interrogative sentences. As an answer to this question I would like to propose that the demonstrative at the end of interrogative sentences functions as a copula, and the whole interrogative sentence has actually the form S-Be, regardless of how S was realized and what were the language-particular equivalents of the verb "to be." It has been know to Semitists for at least sixty years (cf. Cohen 1924) that copulas may develop from pronominal forms. Li and Thompson 1977 have shown it to be a much more widespread phenomenon. The definite marker serves as a copula in Basque (cf. Lafitte 1944 and Frajzyngier in press.) Schuh 1983 has demonstrated such development in one Chadic language, Kilba, and claimed it for Hausa as well.

Thus such development is entirely possible. The marker of interrogative is, however not the copula by itself but, primarily, its place at the end of the sentence. Most Chadic languages are SVO, but as it has been shown in Frajzyngier 1983 they have developed from a Proto-Chadic VSO order. For Proto-Chadic and the majority of contemporary languages, the verb's occurrence in sentence final position is a highly marked phenomenon. It is, however, entirely appropriate for interrogative sentences to have a word order different from affirmative sentences as one of the devices to mark the interrogative function.

3.2 THE YES/NO I-PARTICLE

After considering where the specific i-particles come from, it may be tempting to speculate about the possible origin of the yes/no i-particle. The natural hypothesis would be that the yes/no i-particle is also a copula. For a few languages we have easily accessible evidence that this is indeed the case. Thus in Mulwi 'di is also a definite pronoun, and in languages of the Angas group **a** serves as a copula. For example, in Mapun:

(10a) **à wúr à mískòm mòpún** 'He is the chief of Mapun.'
cop 3sg cop chief Mapun

(10b) **sím wùr a dèvid** 'His name is David.'
name 3sg cop David

For other languages the evidence is, however, not so easily available. I would like to propose that the reconstructed yes/no i-particle ***a** derives from the copula ***a**, which used to exist in Proto-Chadic. This hypothesis may appear to be implausible if one were to believe an assertion in Schuh 1983:312 that "In Chadic languages, copulas of any kind are rather rare." This assertion, however, appears to be based on rather superficial analyses of the syntax of contemporary languages.

There exists in a number of Chadic languages a locative construction typically analyzed as consisting of a preposition **a**, followed by a locative noun serving as spatial specifier, and then followed by a head noun. For example, in Hausa:

(11) **ajiye shi a kai-n gado** 'Put it on the bed' (Bargery, 1951:528)
put it prep head-gen bed

(12) **ga ni a 'daki** 'Here I am in the house' (ibid., 1)
look 1sg prep house

This type of locative phrase is more often than not a complement of the stative verbs, but it does occur with verbs of movement as well. I would like to propose that the contemporary preposition **a** occurring in a number of Chadic languages, is derived from a verb meaning "to be at" in a manner very similar to the development of **zai** and other prepositions from verbs in Chinese (cf. Li and Thompson 1981) or to the similar developments in Kwa lnaguages described in detail in Lord 1973. The development of the interrogative copula and the preposition from the locative copula ***a** were two independent processes:

Loc. copula > preposition

The yes/no i-particle would be derived at the Proto-Chadic stage from the copula, that is:

Loc. copula > i-particle

This last development occurred most probably through the process of putting the copula at the end of the sentence. The occurrence of the **a** at the end of interrogative sentences in contemporary languages constitutes one piece of evidence for the proposed hypothesis. Another piece of evidence is the fact that **a** is a copula in all languages of the Angas group (cf. example 10 above). The third and final piece of evidence is provided by languages that have innovated in form of the yes/no i-particle. In Tera one of the yes/no i-particles is **yà**, and there is in this language a locative preposition **ye**.

Typologically, the proposed hypothesis fits nicely with such languages as Chinese and most of Kwa where the locative stative construction consists of a verb, a noun phrase, and a spatial specifier, most often a postposition. The verb in these constructions eventually becomes a preposition.

For the crucial change from verb to preposition there is independent evidence in Chadic, where in Hausa the preposition **zuwa** 'toward' is derived from the verbal root **z-** 'go'.

3.3 WHY IS THERE AN I-PARTICLE IN SPECIFIC QUESTIONS?

A possible justification for the presence of the i-particle would be that it is the main carrier or marker of the interrogative function. Note, however, that according to all descriptions, the interrogative function is already carried by the q-words; therefore, the presence of the i-particle is at best redundant. In addition, if it were to be the marker of the interrogative function, one would expect the i-particles in yes/no questions and in specific questions to be identical. But this is not the case. Only a few languages have identical i-particles, namely Kera **no**, Pero and Gude **a**. Thus the answer proposed above has to be rejected. Another possible answer is that specific questions were formed by

analogy to yes/no questions. This answer has to be rejected as well, and for the same reason as the previous answer. If the i-particle in specific questions were the result of analogy one would expect this i-particle to be identical with the yes/no i-particle.

In lieu of the above unsatisfactory answers, I would like to propose that the i-particle was the main, if not the only, carrier of the "specific" interrogative function in Proto-Chadic.

In order to provide evidence for the above hypothesis one has first to explain what the function of the q-words was, if the i-particles were to be the main carriers of the interrogative function.

For the q-words I would like to propose that their only function in interrogative sentences was to indicate which argument the question was about. This hypothesis implies, of course, that q-words did not carry the interrogative function, that is, they did not mark the sentence as interrogative. In order to prove the hypothesis about the q-words I will show that they used to have a different function in Proto-Chadic.

Note that in a number of languages from different language families there is a connection between the q-words and the indefinite words (cf. Ultan 1978). Thus in Chinese they are identical; **sheir** 'who' and **sherme** 'what' function as indefinite words as well (Chao 1968:651). In Slavic languages the two forms are very close, for example, Russian **kto** 'who' and **ktoto** 'someone'; **cto** 'what' and **ctoto** 'something'. There is some evidence that this is also the case in Chadic. The indefinite pronouns in Hausa, **wani** m., **wata** f., and **wa'dansu** pl., all contain the marker [**wa**]. In Mapun, a West Chadic language, the indefinite word is **me** 'some', similar to the reconstructed Proto-Chadic q-word for 'what'. The more important evidence for the proposed hypothesis about the meaning of the q-words comes not from languages that retained the old marker but rather from languages that innovated. In Pero the word for 'who' is **non**, which should be compared with **nen** 'person'. In Pa'anci the q-words consist of a q-marker followed by a suffix -**sV**, whose vowel is identical with the vowel of the preceding morpheme. For 'what' the q-marker is **mi**, identical with the reconstructed Proto-Chadic marker. But for 'who,' Pa'anci innovated; it has **a**. Note that **a** in Pa-anci is also the indefinite marker 'one'. The importance of this type of argument lies in the fact that even if there is an innovation in the language, in which a new phonological form replaces the old one, the new form has the same function that has been postulated for the Proto-language, a function which is not necessarily obvious in the contemporary languages. It means that for the speakers of Pa'anci the "indefinite" function was very much a part of the meaning of the q-words. When the form of the q-word is replaced by another form, it is an indefinite marker that is chosen for replacement. In a number of Chadic languages the indefinite markers seem to differ from the interrogative by the addition of another marker, for example, Logone 'who' **bá ke**, indef. **bake-ma**; Daba 'who' **yi**, indefinite **ko-yi**. This may lead some to claim that the indefinite markers are morphologically derived from the q-words. Although this

may indeed be the case in some contemporary languages it does not indicate that it was true for Proto-Chadic. Note that one cannot reconstruct the alleged marker that would derive the indefinite from the q-words. Moreover, a look at Charts 1-4 indicates that some of the q-words are also morphologically derived. Compare the following table which illustrates some of the morphemes used in derivation of "question words";

Language	Prefix	Suffix
Kanakuru		**-dai**
Mapun	**a-**	
Ngizim	**ta-**	
Pa'anci		**-sV**
Bachama		**-no**
Buduma		**-ni**
Masa		**-ge**

Chart 5. Morphemes used in question words

I have no explanation concerning the origin of these prefixes and suffixes. But it appears that they do not derive from the same Proto-form.

The above data indicate that there must have been two different developments that led to the formation of the present q-words and indefinite markers. In some languages the indefinite words became q-words without any change in form. After this functional change, the indefinite word was derived through morphological means. This is the situation in languages in which the indefinite marker seems to have been derived from the q-word.

In other languages the q-word was morphologically derived from the indefinite word. In some languages the original indefinite marker may have been lost; it would have to be derived from the q-word, as is the case in Ngizim, where the indefinite marker is **tlìke** everyone' and **tànke** 'everything' (Schuh 1972:178).

I would like to postulate that in Proto-Chadic a sentence with indefinite words but without an i-particle was affirmative, rather than interrogative. Thus a Proto-Chadic sentence with lexical items "see X q-word" actually meant "X saw someone," rather than "Whom did X see?" The specific i-particle appears therefore to be the only candidate for the main marker of the interrogative function.

4. METHODOLOGICAL AND THEORETICAL IMPLICATIONS

4.1 IMPLICATIONS FOR THE METHODOLOGY OF SYNTACTIC RECONSTRUCTION

The most important implication of the above study is the advantage that is provided by taking into consideration not only formal but also functional information. Thus, although the specific i-particles have different phonemic structure, they are all cognate through the functions they perform <u>outside</u> of interrogative sentences. The same was shown to be true for the general i-particles and the q-words. Even if one were not able to determine the phonological shape of a yes/no or specific i-particle one could

still reconstruct the interrogative sentence in Proto-Chadic in terms of the function and place of its components.

The other implication is that when one takes into consideration not the form of the morphemes but their function, the innovations become important evidence for an historical reconstruction. If one were to ignore the function of the morphemes involved, this important evidence would not be available for historical reconstruction.

4.2 THEORETICAL IMPLICATIONS

There are several possible implications of the findings in this paper for the theory of language. I will concentrate for the time being on two only: the first is the implication concerning substantial universals of the interrogative sentence structure; the second is the implication for the grammaticalization processes in languages.

4.2.1 Implications for the universals of interrogative sentences

Two elements of the interrogative sentence structure in Chadic should help in understanding interrogative sentences in other languages: one is the connection between q-words and indefinite words, and the other is the role of copula in those sentences.

Studies of Proto-Indo-European syntax and universals (e.g., Lehman 1974; Ultan 1978) are not very explicit about the historical development of the q-words and indefinite words although they all point to a connection between the two. The evidence from Chadic points clearly to a possibility that the two may be derived from the same morpheme.

Use of the copula in interrogative sentence formation is certainly a much more widespread phenomenon, but there are no studies concerning conditions under which this, rather than some other device, is used in languages. Note, however, that the use of the copula in the formation of interrogative sentences was not mentioned in Ultan's study.

4.2.2 Implications for the study of grammaticalization

By the term grammaticalization I understand encoding of certain semantic or discourse functions in the grammatical system of the language. What is of interest in this respect in Chadic is that just a few lexical morphemes, such as demonstrative pronouns and the verb "to be," are used in the creation of a very wide range of constructions, such as prepositional phrases, equational sentences, interrogative sentences, to name just a few discussed in this paper. A systematic study of the universals of grammaticalization would tell us more about the structure of the human language than the unending debates about representation of a few well-known facts.

NOTES

[1]The published sources from which the data were taken are listed in the bibliography. Data on Pero, Hona, Cibak and Mandara are from my own fieldnotes. I would like to thank Daniel Barreteau, Henry Tourneux, Ekkehard Wolff, Theda Schumann, and Mishka Sachnine for generously sharing with me their knowledge of Mofu-Gudur, Mulwi, Lamang, Masa and Zime respectively. I would also like to thank the anonymous referee of the Journal of West African Languages for many helpful suggestions, which prompted me to reconsider several statements in the paper.

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