

THE PLURAL IN CHADIC

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1. Introduction

The aim of this paper is to describe the relationship between nominal and verbal plural formations and to consider certain hypotheses concerning the nominal plural in Proto-Chadic.

One of the characteristic features in a number of Chadic languages is the identity of markers of nominal plural with the markers that indicate the frequentative, intensive form of the verb and at the same time, often, plurality of object. In this paper, these forms of the verb will be called plural verbs. The assumption in this paper is that this identity is not accidental. The number of languages in which it happens and the number of morphemes involved make any argument against accidental identity superfluous.

There are essentially three possible explanations for this type of identity. The first two involve internal borrowing, from paradigm A to paradigm B or vice versa, in this case, from verbal plural to nominal plural or from nominal plural to verbal plural. Such borrowing is plausible since the forms that are borrowed have the same semantic function, i.e. as markers of plurality. The third possibility is that there is a form, e.g. marker of plurality, which is not attached to any paradigm in

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particular and which is, as it were, used by any paradigm whenever certain semantic conditions require it. Historically this could be interpreted as the existence of a plural morpheme before the noun/verb distinction emerged in a language. Since it is impossible to check the validity of this hypothesis, I will not consider it at all in this paper, and therefore only the first two hypotheses will be examined. One of them will be rejected and the implication of this for the reconstruction of the Proto-Chadic nominal plural markers will be discussed.

The most widespread device for the formation of nominal plural is gemination of a consonant and/or reduplication of part of a stem. It will be shown that at a certain stage in the history of Chadic this was a device used only for the formation of verbal plural, and that it was subsequently borrowed to mark the nominal plural as well. The same hypothesis will be tested for another frequent marker of nominal plural, *a*, which, along with gemination, was postulated by Diakonoff (1965) to be a Proto-Afroasiatic device. These two hypotheses, if accepted, would rule out the possibility that either of the devices was a nominal plural marker in Proto-Chadic.

The third plural marker, less widespread than the previously mentioned two, involves a morpheme of the form *-Vn*. It occurs almost exclusively as a nominal marker. A hypothesis concerning the origin of this affix will be advanced and argued, and the possibility of *-Vn* being a Proto-Chadic nominal plural marker will be rejected.

In order to present and defend the hypothesis, the data on nominal and verbal plurals from the languages for which I have data will be presented. The data part begins with Pero, which does not have a nominal plural marker at all, but instead has a rich system of verbal plural markers. This is followed by an analysis of the situation in Kanakuru, a closely related language. The Kanakuru data will serve as evidence for the claimed direction of borrowing of gemination from verbal plural to nominal plural. Third, analysis of the nominal and verbal plural formations in other Chadic languages will show that the nominal plurals in those languages are a relatively recent innovation. Finally, we will turn to the discussion of the possible origin of *-Vn* and some related affixes as markers of nominal plural.

2. Pero

The following analysis of plural formation in Pero is rather lengthy for two reasons. First, it is the first presentation of the appropriate data. Second, since Pero has only the verbal plural, it is worthwhile to show how it is formed. The data from Pero will be necessary to show the connection between gemination and reduplication of a syllable, to be discussed briefly later in the paper.

There are several forms of plural for the verb in Pero. Pero verbs may be disyllabic (the largest group), trisyllabic, and monosyllabic. Theoretically, every verb should be able to have a plural form. In practice, this is not always the case, and there are some verbs for which speakers were not able to provide a plural form.

Trisyllabic verbs form the plural by doubling the consonant of the second syllable, which may be formalized by the following rule.

$$(C_1)VC_2VC_3V \rightarrow (C_1)VC_2C_2VC_3V_{[\text{plural}]}$$

| <u>Singular</u> ¹ | <u>Plural</u> | <u>Gloss</u> |
|------------------------------|-------------------|-------------------|
| úgújò | úggújò [úkkújò] | 'throw on ground' |
| lígúnò | líggúnò [líkkúnò] | 'answer' |

Monosyllabic verbs form the plural by adding a suffix *-yy-* to the verbal stem:

| | | |
|----|---------|-----------|
| cá | cá-yy-ò | 'go down' |
| cé | cé-yy-ò | 'drink' |
| cí | cí-yy-ò | 'eat' |

Disyllabic verbs with a sonorant at the onset of the second syllable form the plural by the following rule:

$$C_1V_1SV_3 \rightarrow C_1V_1C_1C_1V_2SV_3_{[\text{plural}]} \quad (S = \text{sonorant})$$

V_2 in the plural form is epenthetic. After a high front stem vowel the

¹The forms in the singular are the underlying forms of the verb; they occur in this phonological form before some of the suffixes. The plural form is found in the imperative and some other paradigmatic forms of the verb.

epenthetic vowel is -i-; elsewhere it is -u-.²

| <u>Singular</u> | <u>Plural</u> | <u>Gloss</u> |
|-----------------|---------------|--------------|
| ménò | mémúnò | 'like' |
| cínà | cíccínà | 'sleep' |
| bínà [pínà] | bíbbínà | 'wash' |
| tánù | táttúnù | 'run' |

The above group of verbs is particularly important in the present investigation since it shows that reduplication of syllable and gemination of consonant are essentially variants of the same device in Pero. The use of reduplication rather than gemination of a consonant is phonologically conditioned. It is the presence of a sonorant at the onset of the second syllable that apparently requires reduplication.

Disyllabic verbs with a sonorant at the onset of the second syllable where the first syllable has either a long vowel or a sonorant form the plural by the following rule:

$$CV_1 \left\{ \begin{array}{l} V_1 \\ S \end{array} \right\} SV_3 \rightarrow CV_1 \$ V_2 SV_3 [\text{plural}] \quad (\$ = \text{syllable boundary})$$

| | | | |
|-------|---------|-----------------------|---------------------------------|
| bíirò | bí\$írò | [pí'írò] ³ | 'make fire' |
| túulò | tú\$úlò | [tú'úlò] | 'scatter' |
| géelò | gé\$ólò | | 'incline the head' |
| káarò | ká\$óro | | 'check, examine (medically)' |
| táamò | tá\$úmò | | 'wait' |
| cúrrò | cú\$úrò | [cú'úrò] | 'fry' |
| bánnò | bá\$únò | [bá'únò] | 'look' |

Disyllabic verbs which have the structure CVCCV, i.e. those that have the first syllable closed, add either a suffix -t- → r/V__V or a

²There are similar restrictions on the form of the epenthetic vowel in Kanakuru (cf. Frajzyngier 1976).

³The \$ is phonetically realized as [ʔ] due to a general phonological rule in Pero which inserts a glottal stop before all vowel-initial syllables. The V₂ of the plural form is a copy of V₁ when V₁ is [+high]. If V₁ is [-high], the V₂ of the plural cannot be predicted at the present state of analysis.

suffix -j-. It is still possible to reconstruct the rule which governs the choice of -t- or -j-. Verbs that have an alveolar consonant as the stem final add the suffix -t-; all the other verbs in this group add the suffix -j-.

| | <u>Singular</u> | <u>Plural</u> | <u>Gloss</u> |
|-----|-----------------|---------------------|-----------------------------------|
| -t- | fúndò | fúndú-t-ò [fúndúrò] | 'cook' |
| | cóttò | cóttú-t-ò [cóttúrò] | 'wring water out of cloth' |
| | báddò | báddú-t-ò [báddúrò] | 'finish' |
| | díllò | díllú-t-ò [díllúrò] | 'fetch small quantities of water' |
| -j- | ámò | ámú-j-ò | 'climb' |
| | yémò | yémú-j-ò | 'carve in wood' |
| | cébbò | cébbú-j-ò | 'plant' |
| | múmmò | múmmú-j-ò | 'close' |
| | bénjò | bénjú-j-ò | 'saw' |

There are only a few examples which do not allow the postulation of the above rule as still operating in Pero. All of them have the singular form CVCV rather than CVCCV. Two of these examples involve a final velar consonant and take the suffix -t- rather than the expected -j-.

| | | | |
|------|--------|-----------|-------------|
| cékò | [céyò] | cékkú-t-ò | 'lose' |
| cúgà | | cúkkú-t-ò | 'fall down' |

The remaining exceptions all involve the suffix -j-.

| | | | |
|------|--------|-------------------|----------------|
| cámù | | cámmú-j-ò | 'twist a rope' |
| ífù | [ívù] | íffú-j-ò | 'catch' |
| cákù | [cáyù] | cákkú-j-ò | 'rub' |
| béjò | | béjjújò [péccújò] | 'thatch' |
| májù | | májjújò | 'ask' |

The plural class $C_1VC_2C_2VC_2V$ has as its source singular verbs of the structure C_1VVC_2V :

| | | | | |
|-------|---------|---------|-----------|----------------|
| wáatò | [wáarò] | wáttútò | [wáttúrò] | 'come' |
| dáafò | | | [dáffúvò] | 'apply cream' |
| cúukò | [cúugò] | | [cúkkúgò] | 'spread water' |

| | | | | |
|-------|---------|---------|-----------|---------------|
| díékò | [díeyò] | díkkúkò | [díkkúgò] | 'fetch water' |
| fóojò | | fójjújò | [fóccújò] | 'push' |

The last major class of plurals includes verbs of the structure $(C_1)VC_2C_2V$, i.e with the second consonant reduplicated. The main source for this class of plurals is verbs of the $(C)VCV$ structure. The other source is verbs which have the first vowel long:

| | | | |
|-------|---------|-------|-----------------------|
| ádù | | áddò | 'eat something hard' |
| lófò | [lówò] | lóffò | 'beat' |
| kóofò | | kóffò | 'pass' |
| déefò | | déffò | 'discuss' |
| páatò | [páarò] | páttò | 'pour' |
| túubò | | túbbò | 'take from container' |
| lóokò | [lóoyò] | lókkò | 'hang' |

This rule of plural formation is of course the same as the rule for trisyllabic verbs, and could be formalized in the following way:

$$C_1VC_2V \rightarrow C_1VC_2C_2V(C_3V)_{[\text{plural}]}$$

2.1. Summary of plural formation in Pero

| <u>Singular</u> | <u>Plural</u> |
|--------------------------------------------------------------------|----------------------------------------------------------------------|
| $(C_1)VC_2VC_3V$ | $(C_1)VC_2C_2VC_3V$ |
| CV | CV-yy-V |
| $C_1V_1SV_3$ | $C_1V_1C_1C_1V_2SV_3$ |
| | $V_2 = i \text{ if } V_1 = i$ |
| | $V_2 = u \text{ elsewhere}$ |
| $CV_1 \left\{ \begin{array}{l} V_1 \\ S \end{array} \right\} SV_3$ | $CV_1\$V_2SV_3$ |
| | (For value of V_2 see footnote 3) |
| $C_1VC_2C_3V$ | $C_1VC_2C_3V \left\{ \begin{array}{l} t \\ j \end{array} \right\} V$ |
| | t/ C_3 alveolar |
| | j/ C_3 non-alveolar |

| | |
|-----------------|-------------------|
| C_1VVC_2V | $C_1VC_2C_2VC_2V$ |
| $(C_1)V(V)C_2V$ | $(C_1)VC_2C_2V$ |

2.2. Conclusion regarding Pero

Despite the considerable variation and complexity in the formation of the verbal plural, there is still a rather large degree of regularity and most of the forms are predictable from the singular form of the verb. It seems that the reduplication of the second consonant is relatively earlier than suffixation of *-t-* or *-j-*. This conclusion is based on the following observations. A number of verbs have plural forms which have already specialized meanings, usually a narrowed meaning when compared with the meaning of the normal plural form:

| | | | |
|------|----------------------|-------|-----------------------------|
| bétò | 'cut into two' | béttò | 'cut into pieces' |
| áfù | 'open' | áfǎ | 'split' |
| ádù | 'eat (e.g. peanuts)' | ádǎ | 'eat something hard (meat)' |
| cúbù | 'show' | cúbbò | 'teach' |

Some of these verbs have a secondary pluralization by means of suffixes in order to convey the most general semantic notion implied by the plural verb:

| | | |
|-------|--------|-------------------------------|
| áfǎ | áfúǎ | 'split, divide' |
| ádǎ | ádúǎ | 'eat many times, many things' |
| cúbbò | cúbbúǎ | 'show, teach many things' |

It is important to note that there is no infix or suffix *a* in the plural forms of the verb. This affix occurs rather frequently in other Chadic languages.

The existence of morphologically plural verbs with meaning different from the singular verbs, e.g. *cúbù* 'show' vs. *cúbbò* 'teach' indicates that gemination and reduplication are not due to recent innovation in Pero. This conclusion is further supported by the fact that the suffixes *-t-* and *-j-* are used only when the gemination cannot apply because the stem already has the structure CVCCV, with the word-medial consonants identical or not.

3. Kanakuru

Kanakuru has a nominal plural realized in essentially three different ways, which are not predictable on phonological or semantic grounds (Newman 1974:82). One is the suffix *-ngin* with what appear to be its variants *-̀njín/-̀njén*; the second is the suffix *-iyán/-uyán* with its variants *ín, án, yen,* and *en*. The third means of forming the nominal plural is through gemination (Frajzyngier 1976; Newman 1974 analyzes it as hardening) of the second consonant and an addition of one of the above suffixes.

Kanakuru has a verbal plural as well, formed by gemination of the second consonant of the verb (Frajzyngier 1976), thus partially resembling the third means of forming the nominal plural. The difference consists in the suffixes, which are present in the nominal plural but absent in the verbal plural.

It appears that gemination is an older device than suffixation in the formation of nominal plurals in Kanakuru. The argument for this conclusion is the following. There is a small number of verbs which have a plural form as well as a singular. There is also a much larger group of verbs in Kanakuru which are plural in form, i.e. they have the second consonant geminated, but for which there are no recorded singular forms. This may of course be attributed to the incompleteness of our data, although the number of such verbs makes this an unlikely explanation. The other possible reason for the lack of the singular counterparts is that they were lost and are not used any more. If this is the case, it would indicate that the gemination of the second consonant is a relatively old device in the formation of verbal plural, although it is not productive anymore. The small set of nouns which form their plural in the same way in which the verbs do may therefore represent the oldest device of forming the nominal plural in Kanakuru, since this set is closed as well.

The following is an explanation for the development of the plural markers in Kanakuru. After gemination ceased to operate as a device for marking the plural, the various suffixes on nouns emerged as a result of compensatory change. The old verbal plurals were not perceived anymore

as plural forms and, therefore, there was a situation in which there existed two forms containing essentially the same semantic characteristics. One of those forms disappeared from usage.

It is possible that the whole process was the opposite from the one described above. One could conceive, for instance, that the nominal suffixes marking plural developed first, and then gemination as the morphological device ceased to operate because it was duplicating the function of the nominal suffixes. But this direction of development is contradicted by examining a number of languages, e.g. Hausa, where there is a large number of nominal plural markers and, at the same time, reduplication of part of the verb is a productive device for the derivation of frequentative forms.

4. Other Chadic languages

In the presentation of plural formation in other Chadic languages, I will use the classification in P. Newman (1977) in which four branches are distinguished: East, Biu-Mandara, West, and Masa. The analysis below is based on data for some of the languages from three of these branches of the Chadic family. Whenever I did not have data, this fact is indicated by "?" in the appropriate column. Most of the data are quoted as presented in the sources I have been using, in most cases without any attempt at reanalysis. The list of languages is by no means exhaustive.⁴

⁴The following are the sources used for the particular languages: Dangla (Fédry 1971); Jonkor and Jegu (Jungraithmayr 1961/62; J. Lukas 1974/75); Kera (Karen Ebert, personal communication); Kapsiki (Smith 1969); Kotoko, Logone, and Buduma (Westermann and Bryan 1952); Tera (P. Newman 1970); Margi (Hoffmann 1963); Bachama (Carnochan 1970); Ga'anda (R. Newman 1971); Bade (R. Lukas 1967/68); Ron languages (Jungraithmayr 1965, 1970); Gisiga (J. Lukas 1970); Angas (Jungraithmayr 1963); Sura (Jungraithmayr 1963/64); Chip (Jungraithmayr 1964/65); Bole (J. Lukas 1971); Kankuru (P. Newman 1974); Pero (Frajzyngier 1976 and fieldnotes); Musgu (J. Lukas 1941); Hausa (Russell Schuh's analysis in Welmers 1973; Frajzyngier 1965).

EAST

| | Nominal | | Verbal |
|-------------|--------------------------------------------------------------------------------------------|-------|---------------------------------|
| | Suffix | Infix | |
| SUBBRANCH A | | | |
| Dangla | --- | -a- | ? |
| Jonkor | -to. | --- | vocalic changes, e.g. o → a. |
| Jegu | -an, -e, -i, -o, -ik, -nau. Tonal changes. There are singular suffixes -o, -e. | | ? |
| Mubi | Vocalic change and gemination of second consonant. | | |
| SUBBRANCH B | | | |
| Kera | -n. | | |

The forms in Jegu and in Kera show similarity, viz. the suffixes -an and -n. The forms in Dangla and Jonkor are different from each other and from Jegu and Kera. The markers involving -n and -k will be dealt with later in this paper. The infix -a- is of course a retention of a very old morpheme (see Greenberg 1955) which will be discussed later as well. Unfortunately I did not have sufficient data concerning the verbal plural in this branch, but from Lukas (1975) it appears that the intensive form of the verb in Jonkor involves the change from o → a in the prefix.

BIU-MANDARA

| | Nominal | Verbal |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| SUBBRANCH A | | |
| Ga'anda | -cə. | Reduplication of first consonant and insertion of -a-. Rule (from R. Newman 1971:35): $C_1VC_2(V)_{[+int]} \rightarrow C_1əC_1aC_2(V)$ |
| Tera | -ku. | None. |
| Margi | -'yar, -i (traces). | Plural through reduplication. |
| Kapsiki | Plural marked with very few nouns denoting humans and animals. Suffixes: -li (-eli), -ši, -lemu, -ati. Reduplication of part of stem. | Reduplication of part of stem. |
| Bachama | Vocalic suffixes. | Internal vowel change. Infix -a-. |
| Gisiga | -ay, postposition hay. | Plural form of verb marked by suffixes -am or -ak indicates <u>plurality of subject</u> . |
| SUBBRANCH B | | |
| Musgu | -ai (-oi), -akai, -ad. | Verb is number-sensitive but, unlike in other Chadic languages, it is in plural form when <u>subject is plural</u> . |
| Kotoko | Gemination of final consonant. Suffixes: -e, -en, ni-i. Internal vowel change. | (Information not available about verbal plural for most languages of this subgroup.) |
| Logone | Gemination of final consonant. Internal vowel change to -a, suffix -en, -e. | |
| Buduma | Suffixes: -ai, -ei, -e. Other devices as in Kotoko. | |

In subbranch A of Biu-Mandara, there is no obvious form which one could postulate to be common to all languages of this subbranch. The verbs in subbranch A form plurals through reduplication or through the vocalic change to a, e.g. Ga'anda, Bachama. This fact will be an important argument later in this paper for the direction of "internal borrowing of forms" in Chadic languages. Apparently, Tera has lost the plural forms of the verb, since it is the only language in the subbranch that does not have a mechanism for the derivation of verbal plurals.

In subbranch B, in Kotoko (Gulfei dialect) and Logone there is an -en suffix. Gemination occurs as a device in at least three languages. In addition, there is an -a suffix in this subbranch. As far as the nominal plural formation is concerned, these two subbranches do not have much in common except for the Gisiga suffix -ay, which is similar to the plural markers in subbranch B. In Gisiga and in Musgu the verb agrees in number with or indicates the number of the subject.

WEST

| | Nominal | | Verbal |
|-------------|-------------------------------------------|------------------------|-----------------------------------------------|
| | Suffix | Infix | |
| SUBBRANCH A | | | |
| Daffo | -ay, -ash, -e. | -a(a)-. | Infix -a-. |
| Sha | -a, -aa, -ash, -e. Tonal changes. | | Suffix -an. Reduplication. |
| Kulere | -egy. Reduplication. | | Infix -a-. |
| Bokkos | -ha, -ash. | -a-with reduplication. | ? |
| Fyer | an, ash, -ash, e, -ee, -i. Reduplication. | -a-, -aa-. | Infixes -i-, -a-, -aa-. Suffixes -aŋ, -an. |

| | | | |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|---|
| Hausa | -unaa, -ukaa, -uwaa, -C'aa, -ai, -uu, -ii, -aa, -akuu, -akii, -annii, -aC'ii. Infix -a-. Reduplication of a consonant is involved in a number of suffixes. | Reduplication of first three phonemes or of second syllable. | |
| Angas | -mwa. | Plurals exist but are not numerous. | |
| Sura | Postposition -mɔ. | Reduplication of stem. Change of tone. Shortening of vowel. Infix -a-. Suffixes: -ap, el, -k. Infix -l-. | |
| Chip | Postposition -mu. | Suffix -p. Infix -a-. Suffixes: -ak, -an. Tonal changes. | |
| Bole | ? | Reduplication of initial syllable or doubling of last consonant of stem. | |
| Kanakuru | -ngin, njin/njen, iyan/uyan, -in, -an, -yen, -en. Reduplication of consonant of stem. | Reduplication. | |
| Pero | No plural. | Reduplication. | |
| SUBBRANCH B | Suffix | Infix | |
| Bade | Final vowel change: a → aa, ə, oo → a, aa, e, -ən, -at, -let, -ə, -yit, -agə, -oot, -ageet, -cin, -tin. Reduplication. | -aa-. | ? |

It seems impossible to reconstruct a common plural marker for the West branch. Within the Ron languages, one can determine a common plural marker and the same goes for Angas, Sura, and Chip. But the plural marker of Angas, Sura, and Chip is a recent innovation. It apparently is a third person plural pronoun and it has been analyzed as such (cf. Greenberg 1955:202). The most widespread markers of plural in the West

branch are the infix (sometimes suffix) /a/ and reduplication, which has been noted for almost all of the languages except for Angas, Sura, and Chip.

The verbal plural has been noted in all West languages, except for Bade--but there my data might be incomplete since the source for this language was an article dealing explicitly with the nominal system. In most of the languages, the verbal plural is marked either by reduplication or by the affix /a/. Sura and Chip have a few additional affixes not shared by other languages in the table. Those affixes seem to be innovations. It is worth noting that neither Pero nor Kanakuru have /a/ as a plural marker.

5. Analysis of the three branches of Chadic

5.1. Nominal plural

The most frequent devices used to mark plural in the three branches of Chadic are /a/ and reduplication or gemination. Within each branch there is an abundance of plural markers which are not cognate within the branch, e.g. Margi -'yar, Tera -ku. Many of the languages have a variety of plural morphemes whose occurrence is often unpredictable on any grounds. This leads to a conclusion that except for /a/ and reduplication, the rest of the plural markers in Chadic languages are the result of a process or processes which must have occurred after Proto-Chadic split into the three or more branches. Moreover, quite often these plural markers did not emerge until the particular branches split into the modern languages. Evidence for this is provided by the diversity of the plural markers within each branch of Chadic.

5.1.1. The morpheme /a/. This marker occurs in all of the branches of Chadic, most often as an infix, but it may be a suffix as well. The languages for which it was not recorded, such as Pero and Kanakuru, either did not have it or lost it.

5.1.2. Reduplication. This process occurs in all of the branches of the Chadic family, but not in all languages. In subbranch A of Biu-Mandara it occurs only in Kapsiki. In the West branch it does not occur

in the Sura-Angas-Chip group. In the East branch it occurs only in Mubi.

5.2. Verbal plural

This category occurs in all of the languages for which I have data. The meaning of this form always includes an indication of intensity of action, repetition of an action and, in all but two languages, it implies plurality of the object. Musgu and Gisiga are important exceptions, in that verbs in these languages agree in number with the subject and have the plural form if the subject is plural. It is important to remember that for the rest of the Chadic languages the plural form of the verb is not usually a function of verb-object agreement, although this has been noted as well, e.g. in Kanakuru (Newman 1974:72). In Margi (Hoffmann 1963:57), if the verb has a plural form the noun does not have to have the plural suffix. Thus the verbal markers in verb and noun in Margi are, as it were, complementary.

The most common devices for formation of the verbal plural are reduplication of a syllable or gemination of a consonant in the verb. Since this device occurs in all of the branches of Chadic and in almost all the languages, one can assume that it is a retention from the Proto-Chadic verbal system. The rules for formation differ from language to language, and those differences have to be attributed to innovations in particular languages.

The morpheme /a/ occurs as the plural marker of verbs in the Biu-Mandara branch (Ga'anda and Bachama) and in the West branch (Ron languages, Sura, Chip). In the East branch it has been noted in Jonkor. On the evidence of the Biu-Mandara and West branches alone, one could conclude that /a/ was a morpheme marking plural in the verbal system of Proto-Chadic. The suffixes which occur in Sura and Chip, viz. -p and -k must be innovations that emerged in these languages after they had split from the other languages of the West branch.

The hypothesis that gemination/reduplication and affix /a/ were originally markers of the verbal plural is most strongly supported by the fact that in the majority of languages there is a verbal plural having one of the above forms even though there is no nominal plural, or

else the nominal plural has a different form from the verbal plural. It has been shown, therefore, that Proto-Chadic had the verbal plural, which still exists in all the branches of the group, marked by reduplication or an affixed /a/. Some Chadic languages have taken this device and used it in the formation of nominal plurals. That is why we find nominal plurals by reduplication or by an affix /a/ in some languages only. The data from Kanakuru suggest that the plural by reduplication is older than the other forms of the plural.

5.3. Suffix -Vn

Another candidate for a Proto-Chadic plural marker is a suffix which always contains at least an alveolar nasal, and usually has the form -Vn. The hypothesis that it was a Proto-Chadic nominal plural marker will be reviewed and rejected in what follows.

In the East branch of Chadic it occurs in Kera. It also occurs in Jegu as one of the many suffixes that mark nominal plural. Dangla and Jonkor do not have such a suffix. If one were to accept -Vn as a Proto-Chadic plural marker, one would have to assume that Dangla and Jonkor lost it and, moreover, that Jonkor developed a new suffix -to.

In subbranch A of Biu-Mandara there are no suffixes of the form -Vn with the possible exception of Margi. Hoffmann (in a remark at the Colloquium) pointed out that r in the Margi plural marker 'yar could be considered a reflex of Proto-Chadic *n, according to Newman and Ma (1966). While this is a very likely possibility, there is nevertheless a reason not to consider 'yar as a reflex of the Proto-Chadic plural marker. As noted in the Biu-Mandara chart, Margi has some traces of the plural suffix -i, the only other plural marker apart from 'yar. Some of the words that take it are:

| Singular | | Plural | Gloss |
|----------|---------------|--------|------------------|
| mdè | 'person, man' | mjì | 'people' |
| sál | | shílí | 'man, husband' |
| ɲkwà | | ɲkwà'ì | 'girl, daughter' |

As Hoffmann writes (1963:59), all these plural forms may take, in

addition, the plural suffix 'yar when used with demonstratives, e.g.:

| | |
|--------------|---------------------------------|
| mjì'yàr kè | 'these people' (besides mjì kè) |
| shílí'yàr kè | 'these men', etc. |

The nature of the words which still take the suffix -i rules out its having been borrowed. Besides, -i occurs as a plural marker in a number of other Biu-Mandara languages, e.g. Kotoko and Buduma. It appears therefore that the suffix 'yar is not the oldest plural marker in Margi, which is further supported by its spread in the language.

In subbranch B of Biu-Mandara, a -Vn suffix occurs in Kotoko and Logone, two closely related languages.

Among the closely related Ron languages, only Fyer has a -Vn suffix -an, which can hardly be called a productive suffix, since only one word containing it is provided by Jungraithmayr (1970), viz. yuur-u 'eye', pl. yiran /y-i-r-an/. In this word there is already a plural marker -i-. In the description of Fyer, there is one more word, humu 'ear', pl. humuaŋ/humwaŋ, which contains a suffix with a nasal, but it is a velar nasal.

These two suffixes cannot be considered reflexes of a hypothetical Proto-Chadic morpheme without previous explanation of what might have caused two different nasals in those suffixes. Besides, the suffixes -aŋ and -an occur more frequently as markers of the verbal plural in Fyer. Another Ron language, Sha, also has -an as the marker of the verbal plural, but does not have it as the marker of the nominal plural. The two instances containing the -Vŋ and -Vn morphemes in Fyer could be explained by postulating that, as in several other instances mentioned earlier in this paper, those plural markers have been internally borrowed from the verbal system. It seems that the fact that the two cases are different, together with the other arguments presented above, rules out the possibility that the Fyer morphemes are reflexes of the Proto-Chadic nominal plural marker.

While Hausa has at least two suffixes that may be claimed to have developed from the Proto -Vn suffix, another subgroup of the West, consisting of Sura, Angas, and Chip, does not have a -Vn suffix.

In the Bole cluster, Kanakuru has a -Vn suffix among several other suffixes which contain a -Vn as part of the morpheme. There is, however, evidence that the various -Vn suffixes in Kanakuru are relatively later devices when compared with gemination of the second consonant of the stem. There is a group of nouns which, in addition to suffixes, have the second consonant geminated; the following examples, based on the data in Newman (1974:84), are presented according to the analysis in Frajzyngier (1976).

| | | |
|---------------|-----------|------------|
| dúu (< dúhú) | dúkkúyán | 'boar' |
| lípè [líwè] | líppén | 'calabash' |
| yáapè [yáawè] | yáappìyán | 'chicken' |
| tákà [táà] | tákkín | 'shoe' |

These data indicate that a suffix containing -Vn has been added to the geminated noun, probably when gemination was not perceived any more as a pluralizing device. Pero, a language from the same cluster, does not have any plural marker.

Bade, a language from Subbranch B of the West branch, as an infix -ən, among eight other affixes, reduplication, and vowel change to mark the nominal plural.

The peculiar distribution of the -Vn suffixes in Chadic languages may have two possible explanations.

(a) A certain suffix containing a nasal consonant functioned as a plural marker in Proto-Chadic. This marker was subsequently dropped by the majority of languages. The reasons for such a massive reduction of this suffix in languages from various groups are not known. This hypothesis has its major weakness in our inability to explain why the suffix was lost.

(b) The other possibility is to postulate that in various languages, a -Vn suffix developed independently to mark the nominal plural. Such a hypothesis can be retained only if one could show why several independent changes produced so similar a result. In order for independent innovations to produce a similar form, one would have to have a similar source for them. It appears that there is such a source in those Chadic languages that have a -Vn suffix.

In many Chadic languages there is a particular form of demonstrative pronoun, genitival linker, independent pronoun, or similar morpheme related to the class of masculine nouns, which often contains a nasal consonant, usually an alveolar nasal, although sometimes it may be a velar nasal. The plural suffix *-Vn* could be derived from a form related to this Chadic masculine marker. All the Chadic languages which have the *-Vn* marker do indeed have a form of the masculine marker containing an *n*. In Hausa it is a genitive linker and stabilizer. In Bade there are demonstrative pronouns and many other forms (cf. Schuh 1975).

It is very likely that in a number of Chadic languages the feminine marker was also used in the formation of the plural, and that this was another source of plural markers that show similarity to one another, for example, markers involving *-k* or *-t*.

At present, I am unable to explain how and why masculine (and feminine) markers could be transformed into plural markers, but this is apparently what happened in Chadic languages. Outside of the Chadic branch of Afroasiatic, a similar phenomenon occurred in Semitic, in particular in Arabic, where the *-una* plurals were first an innovation as plural markers for masculine nouns and only later spread to cover both masculine and feminine nouns (cf. Kuryłowicz 1972:139).

Since it is impossible to reconstruct a common plural morpheme apart from /a/ and reduplication, one has to assume that the multitude of other morphemes occurring in various Chadic languages must be innovations, occurring after those languages split from Proto-Chadic and even after there was a split within the smaller branches of Chadic.

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