

PART II



International Journal of American Linguistics

Volume 29 Number 1

JANUARY 1963

Publication Twenty-five
of the
INDIANA UNIVERSITY RESEARCH CENTER
in
ANTHROPOLOGY, FOLKLORE, AND LINGUISTICS

THE LANGUAGES OF AFRICA

by

Joseph H. Greenberg

THE LANGUAGES OF AFRICA

THE LANGUAGES OF AFRICA

Joseph H. Greenberg

Bloomington, 1963

Published by

Indiana University

Mouton & Co. • The Hague, The Netherlands

INDIANA UNIVERSITY
RESEARCH CENTER IN
ANTHROPOLOGY, FOLKLORE, AND LINGUISTICS

Editor: C. F. Voegelin

Director of Publications: Thomas A. Sebeok

Copyright © 1963 by Indiana University
No part of this book may be reproduced in
any form, by print, photoprint, microfilm,
or any other means without the permission
of the publishers

Publication Twenty-five, pp. viii + 177, Issued January 1963

Also

Part II of the
International Journal of American Linguistics
Vol. 29, No. 1 (1963)

Library of Congress Catalog Card Number: 62-63505

All orders from the United States of America and from
Canada should be addressed to the
Director of Publications of the Research Center in Anthropology,
Folklore, and Linguistics, Rayl House, Indiana University,
Bloomington, Indiana

Orders from all other countries should be sent to
Mouton & Co., Publishers, The Hague, The Netherlands

PREFACE

The present volume is an expanded and extensively revised version of the author's Studies in African Linguistic Classification (referred to as SALC throughout) which appeared in 1955. The former work was in turn a photo offset of eight articles which appeared in the Southwestern Journal of Anthropology 5:79-100, 190-98, 309-17 (1949); 6:47-63, 143-60, 223-37, 388-98 (1950) and 10:405-15 (1954). The author wishes to express his profound gratitude to the late Leslie Spier, editor of the Southwestern Journal of Anthropology, in whose pages these studies first appeared, and to Frank Tannenbaum and Melville J. Herskovits for the joint support of the University Seminars of Columbia and the Program of African Studies of Northwestern University which made the earlier publication by the Compass Press in New Haven possible.

For the present version, the author has many indebtednesses, both material and intellectual. A grant in aid of personal research from the Behavioral Sciences division of the Ford Foundation provided the author with time and research assistance for the preparation of this volume. Acknowledgement is gratefully made of support for this publication by the Language and Linguistics Committee of the African Studies Association likewise on the basis of a grant from the Ford Foundation. Another major source of support for the present effort was a fellowship from the Guggenheim Foundation for field study of languages in Northern Nigeria in 1954-55, with additional assistance from the Columbia Council for Research in the Social Sciences and the Social Science Research Council. It was through data collected in this period that a major gap in the earlier version was rectified as can be seen from the far fuller and more detailed classification of Chad and Benue-Congo languages in the present edition.

It is not possible to mention all the individuals who generously assisted by making available unpublished material. I am particularly indebted to Archibald Tucker for sending me material from the files of the International African Institute on the Coman languages, to Herbert Lewis and Harold Fleming for unpublished data which enabled me to classify the Bako language group as Cushitic, to

Kay Williamson for data on Ijo and in general to the Fellows of the West African Language Survey and Robert Armstrong its field director for numerous word lists of languages in West Africa.

I owe a special debt to David Crabb for his work on Khoisan etymologies and for calling to my attention a discrepancy in regard to the languages assigned to Bantu proper and to the Bantoid subgroup of the Benue-Congo group. I also wish to thank William E. Welmers for his advice on matters of nomenclature almost all of which has been incorporated in the present work. Finally, and not least, I wish to express my gratitude to Melville J. Herskovits under whose guidance I was first introduced to African studies and who stimulated and encouraged me in the crucial initial stages of this research.

Perhaps most of all, however, I am grateful to my critics on many specific details but mostly for forcing me to consider as clearly as possible the basic assumptions which underly the present work.

Joseph H. Greenberg

CONTENTS

	Page
I. The Methodology of Language Classification	1
II. Niger-Congo	6
III. Afroasiatic	42
IV. Khoisan.	66
V. Chari-Nile.	85
VI. Nilo-Saharan	130
VII. Niger-Kordofanian	149
Index to Language Classification.	161
Key to Language Classification.	162
Index of Languages.	163
Maps	Following page 171

I. THE METHODOLOGY OF LANGUAGE CLASSIFICATION

The present volume contains a complete genetic classification of the languages of Africa. Since the results differ in important respects from previously current schemes of classification, a brief methodological foreword seems in order.

There are three fundamentals of method underlying the present classification.¹ The first of these is the sole relevance in comparison of resemblances involving both sound and meaning in specific forms. Resemblances in sound only, for example the presence of a tonal system as such, or in meaning only, as in the existence of morphemes (meaningful) forms indicating sex gender but without phonetic similarity, are irrelevant. The second principle is that of mass comparison as against isolated comparisons between pairs of languages. The third is the principle that only linguistic evidence is relevant in drawing conclusions about classification. This last is so self-evident when stated that it would seem unnecessary. In fact, disregard of this principle is very common and a subtle source of errors in classification in Africa and elsewhere as will be shown later.

The emphasis on sound-meaning resemblances does not imply in principle exclusive reliance on either root morphemes (vocabulary) or affix morphemes (grammar). Related languages, of course, show resemblances both in vocabulary and grammar and contradictions no more appear in Africa than they do in Europe or the Near East, provided only that irrelevant resemblances in form or meaning only are excluded.

An example of the use of sound only or meaning only is the method of Meinhof which is primarily typological with evolutionary overtones. One sample of Meinhof's method is perhaps worth more than pages of abstract analysis. In treating the extraordinarily diverse languages of the southern hills of Kordofan west of the Nile, Meinhof paid no attention to any factor other than the presence or absence of noun prefixes. If a language had noun prefixes, he called it pre-Hamitic, which to him was a stage between the non-classifying, non-gender, isolating Sudanic and the inflective Hamitic with its system of sex gender. If it did not have a system of noun prefixes, it was Sudanic.

Three among the languages of Kordofan—Tagoi, Tumale, and Tegali—are very similar. Meinhof classified Tagoi and Tumale as

pre-Hamitic, but Tegali he assigned to Sudanic simply because it did not have noun prefixes.

A comparison of vocabulary shows that numerals [sci. of Tegali] completely agree with those of Tumele. Moreover they are for the most part identical with the Tagoy numerals. Besides, a number of word stems and some verb forms of Tegele are identical with those of Tagoy and Tumele. But the grammatical structure of the noun indicates that Tegele is a Sudanic language because noun classification is absent while Tagoy and Tumele have clear noun classes. Apparently there has been a mixture of two diverse elements.²

Here, as elsewhere, there is the mechanical application of structural criteria, or even a single criterion. There is no recognition of the living realities of language change, no understanding that prefixes are not essential qualities inherent in an unchangeable species. Characteristic also is the facile assumption of mixture where typological criteria lead to a contradiction. The Mac Diarmids,³ observers with a minimum of formal linguistic training, group the languages of Kordofan, with essential correctness, into eight stocks. They naively classify Tegali along with Tego and Tumale.

The importance of mass comparison as opposed to isolated comparisons between pairs of languages has become clear to me as a result of certain questions of a general nature raised by a number of critics. Basically these criticisms come to two: a doubt as to the feasibility of drawing genetic conclusions of wide scope and the belief that the present classification is arbitrary in the sense that just as good evidence might be assembled for other classifications cutting across the one presented here. The former objection, which appears to be widespread among linguists, is understandable as a reaction against the previous catch-all use of such terms as Hamitic and Sudanic. It should be realized, however, that no concrete evidence of the kind which documents this work was ever assembled for the total assumed ranges of these language stocks. When resemblances can be assembled which are recurrent in many languages, which extend over vast and widely separated geographical areas and which encompass elements with morphological functions, pronouns, and the most stable parts of the vocabulary (most stable on a priori grounds and on the basis of our knowledge of areas with written records), then common origin is the only adequate explanatory hypothesis.

The importance of resemblances recurrent in a large number of languages as plausible outcomes of some single ancestral form as elicited by mass comparison is of very great evidential power in excluding either chance or borrowing as explanations. Considerations

derived from the elementary theory of probability helps to make this explicit. In fact, I had no such considerations in mind when I first undertook the present classification, since the importance of widespread specific resemblances was evident even when not formulated in these terms.

Let us assume even that accident resemblances between two languages can be rather high, say twenty percent. The chance that some single meaningful form will appear with similar sound and meaning is then $1/5$. The chance that this same element will appear also in some third language is the square of $1/5$, that is $1/25$. In general, given n languages the chance that a resemblance will occur in all of them will be $(1/5^{n-1})$. It is easy to see that this ratio rapidly becomes infinitesimal with the increase in n , in other words, resemblances running accidentally through a large number of languages will occur only with the utmost rarity.

Many linguists acquainted with only two or three languages of a family are thus not in a position to assess the importance of the resemblances they note because of this neglect of mass comparison. Much of the relevant evidence for relationship will not appear in such a procedure. Suppose one were to compare English with Hindustani only. The tendency of these resemblances to recur in other languages of the Indo-European family would not be realized. If they were not related, very few such recurrences would be found. Moreover, many facts about English which point to its being Indo-European would not be taken into account if these traits happened to be among those lost in Hindustani and vice versa. For example, a comparison between English and Russian would reveal many resemblances not found in Hindustani while a comparison of Hindustani with Russian would reveal many resemblances not found in English. But any facts which showed that English belonged to some larger group or that Hindustani belonged to the same larger group is relevant to the common origin of English and Hindustani. Each additional language thus brought into the comparisons adds further connecting links tending to establish the validity of the structure as a whole.

In regard to the second problem, the supposed arbitrariness of such a classification, the best test is the pragmatic one of actual performance. If someone will produce a comparable set of proposed etymologies and morphological elements cutting across the families found here and having the properties of widespread distribution, semantic plausibility, and appearance of regular phonologic development from a common original, the arbitrariness will have been proved. I do not believe that this is any more possible than to demonstrate that Finnish, Basque, and German belong to a single family, while Hungarian, Greek, and Hebrew belong to another.

The most effective manner of applying mass comparison as a method is a table of pronouns, grammatical elements, and vocabulary for the languages involved. Such a table when prepared for European languages leads to the universally accepted classifications regarding relationship, even with a very small number of items. The following table has been prepared for a very small number of African languages and a very few items of vocabulary. The forms I consider to show likelihood of common origin are indicated by similar symbols.

	one	two	three	hand	eye	ear	mouth
1.	sang	●su	soti	yung	●sing	—	●a
2.	wate	■iba	●tati	ju(le)	no(do)	●to(go)	yabodo
3.	●toro	●ču	agozo	●daho	●samo	■sumo	■či
4.	■ili	■iwa	●ita	ilo	ewu	●oto	▲enu
5.	mwe	bali	●tato	■(li)-to	(le)-iso	●(ku)-toi	▲(mu)-nywa
6.	●tilo	ndi	yasko	kela	●sim	■sumo	■či
7.	kiet	■iba	●ita	■ete	enyin	●utong	▲inua
8.	lakoi	●swe	we	●taha	i	kebbe	●a

Grammatical prefixes and suffixes are enclosed in parentheses since what we are comparing are morphemes, minimal units having a meaning. Even the first three words lead to a separation of these languages into two groups: I—1, 3, 6, 8; II—2, 4, 5, 7, which is confirmed by the other words. The two families are I. Saharan, II. Niger-Congo. The languages are 1. Berti, 3. Teda, 6. Kanuri, 8. Zaghawa, 2. Kotopo (Adamawa), 4. Ahlō (Togo), 5. Proto-Bantu, 7. Efik. The addition of several hundred Niger-Congo languages and many additional words or grammatical forms would lend continuous further evidence for this same division.

The final principle seems that most obvious of all, namely that languages should be classified on linguistic evidence alone. All that counts is the degree and types of similarity in linguistic forms. The most common source of error in this regard is the fact that prominence of a language or group of languages because of practical importance, extent of population and territory or literary cultivation tends to lead to separate status in classification. Two important instances of these in African classification is the independent position assigned to Bantu in previous classifications and the special status accorded Semitic in the Hamito-Semitic (Afroasiatic) family as against the remaining four branches which were generally lumped together in a pseudo-entity Hamitic. It would be well if languages could be compared without a knowledge of such extraneous facts so that only the degree and type of linguistic resemblance would be taken into account as in the above table of comparison of Niger-Congo and Saharan in which languages are referred to by number.

The methodological principles briefly enunciated here receive continuous exemplification in the detailed studies which follow.

Notes

1. For a fuller discussion of the methodology of language classification, see J. H. Greenberg, Essays in Linguistics, pp. 35-45 (Chicago, 1957).
2. Zeitschrift fur Kolonialsprachen, vol. 7, 1916, p. 110.
3. P. A. and D. N. Mac Diarmid, "The Languages of the Naba Mountains," Sudan Notes and Records, vol. 14, pp. 15-48, 1931.

II. NIGER-CONGO

North of the Bantu languages, whose very obvious unity was early noted, stretches a region of vast linguistic diversity roughly coincident with the geographical area of the Sudan. In the first of two general studies devoted to the languages of the Sudan,¹ Westermann sought to show that the languages of this area (presumably most or all of them, since no exact listing was given) formed a single family he called the Sudanic. His citations were almost all from eight languages, five in the western Sudan (Twi, Gã, Ewe, Yoruba, and Efik) and three from the eastern area (Dinka, Nuba, and Kunama). It is noticeable in Westermann's material that, whereas the five western languages occur in all of the lexical comparisons, the eastern languages are cited far less frequently and the majority of these examples are unconvincing. From this it is clear that the five western languages form part of some real unity while the eastern languages, if related at all, display a connection of a more remote nature. The weakness of the case for a language family embracing the entire Sudan has frequently been noted, and Westermann in a later study explicitly admitted this, remarking that the term Sudanic languages "bezeichnet Sprachen eines gemeinsamen Typus, deren genetische Einheit nur teilweise nachweisbar ist."²

In his second study, Westermann, ignoring the central and eastern areas, showed that almost all the languages of the western Sudan (i.e. the area west of Lake Chad) formed a real unity within which he distinguished a number of genetic subfamilies.³ This stock he called West Sudanic. He also pointed out that the Bantu languages show important lexical resemblances to the West Sudanic languages and that the Bantu noun class-prefixes find close analogues in the class affixes (prefixes, suffixes, and sometimes both) of many West Sudanic languages. This further point was elaborated in a subsequent publication.⁴

The proofs presented by Westermann for the interconnection of the bulk of the languages of the western Sudan (hereafter referred to as the West Sudanic nucleus) is adequate, and the references have already been given to Westermann's material to which those may refer who wish to convince themselves first-hand.⁵

Beyond details in regard to genetic subgroupings there are only two serious points in which I differ from Westermann in his treatment

of the West Sudanic nucleus. These disagreements refer to Fulani and Songhai. I include Fulani within the West Atlantic subgroup while Westermann excludes it from West Sudanic altogether. Meinhof considered Fulani to be Hamitic and this view gained wide currency. More accurately stated, for Meinhof Fulani was an evolutionary stage (pre-Hamitic) between Bantu non-gender nominal classification and Hamito-Semitic gender. In spite of the great deal of mystery—one might say mystification—that has surrounded Fulani, its position within the West Atlantic group is quite obvious. It shows a particularly close relationship to the Serer-Sin and Wolof languages of Senegal. Evidence for this will be presented later in this chapter.⁶ I differ from Westermann also in that I exclude the Songhai language of the central Niger valley.⁷

The evidence presented by Westermann, in the studies already cited, is sufficient to show genetic relationship and on one occasion he stated this conclusion explicitly.⁸ In other publications, however, where tables of classification are presented, he always lists Bantu separately doubtless because of the size and importance of the Bantu group and because of the long-continued tradition of assigning it a separate status.⁹ In fact, the evidence for the inclusion of Bantu is actually better than for many languages of West Sudanic whose affiliation has never been questioned. Bantu does not even form a single genetic subfamily within the entire complex, but belongs within one of Westermann's already established subfamilies, the one he calls Benue-Cross or Semi-Bantu, precisely because of its close resemblance to Bantu. There is no more justification for the term Semi-Bantu than, let us say, a term Semi-English to describe German, Dutch, Swedish, Danish, Norwegian and Icelandic. I have renamed this subfamily of which Bantu is a member Benue-Congo as more appropriate in view of its much greater geographical extension resulting from the inclusion of Bantu.

Westermann's treatment stops with the Benue-Cross ("Semi-Bantu") languages of Nigeria. Consideration of the languages east of this area shows that many of them show clear evidence of affiliation with the West Sudanic nucleus. To the entire family consisting of the West Sudanic nucleus inclusive of Bantu, plus this eastward extension, I have preferred to adopt a new name of a non-committal geographic nature, Niger-Congo, from the two great rivers in whose basins these languages predominate.

The eastward extension of the Niger-Congo family forms an additional genetic subgrouping beyond those distinguished within the West Sudanic nucleus. It includes such well-known languages as Mbum, Gbaya, Zande, Sango and Banda. A more complete listing is given below.

In regard to the southern portion of that part of the Sudan extending approximately from Lake Chad to the Nile basin, Tucker saw that "these languages . . . are sharply divided into two opposing camps."¹⁰ Tucker has distinguished the membership of these two groups with entire accuracy. One of these belongs to the easternmost subgroup of Niger-Congo. The other forms a genetic group to which I apply the term Central Sudanic. It includes Bongo, Baka, Bagirmi, Kreish, Mangbetu, Lendu, Lugbara, Moru, Madi and others.¹¹

Farther north still another group not affiliated to Niger-Congo is to be found. This is the Saharan family including Kanuri, Teda, Zaghawa and Berti.¹²

An enumeration of the membership of the Niger-Congo family by tentative genetic subfamilies follows:¹³

1. West Atlantic: a. Northern: Wolof, Serer-Sin, Fulani, Serer-Non, Konyagi, Basari, Biafada, Badyara (Pajade), Dyola, Mandyak, Balante, Banyun, Nalu, Cobia, Cassanga, Bidyogo. b. Southern: Temne, Baga, Landoma, Kissi, Bulom, Limba, Gola.

2. Mande:¹⁴ a. Western: 1. Soninke, Malinke, Bambara, Dyula, Numu, Ligbi, Huela, Vai, Kono, Koranko, Khasonke, Susu, Dyalonke. 2. Sya. 3. Mande, Loko, Gbandi, Gbunde, Loma, Kpelle (Guerze). b. Eastern: 1. Mano, Dan (Gio), Kweni (Guro), Mwa, Nwa. 2. Samo, Bisa, Busa.

3. Gur: a. Senufo: Minianka, Tagba, Foro, Tagwana (Takponin), Dyimini, Nafana. b. Lobi-Dogon: Lobi, Dyan, Puguli, Gan, Gouin, Turuka, Doghosie, Doghosie-Fing, Kyan, Tara, Bwamu, Wara, Natio, Dogon, Kulango. c. Grusi: Awuna, Kasena, Nunuma, Lyele, Tamprusi, Kanjaga (Bulea), Degha, Siti, Kurumba (Fulse), Sisala. d. Mossi, Dagomba, Kusasi, Nankanse, Talensi, Mamprusi, Wala, Dagari, Birifo, Namnam. e. Tem, Kabre, Delo, Chala. f. Bargu (Bariba). g. Gurma, Tobote (Basari), Kasele (Chamba), Moba.

4. Kwa: a. Kru: Bete, Bakwe, Grebo, Bassa, De, Kru (Krawi). b. Avatime, Nyangbo, Tafi, Logba, Likpe, Ahlõ, Akposo, Lefana, Bowili, Akpafu, Santrokofi, Adele, Kebu, Anyimere,¹⁵ Ewe, Aladian, Avikam, Gwa, Kyama, Akye, Ari, Abe, Adyukru, Akan (Twi, Anyi, Baule, Guang, Metyibo, Abure), Gã, Adangme. c. Yoruba, Igala. d. Nupe, Gbari, Igbira, Gade. e. Bini, Ishan, Kukuruku, Sobo. f. Idoma, Agatu, Iyala. g. Ibo. h. Ijo.

5. Benue-Congo: A. Plateau: 1. a. Kambari, Dukawa, Dakakari, Basa, Kamuku, Reshe.¹⁶ b. Piti, Janji, Kurama, Chawai, Anaguta, Buji, Amap, Gure, Kahugu, Ribina, Butawa, Kudawa. 2. Afusare, Irigwe, Katab, Kagoro, Kaje, Kachicheri, Morwa, Jaba,

Kamantan, Kadara, Koro, Afo. 3. Birom, Ganawuri (Aten). 4. Rukuba, Ninzam, Ayu, Mada, Kaninkwom. 5. Eggon, Nungu, Yeskwa. 6. Kaleri, Pyem, Pai. 7. Yergam, Basherawa. B. Jukunoid: Jukun, Kentu, Nyidu, Tigong, Eregba, Mbembe, Zumper (Kutev, Mbarike), Boritsū. C. Cross-River: 1. Boki, Gayi (Uge), Yakoro. 2. Ibibio, Efik, Ogoni (Kana), Andoni, Akoiyang, Ododop, Korop. 3. Akunakuna, Abine, Yako, Asiga, Ekuri, Ukelle, Okpoto-Mteze, Olulomo. D. Bantoid: Tiv, Bitare, Batu, Ndoro, Mambila, Bute, Bantu.

6. Adamawa-Eastern: A. Adamawa: 1. Tula, Dadiya, Waja, Cham, Kamu. 2. Chamba, Donga, Lekon, Wom, Mumbake. 3. Daka, Taram. 4. Vere, Namshi, Kolbila, Pape, Sari, Sewe, Woko, Kotopo, Kutin, Durru. 5. Mumuye, Kumba, Gengle, Teme, Waka, Yendang, Zinna. 6. Dama, Mono, Mbere, Mundang, Yasing, Mangbei, Mbum, Kpere, Lakka, Dek. 7. Yungur, Mboi, Libo, Roba. 8. Kam. 9. Jen, Munga. 10. Longuda. 11. Fali. 12. Nimbari.¹⁷ 13. Bua, Nielim, Koke. 14. Masa.¹⁸ B. Eastern: 1. Gbaya, Manja, Mbaka. 2. Banda. 3. Ngbandi, Sango, Yakoma. 4. Zande, Nzakara, Barambo, Pambia. 5. Bwaka, Monjombo, Gbanziri, Mundu, Mayogo, Bangba. 6. Ndogo, Bai, Bviri, Golo, Sere, Tagbo, Feroqe, Indri, Mangaya, Togoyo. 7. Amadi (Madyo, Ma). 8. Mondunga, Mba (Bamanga).

The remainder of this chapter will be devoted to a discussion of the three major points in which Niger-Congo as just outlined differs from the Western Sudanic of Westermann. These are the inclusion of an Adamawa-Eastern subgroup and the affiliation of Fulani and Bantu.

The trait of Niger-Congo morphology which provides the main material for comparison is the system of noun classification by pair of affixes, one for the singular, another for the plural. The Bantu noun prefixes are fairly typical of this classificational system. So we have in Bantu the pair mu-singular, ba-plural for the class of human beings; le-singular, ma-plural for objects that come in pairs, although the class meanings are by no means always clear. In the West Sudanic group these affixes appear sometimes in the form of prefixes, as in Bantu and the languages of the Benue-Congo in general as well as other subfamilies; sometimes as suffixes, as in many of the Gur languages, sometimes as both simultaneously as in some of the Gur languages and sporadically elsewhere. Of the eastern languages, the Adamawa branch shows suffixes and the Eastern branch some uncertain traces of prefixes and for Mondunga and Mba a suffixial system.

The drift in Niger-Congo has been in the direction of the simplification of the nominal classificational system. This has reached its

climax in Mande and some of the Kwa languages in which the affixes have been entirely lost and an isolating system results. Hence while the presence of these affixes is important evidence for affiliation with the Niger-Congo family, absence of the affixes does not prove lack of connection. Evidence based on these classifying affixes as well as pronominal elements will be considered here.

Of the languages of the Adamawa branch, Longuda shows suffix alternations making singular and plural and exhibiting specific resemblance to the usual affixes of the Niger-Congo family. We have the le/a class, usually associated with parts of the body that come in pairs, in yu-la pl., yu-a 'breast' and other words. The final vowels in Longuda have been levelled in all cases to a or e depending on the vowel of the preceding syllables. We find the ko class, which in Niger-Congo languages is frequently associated with the names of certain parts of the body, particularly the long limbs, (e.g. Bantu ko-boko 'arm') in kwab-ka 'arm' and čau-ka 'leg'; the ma class, which does not have distinction of singular or plural, refers to mass nouns, that is, indefinitely divisible substances, particularly liquids, and is found in almost all branches of the Niger-Congo languages. We have in Longuda ma-m 'water,' tu-ma 'blood,' bo-ma 'salt,' etc. We also find the ba suffix, plural of the personal class, in such forms as nyi-re/nyi-b 'man.' The singular remains unexplained. We find adjectival concord in such instances as mwa-i sne-e 'tall woman,' mwa-b sne-b 'tall woman,' literally 'woman tall,' etc., ti-ka i-ka 'that tree,' guba-l i-la 'that stone.'

In Yungur we have some unexplained suffix alternations, as well as clear instances of the ma mass noun class in tux-ma 'salt,' mod-ma 'blood.' Yungur has ba 'they' where, as elsewhere in the languages of the Niger-Congo family, the plural prefix of the personal class functions as the third person plural pronoun.

Jen has no noun plural formations. Here also we have ba 'they' as a relic of the personal plural class.

Kam has no noun plural formation. Material is particularly scarce here and no evidence of the noun classes is discoverable.

Languages of the Vere group have a well-marked system of suffixes. Vere itself shows the le/a alternation in no-r/no 'eye.' Here the r is a development of l as is evident from alternations in Vere itself. We have ri-l 'name' but ri-ra mingar-al 'my name.' Note that the agreement suffix also ends in l. Related dialects also show l in these forms, thus, Voko, another dialect of the Vere group has no-le 'eye' with the postulated le suffix. We also find the ko suffix in the Vere group in Vere to-k, Woko to-go, Sari to-ko 'ear' and other words. The ma affix for mass nouns in Woko ga-me 'blood,' bu-me

'beer' and similar words and the -bo affix in Vere ta-p, Woko ta-bo 'bow' (cf. Proto-Bantu bo-ta 'bow' with the same affix). The common Vere suffix -s added to human and animal names, is difficult to explain. Other languages of the Vere group usually have -no for human beings, -yo for animals. For a possible cognate of the -yo suffix see the discussion of Banda below.

Mangbei has the -ko suffix in the form -go in su-go 'ear' and other words. The Niger-Congo affix -ka found in West Sudanic, sometimes with diminutive meaning, occurs in bi-ga 'child,' su-ga 'spear' and other words (cf. bi-ga 'child' in Kusasi of the Gur group with the same affix). Mass nouns exhibit -ba, a suffix reminiscent of forms in some of the Togo languages. A suffix -ne, -no in dig-no 'breast,' ne-ba-ne 'chin' and other words where -le might have been expected are possibly developments of the -le affix since the change l>n is common in languages of the Niger-Congo family. The ne- prefix of ne-ba-ne 'chin' is parallel by a number of forms like na-lim-no 'tongue.' That this na is a prefix is shown by such variations as napuga and puganai, given as alternative forms for 'the men.' It may be a demonstrative element.

In Fali we find the -ko suffix in bet-ku 'breast,' tem-gu 'teeth' and many other words. The -ma mass noun suffix occurs in nyi-m 'blood,' dobra-m 'fat,' don-am 'salt.' A -yo suffix for animals like that of some of the Vere dialects is found in gun-yo 'fly,' ta-yu 'buffalo,' etc. There are apparently no plural formations.

Nimbari has the -ko suffix in to-gu 'ear,' etc. We also find the -ma mass noun suffix in be-m 'water,' de-m 'blood,' ne-m 'fat,' etc.

The Mbum dialects show clear traces of many of the common noun class affixes of the Niger-Congo family, although plural alternations do not occur. Thus we have the ko class in Laka su-gu 'ear,' in Mbum itself usually -k as in ho-k 'nose,' the -ma class in Mbum nu-m 'fat,' ndu-m 'salt,' etc., and the -le class in Laka tu-l 'head' (cf. Bantu le-to 'head,' with the same element as a prefix).

In the meager material on Masa furnished by Lukas and Mouchet (Juman and Kim), we find evidence of the -ko suffix in Masa lo-go-r 'ear' where -r is probably first person possessive, of -m in Juman mom 'water' and of -le in Kim la-r 'belly.'

Chamba has singular-plural alternations with the suffix pair le/a in nigi-la 'tooth,' nigi 'teeth,' with the levelling of final vowels, here always to a, similar to that already noted in Longuda. The -ma suffix appears in ie-ma 'blood,' kili-ma 'oil,' etc., and the -bo suffix in ta-ba 'bow.' There is an -s suffix for animals reminiscent of Vere, for example in nam-sa, 'animal,' bu-sa 'snake.'

The Daka evidence is difficult to interpret. The -ba personal plural suffix, however, is clearly present in such examples as ne 'man,' ne-bo 'men.'

The languages of the Mumuye group show some traces of the Niger-Congo system of affixes. Most of the languages do not have special plural formations for the noun but Kumba has no-r 'eye,' no 'eyes,' probably an instance of the le/a alternation with phonetic developments parallel to those for Vere cited above. Similarly, Teme has no-ru 'eye,' to-ro 'ear' possibly with vowel assimilation of the same suffix. The -ka suffix appears in Gomla ta-ka 'bow' and similar forms in other languages where Mumuye proper has merely ta. This suffix also appears in Kumba ho-ka 'nose.' Kumba has likewise retained the ma affix for mass nouns in me-m 'water,' dei-m 'blood,' no-m 'oil,' 'fat,' etc.

The Nielim-Bua-Koke group likewise shows only traces of the Niger-Congo classificational elements. Sometimes, just as in the Mumuye group, one language has a suffix in a particular word where another exhibits only the stem. In other instances variant forms, with and without the suffix, are given for the same word. There is evidence for the -le suffix in Nielim tu-la 'ear,' Koke gi-l 'eye,' Nielim su, su-l 'head,' Koke su-l 'head.' The ma formative occurs in Bua hu-ma 'blood,' nu-mo 'fat' and Koke li-m 'water, rain.'

The Tula language has a fully functioning system of class suffixes with clear points of contact with the general Niger-Congo system. The personal class is readily identified by the demonstrative agreements w 'singular,' b 'plural' corresponding to the common West-Sudanic u and ba respectively. The noun has the plural suffix -bo as in kwartabo 'men.' The class with agreements w 'singular' y 'plural' agrees with West-Sudanic u/i and Bantu classes 3 and 4 mu-/mi-. The class with singular agreement d and plural t or less commonly y is probably related to West-Sudanic li/a, Proto-Bantu *de-/ *ma-. The liquid or mass noun class in -m is seen in kotom 'blood,' yem 'milk' etc. The suffix -ko for verbal nouns agrees with the Bantu ko- prefix of the infinitive and related West-Sudanic forms.

Except for Mondunga and the closely related Mba, the languages of the Eastern section of the Adamawa-Eastern branch show only a few uncertain survivals of the Niger-Congo system of affixes. The situation in Banda is typical of most of the group. We have vowel prefixes in o-tu 'ear,' o-wu 'nose,' a-ma 'mouth,' and similar words. That these are prefixes is, of course, suggested by comparative data: to, for example, is the morpheme meaning 'ear' throughout most of the Niger-Congo family, combined with some classificational affix. That the a- in a-ma is a prefix is further shown within Banda itself

by the occurrence of ma in place of a-ma in certain compounds. We have also such alternations as bu 'to be black,' u-bu 'black'; tu 'to have intercourse,' o-tu-ru 'coitus.' The situation is parallel to that in Ibo and other languages where the Niger-Congo system is in an advanced state of decay and the extensive loss of affixes combined with the widespread application of analogy or a levelling factor has reduced the system to a few vowel and nasal affixes without clear cut distinction in meaning. The forms va-, vo- found in some of these languages prefixed to the normal numeral roots may well be a survival of the concord form -ba of the personal plural class. A prefix y plus vowel is found denoting animals in Banda in ya-vuro 'dog,' ye-bru 'goat,' yə-nu 'bird.' Its only analogue, to my knowledge, are the suffix forms cited above for some languages of the Vere group and Messo. Likewise, whether the a- prefix for animate plurals found in Banda, Zande, and Barambo is a survival of the system of affixes, and, in general, whether the so-called gender systems of these languages originated in the general classificational system of the Niger-Congo family remains to be investigated.

The suffixes of Mba show the clearest relationship to the Niger-Congo class system of any language in the Eastern subgroup. The class with singular suffixes -ki, -gi, -ge, plural -si corresponds to Western Sudanic ka/si as found particularly in the Gur languages. The class -ge/-bi obviously finds its counterpart in Western Sudanic and in Bantu *ke-/ *bi-. There is likewise the singular -li suffix corresponding to Western Sudanic -li and Bantu *-de which has however lost its original plural in favor of -si mentioned above as plural of the -ki class. In addition there is the suffix -me found in liquids and mass nouns e.g. gome 'water,' zame 'milk.' The closely related Mondunga has similar forms; a class with agreements k/z corresponding to -ki, -gi, -ge/-si of Mba, a singular l class and the liquid mass noun class in m. In addition, it has a suffix class with agreement w/y as in Tula, here likewise the reflex of West Sudanic u/i, Bantu *mu-/ *mi-. Mondunga also has a single prefix class li-/ma- which is related to Bantu *de-/ *ma-, Western Sudanic li/a.

Adamawa-Eastern Comparative Word List¹⁹

- | | |
|------------------|---|
| 1. animal, meat: | (3) Degha <u>nama</u> ; Dagomba <u>num(di)</u> ;
Mossi <u>nem(do)</u> . |
| | (4) Adele (ε) <u>naŋ</u> ; Twi <u>nam</u> ; Nupe <u>ena</u> ;
Proto-Ijo <u>*nama</u> . |
| | (5) Mambila <u>nyama</u> ; Efik <u>unam</u> ;
Proto-Bantu <u>*nyama</u> . |

- (6) Longuda nyomo; Yungur namo;
Kam nam; Mangbei nama; Bua
nyam; Namshi nam(bo).
2. to be (1):
- (1) Temne ba 'be in a place.'
(2) Bambara be; Dan be; Huela ve.
(4) Ahlō ba; Akye ba; Ibo ba
(progressive auxiliary).
(5) Bute be; Proto-Bantu *ba, *be.
(6) Gbaya be; Gbanziri ba.
3. to be (2):
- (1) Temne re.
(2) Mende le.
(3) Kasele de.
(4) Ewe le; Ibo di, ri; Santrokofi le.
(5) Efik di; Proto-Bantu *de.
(6) Gbaya de; Indri le; Feroqe li.
4. belly:
- (1) Kissi puli; Banyun be:r; Cobiana,
Cassanga abu.
(2) Bambara furu; Susu furi 'abdomen';
Kono ebu.
(3) Mossi pu(ga); Dagomba puri;
Tobote (de)po(l).
(4) Likpe (ka)fo; Idoma ipu; Igala efu;
Ijo furo.
(5) Bute bur; Janji εpuru; Proto-Bantu
*pu.
(6) Mumuye buru; Taram fu; Nielim
hul; Nzakara vuru; Bwaka bu;
Barambo bulu.
5. bird:
- (1) Badyara (u)noune.
(3) Kanjaga nui; Gurma nuagu; Mossi
noa:(ya) 'chicken.'
(4) Aladian (e)nene; Ibo nnunu; Twi
anoma.
(5) Jaba nu; Ngoro anona; Proto-Bantu
*-noni; Efik enuen.
(6) Kam nu; Nimbari nun(gu); Chamba
nu(a); Bua ne; Gbanziri nu; Ndogo
no; Gbaya nwě.
6. to bite:
- (1) Mandyak rume; Balante doma.
(2) Bambara dumu 'eat'; Susu don 'eat.'
(3) Mossi dumi; Chala don; Kabre dum.

- (4) Kebu dom; Adele ḍoḡ; Guang duḡ.
 (5) Bute nom; Efik dom; Proto-Bantu *dom.
 (6) Daka lom; Vere rom; Mbum loḡ; Mba nomo; Amadi romgo.
7. black:
- (1) Temne bi 'be black.'
 (2) Bozo (Soninke) bibi; Dyula fi; Kweni beri 'night.'
 (3) Kulango bi; Kabre biyo 'be black'; Doghosie biri(ge).
 (4) Ahlō bibi; Kukuruku bi 'to be dark'; Idoma obi 'darkness.'
 (5) Reshe ubiru; Boritsū ebr; Efik obubit 'be black.'
 (6) Jen bi; Daka vir(ki); Mumuye viri; Zande bi; Nzakara bibiri; Gbanziri bi; Ndogo bvibvi; Sango bi 'night'; Banda bi 'at night.'
8. bow:
- (1) Gola ta: 'shoot with a bow'; Dyola (ka)taḡ 'arrow.'
 (2) Mano, Dan sā; Busa sa.
 (3) Talensi ta(b); Mossi ta(ba); Tobote (bo)to(bo).
 (4) Lefana (ɔ)ta; Ibo ota; Idome ota.
 (5) Tiv ta 'shoot'; Piti (o)ta; Proto-Bantu *(bo)ta.
 (6) Namshi ta(bo); Mumuye ta; Vere ta:(p).
9. breast:
- (1) Biafada (a)bili; Mandyak pil; Konyagi (i)bal.
 (3) Tobote (de)bil; Dagari bere; Gurma (li)be(li).
 (4) Likpe (lɛ)mi; Akposo (ɛ)vi; Nupe (e)be.
 (5) Kentu (a)mɛ; Akunakuna ɛbi; Proto-Bantu *(de)-bɛdɛ.
 (6) Messo (Fali) bet(ku); Yasing bi; Jen mi; Mumuye mi.
10. child:
- (1) Fulani bʔi; Serer-Sin bi; Balante (m)bi.
 (3) Mossi bi(ga); Siti bi; Bariba bii.
 (4) Adele ebi; Ewe vi; Gbari (e)bi.

- (5) Koro ebiya; Kamuku boo; Proto-Bantu *biad- 'give birth.'
- (6) Mangbei bi(ga); Yasing bie; Koke ba; Gbaya be; Ndogo bvi.
11. cow:
- (1) Serer-Sin nak; Fulani nagge; Temne (u)na.
- (2) Soninke nā; Sya niaya; Mende nika.
- (3) Sisala no(ho) 'ox'; Lobi nā 'ox'; Bariba nee.
- (4) Gbari nako; Idoma ɛna; Guang (kɛ)na.
- (5) Jaba nyak; Efik enən; Jukun na.
- (6) Kam nak; Yungur na; Bua nya; Namshi na(yo).
12. to cut:
- (2) Kpelle te; Vai tie; Mende tewe.
- (3) Bwamu tā.
- (4) Nyangbo te; Bassa te; Guang te.
- (6) Mbum te; Ngbandi dɛ; Zande dɛ.
13. day, sun:
- (2) Dyula la; Mano, Dan dɛ.
- (3) Dagari da; Mossi da(re); Minianka tyā(ga).
- (4) Gã la 'fire'; Abe la 'fire'; Idoma ola 'fire.'
- (5) Boritsū ula 'fire.'
- (6) Vere ula 'day'; Mumuye la 'sun'; Mbum lo 'day'; Sango la 'sun'; Mayogo ela 'sun'; Barambo ora 'day.'
14. to die:
- (2) Numu, Ligbi, Huela kpā 'kill.'
- (3) Minianka ku; Tobote kpi; Bariba gbi.
- (4) Likpe kpi; Ewe ku; Yoruba ku.
- (5) Bute ku 'kill, die'; Efik kpa; Proto-Bantu *ku.
- (6) Sango kui; Zande kpi; Gbanziri kpwi.
15. dog:
- (3) Mossi ba(ga); Bariba bõõ; Minianka põ.
- (4) Akposo (ɔ)va; Nupe (a)ba; Igala abia.
- (5) Efik ebua; Yeskwa (e)bu; Proto-Bantu *(m)-bwa.

16. to drink:
- (6) Mangbei vwa; Yungur bwe; Daka vo(na); Sango mbo; Ndogo bvo; Gbanziri mbo.
 - (3) Mossi nyu; Chala nyɔ̃; Sisala nyɔ̃a.
 - (4) Lefana ni; Ewe no; Bini nwɔ.
 - (5) Efik ɲwɔŋ; Proto-Bantu (Meinhof) *mu(a) but cf. Swahili nywa; Duala nyɔ; Pedi nwa.
 - (6) Nielim nyi; Longuda nyo; Sango nio.
17. ear:
- (2) Soninke toro; Bozo (Soninke) two; Dan tu.
 - (3) Kanjaga tu(i).
 - (4) Ahlō (ɔ)tɔ; Ewe to; Yoruba eti.
 - (5) Gure (ku)to; Efik utɔŋ; Proto-Bantu (ko)tɔ.
 - (6) Longuda tu(la); Mangbei su(ɡo); Waka to; Mbum su(k); Nielim tu(la); Sari to(ko).
18. to eat:
- (1) Temne di; Kissi de; Mandyak de; Dyola ri.
 - (2) Mwa li; Bozo (Soninke) dye.
 - (3) Foro li; Mossi di; Sisala di.
 - (4) Anyimere di; Ibo ri; Idoma le.
 - (5) Efik dia; Proto-Bantu *de; Gure le.
 - (6) Namshi le; Yasing re; Daka li; Gbaya li; Zande ri; Barambo le.
19. eye:
- (1) Mampa (Bulom) nyeny; Ankaras (Bidyogo) ne.
 - (2) Malinke nya; Dan nya; Susu nia.
 - (3) Nafana nye(ne); Sisala ni; Mossi ni(fu).
 - (4) Ahlō (e)nu; Ibo anya; Abure enyi.
 - (5) Efik enyin.
 - (6) Yungur nu; Longuda nyu(la); Kam anu; Jen niŋ; Kumba nɔ(r); Vere nɔ(r); Nielim nyi.
20. to fall:
- (2) Mano to; Kpelle to.
 - (3) Kasena to; Awuna tua; Kabre tolu.
 - (4) Twi to; Likpe tsue; Igala ata.
 - (6) Mbum to; Nzakara, Zande ti; Bwaka te; Gbanziri ti; Mba te; Banda te.

21. fish:

- (1) Kissi suwo; Badyara (i)saŋ;
Biafada yesa.
- (2) Sya zε; Dan zu; Bisa zo.
- (3) Bariba sũã; Mamprusi zi(ŋa);
Chala (di)ji.
- (4) Anyimere sõ; Adele (ε)sun;
Newole (Bete) zi(ri).
- (5) Tiv esu; Proto-Bantu *swe.
- (6) Masa ši; Mbum seo, nzui; Lakka
sui; Koke sa(p); Gbanziri si;
Ndogo se; Sango susu.

22. fly:

- (2) Sya sinsin; Koranko sisie; Vai
sisi.
- (3) Mossi zoa(ga); Lobi kinkin;
Minianka sūsũo.
- (4) Ibo iji, ijiji; Idoma iju; Yoruba
ešĩšĩ.
- (5) Bute ŋgi(b); Olulomo (e)kinki;
Kahugu (ku)ge; Proto-Bantu *-gi.
- (6) Daka ge; Jen izẽ; Vere gunku(s);
Gbaya dzi; Gbanziri ŋgi, ngungu.

23. four:

- (1) Fulani nai; Limba (bi)naŋ; Badyara
(ma:)ne.
- (2) Bambara nani; Susu nani; Kpelle
na:ŋ.
- (3) Mossi anãsi; Konkomba nnā;
Sisala na.
- (4) Avikam anã; Adele -na:; Idoma
enε; Proto-Ijo ini.
- (5) Koro anar; Efik ina; Proto-Bantu
*na, *nai.
- (6) Munga nyin; Kam nar; Mbum
nyiaŋ; Yasing nei; Daka nasa;
Gbaya nara; Gbanziri (bo)na;
Banda (va)na.

24. to give:

- (1) Gola nyã; Balante nya.
- (2) Dan nu; Mwa na.
- (4) Ewe na; Avikam na; Bini na.
- (5) Bute naha; Tiv na; Efik no.
- (6) Longuda na; Yungur na.

25. goat:
- (1) Wolof mbei; Fulani mbe:wa;
Krim (Bulom) bili.
 - (2) Kpelle boli; Busa ble.
 - (3) Tara boro; Awuna bono; Lyele
bonyɔ̃; Lobi bu.
 - (4) Aladian (o)buri; Ibo obori; Grebo
wudi.
 - (5) Abua ɛbwɛli; Efik ebot; Proto-
Bantu *-bodi.
 - (6) Yungur mbwere; Bua mbi; Chamba
vi(a); Kam impili; Gbanziri bele.
26. head:
- (4) Akpafu iti; Twi eti; Ibo isi.
 - (5) Piti (li)te; Koro etso; Proto-Bantu
*-to, *-toi.
 - (6) Nielim su; Daka ti(i); Mono,
Lakka tu(l).
27. knee:
- (1) Mampa (Bulom) (i)lonk, (i)donk;
Dyola (ka)dyun.
 - (3) Mossi dun(di); Gurma (le)du(le).
 - (5) Akunakuna (a)ron; Efik edon;
Proto-Bantu *-du, *-dui.
 - (6) Longuda (kwɔ)dum(le); Chamba
ɔ̃ndu(la); Kam alunu; Namshi
ɔ̃du(ko); Gengle run.
28. to know:
- (1) Mandyak me.
 - (2) Malinke me, mina 'understand';
Bambara men 'understand.'
 - (3) Mossi, Dagomba mi.
 - (4) Yoruba mɔ; Ibo ma.
 - (5) Mambila mini 'think'; Proto-Bantu
*manya 'know.'
 - (6) Namshi meĩ 'know'; Mbum ma
'think.'
29. to laugh:
- (1) Bulom mam; Wolof mun 'smile.'
 - (3) Chala mɔ; Sisala mɔŋ; Degha
mame; Lobi ma.
 - (4) Adele moma; Nupe mɔ; Ibo mua.
 - (5) Efik mam (noun).
 - (6) Jen mama; Gbaya mama; Banda
omo; Zande moma; Gbanziri mo.

30. leopard:

- (3) Kusele (ɔ)gbe; Lobi kpe; Awuna gwe(ro).
- (4) Ibo ago; De gbi; Bini ekpē.
- (5) Proto-Bantu *(ɣ)-gwe; Yeskwa egbi; Janji (bi)kpe.
- (6) Daka gbe; Chamba go(a); Vere go; Mumuye gbe; Gbaya go.

31. long:

- (3) Lyele dwal 'be long, high'; Bariba dēŋya; Awuna lo 'be deep.'
- (4) Ewe didi; Nyangbo dada 'be long, high'; Akye du 'be long'; Proto-Ijo *ala 'far.'
- (5) Bute le: 'deep'; Warwar (Mambila) da 'be long'; Proto-Bantu *dai, *dē.
- (6) Mbum di 'deep, long'; Banda de 'be long, deep'; Gbaya du 'be long.'

32. man:

- (1) Nalu nyie; Bulom nɔ; Mandyak (ba)-nya (plural).
- (2) Mande nu; Kpelle nū; Bambara nyi 'partisan de. . . .'
- (3) Mossi ni; Dagomba niri; Kasele onyi.
- (4) Adele (e)ni; Yoruba ni; Likpe ni.
- (5) Abua oni; Nyidu unɔ; Koro (i)nye.
- (6) Daka ne; Kam nyi; Longuda nyi(re).

33. moon:

- (1) Bulom ipan; Badyara fa.
- (3) Kulango fenyō; Siti palo; Lobi puri; Puguli pɛno.
- (4) Likpe (ko)fa; Igbira (u)fɛ; Kyama pɛ.
- (5) Jaba fi; Kamuku (o)piana; Efik ɔfiɔŋ.
- (6) Munga fi; Yungur fɛ; Bua fio; Nielim pien; Mayogo epe.

34. mouth:

- (1) Gola (o)nyā; Mampa (Bulom) nyen; Bidyogo (ka)na.
- (3) Nafana nyo; Kulango no(ɣo); Dagomba nɔ(le).
- (4) Ahlo enu; Ewe nu; Aladian (o)mwa; Abe (o)nwa.

- (5) Efik inua; Jukun nu; Proto-Bantu *nwa.
- (6) Munga mwa; Nielim mu; Gbaya nu; Gbaya mu.
35. neck:
- (2) Kpelle kɔŋ; Vai kaŋ; Bambara kã.
- (4) Twi ɛkɔŋ; Gã kwɛ; Likpe ɔkwɛ.
- (5) Olulomo (de)kolo; Bute kor; Proto-Bantu *-kɔɔ.
- (6) Namshi kol(ko); Sango golo, goro; Sande goro; Mayogo guru; Gbanziri, Barambo golo.
36. oil:
- (2) Sya nyi; Dan nyõ; Bisa nyon.
- (3) Chala nu 'fat'; Kabre ni(m); Awuna nu(ga).
- (4) Idoma nɔ; Gwa nnon; Adele (bu)nõ.
- (5) Janji (ti)noi; Gure, Kahugu (ma)ni; Ganawuri inoi.
- (6) Yasing numi; Mbum nu(m); Munga nui; Mumuye nũ; Jen nyui; Gbaya no.
37. saliva:
- (1) Limba tutu 'to spit'; Sherbro θu 'to spit'; Fulani tuta 'to spit.'
- (4) Avatime (si)ta; Ewe ta; Yoruba itɔ.
- (5) Proto-Bantu *-ta.
- (6) Mbum sa(m); Vere ta(tu); Chamba so(ra); Gbaya sa; Ndogo tso.
38. salt:
- (1) Balante tom; Bidyogo nto.
- (3) Legba to(m); Kabre ɔɔ(m).
- (6) Mbum to(m); Mumuye tã; Gbaya tõ, toŋ.
39. to say:
- (3) Awuna ta; Dagari tɔhe; Chala tage.
- (4) Adele ta; Ewa ta 'tell'; Bini ta.
- (5) Bute ta; Proto-Bantu *ti; Efik te 'speak.'
- (6) Gbaya to; Banda to.
40. skin:
- (1) Gola koro; Limba koto; Bulom kor.
- (2) Mende kɔɔ; Kweni kor; Dan ku.
- (4) Santrokofi (ɔ)kɔ; Newole (Bete) kpa; Idoma ɔkpa.
- (5) Bute kwa; Irigwe kikpe; Kagoro okwo.

41. to sleep:
- (6) Togoyo kɔ; Ndogo ko; Gbanziri koto; Banda oko; Indri kua.
- (1) Bulom lɔl; Gola ɖa 'lie down'; Kisi loaŋ.
- (4) Likpe le; Ibo la; Aladian ɖeɖa; Yala la.
- (5) Proto-Bantu *dad- 'lie down'; Efik de.
- (6) Nielim lelo; Gbanziri lala; Banda lo; Gbaya ra.
42. stone:
- (1) Temne (a)sar.
- (3) Gurma (li)tan(le); Kasele (de)ta.
- (4) Adele (de)ta; Akpafu ita; Gã tɛ.
- (5) Kamuku tale; Bute seule; Proto-Bantu *-tade.
- (6) Munga tei; Kam (a)tal; Mumuye tari; Bua ta; Gbaya ta; Sango te.
43. three:
- (1) Fulani tati; Temne sas; Limba (bi)tat.
- (3) Nufana tare; Gurma ta; Gan ata.
- (4) Kebu ta; Yoruba eta; Idoma eta; Proto-Ijo *taru.
- (5) Kagoro tat; Bute tare(b); Proto-Bantu *tato.
- (6) Munga tat; Mumuye tati; Bua ter; Kam car; Nielim teri; Masa ata; Daka tara; Namshi tatu; Gbaya tare; Nzakara ata; Gbanziri (bo)ta; Sango ota.
44. ten:
- (1) Wolof buko; Konyagi fuko; Landoma pu.
- (2) Mende pu; Susu fu; Kweni vu; Bisa bu.
- (3) Tamprusi fi; Mossi piga; Gurma piega.
- (4) Likpe fu; Nyangbo (ke)fɔ; Grebo pu.
- (5) Tiv puwə; Kamuku opa.
- (6) Jen fwia; Munga fu; Yungur pu; Kam buu; Mbum bu; Vere bo; Gbaya bu, bua, buko.

45. tongue:

- (1) Badyara (pu)lema; Fulani dʔem(gal); Nalu (mi)lembe.
- (4) Adele (ge)lema; Lefana (u)nyemi; Bini ařaře.
- (5) Yeskwa (u)lema; Proto-Bantu *-deme; Efik edeme.
- (6) Munga lyem; Kam (a)lim; Teme lem; Mbum lima; Mangbei (na)lim(no); Yungur liemie; Gbaya lembe.

46. tooth:

- (1) Mankanya (Mandyak) (i)nyig; Fulani nyi:(re); Bidjogo (ka)nyi.
- (2) Bozo (Soninke) nyi; Bambara nyin; Sya nyini.
- (3) Dagomba nyine; Talensi nyin; Sisala nyi(la).
- (4) Lefana (a)nyi; Yoruba enyi; Igbira anyi.
- (5) Kamuku (li)nye; Bute nyin; Tiv anyi.
- (6) Daka nyine; Koke ni; Gbaya nini.

47. tree:

- (1) Nalu (n)ti; Biafada (bu)ri.
- (3) Dagomba ti(a); Lobi ti(ri); Sisala te(a).
- (4) Ahlõ oti; Ewe ati; Ari ti 'firewood'; Ijo te.
- (5) Yeskwa (e)ti; Proto-Bantu *-te; Kurama uti.
- (6) Chamba ti(a); Daka ti(ma); Longuda ti(ka); Koke teo; Teme, Vere, Gbaya te.

48. two:

- (1) Temne (kə)bari 'twin'; Nalu bele.
- (2) Mende fele; Mano pere; Sya pla.
- (4) Avatime oba; Igbira eba; Nupe (gu)ba.
- (5) Efik iba; Kamantan (bi)far; Proto-Bantu *bade, *bede.
- (6) Daka bara; Nimbari bala; Messo bala.

49. white:

- (1) Dyola fur; Limba fufu; Gola fua.
- (2) Mende puru; Sya foro; Boko pura.

- (3) Awuna pōa; Sisala pula 'be white';
Mossi pel(ya).
- (4) Adele fu; Ewe fu 'be white'; Twi
fufu.
- (5) Efik fua, fia; Bute eburi; Tiv
pupu.
- (6) Mumuye puru; Mburn fu 'be white';
Vere bulε; Ngbandi vulu.

From the time of F. Mueller, who, in the mid-nineteenth century, established a separate Nuba-Fulah group in his classification of African languages, to the more recent theory of M. D. W. Jeffreys, advanced perhaps only half-seriously, that Fulani is so remarkable that it could only be explained as an arbitrarily invented children's language, the Fulani language has always been a subject of special interest to students of Africa. The reasons are not far to seek. The Fulani are a conspicuous people, one of the largest tribal groups in Africa, spread in isolated though substantial islands over well-nigh half the breadth of the African continent from Senegal to Wadai, east of Lake Chad. Under enthusiastic Moslem leaders they had made themselves political masters over a considerable portion of this area at the time of the arrival of the Europeans. Racially they seemed to form a special subtype, and theories of Caucasoid origin have always been popular. The best known of these perhaps is that advanced by M. Delafosse who considers them a group of Aramaic-speaking Judaeo-Syrians who entered Negro Africa from Cyrenaica about 200 A.D. The evidence to support this viewpoint is meager and inconclusive. Linguistically also they have seemed unique. The feature of the language which has aroused the most speculation is the alternation of initial consonants, particularly in the substantive, which combines with suffix replacement in the plural to produce surprising results. Thus a member of the Fulani nation is pul-lo, the plural is ful-se. The word for 'thief' is guj-jo in the singular, wuy-se in the plural. As we shall see, this phenomenon, in spite of the wonder it has aroused, is far from unique in this portion of Africa.

In keeping with the prevailing conception of Caucasoid origin of the Fulani people, Meinhof attempted to show that the Fulani language was Hamitic. In spite of occasional protests and the extreme weakness of Meinhof's demonstration, this view has met with wide acceptance. F. W. Taylor, for example, speaks of "the generally accepted theory that Fulani is one of the Hamitic tongues" although the reason he gives for its not being connected with the other languages of the West Sudan will hardly seem cogent to the linguist: "From its wealth of vocabulary, its sonorous diction and the delicate shades of meaning

it can express, I certainly do not think it belongs to the Sudanic family."²⁰ The Hamitic origin of Fulani is accepted by Jeffreys also, who derives only the vocabulary of Fulani from his hypothetical children, but tells us that "the grammar could not be invented and so was Hamitic."²¹ Material on the Fulani language is catalogued under Hamitic in the Columbia University Library. It was evidently in deference to this widespread opinion that Westermann excluded Fulani from affiliation with his West Sudanese family.

The thesis which I shall present here is that there is, in fact, nothing particularly difficult about the genetic classification of Fulani among African languages. It is closely related to Serer-Sin, a relatively obscure language of the Senegal area, and exhibits a somewhat more remote connection with the Wolof language of the same general area. All three of these languages clearly belong to the northern sub-group of Westermann's West Atlantic section of his West Sudanic family. It belongs, then, to the westernmost branch of the far-flung Niger-Congo family as outlined earlier in this chapter.²² I could have demonstrated there its membership in the Niger-Congo family in general, but I have preferred to document the close relationship of Fulani and Serer-Sin with occasional references to Wolof. Since the membership of Serer-Sin and Wolof in the West Sudanic family has never been questioned, it must follow that Fulani is also a member of this group.

The relationship of Fulani, Serer-Sin, and Wolof has been noted by H. Laubouret, who writes concerning Wolof, "Il est apparenté d'assez près au Sérère et au Peul."²³ Peul is the usual French designation of the Fulani. Mlle Homburger, who in spite of her confused pan-Africanism, occasionally shows a good comprehension of closer connections, notes this relationship and in her writings constantly cites the three languages together as a groupe Sénégalaise.

It is to be noted that the Serer-Sin language is distinct from Serer-Nono. The latter language is a member of the northern sub-branch of the West Atlantic languages but shows no special relationship to Fulani. In what follows I shall refer to the Serer-Sin language simply as Serer.

It is precisely the feature of Fulani that has been considered most peculiar, the system of initial consonant alternation, which constitutes the most powerful proof of the connection of Fulani with Serer, and in general with the northern languages of the West Atlantic group. These alternations occur both in the noun and the verb. The noun will be considered first.

The noun in Fulani forms a set of noun-classes, sixteen in the singular, six in the plural. Each is characterized by a suffix which combines with the noun base in intricate fashion, by its own

demonstrative and possessive particles which resemble the suffix in form, and by the form of the initial consonant in one of three alternating possibilities: stop, fricative, or prenasalized. Thus the word rawa-ndu 'dog' belongs to the ndu class in the singular; rawandu ndu doggi means 'the dog which ran'. The initial consonant is the fricative of the series: d stop, r fricative, nd prenasalized. The plural dawa'pi belongs to the pi class; dawa'pi pi ndoggi means 'the dogs which run'. The initial consonant of all nouns of this class belongs to the stop series, just as all nouns of the ndu class in the singular all begin with fricatives. However the unvoiced consonants show a stop in situations where the voiced consonants are prenasalized; ko, for example, where *nko might have been expected. The implosives, t and l, do not vary at all. The fricative alternant of b, *β has developed into w, that of g, *ɣ has become y before e and i, w before a, o, and u.

This entire system is duplicated in Serer but the details are in some cases different. There are ten classes in the singular, four in the plural, and some specific correspondences with the Fulani classes can be noted. The noun suffix appears only in detached form as an indication of the indefinite article, in some classes as a prefix also. The initial consonant alternation appears but in somewhat different form as indicated in the following partial table:²⁴

B	SS	SF	SN	FS	FF	FN
*g	k	g	ng	g	w/y	ng
*k	k	x	k	k	h	k
*d	t	r	nd	d	r	nd
*t	t	d	t	t	t	t
*l	l	l	l	l	l	l
*D	d	d	d	D	D	D

It is the precise functioning of this table which forms the single most cogent proof of the genetic relationship between Fulani and Serer. Thus *gor 'man', which belongs to the personal class, has both in Fulani and Serer a singular with a stop initial and a plural with a fricative. We find Serer o-kor oxa 'a man', gor va 'men'; Fulani gor-ko 'man', wor-ae 'men'. I have used a table similar to the above to find cognates for known Fulani words from a Serer dictionary again and again with success.

Similar systems of alternation are found as a survival in a few words in Wolof (pan 'day', fan 'days') and fully functioning in Biafada and Konyagi, both languages of the northern sub-group of Westermann's

West Atlantic group. For example, in Biafada we have, with a system of prefixes, such alternations as gu-ranka 'leg', ma-tanka 'legs'. Here again many details correspond. There are three alternants: stop, fricative, and prenasal. Where Fulani has implosives we have a non-alternating consonant. Thus wu-dema (pl. ma-dema) 'tongue' is related to Fulani dem-gal (pl. dem-di) with the same meaning. Just as in Fulani and Serer l does not alternate, etc.²⁵

Fulani and Serer both have systems of derivative affixes used with verbs which share a number of highly specific points in common. We have Serer -in, Fulani -in 'causative'; Serer -an, Fulani -an 'perform an action to or for someone'; Serer -ir, Fulani -ir 'to perform an action together with or by means of'; Serer -andor, Fulani -indir 'reciprocal action'.

Finally we have a goodly number of lexical resemblances of which the list which follows are far from a complete enumeration. A few items are particularly noteworthy as completely excluding the possibility of borrowing as an explanation. The Fulani word for head is ho're, plural ko?e. An internal analysis in Fulani shows that the base form is *kok: that is *hok plus re > ho're and kok plus pe > ko?e. Serer here has xox 'head', the regular reflex of the hypothetical *kok. Another instance that can hardly be the result of borrowing because of the semantic differentiation is Serer fi 'to do', without any derived noun, related to Fulani fi 'an act, affair', without any corresponding verb in the language. In general, as already noted, the regular alternations in the initial consonants precludes borrowing as an overall explanation.

accept: F. jab, S. jab; affair: F. fi, S. fi 'to do'; ass: F. wam-nde, S. fam; be far: F. wodda, pl. ngodda, S. god; be well fitted: F. hen-, S. xen; be bitter: F. hap-, S. xad; black: F. bal-, S. bal-ig 'to be black'; child: F. si, S. bi; come: F. war-, pl. ngar, S. gar; count: F. lim-, S. lim; cow: F. nag-ge, S. nak (Wolof, nag); dig: F. was-, pl. ngas, S. gas 'bury'; do masonry: F. mah-, S. max; drink: F. yar-, S. yer; ear: F. nof-ru, S. nof; eat: F. nyam-, S. nyam; elephant: F. nyi'wa, pl. nyi si (base *nyig), S. nyig; eye: F. yite-re, pl. gite, S. ngid; finger: F. hondu, pl. ko'l i, S. kol; fish: F. li'ngu, pl. libni (possibly from *lib-ngu), S. lib; frog: F. fab-ru, S. fab; follow: F. rew-, S. ref; hear: F. nan-, S. nan; hole: F. ngas-ka, S. ngas 'well'; horse: F. pucu, S. pis; inhabit: F. yen-, pl. ngen-, S. gen; kill: F. war-, pl. mbar, S. var; know: F. ?and, S. and; laugh: F. jal-, S. jal; man: F. gor-ko, S. kor; see: F. yi-, pl. ngi, S. gi; sheep: F. mba'la, S. mbal; sing: F. yim-, pl. ngim, S. gim; spleen: F. dam-ol, S. dam; star: F. ho'd-ere, S. xor; steal: F. guj-ja, S. gud; today: F. hande, S. xane;

white: F. dan-, S. dan-ig, 'to be white', woman: F. deb-bo, S. tev;
write: F. wind-, pl. mbind, S. bind.

The reader who has followed the demonstration thus far will no doubt have realized that were it not for the prevailing theory of the Hamitic affiliations of Fulani, the present exposition would be unnecessary. Under ordinary circumstances one does not write treatises to prove that French is related to Italian. If the standard classification maintained that French was related to Basque and was not an Indo-European language, such a treatment would, however, be in order. It is clear that if Fulani is Hamitic, then so is Serer, and if Serer then Wolof and all the languages of the West Atlantic subgroup and the final result is the incorporation of the entire West Sudanic with extensions (the family I call Niger-Congo) into Hamitic. For this there is no evidence and it is certainly not intended by the orthodox theory.

In order to rescue the traditional conception, some will say that Fulani does indeed closely resemble Serer and the other languages of the Senegal area, but that this is simply the result of the influence of neighboring languages on the original Fulani language which was different and perhaps, after all, Hamitic. But what has been demonstrated here is surely genetic relationship. Such items as the initial consonant alternations or an entire system of verbal derivative affixes are not borrowed. Perhaps the Fulani once spoke a different language and exchanged it for one native to this area. This may be so, but the linguistic evidence makes it not one whit more likely for the Fulani than for the Serer or other peoples in the area. There is no linguistic proof for this and whatever may have been true of the now probably unrecoverable past, the Fulani now speak a language of the West Atlantic group.

As for Meinhof's proof of the Hamitic relationship of Fulani in Die Sprachen der Hamiten I discuss it only briefly here because the establishment of the membership of Fulani in the Niger-Congo family excludes the possibility of its membership in the Hamitic group. That Hamitic and Niger-Congo may ultimately be related is, of course, possible, and there are a few indications that this is so, but this does not, of course, imply a special position for Fulani as against the hundreds of other Niger-Congo languages.

In the field of morphology, Meinhof is unable to show any specific resemblances of importance in verbal conjugation or the noun gender system characteristic of Hamitic languages. The resemblances pointed out are vague and general in character. The existence of a system of verb derivation is alluded to, but only three are cited as showing any coincidence with Hamitic forms. The form -ta is quoted

as 'intensive and frequentative' but it does not occur with this meaning in any of the languages treated by Meinhof as Hamitic in this volume or anywhere else, to my knowledge. The usual meaning of this element is reflexive or passive in Semito-Hamitic languages. A causative -i, Meinhof admits is only present "in Resten." Meinhof derives it by analyzing the Fulani causative -in into -i 'causative' plus n. The meaning of n is not given. The whole process is sheer fantasy. Moreover, where -i is found elsewhere as a causative it is doubtless secondary. The normal Semito-Hamitic causative is s. The third verbal derivative form given by Meinhof is -na 'applicative'. But the Hamito-Semitic -n is passive in meaning. The few other morphological elements cited by Meinhof cannot be looked upon as any more convincing. A complete analysis seems unnecessary.

What was apparently the most important proof of Hamitic affiliation for Meinhof was the existence of initial consonant alternations in the noun, which he interpreted in the following manner. There are two large classes of nouns in Fulani, the personals and the non-personals. They are marked by the system of initial alternations: personals, stop in the singular, fricative in the plural; non-personals, fricative in the singular, stop in the plural. This process of reversal Meinhof calls logical chiasmus and he finds it in other Hamitic languages in other connections. The personals are declared to be the forerunners of the masculine gender, and the non-personal "Sachklasse" the ancestor of the Hamitic feminine. In fact, Fulani was called pre-Hamitic by Meinhof and according to him represented an older form of Hamitic speech.

As has been shown already by Klingenberg, this is simply contrary to fact. The form of the initial consonant depends on the suffix-class, not on personal or non-personal meaning. It so happens that there is a single personal class (as in other Niger-Congo languages) which has the stop-fricative alternation. The scheme breaks down for things, some of which have stop initials and some fricatives, depending on the suffix class to which they belong. Doubtless the initial component alternations are the result of phonetic changes induced by former prefixes, such as those of the neighboring languages which share these alternations with Fulani. It is certainly suggestive that all the classes whose pronouns end in -l in Fulani begin with stops, and the pam and kon class begins with prenasalized consonants. Whatever the explanation, the opposition of personal and non-personal has nothing to do with the case.

Finally there is the lexical evidence to be considered. An examination of the comparative lists at the end of Meinhof's treatise show that Fulani is more often than not omitted in the citations. Where it occurs, most of the time the comparisons are unconvincing. Who will

believe, for example, that Fulani nido, nidi 'two' is cognate with Bedaaye tagu, dagu 'twenty' or that Fulani toro'ri 'large elephant' is cognate with Somali dagon 'elephant', and similar forms? And why compare tato, tati 'three' with Somali saddeh or Chamir šakua when we have forms like tat and tato throughout the Niger-Congo family including Proto-Bantu *tato? Most of the few comparisons that show promise are the result of borrowing from Hausa, which is Hamitic. This can be shown by their non-occurrence in the Senegal dialect of Fulani. The few remaining are presumably accidental or the result of an extremely remote relationship between the Niger-Congo and Hamitic families as a whole.

Using Meinhof's methods one could prove that Algonkian was Hamitic. The existence of animate and inanimate gender would be stated to be a forerunner of masculine and feminine and perhaps the same number of accidental resemblances in vocabulary might be cited.

One important consequence of the present thesis is the confirmation it affords of the view that the Fulani have moved in historic times from west to east across the Sudan. The Senegalese group of Fulani bordering the closely related Serer and Wolof must be looked upon as the nucleus from which other Fulani-speaking groups broke off and migrated eastward and southward. Much more important, if the analysis of Fulani presented here is correct, is the fact that the possession of cattle and the aptitude for military conquest are not necessarily correlated with the speaking a Hamitic language. It is a priori improbable that such a cultural trait as the possession of cattle should be related in a constant way with the possession of the language of a certain stock. I fear the impulse to classify Fulani as Hamitic, whether consciously or subconsciously, came from the stereotype of the conquering-cattle-owning-Hamite. In the Western Sudan the ironic fact is that the Hamitic-speaking agricultural Hausa are under the rule of the pastoral Fulani who speak a West Sudanic (Niger-Congo) language. This simple formulation of the relation between cattle conquest and language which has hitherto dominated the literature on Africa will also be shown as false for East Africa where the supposed Hamitic affiliations of the Masai, Nandi, and other cattle people of this area will be shown to have as little foundation as that of the Fulani.

In an earlier section of this chapter, the position to be assigned to the Bantu languages within the vast Niger-Congo family was indicated without the presentation of detailed proofs or the refutation of arguments that might be presented in favor of the traditional view.

As has already been seen, the great mass of languages in the western Sudan were demonstrated by Westermann to be genetically

related and to this group he applied the name West Sudanic. In the first part of this chapter I attempted to show that many languages farther east in the Sudan, though by no means all of them, belonged to this 'West Sudanic' family; for this entire stock I proposed the designation Niger-Congo.

Westermann, who, it is worth remarking, is an eminently cautious investigator, pointed out many resemblances in fundamental vocabulary between the Proto-West Sudanic forms he had reconstructed and the Proto-Bantu forms postulated by Meinhof.²⁶ This material, which might be vastly extended, showed regular correspondences such as the following: Proto-Bantu $\ast\bar{v}$ = Proto-Sudanic $\ast\bar{b}$, Proto-Bantu $\ast\bar{y}$ = Proto-Sudanic $\ast\bar{g}$; in the vowel system Proto-Bantu $\ast\bar{i}$, $\ast\bar{i}$, $\ast\bar{e}$, $\ast\bar{a}$, $\ast\bar{o}$, $\ast\bar{u}$, $\ast\hat{u}$ corresponded respectively with Proto-Sudanic $\ast\bar{i}$, $\ast\bar{i}$, $\ast\bar{e}$, $\ast\bar{a}$, $\ast\bar{u}$, $\ast\bar{u}$, $\ast\bar{u}$.²⁷ Occasionally Proto-Bantu \bar{u} corresponds to Proto-West Sudanic \bar{i} . Moreover the noun classifying affixes of West Sudanic, which appear as prefixes in some languages, suffixes in others, and as both prefixes and suffixes in still others, showed close resemblances to the well-known prefixes of Bantu both in form and meaning, thus:

<u>PWS</u>	<u>PB</u>	<u>Meaning</u>
u	γu^{28}	Singular, personal class and animate non-personal class
ba	va	plural, personal class
i	γi^{28}	plural, animate non-personal class
li	li	singular of paired objects
a	γa^{28}	plural of paired objects
ma	ma	liquids and other mass nouns
bu	vu	abstract
ki	ki	plants, objects
ku	ku	infinitive, locative
ka	ka	diminutive singular
ti	tu	plural of diminutives.

I list here the English equivalents of a selection of morphemes for which cognate forms may be found in Bantu and West Sudanic. A full listing, with forms from the relevant languages is not attempted for reasons of space: head, ear, mouth, tongue, jaw, arm, hand, leg, knee, breast, belly, back, tail, skin, bone, saliva, excrements, mother, father, sun, stone, wind, water, blood, fat, charcoal, animal, leopard, fowl, egg, dog, bird, goat, fly, crab, tree, two, three, four, inside, not, I, he, we, you, they, be, go, send, speak, eat, drink, sleep, die, laugh, call, steal, break, defecate, sit, bad, soft, large, black.²⁹

In order not to duplicate material already available, the reader is referred to the above-mentioned study of Westermann. Likewise a number of Proto-Bantu forms are incidentally cited in the Adamawa-Eastern comparative word list earlier in this chapter. Some idea of the extent of these resemblances may be gathered from the following. They are more numerous than for many of the languages already accepted as West Sudanic and the case is somewhat better than for the affiliation of English to Indo-European. Thus, of 50 nouns, taken at random from Johnston's study of Bantu, 21 were referable without trouble to Proto-West Sudanic. Of these same 50 nouns in English only 17 could be traced to Proto-Indo-European. Of these some 50 nouns in Dyula, a typical Mande dialect which has always been reckoned as West Sudanic, only 11 could be shown to be derived from Proto-West Sudanic.

If we may, on the basis of this evidence, admit that the Bantu and West Sudanic (i.e. Niger-Congo) languages are related, the question arises regarding how this relationship is to be conceived. One alternative is to regard Bantu as coördinate genetically with West Sudanic (i.e. Niger-Congo) as a whole. In view of the size of the Bantu group and the independent position accorded to it in every previous classification of African languages, this was my assumption during the earlier phases of the investigation. However, another possibility soon forced itself on my notice, namely, that the Bantu languages are simply a subgroup of an already established genetic subfamily of West Sudanic.

For this to be true, there must exist a subfamily of West Sudanic which shares common linguistic innovations not found elsewhere among West Sudanic languages. There is such a group of languages, those called Benue-Cross by Westermann and Semi-Bantu by other writers. An example of an innovation of the type referred is the word for 'child'. The Proto-West Sudanic form is **vi* and it is found virtually everywhere outside of the Benue-Cross group. These languages, along with Bantu, show a form **ana* which is evidently an innovation dating a period of common historical development in which both Semi-Bantu and Bantu languages shared. Many other such innovations could be cited. Their sum total is so great that, as will be seen later, several Bantu languages, about which only very limited information existed, have been classified as Bantu while other observers have on occasion classified the same language as Bantu or Semi-Bantu. Of the 50 Bantu nouns discussed above, 43 are found commonly in Semi-Bantu languages, while for the same 50 in English, only 39 are traceable to Primitive Germanic.

The position of the Semi-Bantu languages has always been a paradoxical one. They have been considered, with every right, as a

subdivision of West Sudanic yet they show a resemblance to Bantu which is so close as to earn them the name Semi-Bantu. If Bantu and West Sudanic are really distinct, such a group of languages should not exist! But we have seen, that apart from any consideration of the Semi-Bantu group, there is sufficient evidence that Bantu is in some manner related to West Sudanic. The denial of the relationship between the Bantu and Semi-Bantu languages, which is almost comparable to denying the genetic relationship of English and German, is the reductio ad absurdum of the conventional assumption of the independent status of Bantu.

The only alternative explanation, and one must suppose that this has been more or less tacitly accepted up to now, is that the Semi-Bantu languages owe their special resemblance to the Bantu languages through borrowing, and that the resemblance between West Sudanic and Bantu is likewise the result of borrowing from Bantu. This explanation seems to be precluded for the following reasons.

1. The nature of the phonetic correspondences. For the bulk of the Semi-Bantu languages we have nothing beyond word lists. In the case of Efik, however, one of the languages of the Cross River group, we have a dictionary with tone markings by R. F. G. Adams and a number of Efik forms cited in Ida Ward's excellent tonal study.³⁰ A comparison of Efik with related Proto-Bantu forms shows a high degree of correspondence in tones, about as great as that exhibited by most contemporary Bantu languages to the reconstructed Proto-Bantu forms. This can be seen from the following list of Efik forms and their probable Bantu cognates:³¹

<u>Efik</u>	<u>Proto-Bantu</u>	<u>Meaning</u>
1. -bà	-bàdé	E. both; B. two
2. -bá	-béde	breast
3. bàt	bàd-	to count
4. bí	-bé	E. to slander; B. evil
5. -bót	-bódi	goat
6. -bók	-bókò	arm
7. -buá	-bwá	dog
8. dàhá	dàg-	to leave
9. dé	dá(ad)	to sleep
10. -démè	-démè	tongue
11. díá	dé-	to eat
12. dòk	dòk-	to weave
13. -dóŋ	-dú	knee
14. dòŋ	dòŋg-	E. pay attention to; B. be in order

	<u>Efik</u>	<u>Proto-Bantu</u>	<u>Meaning</u>
15.	dóm	dóm	to bite
16.	-dùŋ	-dĩ	root
17.	dùòt	-dītò	E. feel heavy; B. be heavy
18.	fát	pát-	E. embrace; B. seize
19.	fiá	pé-	E. firewood; B. burn
20.	fót	-púdò	E. lather; B. froth, foam
21.	-káŋ	-kádà	charcoal
22.	-kíkò	-kókó	E. cock; B. fowl
23.	kóŋ	-kódó	E. be high; B. large
24.	kóŋó	-kádá	crab
25.	kòp	-kóbù	navel
26.	kót	kód-	E. add, join; B. grow, be strong
27.	kpá	kú-	to die
28.	-kpè	-gwè	leopard
29.	-kút	-kúdù	tortoise
30.	mà	màd-	to finish
31.	mèn	mèd-	to swallow
32.	mònó	bón-	to see
33.	-nàm	nyàmà	animal
34.	-nàŋ	-nà	four
35.	-nèn	nóní	E. fowl; B. bird
36.	nímé	dím-	to extinguish
37.	nióŋ	-nénè	E. be long, tall; B. large
38.	-nuà	-nwà	mouth
39.	sák	sèk-	to laugh
40.	-sòŋ	-sé	earth
41.	-suéné	-sónì	shame
42.	tá	-tátò	three
43.	-ták	-tākò	E. bottom; B. buttock
44.	tè	tè	to say
45.	tém	tém-	E. cut, mow; B. cut down
46.	tiòn	táànò	five
47.	-tó	-té	tree
48.	-tóŋ	tó	ear
49.	-tóŋ	tún	E. strong desire; B. to wish
50.	wòt	bòd-	to kill
51.	yén	-jánà	child

We also have Abraham's tonal material for another Semi-Bantu language, Tiv. Here again there is, in general excellent agreement with reconstructed Proto-Bantu tonal forms. Most striking of all is the following. In Bantu, the nominal prefixes have low tone. However a number of Bantu languages agree in having high tone except for Meinhof's classes 1 and 9 (the singular of the personal and animal classes) for certain forms in concord with the noun. These include one or all of the following: adjective prefixes, prefixes of numerals, genitive particle including the possessive adjectives and pronouns and verb subject pronouns. Thus, for all classes except 1 and 9 which have low tone, these concord elements have high tone as against low tone for the nominal prefix. This precise irregularity occurs in Tiv where for the "long form" of the pronouns as subject of certain verb forms classes 1 and 9 have low tone and the remaining pronouns have high tone.³² A more intimate point of contact or one less likely to be borrowed is difficult to imagine.

2. The irreversibility of certain changes. In Meinhof's classes 3 and 4, Bantu has the prefixes *mu- and *mi- as against Semi-Bantu and West Sudanic *u- and *i-. This certainly a Bantu innovation. In the pronominal referents for these classes Bantu has, however, *yu- and *yi-. This can be explained in the light of Semi-Bantu and other West Sudanic forms as a survival from the period when the noun prefixes did not begin with a nasal. On the other hand, the Bantu forms cannot explain the Semi-Bantu and other West Sudanic forms.

Bantu has a verb vî-ala 'to give birth'. As a derivative from vî 'child' + ala, a verbal formative, it is quite understandable. But *vi 'child' does not exist as a word either in Bantu or the Semi-Bantu languages, whereas it is the ordinary word for child practically everywhere else among the West Sudanic languages, and a Proto-West Sudanic form *bi is generally assumed. The verb formation, on the other hand, is peculiar to Bantu. For the West Sudanic languages to have borrowed this word, would have required an analysis of the form vî-ala into its constituent elements and the abstraction of the form *vî- in the meaning 'child'. I think we must reject any hypothesis which makes professional linguists out of the ordinary speakers of a language. But if not borrowed, then, unless the resemblance is accidental—a highly unlikely hypothesis—it must be the result of genetic relationship.

3. The nature of the vocabulary involved. It is precisely the most fundamental and common words, and in overwhelming numbers, which are involved. Thus there is correspondence between Bantu and

the West Sudanic languages, including the Semi-Bantu, in the numerals two, three, and four, with Semi-Bantu in the numeral five also, while in the numbers above five there is no resemblance between Bantu and West Sudanic forms. Surely a set of languages which were so strongly influenced by another language that they borrowed the lowest numerals would not create the higher ones out of their own resources. In all examples of borrowed numerals of which I am aware, a language which borrows lower numerals also borrows higher ones.

Again one would expect that an influence which was strong enough to cause the borrowing of terms for parts of the body, pronouns, etc., would necessarily lead to the borrowing of less fundamental terms. But such Kulturwörter as the terms for axe, maize, guinea-corn, mat, are not among the terms which show agreement between Bantu and the Semi-Bantu languages. All our experience and common sense suggests that these would be the first terms borrowed.

4. Some common Bantu words are found widely in West Sudanic, others are not found at all. The first situation is far more common because of the closeness of the relationship. For example, the Bantu word for 'tongue' — *-deme shows related forms in a large number of languages as far west as the West Atlantic group. On the other hand, the word for 'belly' — *-bumo is not found outside of Bantu. On a theory of spread from Bantu we would be unable to account for a gigantic conspiracy of the numerous and diverse West Sudanic languages to borrow from a specific group of Bantu words roots and not from others. On the view that Bantu is simply one among many Niger-Congo groups, roots confined to Bantu are more recent innovations which arose during the period that Bantu was differentiating from the most closely related languages of the Bantoid subgroup of the Benue-Congo division of Niger-Congo. Indeed if a language such as the reconstructed Proto-Bantu were spoken by a small population in the Nigeria-Cameroons area, it would occur to no one to consider Bantu as anything but another language of the Semi-Bantu (Westermann's Benue-Cross) group.

5. Supposedly transitional languages are really Bantu. Certain languages of the northwest Bantu border area have generally been considered to be Semi-Bantu, although some difference of opinion exists.³³ Such languages, for example, are Bamum, Bali, Banen, and Jarawa. These resemble the Bantu languages more than the more distant Semi-Bantu languages, so that Bantu seemed, as it were, to spill over in this direction. The closer resemblance of these languages to Bantu seemed to suggest borrowing from Bantu which was

less intense the farther one removed from the Bantu-Semi-Bantu border line. These languages show lexical innovations characteristic of Bantu languages as against the remaining Benue-Congo languages and what is known of their grammars confirms this conclusion. They all seem to show, moreover, specific evidence of membership in the Northwestern subgroup of Bantu of which Duala and Yaunde are the best known. In the present work, absence of mention in the list of Benue-Congo languages of a border language is tacit evidence of my opinion that it is Bantu.³⁴

If the evidence presented here is accepted, the reader will naturally inquire after the reasons which have induced all previous writers on this subject to accept the Bantu-Sudanese dichotomy as fundamental in African linguistics. I believe that the explanation is to be found in the history of our knowledge of Africa. The Bantu languages, which cover such a large section of Africa, were the first to come to the attention of scientifically trained observers and their unity was obvious, so that the existence of a Bantu language family was early established. By contrast the Sudanese area presents a chaotic picture and it was only in 1911 with the appearance of Westermann's Sudansprachen that the presence of wide-spread relationships among languages of the Sudan was demonstrated. By this time the separate status of Bantu was so traditional that a fundamental separation of the two groups was assumed. This was reinforced by evolutionary reasoning, in which, starting from a few well-known languages of the West Coast (e.g. Ewe, Twi, which were atypical in having lost their noun affixes), a sequence Sudanic = isolating, Bantu = agglutinative became fundamental for African linguistics. Moreover, the field is so vast that workers in one area had little knowledge of the languages in the other.

Another consideration which has played its part is that the vast area and large numbers of speakers of the Bantu languages seemed to guarantee separate familial status. I have no doubt that if a language resembling Proto-Bantu were spoken by a small number of people in the Nigeria-Cameroon border area, it would have been classified with the other languages of the Benue-Cross (i.e. Semi-Bantu) group. Considerations of this kind are, of course, irrelevant. At present the speakers of Germanic languages number over 350,000,000, while those of the Tokharian branch number zero, Tokharian being extinct. This does not prevent Indo-Europeanists from considering Germanic and Tokharian as being coördinate branches of Indo-European and providing equally valid evidence for the reconstruction of Proto-Indo-European.

If the view of the position of the Bantu languages presented here is accepted, there are certain historical conclusions of considerable

significance which follow. When Sapir demonstrated that the Algonkian languages were related to the Wiyot and Yurok languages of California, it was clear that, if this demonstration was accepted, it constituted a powerful argument for the movement of the Algonkian-speaking peoples from the west to the east. In the present instance we have, not two languages, but the vast Benue-Congo group of languages all of which except Bantu are spoken in Nigeria and the Cameroons. Moreover the location of the other languages of the Bantoid subgroup suggests even more specifically the Central Benue valley as the ultimate area of Bantu origins. The evidence thus becomes strong for the movement of the Bantu-speaking peoples from this area southeastwards. The usual assumption has been a movement directly south from the great lake region of East Africa.³⁵ It will also follow that this is a relatively recent movement, a conclusion which has generally been accepted on the basis of the wide extension of the Bantu languages and the relatively small differentiation among them. The assumption of Bantu movement made here also agrees well with the analyses of Herskovits, Ankermann, and Frobenius, which make the Guinea Coast area and the Congo basin part of the same culture area. Bantu culture would then be a relatively recent southeastward expansion of the Guinea-coast type of culture.

Notes

1. D. Westermann, Die Sudansprachen, eine sprachvergleichende Studie (Hamburg, 1911).

2. D. Westermann in Baumann, Thurnwald and Westermann, Völkerkunde von Afrika (Essen, 1940), p. 383. In this publication Westermann does not admit even a typological resemblance between the languages of the eastern Sudan and the West Sudanic languages with which he formerly connected them.

3. D. Westermann, "Die westlichen Sudansprachen und ihre Beziehungen zum Bantu" (Mittheilungen des Seminars für orientalische Sprachen, vol. 30, Berlin, 1927).

4. Nominalklassen in westafrikanischen Klassensprachen und in Bantusprachen (Mittheilungen des Seminars für orientalische Sprachen, vol. 38, part 3, pp. 1-55, 1935).

5. See the references in notes 1 and 2. Further material is presented in Westsudanische Studien (Mittheilungen des Seminars für orientalische Sprachen, vols. 28, 29, 31), *passim*.

6. Fulani is thus a member of the West Atlantic subgroup of Western Sudanic. Westermann acknowledged that this had been his

own previously unstated view in an article published after the appearance of SALC. "The fact that Fulani is equally related to Wolof and Serer shows its true place: it has nothing to do with Hamitic languages" (Africa 22:253, 1952).

7. It was probably Westermann's belief that Songhai was distinct from West Sudanic but since it was a single language he hesitated to accord it separate status and treated it with the Gur group on geographical grounds.

8. Subsequent to the publication of SALC, I discovered that Westermann had stated in the article "African Languages" (Encyclopaedia Britannica, 1953) that "there is an original affinity between Bantu and Sudanic languages." The statement is, however, somewhat equivocal in that this is called a "common linguistic substratum" and no distinction is made between Western and Eastern Sudanic.

9. I wish to emphasize here that this relationship is a very close one and not at all to be compared to hypotheses of the Ural-Altaic type. Were it not for existing preconceptions, there would be no need for a special demonstration. In particular, the relationship between Bantu and the other languages of the Central group ("Semi-Bantu") is so close that, as will be shown later, a number of genuine Bantu languages have been erroneously classified as "Semi-Bantu."

The oft-noted resemblances between Bantu and Fulani are merely a consequence of common membership in the Niger-Congo family.

10. A. N. Tucker, The Eastern Sudanic Languages, p. viii (London, New York, Toronto, 1940).

11. A full listing of languages is found in chapter 5 where it is likewise shown that Central Sudanic is a subgroup of the Chari-Nile branch of Nilo-Saharan.

12. J. Lukas in an article "Umrisse einer ostsaharanischen Sprachgruppe," (Afrika und Übersee 36, pp. 3-8, 1952), came independently, though after the appearance of SALC, to the same conclusion regarding the relationship of Zaghawa and Berti to the long recognized grouping of Kanuri and Teda.

13. The affiliation of Kru and Ijo to the Kwa group is to be considered tentative. Kwa and Benue-Congo are particularly close to each other and in fact legitimate doubts arise concerning the validity of the division between them. On the other hand West Atlantic seems more remotely related to the other group and Mande the most distant of all. These opinions coincide to a considerable degree with those of W. E. Welmers (personal communications) and receive some support from unpublished glottochronological data of R. Wescott.

14. The subgrouping of Mande given here is in substantial agreement with that of W. E. Welmers in "The Mande Languages" (Report of the 11th Annual Round Table Meeting on Linguistics and Language

Studies, pp. 8-21, Washington, 1961). The incorrectness of the traditional division into Mande-tan and Mande-fu is likewise recognized by A. Prost in Les Langues Mande-Sud du groupe Mana-Busa (Dakar, 1953).

15. The languages listed here from Avatime to Anyimere inclusive are the so-called "Togo remnant languages." They belong integrally within this subgroup of Kwa.

16. The exact position of Reshe within Benue-Congo is uncertain.

17. Nimbari is possibly extinct. It is the language referred to as Niamniam by Strümpell.

18. This is not to be confused with a Chadic language likewise called Masa in the same area. I have referred to the latter by an alternate name Bana (unfortunately also employed for the Niger-Congo language mentioned here).

19. The numbers refer to the subgroup of Niger-Congo as listed earlier. In general I have restricted citations to three languages from each group. Both the number of languages cited and the number of etymologies on this list could be very greatly extended.

20. F. W. Taylor, A First Grammar of the Adamawa Dialect of the Fulani Language (Oxford, 1921), p. 10.

21. Africa, vol. 17, 1947, p. 53. The article is entitled Speculative Origins of the Fulani Language.

22. Southwestern Journal of Anthropology, vol. 5, pp. 79-100, 1949.

23. Africa, vol. 4, 1931, p. 57.

24. The meanings of the abbreviations are: B—base form, SS—Serer stop, SF—Serer fricative, SN—Serer nasalized, FS—Fulani stop, FF—Fulani fricative, FN—Fulani nasalized. ɓ and ɗ in the Fulani words stand for implosive sounds.

25. In addition, it has not been previously noticed that initial consonant alternations also occur in the Sarar dialect of Mandyak as found in the S. Koelles, Polyglotta Africana (London, 1854).

26. D. Westermann, Die westlichen Sudansprachen und ihre Beziehungen zum Bantu (Berlin, 1927), especially pp. 310-313.

27. In the present instance where I am reproducing Westermann's data I quote Meinhof's orthography of Proto-Bantu as in the original. In the later sections including the comparative Efik material a modification of Meinhof's system which has become standard with Bantuists is employed. It is the same as that found in A. G. Meeussen, "Les Phonemes du Ganda et du Bantou Commun," Africa 25, pp. 170-80, 1955.

28. Here again, I quote Meinhof's reconstruction. Since Meinhof's ɣ has been shown to represent two different original consonants, yu, ji and ju or yu, yi and ya appears more probable.

29. This list is selected from the list of Bantu-West Sudanic cognates in the Westermann study referred to in note 26.

30. I. C. Ward, The Phonetic and Tonal Structure of Efik (Cambridge, 1933) and R. F. G. Adams, Efik-English Dictionary, 3rd ed., revised (Liverpool, 1953).

31. A few items for which the internal Bantu evidence regarding tone is conflicting are omitted. In one case, 'to be,' Ward has low tone and Adams high tone (di, di) and Proto-Bantu *dè. In item no. 44, the tone is missing in Adam's dictionary, low in Ward. In no. 35 perhaps the Bantu form is to be compared rather to (i)nuen 'bird' with middle tone on the second syllable. In a number of cases items were omitted because there was insufficient evidence for the tone of the Proto-Bantu form. Most of the tonal data on Bantu cited here are found in J. H. Greenberg, "The Tonal System of Proto-Bantu," Word vol. 4, pp. 196-208, 1948.

32. For this tonal pattern in Tiv see the tables in R. C. Abraham, The Grammar of Tiv (Kaduna, 1932) on pp. 3 and 13. For Bantu examples see P. H. Nekes, Lehrbuch der Jaunde-Sprache (Berlin, 1911), p. 89, J. F. Carrington, "The Tonal Structure of Kele (Lokele)," African Studies 2:193-209 (1943), tables accompanying paragraphs 36, 40 and 45, and A. Burssens, Manuel de Tshiluba (Anvers, 1946), pp. 34 and 45-46. It should be noted that in Chiluba low tone corresponds regularly to Proto-Bantu high tone and vice-versa.

33. Thus N. W. Thomas considered Jarawa to be Bantu while other writers called it Semi-Bantu. Johnston considered Banen to be Semi-Bantu but it is classified as Bantu by Guthrie in The Bantu Languages of Western Equatorial Africa (Oxford University Press, 1953), p. 28. In the same work, the Kaalong language (p. 33) which is hardly more than dialectally different from Koelle's Ndob is treated as Bantu while Johnston calls it Semi-Bantu.

34. The languages listed under numbers 227, 228, 230, 232, 233, 234, 235, 236, 237 and 253 as Semi-Bantu in Johnston's classic work, The Bantu and Semi-Bantu Languages, are considered here to be Bantu. A full discussion of the evidence regarding the northwest boundary of Bantu is planned for subsequent publication.

35. However, Johnston who posits the Great Lakes area as the focus of Bantu expansion, assumes an earlier origin between the Chari basin and the Bahr-el-Gazal because the closest relations are in the Niger and Cross River basins.

III. AFROASIATIC

The uncertainty regarding the possible extension of the Hamito-Semitic languages in Negro Africa is well described by Marcel Cohen in his recent Essai Comparatif sur le Vocabulaire et la Phonétique du Chamito-Semitique when he states that

the question is . . . complex and irritating. What must be determined is whether certain of these languages, or even the majority of them should not be considered to be members of the Hamito-Semitic family whose definition should be revised in consequence.¹

Highly conflicting opinions are current regarding the existence of Hamito-Semitic languages in Negro Africa. On the one hand, one finds to varying extents in standard ethnologic works, the vast extension of Hamitic espoused by Carl Meinhof, while other writings, notably those of M. Delafosse and, in more extreme form, those of Mlle Homburger, the unity of Negro-African languages is proclaimed and it is denied that any belong to the Hamito-Semitic family.²

I shall review the evidence concerning the various languages of Negro Africa that have been regarded by some writers as belonging to the Hamito-Semitic family. If the theoretical statements made in the introductory section are kept in mind, it will be realized that our point of departure must be the existence of four languages or language groups—Semitic, Berber, the extinct ancient Egyptian, and the Cushitic languages of East Africa—which exhibit such marked morphological and lexical resemblances that their relationship cannot be doubted, and has, in fact, gained general acceptance. The problem will then be to determine whether any of the suggested languages possess those specific morphological and vocabulary elements which characterize the generally accepted Hamito-Semitic languages. Thus, it will not be sufficient, after the manner of Meinhof, to operate with such general concepts as Ablaut, polarity, and grammatical gender. I have little doubt that, on this basis, if a Negroid population had been found in Central Africa speaking an Indo-European language, Meinhof would, without further ado, have classified it as Hamitic. If we take as an example Meinhof's chief criterion, grammatical gender, we see that its mere presence in two languages proves very little. To say, however, that these two languages possess a feminine formative t

increases greatly the specificity, and with it, the cogency of the evidence. If this point of view is adhered to, it is found that in all cases a clear answer is possible. Specific points of resemblance are either so numerous that genetic relationship must be accepted or so rare that it must be decisively rejected.

The proposed languages and language groups whose possible membership in the Hamito-Semitic family is to be evaluated are (1) Fulani, (2) the "Nilo-Hamitic languages" (Masai, Nandi, Turkana, Suk, Bari, and others), (3) Hottentot, (4) Hausa and similar languages in the Lake Chad region.

Fulani has already been considered and rejected in the previous chapter. There it was seen that concrete resemblances to the Hamito-Semitic languages were almost completely absent, while the evidence adduced pointed unmistakably to inclusion in the West Atlantic branch of the Niger-Congo family.

Turning to East Africa, the group of languages traditionally called Nilo-Hamitic are to be considered next. Here, as in the instance of Fulani, the typical Hamito-Semitic pronominal and verbal elements are entirely lacking. Sex gender is indeed present, but the formatives used—l masculine and n feminine—show no agreement with those employed in the Hamito-Semitic languages. There are some vocabulary resemblances, in greater number than for Fulani, but the fact that the resemblances are almost entirely with the neighboring Cushite languages and not with other branches of Hamito-Semitic shows that we have to do with borrowing.

The relationship of the Nilo-Hamitic languages lies obviously in another direction. There are thoroughgoing resemblances in fundamental vocabulary with the Nilotic languages—Shilluk, Dinka, Nuer, and others. Pronominal and verbal forms show close correspondence in the two groups. We find highly idiosyncratic plural formations shared by both groups of languages. The mere fact that the Nilo-Hamitic languages have grammatical gender while the Nilotic do not, is, as we have already seen, not in itself decisive. Moreover, Shilluk, a Nilotic language, has ǰa-l 'boy', ǰa-n 'girl' with the very same affixes for male and female quoted above as characteristic of the Nilo-Hamitic languages.

Indeed, the relationship between the Nilotic and the Nilo-Hamitic languages is so close that they must be considered as forming together a single subfamily of a wider group to which I apply the name Eastern Sudanic. This linguistic stock will be discussed in regard to its composition and its membership in the wider Chari-Nile and Nilo-Saharan groupings in later chapters.

Meinhof revived the earlier suggestion of Lepsius that Hottentot was a Hamitic language. Here again the chief, and in this case,

practically only, consideration was the presence of sex gender in Hottentot. Meinhof's view was that the clicks of Hottentot were borrowed from Bushman, along with a large portion of its vocabulary. Actually, the vast majority of Hottentot verbal and nominal roots begin with clicks and all would presumably have to be borrowed if Meinhof's explanation were to be retained. In addition, Hottentot and at least the North Bushman languages have the following fundamental features in common. The verbal and nominal bases are practically all disyllabic, or can be reconstructed as such, and exhibit a specialized pattern. They begin either with a click or non-click consonant, clicks occurring in this initial position only. This is followed by a very restricted group of vowels in second position. In the third position only a small selection of non-click consonants occur. In the fourth and final position, we find the full gamut of vowels. The sharing of this fundamental pattern in which the clicks function in a special role is powerful evidence for the relation of Bushman and Hottentot. If we add the vocabulary resemblances and the presence of similar verb tense affirmatives, the evidence for this connection becomes overwhelming.

In fact, the click languages of the Bushman-Hottentot area clearly fall into three subgroups—northern, central, and southern—a division which cuts across the cultural distinction between hunting, food-gathering Bushmen and pastoral Hottentot. Hottentot belongs in the central linguistic group along with the languages of the Tati Masarwa and Naron Bushmen, the relationship to the latter being particularly close. This point has been seen by Schapera, who considers Hottentot rather to be a Hamitic-influenced Bushman language than Bushman-influenced form of Hamitic speech.³ Likewise, D. Bleek, in her comparative vocabulary of Bushman languages, quotes Hottentot forms along with those of the central Bushman group.⁴ The only real point of resemblance with Hamitic-Semitic languages is in the presence of a b suffix for the masculine singulars and an s for the feminine singulars, a point shared with Naron Bushman. With the masculine b of Hottentot we may compare the b masculine of the objective case suffix of Bedaue, a Cushite language; the feminine s appears a possible development of the general Hamito-Semitic t. In the absence of other resemblances such a point of contact is arresting, but hardly decisive. If not an accidental convergence, there has been borrowing from a Hamitic-Semitic language and nothing more. In view of the considerable evidences pointing to relationship with the Bushman languages, the only other alternative is to consider Bushman and Hottentot together as a distinct subgroup in Hamito-Semitic. This has never been suggested by anyone and is entirely unlikely.

The remaining group of languages of Negro Africa sometimes regarded as Hamitic is that represented by Hausa in Meinhof's treatment. The resemblance of Hausa to the Hamito-Semitic languages was noted by earlier writers. Lepsius in 1863 put Hausa in the same Hamitic group as Berber.⁵ Others, while not following him in admitting a special resemblance with Berber, have likewise considered Hausa to be Hamitic. In 1866, F. Müller edited and published Krause's material on the Musgu language, south of Lake Chad in the same general area as Hausa, and declared it to be Hamitic.⁶ Meinhof nowhere mentions other languages than Hausa in the text of his work, but from the accompanying map it would appear that he also considered Musgu to be Hamitic.⁷ In several publications J. Lukas has pointed to an entire group of languages which he calls Chad-Hamitic and which includes Hausa and Musgu along with a number of other languages in this area.⁸ M. Cohen, in his comparative essay on Hamito-Semitic, remarks on the obvious resemblances between Hausa and the recognized Hamito-Semitic languages, and cites occasional Hausa forms in his comparative vocabulary.⁹

Unfortunately, up to now, Hausa forms have been cited in isolation and without much consideration of the other languages in the area to which Hausa is clearly related. This is easy to understand inasmuch as Hausa is a conspicuous language, perhaps the most widely spoken in Negro Africa, and material on it is relatively abundant. The bringing in of other languages of the Lake Chad area greatly strengthens the case for the entire group of languages as forming a branch of Hamito-Semitic. Other languages in the area show pronominal and verbal forms similar to those of Hausa, thus showing that they are not recent borrowings from Arabic as has sometimes been suggested. Vocabulary resemblances are similarly strengthened and further etymologies become possible which could not be discovered on the basis of Hausa alone.

Before presenting the evidence for the inclusion of these languages in the Hamito-Semitic family, I shall outline and classify its membership. The Chad family is, in my opinion, more extensive than that outlined by Lukas in his various discussions. Here, once again, we meet the typological thinking which has produced such confusion in regard to linguistic relationships in Africa. Lukas excludes languages which do not have sex gender. Thus Mubi is considered to be Chad because it has a gender system, while the other closely related languages of the eastern subgroup (group 9 below) are rejected. It may also be pointed out that not all of the previously accepted Hamito-Semitic languages have grammatical gender. In particular, it is lacking in some of the languages of the western subgroup of Cushitic.

The following classification of the Chad languages into nine groups is rather conservative and may be replaced eventually by a simpler one. Considering the limitations of the data available, the present procedure seems safest. The arrangement is approximately from west to east.

1. (a) Hausa, Gwandara; (b) Ngizim, Mober, Auyokawa, Shirawa, Bede; (c) (i) Warjawa, Afawa, Diryawa, Miyawa, Sirawa, (ii) Gezawa, Seiyawa, Barawa of Dass; (d) (i) Bolewa, Karekare, Ngamo, Gerawa, Gerumawa, Kirifawa, Dera (Kanakuru), Tangale, Pia, Pero, Chongee, (ii) Angas, Ankwe, Bwol, Chip, Dimuk, Goram, Jorto, Kwolla, Miriam, Montol, Sura, Tal, Gerka, (iii) Ron.

2. Kotoko group: Logone, Ngala, Buduma, Kuri, Gulfei, Affade, Shoe, Kuseri.

3. Bata-Margi group: (a) Bachama, Demsa, Gudo, Malabu, Njei (Kobochi, Nzangi, Zany), Zumu (Jimo), Holma, Kapsiki, Baza, Hiji, Gude (Cheke), Fali of Mubi, Fali of Kiria, Fali of Jilbu, Margi, Chibak, Kilba, Sukur, Vizik, Vemgo, Woga, Tur, Bura, Pabir, Podokwo; (b) Gabin, Hona, Tera, Jera, Hinna (Hina).

4. (a) Hina, Daba, Musgoi, Gauar; (b) Gisiga, Balda, Muturua, Mofu, Matakam.

5. Gidder.

6. Mandara, Gamergu.

7. Musgu.

8. Bana, Banana (Masa), Lame, Kulung.

9. (a) Somrai, Tumak, Ndam, Miltu, Sarwa, Gulei; (b) Gabere, Chiri, Dormo, Nangire; (c) Sokoro (Bedanga), Barein; (d) Modgel; (e) Tuburi; (f) Mubi, Karbo.

The morphological resemblances of the Chad languages with the recognized Hamito-Semitic languages are so numerous that the following exposition is purposely confined to a few salient points and the quotations are drawn from a restricted number of languages.

1. The feminine formative t is found in the Chad languages. We have Bachama -to, Malabu -ti, Bana -ta, suffixed to feminine nouns. In Hausa, r<t is the definite article for feminine nouns and ta is base for possessive pronouns referring to feminine nouns. Many further instances could be cited. With these uses, we may compare Egyptian t suffixes to feminine nouns, Semitic -at suffixed to feminine nouns, Berber t simultaneously prefixed and suffixed to feminine nouns and,

in some Cushitic languages, the -ti definite article added to feminine nouns and t as a base for feminine demonstrative adjectives.

2. The opposition k 'masculine' / t 'feminine' is most clearly found in Mubi where as possessive particles we have gi < ki after masculine nouns and di < ti after feminine nouns. This is parallel to the Somali suffixed definite article, e.g. nin-ki 'the man', nag-ti 'the woman' and to the k/t opposition employed in the demonstrative adjectives of Sidamo and other Cushitic languages.

3. The employment of n as a connective between a noun and a following dependent genitive is found in Musgu na, Logone n, Margi r < n, etc. This usage in the Chad languages coincides with that of Egyptian n and Berber n.

4. In the formation of noun plurals, there is detailed resemblance, particularly to Berber and the Cushitic languages. Taking our example from Logone, we have the following:

a. Doubling of the final consonant with additions of e: gam 'hoe', gamme 'hoes'. Compare the Cushitic Chamir iel 'eye', ielle 'eyes'.

b. Internal change of some other vowel to a: Logone sini, 'tooth', san 'teeth'. In Bedauye, or North Cushitic, we have 'or' son, 'ar' sons; in Berber a-jɗid 'bird', i-jɗad 'birds'. (The initial vowels are a historically distinct formation.) This type of plural is also found in Semitic (e.g. some of the Arabic 'broken plurals' and the Hebrew plural of segolates).¹⁰

c. Suffixation of en. Logone marar 'breast', mararen 'breasts'; Berber a-xam 'tent', i-xamen 'tents'.

d. Suffixation of en plus internal change to a. Logone ngun 'belly', ngwanen 'bellies'; Berber a-fus 'hand', i-fassen 'hands'.

5. There is extensive over-all correspondence in the pronominal system, particularly in the personal possessive suffixes attached to nouns. Among the more significant points of agreement are the following:

a. The first person singular possessive added to a noun is usually -u (Logone, Sokoro), as in Berber, or -i (Mubi) as in the Semitic languages. It is a striking point of agreement with Semitic that except for the first person singular possessive the sets of pronouns suffixed to nouns to indicate possession and to verbs to indicate the pronominal object are identical. Thus Arabic (Semitic) has 'abu-ka 'thy (masc.) father' and yadribu-ka 'he strikes thee (masc.)' with the same suffix. In the first person however, we have Arabic possessive ya, i 'my' but ni 'me' as the objective of a verb. The very same contrast is found in the Chad languages where -ni is common as the first person

singular pronominal object of verb forms (Buduma -ni, Logone -'ən, Hausa -ni). Thus we have Hausa 'uba'n-a 'my father' but ya' ba'-ni 'he gave me'.

b. In the Chad languages, we have -ka 'thy (masc.)' and -ki 'thy (fem.)' or forms easily derivable therefrom (Hausa, Logone, Mubi, Bolewa, and many others). This agrees exactly with Semitic -ka and -ki in the same meanings and with Egyptian -k 'thy (masc.)' and c < ki 'thy (fem.)'.

c. The common masculine third person possessive -ni (Logone, Gabin, Bura, etc.) is to be compared with the Cushitic Galla ini 'he'; Bogo, Quara, Demba, ni 'he'.

d. The second person plural possessive Hausa -ku, Jara -kun, Ngizim -kum, Ngamo -kom, etc., may be compared to Proto-Semitic *-kumu 'your (masc.)' / -kinna 'your (fem.)'; Egyptian -cn < kin 'your' and Cushitic Beja -kna 'your'.

e. The Hausa third person singular subject pronouns in construction with a verb, ya' zo 'he came', ta' zo 'she came' correspond exactly to Semitic (Arabic yaḍribu 'he strikes', taḍribu 'she strikes'), Berber idda 'he goes', tedda 'she goes', and Cushitic (Beja idif 'he goes', tidif 'she goes').

6. One remarkable detailed resemblance to Semitic deserves to be mentioned. In Semitic languages, verbs with initial w in the perfective have forms without w in other tenses and in the derived noun. In Arabic, for example, we have walada 'he begat', lida 'the act of begetting'; wasina 'he slept', sina 'the act of sleeping'. In Logone we have this same alternation in the verb 'to sleep' wisan 'he slept' but san 'the act of sleeping'. Borrowing is out of the question since wasina is not in use in present-day Arabic. This same alternation is likewise found in Egyptian.

7. Hausa and certain other Chad languages have an m- prefix which forms nouns of place, instrument and agent. This prefix occurs very commonly in Semitic, Egyptian, Berber and Cushitic with the same general range of meaning.

For no other proposed Hamito-Semitic African languages can anything be presented remotely approaching the morphological and lexical resemblances adduced here for the Chad languages. We arrive therefore at the definite conclusion that the language family traditionally named Hamito-Semitic has five coördinate branches: (1) Semitic, (2) Berber, (3) Ancient Egyptian, (4) Cushitic, (5) Chad.¹¹ In regard to its membership there remains only to be added the fact that the existence of Cushitic languages, considerably south of the main group, has generally been overlooked. These languages are listed below as forming the southern branch of the Cushitic substock.¹²

1. Northern Cushitic: Beja (Bedauye).
2. Central Cushitic: Bogo (Bilin), Kamir, Khamta, Awiya, Damot, Kemant, Kayla, Quara.
3. Eastern Cushitic: Saho-Afar, Somali, Galla, Konso, Geleba, Marille, (Reshiat, Arbore), Gardula, Gidole, Gowaze, Burji, Sidamo, Darasa, Kambata, Alaba, Hadya, Tambaro.
4. Western Cushitic: Janjero, Wolamo, Zala, Gofa, Basketo, Baditu, Haruro, Zaysse, Chara, Gimira, Benesho, Nao, Kaba, Shako, She, Maji, Kafa, Garo, Mocha, Anfillo (Mao),¹³ Shinasha, Bako,¹⁴ Amar, Bana, Dime, Gayi, Kerre, Tsamai, Doko, Dollo.
5. Southern Cushitic: Burungi (Mbulungu), Goroa (Fiome), Alawa (Uwassi), Iraqw, Mbugu, Sanye.

If the linguistic analysis presented here is correct, then much of what has hitherto been standard physical anthropology and reconstructed culture history in Africa is in need of reconsideration. The vagueness of the use of the term Hamite as a linguistic term and its extension as a racial term for a type viewed primarily as Caucasoid, has led to a racial theory in which the majority of the native population of Negro Africa is considered to be the result of mixture between Hamites and Negroes. A prominent instance is the standard work of C. G. Seligman, Races of Africa, in which the Negroes of the West African forest belt become the only true Negro while all the rest are Hamiticized to a greater or less extent.¹⁵ The speakers of "Nilo-Hamitic" languages are called racially half-Hamites. The Bantu are considered to be another type of Hamiticized Negro on the basis of the speculations of Meinhof (for which he never produced any proof, nor is any proof possible) that "Bantu is a mixed language, so to speak, descended of a Hamitic father and a Negro mother."¹⁶

With this is often combined a belief either in the inherent superiority of the Hamite element or in a factual estimate that it has shown itself everywhere as a conquering, predominantly pastoral element among Negroid agricultural peoples. Numerous citations from the ethnological literature on Africa could be made to indicate that this is the dominant view. I shall simply quote a few instances as representative of the general trend.

In W. Fitzgerald's Africa, we read:

From a distant period there has been a southward penetration of Hamites into East Africa and through their tendency to intermarry with the sedentary agricultural population has evolved the virile type to which we now refer.¹⁷

Meinhof says:

Apparently in the course of history it has repeatedly happened that the Hamitic peoples have subjugated and governed as a ruling people [German original: Herrenvolk] dark pigmented Negroes who spoke languages different from that of the Hamites.¹⁸

Haddon in speaking of the Bantu, says:

The widely spread keeping of cattle and refinement of facial characteristics betray Hamitic infusion.¹⁹

Seligman's statement is deeply tinged with the assumption of Hamite superiority:

. . . the incoming Hamites were pastoral Caucasoids—arriving wave after wave—better armed as well as quicker-witted than the dark agricultural Negroes.²⁰

The borrowing of a term for a linguistic stock for racial application is always a delicate matter, though if the correspondence is fairly close, as is the case with the term Dravidian in India, there is some justification for the procedure. In the instance of the use of Hamite in Africa, we have the extension of a term, whose original application in a linguistic sense was never made precise, to a great physical variety of populations. If the linguistic analysis presented here is correct, the term Hamite as a linguistic designation can only be applied correctly in Negro Africa to the Cushite populations of East Africa and the peoples enumerated above as speaking the Chad languages. As a matter of fact, even the linguistic use of the term Hamite should be abandoned. The Semitic languages do not occupy any special place in the total Hamito-Semitic complex. Their cultural importance and connection with our own historic past has led to a separate treatment which is not justifiable linguistically. In other words, the non-Semitic languages of the Hamito-Semitic family do not form a linguistic unity as against Semitic. Therefore, the term Hamitic, which has been reserved for this use, does not refer to any valid linguistic entity. Hence I have avoided the term Chad-Hamitic and preferred to designate this group simply as the Chad family. The only remaining use of the term Hamitic is in the complex term Hamito-Semitic and even here it can only lead to misconceptions regarding a special place for Semitic within the entire family. It therefore requires special explanation every time it is introduced in order to avoid such a misapprehension. The term Hamito-Semitic is so well-entrenched that it will no doubt continue to be used. I suggest the name Afroasiatic for this family as the only one found both in Africa and in Asia. In this way Hamitic could be entirely eliminated from use even as a linguistic term.

So all-pervading has been the loose application of the term Hamite in African racial classification that if the present linguistic analysis is accepted the whole problem of physical variation in Africa should be approached once again independent of preconceptions based on language. It would be a rather remarkable accident if a racial classification based on incorrect linguistics turned out to be valid.

In regard to the correlation between pastoral life and the speaking of Hamitic languages, the present results show that the stereotype of the pastoral conquering Hamite must be abandoned. In West Africa we have a one-hundred percent negative correlation. The only predominantly pastoral people, the Fulani, have been shown to be non-Hamitic-speaking, while none of the Hamitic-speaking peoples of the Chad area are cattle folk.

In East Africa, it now appears that those people with the greatest cultural emphasis on cattle are either East Sudanic (Nilotes and "Nilo-Hamitics") or Niger-Congo in speech (the Bantu). The Cushites, who are Hamito-Semitic speakers, are generally pastoral but in less intensive fashion than these other people.

Previous writers have either considered all these languages Hamitic (Meinhof) or none (Homburger). I have simply tried to classify languages on the basis of the evidence as it has appeared to me. However, any theory which at once harmonizes with the flattering view of the general predominance of the Caucasoid over the Negroid types under all cultural circumstances in Africa and which involves a fairly constant correlation of linguistic, cultural, and physical traits over a long period of time, must almost inevitably turn out to be false.

Afroasiatic Comparative Word List²¹

1. antelope:

Chad:	Ankwe (1) <u>jiri</u> 'roan antelope'; Buduma (2) <u>ngəri</u> 'gazelle'; Logone (2) <u>garia</u> .
Cushitic:	Beja (N) <u>garuwa</u> ; Sidamo (E) <u>gedimo</u> ; Iraqw (S) <u>gwarehi</u> 'dik-dik antelope'.
2. arrow:

Chad:	Bede (Ngizim) (1) <u>salo</u> 'to cut'; Gulfei (2) <u>si:l</u> ; Buduma (2) <u>hal</u> 'to stab'; Balda (4) <u>zala</u> ; Mofu (4) <u>sellam</u> ; Gisiga (4) <u>suil</u> 'knife'; Barein (9) <u>saalu</u> 'knife'.
Cushitic:	Beja (N) <u>sal</u> 'sharp, pointed'; Kamir (C) <u>sil</u> 'knife'; Quara (C) <u>sɛlau</u> 'sharp'.

3. ass:

Chad: Bolewa (1) koro; Buduma (2) koro; Bana (8) kuro(ta); Sokoro (9) kuro.

Cushitic: Chara (W) kura; Kafa (W) kuro; Saho (E) okalo. [62]

4. back:

Chad: Muturua (4) duba; Matakam (4) deba; Gidder (5) debo(ko); Musgu (7) deba.

Cushitic: Kamir (C) dirba; Bogo (C) danbi; Somali (E) dambo; Saho (E) daban.

Semitic: Arabic dabara 'be behind'; dubur 'back'. [332]

5. to beat:

Chad: Hausa (1) do:ka; Karekare (1) duku; Kilba (3) digga.

Cushitic: Saho, Afar (E) tak; Galla (E) daku 'pound'; Bogo (C) dadaku.

Berber: Tuareg dəgdəg 'pound'.

Egyptian: dkw 'flour, pounder'.

Semitic: Hebrew dəqəq 'pound'; Arabic daqqaqa, dakka 'be pounded'; Akkadian daqa:qu 'break in fine pieces'. [340]

6. bee:

Chad: Chibak (3) məmə 'honey'; Sukur (3) mam 'honey'; Muturua (4) mam 'bee, honey'; Balda (4) a:mam; Gidder (5) amama 'bee, honey'; Musgu (7) ammumi; ami; Mubi (9) u:m.

Berber: Iznacen (etc.) (θ)ammem(θ) 'honey'.

7. to be wide:

Chad: Hausa (1) ʔisa 'be sufficient, reach'; Logone (2) sui 'it is sufficient'; Mandara (6) ši-ša 'I have enough'.

Egyptian: wsx.

Berber: ssu 'stretch'.

Semitic: Arabic wasiʕa; Hebrew yešaʕ 'salvation'. [78]

8. black: Chad: Buduma (2) tsillim; Kuri (2) cilim; Sokoro (7) silim.
Cushitic: Bogo (C) cʔalam 'be dark'; Beja (N) duluma 'darkness'.
Semitic: Arabic zulm 'darkness'; Akkadian šalmu. [353]
9. blood: Chad: Hinna (3) var; Gidder (5) beli; Musgu (7) fel; Karbo (9) ba:ri; Somrai (9) bari.
Cushitic: Beja (N) boi; Kamir (C) bir; Saho (E) bilo.
10. body: Chad: Hausa (1) gawa 'corpse'; Sokoro (9) goi 'corpse'.
Cushitic: Zaisse, Haruro (W) gawo 'belly'.
Egyptian: d(t).
Semitic: Hebrew gew 'interior'; gəwīyyo 'body, corpse'; Syriac gaw 'midst, belly'; Arabic jaww 'midst'. [220]
11. bone: Hausa (1) kʔasi; Karbo (9) ka:so/, ka:si.
Egyptian ks; Berber (i)xs (< iḳs). [225]
12. bow: Chad: Bata (3) ra:ge; Jera (3) riax; Bachama (3) rage; Mofu (4) lekae.
Egyptian: rwd 'bowstring'.
13. brother (1): Chad: Bachama (3) zino(gi) 'my brothers'; Modgel (9) sen; Somrai (9) sen.
Cushitic: Beja (N) san; Demba (C) zan, zin.
Egyptian: sn. [272]
14. brother (2): Chad: Angas (1) mwol; mal 'sister'; Dera (1) molo; Mandara (6) mal 'older brother'.
Cushitic: Beja (N) mʔali 'brother- or sister-in-law'; Mocha (W) mano.

15. by, near: Chad: Hausa (1) gaba: 'in the presence of'; Musgu (7) gob; Bana (8) gobio.
Cushitic: Beja (N) geb; Bogo (C) gaba:.
Semitic: Ge'ez gäbo (borrowed from Cushitic?).
16. cattle: Chad: Karekare (1) lo 'meat, animal'; Zumu (3) lio 'meat, animal'; Mubi (9) la.
Cushitic: Bogo (C) lau; Saho, Afar (E) la:.
17. to change: Chad: Hausa (1) may(da); Angas (1) ba:r 'become'; Logone (2) ϕullei 'change'.
Cushitic: Galla (E) mara 'turn'.
Semitic: Hebrew (he)mir; Akkadian ma:ru 'exchange'; Arabic ma:ra 'move to and fro'.
18. child: Chad: Affade (2) ul; Kuri (2) wu:li; Somrai (9) wi:l.
Berber: u 'son', ul(t) 'daughter'.
Semitic: Arabic walad; Hebrew yēləd.
19. cold: Chad: Affade (2) simmade; Logone (2) simmade 'wind'; Gidder (5) semmia 'wind'; Musgu (7) simer 'wind, cold'; Kulung (8) simeda 'wind'.
Berber: semmiḍ 'to be cold'.
20. to come: Chad: Dera (1) bə 'go away'; Hona (3) bai; Gabin (3) bei; Tera (3) ba; Kulung (8) ba; Sokoro (9) ba 'go'.
Cushitic: Beja (N) ba:y 'go'; Afar, Galla (E) ba: 'go'; Sidamo (E) ba 'go'.
Semitic: Hebrew bo; Arabic ba:ʔ 'return'; Ge'ez boʔ.
21. cow: Chad: Hausa sa: 'bull'; Kuri (2) sa; Margi (3) hsa; Musgu (7) saye; Ndam (9) suwi.

Cushitic: Beja (N) ša? 'ox, cow';
 Somali (E) sa: 'ox, cow';
 Burungi (S) se 'ox'.
 Berber: Tuareg esu 'ox, cow'. [279]

22. day:

Chad: Logone, Ngala (2) se; Margi
 (3) aši-na 'today'; ašiduku
 'tomorrow'; Mubi ha-ssa 'now
 = this day'.

Cushitic: Mbugu (S) azi; Jangero (W)
aši 'now'; ha-sau 'today'.

Berber: ass/ussan.

23. to die:

Chad: Hausa (1) mutu; Logone (2)
mti; Hinna (3) midi; Musgu (7)
miri; Mubi (9) ma:t; Sokoro
 (9) mi:ta.

Egyptian: mwt.

Berber: emmet.

Semitic: Arabic maita; Ge'ez mota;
 Hebrew meθ. [488]

24. dove:

Chad: Ankwe (1) bel; Sura (1) mbul;
 Bolewa (1) mbole; Gaberi (9)
belu.

Egyptian: mnw(t).

Berber: (θa)mella, (θa)melli (Newman's
 Kabail).

25. to drink:

Chad: Hausa (1) ša; Angas (1) šwe;
 Ngala (2) še; Logone (2) se;
 Bata (3) sua; Mandara (6) ša;
 Musgu (7) sa; Mubi (7) suwa.

Berber: su.

Egyptian: Anaint Egyptian zwr;
 Sahidic Coptic so. [296]

26. ear:

Chad: Affade (2) sim; Buduma (2)
hamai 'to hear'; Jera (3) Limo;
 Matakam (4) sam; Gidder (S)
smo(ko); Mandara šimma;
 Musgu (7) θem; Bana (8)
huma(ngu) 'my ear'.

Berber: Ghadames asim.

Semitic: Hebrew šomaʿ; Aramaic šmaʿ; Arabic samiʿa; Akkadian šemu: (all meaning 'to hear').
[82]

27. to eat:

Chad: Hausa (1) ci; Bolewa (1) ti;
Kulung (8) te 'food'; Bana (8)
ti(na) 'food'; Mubi (9) tiya
'food'; tuwa 'eat'.

Egyptian: t? 'bread'.

Berber: ca 'eat'; tett (habitual form
of same verb).

Cushitic: Beja (N) tiyu 'food'; Sidamo
(E) it; Janjero (W) ta?.

Semitic: Akkadian teʾu; Mehri (South
Arabic) towu:. [315]

28. egg:

Chad: Hausa (1) kʾway; Ngizim (1)
agwoi; Zumu (3) kwali; Njei
(3) kursi; Gabin (3) gɛ:la.

Berber: Beraber (ti) glay; Shilh
(ta) glay(t).

Cushitic: Bogo (C) kaɣalu:na; Saho
(E) unkualale; Iraqw (S) qanhi;
Kamir (C) qalu:na.

29. eye:

Chad: Hausa (1) ido; Buduma (2) yil;
Hinna (3) idi; Matakam (4) ere;
Mandara (5) ije; Musgu (7)
aray; Bana (8) ir(angu) 'my eye';
Sokoro (9) yi:di.

Cushitic: Beja (N) lili; Somali (E)
il/indo; Quara (C) yil, il; Iraqw
(S) ila.

Egyptian: yr(t).

Berber: Ghadames wel/wallen. [63]

30. fire:

Chad: Klesem (2) ahu; Affade (2) hu;
Hiji (3) uhu; Hina (4) koho;
Matakam (4) oko; Kulung (8)
ako(da); Sokoro (9) ako.

Egyptian: x(t).

Berber: Tuareg uku 'be lit'; Shilh
(ta) ka(t). [142]

31. flower: Chad: Hausa (1) fure; Buduma (2) phorio.
 Cushitic: Beja (N) far; Saho (E) fire; Janjero (W) fura; Kamir, Bogo, Demba, Quara (C) fir 'fruit'.
 Egyptian: pr(t) 'fruit'; pry 'to fructify'.
 Semitic: Hebrew pəri 'fruit'; Ge'ez färyä, färayä 'to blossom'; Ugaritic pr 'fruit'. [367]
32. to fly: Chad: Ankwa (1) pʔaar 'jump'; Angas (1) piar 'jump, leap'; Buduma (2) fär 'fly, jump'.
 Cushitic: Beja (N) fa:r 'jump, hop'; Boyo (C) fir y 'flee'.
 Berber: Shilh firri; Ait Izdeg afru (etc.).
 Egyptian: pʔ 'fly, flee'.
 Semitic: Arabic farra 'flee'; Aramaic far 'flee'. [366]
33. forest: Chad: Logone (2) deli; Sokoro (9) dəri.
 Cushitic: Beja (N) dala 'thicket'; Kamir (C) dir.
34. foot: Chad: Bolewa (1) šeke; Fali of Kiria (3) sika; Cheke (3) sikə.
 Berber: (ta)zux(t).
 Cushitic: Quara (C) sukana; Beja (N) sikwina.
 Semitic: Hebrew šoq 'leg'; Arabic sa:q 'leg'. [265]
35. four: Chad: Hausa (1) fudʔu; Bolewa (1) podo; Margi (3) fodu; Hiji (3) fware; Muffu (4) fudo; Gidder (5) podo; Mandara (6) ufalle; Musgu (7) podu; Bana (8) fidi; Mubi (9) fadʔa.
 Cushitic: Beja (N) faḍig; Somali (E) afar.
 Egyptian: fdw.
36. head: Chad: Hausa (1) kay; Bolewa (1) ko; Njei (3) kirre; Margi (3) kir; Gidder (5) ki(ko); Modgel (9) gol.

- Cushitic: Bogo (C) kirkirta; Saho (E) kalkale.
 Berber: Tuareg (a) kelkel 'brains'.
 Semitic: Aramaic gulgulto 'skull';
 Hebrew galgol(əθ) 'skull'. [212]
37. heart:
 Chad: Logone (2) nəfu; Falli of Kiria (3) nəffə.
 Cushitic: Kaffa (W) nibbo; Janjero (W) niba; Galla (E) labbe.
 Egyptian: yb.
 Semitic: Hebrew leb; Aramaic libb; Geʿez ləb; Akkadian libbu. [443]
38. heavy:
 Chad: Angas (1) toon; Sokoro (9) dol.
 Egyptian: wdn 'be heavy'.
39. hot:
 Chad: Gerka (1) tu; Somrai (9) daua; Sokoro (9) ati 'heat of day'.
 Egyptian: tʔ 'be hot'.
40. house:
 Chad: Bolewa (1) bin; Dera (1) mina; Logone (2) ven; Kobochi (3) vine; Gisiga (4) vin; Sokoro be:ni 'build'.
 Cushitic: Sidamo (E) min 'build'; mine: 'house'; Kamir (C) gin.
 Semitic: Arabic bana: 'build'; Hebrew bəno 'build'.
41. knee:
 Chad: Angas (1) kirm 'kneel'; Vizik (3) karIm; Musgu (7) gurfa 'kneel'.
 Cushitic: Beja (N) gunba; Saho (E) gulu:b; Somali (E) jilib; Bogo (C) girib; Iraqw (S) gurungura.
 Berber: Kabyle keref 'bend the knee'; Touareg jereff(et) 'kneel'. [401]
42. to know:
 Chad: Hausa (1) sani, šina; Logone (2) sən; Buduma (2) hin.
 Berber: sen.
 Egyptian: Coptic swon.
43. large:
 Chad: Logone (2) a:bi: 'fat'; Higi (3) bwa; Musgu (7) bba.

- Semitic: Geʿez ṣābāyā 'be large, thick';
Hebrew ṣōb 'be thick'; Akkadian
ebu: 'fat (adj.)'.
44. left hand:
Chad: Angas (1) kul; Musgu (7) kule;
Kulung (8) gulana 'on the left';
Somrai (9) gele.
Cushitic: Saho (E) gura; Somali (E)
gu:ra; Sidamo (E) gura.
45. lightning:
Chad: Logone (2) haw amələji 'to
lighten'; Batta Garua (3) baratje.
Cushitic: Kamir (C) birqa.
Egyptian: brq 'to shine'.
Semitic: Hebrew bōraq; Akkadian
bara:qu 'to lighten'.
46. like, as:
Chad: Ngamo (1) aka 'how?'; Buduma
(2) kimi 'how? = like what?'.
Cushitic: Janjero (W) akka 'thus, how?';
Galla aka.
Berber: Ghadames mək 'how? = what
like?'.
Semitic: Arabic ka; Akkadian ki.
47. lion:
Chad: Gulfei (2) arfu 'elephant'; Zumu
(3) aruwo 'leopard'; Kumbu (3)
aru 'leopard'; Mubi oruna.
Cushitic: Somali (E) a:r.
Berber: awar.
Egyptian: rw.
Semitic: Hebrew ʔari; Akkadian aru;
Geʿez ʔärwe 'wild animal'. [34]
48. many:
Chad: Bolewa (1) gōdōŋ; Podokwo (3)
guda; Mandara (6) kwottya.
Cushitic: Beja (N) gwud; Galla (E)
guda.
49. meat:
Chad: Buduma (2) su; Muturua (4)
use; Gidder (5) soa; Mandara
(6) šo:a; Barein (9) su.
Cushitic: Beja (N) sa; Janjero (W) aša.
50. moon:
Chad: Ngizim (1) tira; Bolewa (1) tere;
Podokwo (3) tera; Sarwa (9) tile.

- Cushitic: Beja terig.
 Berber: itri 'star'.
51. mouth: Chad: Hausa (1) ʔafa 'throw in the mouth'; Angas (1) po; Bolewa (1) bo; Margi (3) fam; Kulung (8) va(na); Karbo (9) biy.
 Cushitic: Beja (N) yaf; Somali (E) af; Iraqw (S) a:fa.
 Semitic: Akkadian pu; Hebrew pə; Arabic fam; Geʿez ʔaf. [380b]
52. name: Chad: Hausa (1) su:na; Angas (1) səm; Buduma (2) summo; Gabin (3) Lim; Somrai (9) sumo.
 Cushitic: Beja (N) sim; Janjero (W) sun; Hadiya (E) sum.
 Berber: isem (borrowed from Arabic?).
 Semitic: Arabic ism; Hebrew šem; Akkadian šum.
53. near: Chad: Gerka, Ankwe (1) duk; Banana (8) tog.
 Cushitic: Kamir (C) tak 'be near'; Quara (C) te:k; Bogo (C) ta'yat(aux).
54. nose: Chad: Hausa (1) sunsuna 'to smell'; Klesem (2) siŋ; Sukur (3) šin; Kulung (8) asinan.
 Cushitic: Somali (E) san; Kamir (C) esiŋ; Chara (W) sinan; Afar (E) san.
 Egyptian: snsn 'to smell'.
55. oil: Chad: Hausa (1) may; Karekare (1) məru; Bachama (3) mare; Kilba (3) mal.
 Egyptian: mrḥ(t).
56. place: Chad: Angas (1) pe; Montol (1) bi; Logone (3) mba.
 Egyptian: bw.
 Cushitic: Sidamo (E) baʔa; Gudella (E) beyo.

57. pot: Chad: Dera (1) kɪle; Kulung (8) ge:la 'water pot'; Mubi (9) ko:lo 'cooking pot'; Sokoro (9) ko:kolo 'cooking pot'.
Cushitic: Beja (N) kalhɛ.
Egyptian: krh(t).
58. rain: Chad: Bede (1) demanu; Hausa (1) da:muna: 'rainy season'; Kuseri, Gulfei, Logone (2) deman.
Cushitic: Kamir (C) dimena: 'cloud'; Gongga (W) dɛmɛna: 'cloud'.
Semitic: Geʿez dämena 'cloud' (probable borrowing from Cushitic).
59. road: Chad: Angas (1) a:r; Ankwe (1) war; Gidder (5) ura.
Egyptian: wʔ(t).
60. root: Chad: Hausa (1) saywa:; Bolewa (1) šorin; Angas (1) si:n; Mandara (6) šallwa:; Musgu (7) salawoŋ.
Cushitic: Beja (N) sar 'artery'; Kamir, Bogo (C) zir; Basketo (W) zir.
Berber: Tuareg azar, asur 'nerve, root'; Beni Snous azwər 'nerve, tendon, vein, root'.
Semitic: Hebrew šerəš; Akkadian šuršu; Arabic širs 'root, vein'.
61. saliva: Chad: Batta-Garua (Bata) (3) nawi; Wandala (6) nehe; Mubi (9) lawe.
Egyptian: nh.
62. to see: Chad: Angas (1) nai; Jeng (Bata) (3) naan; Tera (3) na; Jara (3) nana.
Berber: inni.
Egyptian: nw.
Semitic: Arabic ʔinna 'behold!'; Hebrew hinn- 'behold!'. [465]
63. to seize: Chad: Hausa (1) ka:ma; Gidder (5) gəma 'take'.
Semitic: Akkadian kamu:.

64. shoe: Chad: Angas (1) ka:p; Logone (2) ka:be 'hoof'.
Cushitic: Galla (E) kope.
Egyptian: cb(t).
65. shoulder: Chad: Buduma (2) ngəru; Karbo (9) goreny; Mubi (9) gol.
Berber: (a)γil 'arm'.
66. six: Chad: Hausa (1) šidda; Gidar (5) serre; Musgu (7) sa:ra; Modgel (9) side:.
Egyptian: sys, srs.
Semitic: Arabic sitt; Hebrew šeš.
67. sky: Chad: Hausa (1) sama 'above'; Logone (2) sama 'rain'; Gudo (3) zim; Mandara (6) samaya.
Semitic: Arabic sama:?; Akkadian šame:; Hebrew šom(ayyim).
68. to sleep: Chad: Bolewa (1) sunə 'dream'; Logone (2) san 'sleep'; wisan 'to sleep'; Bana (8) sene; Mubi (9) sunə; Sokoro (9) sonisoni 'dream'.
Semitic: Arabic wasina; Hebrew yošen.
69. sour, sharp: Hausa (1) ya:mi:; Musgu (7) xom 'salt'.
Cushitic: Beja (N) hami.
Egyptian: ħmʔ(t) 'salt'. [24]
70. to spit: Chad: Hausa (1) to:fa; Logone (2) tufa; Kobochi (3) tife 'saliva'; Mubi (9) tuffa.
Cushitic: Beja (N) tu:f; Somali (E) tuf; Galla (E) tufa.
Egyptian: tf.
Semitic: Arabic taffa. [319]
71. to steal: Chad: Gidder (4) hal; Musgu (7) həl; Banana (8) kul.
Berber: aker.
Egyptian: ycʔ 'to seize'.
Semitic: Akkadian kalu: 'seize, take'.
[190]

72. tongue:
 Chad: Hausa (1) harše, halše; Angas (1) lis; Klesem (2) li:za; Musgu (7) alesi; Mubi (9) lisi.
 Berber: ils.
 Egyptian: Ancient Egyptian ns; Sahidic Coptic las.
 Semitic: Arabic lisa:n; Hebrew lošon. [436]
73. tooth:
 Chad: Klesem (2) sa:ni; Buduma (2) sannay; Gabin (3) Lena:; Margi (3) šir; Mandala (6) tsare:; Banana (8) sianu; Mubi (9) siṇaṇu; Karbo (9) seṇ.
 Berber: Siwa (a)sen; Tuareg (e)sin 'incisor tooth'.
 Semitic: Arabic sinn; Hebrew šen. [262]
74. tree:
 Chad: Bata (3) kade:; Njei (3) kadi; Gamergu (6) xatta; Chire (8) gotto.
 Cushitic: Somali (E) ged; Mbugu (S) (m)xatu.
 Egyptian: xt.
 Semitic: Akkadian xatṭu 'stick, branch'. [146]
75. water:
 Chad: Angas (1) am; Ngala (2) am; Sukur (3) yiam; Matakam (4) iam; Musgu (7) yem; Mubi (9) ame.
 Cushitic: Beja (N) yam.
 Egyptian: ym 'sea' (borrowing from Semitic).
 Semitic: Arabic yamm 'sea'; Hebrew yam 'sea'. [494]
76. to weave:
 Chad: Hausa (1) sak?a; Angas (1) sak; Musgu (7) sasaka.
 Semitic: Hebrew sokak 'weave, cover'; Arabic šakka 'cover'.
77. what?:
 Chad: Hausa (1) me:, mi:, me:ne:ne:; Angas (1) me; Buduma (2) mini; Margi (3) mi; Muba (9) mi:; Sokoro (9) ma 'question word'.

Cushitic: Saho (E) ma:, mi: 'who?';

Sidamo (E) ma.

Berber: Shilh ma 'who? what?'.
 Egyptian: m 'who? what?'.

Semitic: Arabic ma:; Hebrew ma;

Akkadian mi:n-; Ge'ez mi:

'how much?'.

78. woman:

Chad: Karekare (1) men 'wife'; Cheke
 (3) min; Musgu (7) muni.

Cushitic: Geleba (E) minne; Sidamo
 (E) men(ti); Gimirra (W) main;
 Iraqw (S) ameni.

Notes

1. Paris, 1924, p. 24.
2. For the view of M. Delafosse see Les Langues du Soudan et de la Guinée (in Les Langues du Monde, A. Meillet and M. Cohen, eds., pp. 463-560, Paris, 1924); for those of Mlle Homburger, The Negro-African Languages (London, 1949).
3. I. Schapera, A Preliminary Consideration of the Relationship between the Hottentots and the Bushmen (South African Journal of Science, vol. 23, pp. 833-866, 1926).
4. D. F. Bleek, Comparative Vocabularies of the Bushman Languages (Cambridge, 1929).
5. R. Lepsius, Standard Alphabet (2nd ed., London, 1863).
6. Die Musuk-Sprache in Central-Afrika (Vienna, 1866).
7. Die Sprachen der Hamiten (Hamburg, 1912).
8. The Linguistic Situation in the Lake Chad Area of Central Africa (Africa, vol. 9, pp. 332-349, 1936) and Der hamitische Gehalt der Tschadohamitischen Sprachen (Zeitschrift für Eingeborenen-Sprachen, vol. 28, pp. 286-299, 1938).
9. M. Cohen, Essai comparatif sur le vocabulaire et la phonétique du Chamito-Sémitique (Paris, 1947).
10. For a fuller comparative treatment of the plurals see J. H. Greenberg, "Internal a-Plurals in Afroasiatic (Hamito-Semitic)," Institut für Orientforschung, No. 26, pp. 198-204 (Berlin, 1955).

11. In a remarkably prescient essay, "On Sister Families of Languages, Specially those Connected with the Semitic Family," Transactions of the Philological Society, 1860-61, pp. 20-27, 112-132, C. Lottner treated Egyptian, Berber, Semitic and Cushitic as coordinate branches of a single family. In the more recent period, M. Cohen in the chapter "Langues chamito-semitiques" in A. Meillet and M. Cohen, Les Langues du monde (1st. ed., Paris, 1928), likewise treated Semitic as a single branch of the larger Hamito-Semitic family.

12. Except for the omission of Southern Cushitic, this classification agrees with that of M. M. Moreno in his Manuale di Sidamo (Rome, 1940). The careful review of the evidence there makes a formal justification of the present classification unnecessary. I do plan, however, to publish separately the evidence for the affiliation of Southern Cushitic to the rest of Cushitic.

13. I have employed Anfillo as the basic term here, since the northern Mao speak a different language which belongs to the Coman group.

14. Bako and the languages closely related to it were left unclassified in SALC because of lack of evidence. Material now available shows that these languages are without doubt Western Cushitic.

15. London, 1930.

16. Zeitschrift für Kolonialsprachen, vol. 5, p. 164.

17. Page 127.

18. Die Sprachen der Hamiten, p. 2.

19. The Races of Man (Cambridge, 1929), p. 42.

20. Races of Africa, p. 158.

21. Numbers after Chad languages refer to subgroupings as listed above. Letters after Cushitic languages refer to subgroupings as found in Fig. 3. Egyptian forms are ancient Egyptian unless otherwise stated. In these forms consonants only are known. Semitic verbs are quoted in the third person masculine perfective, the standard form, except for Akkadian where the infinitive is cited. The number found at the end of some citations refers to the numerical listing in M. Cohen's Essai comparatif sur le vocabulaire et la phonétique du Chamito-Sémitique.

IV. KHOISAN

Schapera is the author of the convenient term Khoisan, compounded of the Hottentot's name for themselves (Khoi) and their name for the Bushmen (San). Culturally, two groups are usually distinguished, the cattle-raising Hottentots with a somewhat complex political organization and sense of ethnic distinctness and the hunting, food-gathering Bushmen. Both of these peoples speak languages whose most conspicuous feature is the presence of click-sounds.¹ These sounds are also found in the neighboring Bantu languages of the Zulu and southern Suto where their presence is the result of borrowing from the languages of the Khoisan peoples. In addition, two languages of East Africa containing clicks, Sandawe and Hattsa, will be shown to be related to the languages of the Bushmen and Hottentot. Terminologically, it is convenient to extend the usage of Khoisan to include this entire group of related languages. Where necessary, the languages of the Bushmen and Hottentot will be called South African Khoisan to distinguish them from the languages spoken farther north in East Africa.

The usual view has been that the languages of the Bushmen, which are quite diverse, form a single family. With regard to the Hottentots, there has been difference of opinion. Meinhof, renewing an earlier suggestion of Lepsius, sought to prove that Hottentot was "Hamitic." This particular demonstration of Meinhof has probably evoked fewer favorable reactions than any other of his proposed extensions of "Hamitic" in Negro Africa: few, if any, would today maintain Meinhof's position with reference to Hottentot in its pristine form. W. Planert had pointed to the close similarity existing between the language of the /Ai San Bushmen (a form of Naron) and Hottentot, even before the appearance of Meinhof's work Die Sprachen der Hamiten.² The appearance of D. Bleek's comparative Bushman vocabularies showed that the language of the Khoisan area fell into three groups—a northern, central, and southern—and that Hottentot belonged to the central group, being particularly close to the language of the Naron Bushmen.³ This rendered the Hamitic theory in its pure form untenable. At present, what is perhaps the most representative view is the one voiced by Schapera, that "Instead of looking upon them, as hitherto has been the custom, as Hamitic languages with Bushman

admixture, it seems more correct to regard them as Bushman languages which have incorporated Hamitic features."⁴

First those features of Hottentot will be briefly reviewed which make it necessary to assume that its fundamental affiliation is within the Khoisan group of languages. After this, a discussion of Hottentot morphology will be undertaken, in order to show that in this aspect as well, in which "Hamitic" influence is usually posited, all of the basic features are Khoisan and there is no reason to assume the presence of a "Hamitic" factor in order to account for the particular linguistic developments to be found in Hottentot.

In phonology, the most important evidence of the basically Khoisan relationships of Hottentot is the frequency of the click sounds and the essential part they play in the economy of the language. As in other South African Khoisan languages, they only occur initially. Well over seventy percent of the noun, verb, and adjective roots of Hottentot begin with clicks. If the "Hamitic" theory in its pure form were to be accepted, all of these forms would have to have been borrowed from Bushman languages. In connected text, because of the large number of non-click grammatical particles, the frequency of words beginning with clicks is much smaller than on a dictionary basis. The text frequency of clicks, however, is actually higher for Hottentot than for most Bushman languages. Thus, selecting !Kung as representative of northern Bushman, Hiechware for the central group, and /Xam for the southern, the following figures were obtained for the ratio of clicks to the number of words in connected discourse: !Kung 18%, Hiechware 16%, /Xam 30%, Nama Hottentot 26%, Korana Hottentot 44%.

In addition, Hottentot shares with the Bushman languages the following distinctive method of root formation in which the clicks play a fundamental part. Verb, noun, and adjective roots are mostly disyllabic, or can be reconstructed as once having been disyllabic. The roots begin most frequently with a click, sometimes with a non-click consonant. This is followed by a restricted group of vowels in the second position, basically o or a. The third position is either vacant or one of a small selection of non-click consonants occur: r, m, n, or a labial (in Nama Hottentot phonemically a p). In the fourth or final position we find the full set of vowels—a, e, i, o, or u. I do not discuss here the dropping of certain final vowels after m and n, or other complications. Suffice it to say, that practically without exception all of the Hottentot root vocabulary conforms to this idiosyncratic pattern, which reappears generally in the other South African Khoisan languages, insofar as the rather poor material generally at our disposal seems to indicate. Examples illustrative of this pattern

are, in Nama Hottentot, /kora 'rough'; /lapa 'descend'; /goma 'catch fish'; /kai 'cut off' (with vacant third position). The written k, g, etc., after the click sign indicates the type of release and forms a single phoneme with the click. The functioning of the clicks in this pattern is, obviously, powerful evidence for their original nature in Hottentot. Another striking feature of Hottentot phonology, shared with Bushmen, is not without parallels in other parts of Africa but is totally unlike Hamito-Semitic. No word may begin with r or l, and r only appears medially where it evidently has developed from an original dental (t, d, s, etc.); the dentals in turn occur initially but not medially in roots.

In vocabulary, Hottentot shows virtually no resemblance to Hamito-Semitic. On the other hand, the vast majority of root morphemes closely resemble that of the other languages of the central South African Khoisan group—Naron, Hiechware, etc. Somewhere near half of the Hottentot vocabulary has obvious cognates in either Northern Bushman languages, Southern Bushman languages, or both. These related forms are so numerous that there is no need to reproduce them here. Their existence can hardly be disputed. They appear in convenient form in Bleek's work, to which the reader is referred if he wishes to convince himself of their reality.

It remains to consider the evidence from morphology, in which many have seen indications of "Hamitic" influence. The verb root is, in general, unchangeable both in Hottentot and in the languages of the Bushmen, in contrast with the internal inflection of Hamito-Semitic. None of the characteristic conjugational forms of these languages appears in the Hottentot verb. Tense and other sense modification are produced by particles which stand after the pronoun. In these particles, Hottentot shows general agreement with those of the Bushman languages. Nama Hottentot indicates the past by an element go (in the usual orthography). Phonetically we have eo, that is an intermediate unvoiced lenis sound: Beech phonemicizes it as ko. In Nama there is no phonemic distinction between k and g. This same particle corresponds to ko of Auen and !Kung in the northern Bushman languages, Naron ko in the central group, and /Auni ko in the southern, all designating the past. The Nama Hottentot particle re, indicating continued action, agrees with re with the same meaning in Auen (Northern group) and Naron (Central). Whether Nama ta, which forms the present, is cognate with ti found almost everywhere else in the Khoisan languages, I do not know. The vowel correspondence would be unusual. Nama nĩ 'future' and Korana Hottentot ta 'future' are not paralleled elsewhere in the Khoisan languages, but it is clear that the Nama optative ga (phonemically ka; see above) is

related, by an obvious and frequent transition of meaning (cf. English will), to the ka future of Auen (Northern), Naron (Central), and the oga of !Kung (Northern). It is also clearly the same word as ka 'to wish' found in /Xam (Southern) and in Korana Hottentot and in the form kaa in Hiechware (Central). In general, the tense particles of Hottentot are no more divergent from the general patterns than that of the average Bushman language.

Hottentot forms a passive with an -e suffix found in other languages of the central Khoisan group (Naron -e, Hiechware -ee). It agrees likewise with Naron in expressing reciprocal action of the verb with a -ku suffix. All these are fundamental morphological constructions in which Hottentot behaves like any other Khoisan language and is quite unlike Hamito-Semitic. The only possible point of resemblance with Hamito-Semitic is the existence of a -si causative suffix. This does not point to Hamito-Semitic any more than to the Niger-Congo languages (Mossi, Bantu, and others have an -s causative) or the Fur languages of Darfur which likewise have an s causative. Such derivational affixes in the verb are a widespread African feature that may indicate more remote relationships among certain African linguistic stocks. It cannot be used, therefore, as an argument for specifically Hamito-Semitic connections.

In the Hottentot noun, we have a genitive construction in which the possessed precedes the possessor. Hottentot employs the particle di between the possessed and the possessor. The same element di is found in Naron (Central) and /Nu //En (Southern) in this same usage.

Hottentot indicates gender (masculine, feminine, or common) and number (singular, dual, and plural) by suffixes to the noun. Thus, we have in Nama: kxoe-b 'man'; kxoe-s 'woman'; kxoe-i 'person'; kxoe-kxa 'men (dual)'; kxoe-ra 'women, persons (dual)'; kxoe-ku 'men'; kxoe-ti 'women'; kxoe-n 'persons'. This scheme is closely paralleled by that of the Naron Bushman: kwe-ba 'man'; kwe-sa 'woman'; kwe-čəra 'men (dual)'; kwe-šəra 'women (dual)'; kwe-či or kwe-//kwa 'men'; kwe-si 'women'. If one scheme has been borrowed from the "Hamitic" so must the other, so that at least one Bushman group, the Naron, have been just as much subject to "Hamitic" influence as the Hottentot. Outside of the mere fact of grammatical gender, which occurs elsewhere in Africa outside of Hamito-Semitic (East Sudanic and in the language of Jebel Gule in the upper Nile), we have only two points of specific resemblance. One is the -b masculine singular with which we may compare the Cushite Bedauye -ba as masculine accusative suffix and the p and f of Egyptian demonstratives and possessive pronouns. The other is the -s feminine singular and -ti plural which suggest the general Hamito-Semitic t feminine.

It is on these two resemblances that practically the entire case for "Hamitic" influence usually rests. But one might just as well suggest that the -ku masculine plural and the -a copula of South African Khoisan languages demonstrated East Sudanic influence or perhaps more strikingly that Cape Bushman with the pronouns he 'third person singular', i 'first person plural', and u 'second person plural' is related to English hij, wij, juw (he, we, you). Morphological influence of this intimate type by one language on another is rare at best, and can only occur under conditions of intensive contact. It is likely that contact of such a degree of intensiveness would have left practically no trace in the ordinary vocabulary of Hottentot? I believe that common sense will give a negative answer.

The plural gender affirmatives of Hottentot occur quite generally in the Bushmen languages, though without precise gender connotation. For example, it seems likely that the Nama common gender plural -n (accusative na) was originally ni in the nominative. Now -ni is the common noun plural of /Auni and /Nu //En, both Southern Bushmen languages, and occurs as one of the plural formations in Nusan (also a Southern Bushman language). A feminine singular -ti suffix appears in /Xam Bushman, which shows sporadic gender formation. The Hottentot masculine plural -ku (-gu in the usual Nama orthography) seems to correspond to the /Xam plural for persons. Moreover, a number of these gender-number formatives are found in Sandawe and Hatsa, click languages to the north—languages which in general vocabulary and grammatical details are remote from Hottentot. There would thus have to have been a conspiracy for the Sandawe and Hatsa languages to borrow exactly the same grammatical elements from Hamito-Semitic languages.

The personal pronouns of Hottentot, which again are almost identical with those of the Naron Bushmen, at first seem highly divergent in most respects from those of the Southern and Northern Bushman language groups, but analysis shows a number of real points of contact; nor is it always Hottentot which has been the innovator. Hottentot and Naron pronouns distinguish number (singular, dual, and plural) and gender (masculine, feminine, and common in Hottentot, masculine and feminine in Naron). In both languages the pronouns consist of two elements: a prefix which does not appear in certain constructions and a base which appears in all constructions. Thus sa-ts 'thou' masculine, in Hottentot contains a prefix sa. In independent use the form is sa-ts, but when suffixed to the verb as subject or object -ts, the base alone, is used. For the first and second person the prefix elements are three: ti—first person singular, sa—all other first and second person forms except first person exclusive, si—first person dual and

plural exclusive. Of these, ti is probably proto-Khoisan since it appears as tsi in the remotely related Sandawe of East Africa, whereas North and South Bushman disagree on the first person pronouns (North mi, South n, na). The first person exclusive si is identical with the first person plural exclusive pronoun of the Southern Bushman languages.

Of the base, or second part of the pronoun, some are the gender and number elements already discussed. The first person base -ta is related to first person -ta suffixed to verbs in Hatsa, another click language in East Africa, thus, Nama mū-ta 'I see' displays the same construction as Hatsa fwa-ta 'I drink'.⁵

The third person pronoun in Hottentot and Naron, as in general in the Khoisan languages, is a demonstrative pronoun, in this case with number and gender elements affixed. Hottentot uses //ǎĩ- as a base, but the closely related Naron employs instead xa- thus making xa-ba 'he', xa-sa 'she', etc. This xa is very possibly the ordinary Bushman demonstrative and third person pronoun ha 'that, he, she, etc.' In general, the Bushman languages use a farther demonstrative ha 'that' and a nearer he 'this'. The latter occurs in Korana, but not in Nama Hottentot, as he 'this'.

Hottentot forms adverbs by suffixing -se to adjectives. Naron uses -sə and Auen, a Northern Bushman language, -si. Sandawe, in East Africa, has -se.

Hottentot suffixes prepositions to the noun, as do all the Bushman languages. Hottentot /ka 'with' is cognate with Southern Bushman ~~≠~~Khomani /ka, and probably with Naron (Central) and Auen (Northern) /kwa. Hottentot ka, which only occurs in a few fixed adverbial expressions in the meaning 'in (of time or place of)', is related to Naron ka 'in (of time and place)', Auen and !Kung ka 'in', Hiechware and Masarwa ka 'at'. The usual Hottentot form for 'in' is !na. This resembles Auen !ne and !Kung !nē (both Northern languages).

The present review of the morphological evidence from Hottentot should be sufficient to show that it resembles the Bushmen languages at every turn. The only elements suggestive of Hamito-Semitic influence are the -si causative of the verb and the -b masculine and -s feminine affix of the noun. In view of the overwhelming vocabulary resemblance to Bushmen languages, the fundamental role of clicks in Hottentot phonology, and the detailed morphological agreements with Bushmen, there can be no doubt that Hottentot is a member of the Khoisan family of languages. In the practical absence of any vocabulary resemblance, the assumption of "Hamitic" influence to explain these few scattered points of morphological resemblance is quite unjustified.

There are only two tenable explanations of these resemblances. They can be considered as chance convergences, or, provided they can be reconstructed for the parent click language (in the case of the gender elements this seems to be probable) they may result from a remote relationship between the click languages and Hamito-Semitic as a whole.

SANDAWE

The Sandawe are a hunting and, to some extent, agricultural and herding people of Tanganyika, in East Africa. Their language has three of the four clicks which occur in the Central and Northern Khoisan languages of South Africa. In addition to ≠ , it lacks the labial click of the Southern Bushman languages.

Sandawe displays enough morphological and lexical resemblance to the South African Khoisan languages for its relationship to be accepted. Because of the presence of grammatical gender, the Sandawe language has usually been compared with Hottentot. However, its relationship to the South African Khoisan languages is obviously a remote one, and all the languages agree in a number of lexical and morphological innovations (for example, the verb tense elements) which indicate a period of common development of divergent forms. The presence of gender in both Sandawe and Hottentot (and Naron Bushman) is to be interpreted, in accordance with the usual methods of comparative linguistics, as a common retention of a feature of the ancestral click language. This is further confirmed by the occurrence of the same gender affixes in Hatsa, another East African click language, remote in other respects from both Khoisan and Sandawe. Moreover, Sandawe does not exhibit markedly more vocabulary resemblance to the Central branch of South African Khoisan than to the others.

Sandawe has a number of morphological features which recall those of the South African group, particularly in the pronouns. First person tsi is equivalent to ti of Hottentot and Naron, či of Hiechware. The third person feminine pronoun sa is cognate to the -s of Hottentot and -sa of Naron. Common gender singular e resembles the -i nominative -e accusative of the Hottentot. Just as in Hottentot and Naron, a demonstrative functions as a base for the third person pronouns. It is the form ha- which means 'he, she, it' throughout the Northern and Southern Bushman groups. The masculine singular affix -we appended to it to form ha-we 'he' may be plausible compared to the -b masculine of Hottentot and Naron (in Hottentot the usual intervocalic pronunciation is that of a voiced bi-labial fricative β which easily

passes into a w). In its elements and formation Sandawe ha-we thus completely parallels Naron xa-ba. Similarly ha-su, he-su 'she' resembles Naron xa-sa.

In addition to its employment as a base for third person pronouns, ha in Sandawe means 'that' just as do /Xam and Batwa (Southern) ha, Naron (Central) xa and Hiechware (Central) ho. The other demonstrative in Sandawe is he 'this' which may be compared with Korana Hottentot he 'this'. Elsewhere in the Khoisan languages he functions as a third person pronoun. The same contrast of an -a remote demonstrative element with an -e near demonstrative is found in Sandawe na 'there', ne 'here'. 'There' is //na in most Southern Bushman languages and in Hottentot. 'Here' is ne in Hottentot.

In the plural of nouns, the feminine affix -si obviously resembles Naron feminine plural -si, Hottentot feminine plural -ti and the frequent -si plural of Northern Bushmen languages and of /Auni in the Southern group, without gender connotations. The masculine plural which is sometimes ko, more often the singular form without change, is clearly related to Hottentot -ku, masculine plural, and perhaps the gu personal plural of /Xam (Southern Bushman).

In general, the verb structure of Sandawe resembles that of the Khoisan languages. The most conspicuous difference is the absence of tense particles in Sandawe. The -ki reciprocal suffix of the Sandawe verb is perhaps related to the -ku of Naron and Hottentot.

Sandawe forms adverbs and adjectives by means of an -se suffix. With this we may compare Auen (Northern) -si, Hottentot -se, Naron -sə.

HATSA

The Hatsa (variously called Wakindega, Watindenga, Kindega, Hatsa, and Hadzapi) are a small hunting, food-collecting group who live some distance northwest of the Sandawe, southeast of Lake Victoria, in Tanganyika. Their language contains the same four clicks as the Central and Northern Khoisan languages but they appear far less frequently, and often in the middle of words, a rare phenomenon in Khoisan languages, and only an occasional one in Sandawe. Our knowledge of this language is very limited, consisting of several far from complete grammatical sketches and Dempwolff's short vocabulary.

In spite of the sparse material, a number of significant morphological resemblances to Sandawe and to the Khoisan languages are apparent. The Hatsa noun has grammatical gender. Masculine singular nouns often have a suffix -wa (-ya after -i). This reminds us

of the -we of the Sandawe third masculine pronoun which was interpreted as <be, thus corresponding to the Hottentot -b, Naron -ba masculine element. Indeed -ba is found in one Hatsa masculine noun yak'amba 'male'. Moreover, the third person masculine possessive suffix is -ma and there is a constant m/b alternation within Hatsa. Thus nouns have a masculine plural -bi, feminine plural -be suffix, while the corresponding verb subject suffixes are -mi and -me respectively. In Naron the same alternation occurs, the -ba masculine can be replaced by -me before the verb 'to be', before possessive di, and before prepositions.

The third person feminine possessive -sa coincides with Sandawe -sa 'she' and the feminine noun suffix in Naron -sa. All of the plural feminine personal pronouns have a -ti suffix which is to be compared to the feminine noun plurals -ti of Hottentot and -tsi of Sandawe. The -či of the masculine plural pronouns may similarly be compared to the masculine noun plural -či of Naron.

The third person independent pronouns show the same ha- base as those of Sandawe, the independent ha of the Bushman languages, and the xa- third person base of Naron. The masculine third person independent pronoun of Hatsa ha-wa is thus entirely parallel in its formation to Sandawe ha-we and Naron xa-ba. In Hatsa, ha occurs independently as a demonstrative, just as in Sandawe and some of the South African Khoisan languages.

The third person singular objective pronoun -a is identical with this pronoun in Sandawe.

The first person pronoun subject suffixed to the verb is -ta, which is identical in form with the Hottentot -ta and resembles Sandawe tsa, one of the variants of the first person singular independent pronouns.

The Hatsa interrogative pronoun base tu- seen in tundu 'where?', tuma 'when?' may be connected with Naron (Central) du 'what?', 'which?' and possibly the de interrogative base of /Xam (Southern) and !Kung (Northern) Bushman.

Hatsa employs a suffix -ina to form a noun locative with the meaning 'to', 'at'. Sandawe similarly employs -na.

The Hatsa copula e is identical with the e copula of practically all the Southern and Northern Bushman languages, the e of the Naron (Central) and je of Hiechware (Central). Perhaps this form is cognate with the i copula of the Hottentot and Sandawe.

Two tense formatives are found in Hatsa: ta 'past' and so, si 'future'. Perhaps the latter is to be connected with the Khoisan /Auni (Southern) se future which has elsewhere been generally replaced in the Khoisan languages by a periphrases based on ka 'to wish'. Hatsa also has an a 'continuative' which links a verb to the previous one in

the narrative regardless of the tense of the former. An element a, used in exactly the same manner, is known from the Auen (Northern) and Naron (Central) Bushmen languages.

Comparative Khoisan Word List⁶

1. above: Sandawe /'aŋ(ki); Naron (C) /am, /gam
'on'.
2. arrow: Hatsa hi//k'owa; //k"owako, //k"oka
'arrowshaft'; !Kung (N) //kou;
Naron (C) //k'ō:(ba); /Auni (S)
//kowa, //kōwa.
3. ashes: Hatsa ts'oko 'wood, firewood, ashes
used as fire'; Auen (N) tɔɔ; Nogau
(N) do; !Kung (N) tɔ; Hiechware
(C) joaa; Naron (C) tau, tou(ša);
Nama Hottentot (C) tsao.
4. to ask for: Hatsa //aia; Auen (N) //kai 'speak,
pray'; Batwa, Masarwa (S) //k'ai;
//kai.
5. to be able: Sandawe da; /Xam (S) dɔa.
6. to be finished: Hatsa bahiya, baheya, baya; /Xam (S)
ba:ʔi 'to finish'.
7. to be hungry: Hatsa hatse; Sandawe ts'o; !Kung (N)
dzau, sau 'to hunger'.
8. to be ill (1): Hatsa ≠o 'die of hunger, be ill';
!Kung (N) ≠o 'die of hunger'.
9. to be ill (2): Hatsa ca; Auen (N) cā, ca: 'illness,
be ill'; Naron (C) cā.
10. to be in: Hatsa /na; Auen (N) /na; //!Ke, /Auni
(S) /na.
11. to be silent: Sandawe !kamu; !O !Kung (N) !gum;
Nama Hottentot !gai.
12. to beget: Sandawe haba; Hiechware Naron (C)
aba:.
13. below: Sandawe /u(ki); !O !Kung (N) /ko 'under';
//!Ke (S) /kāũ 'under'; /Xam (S) /ko:
'under'.

14. bow: Hatsa k"o, k"owako; Nama Hottentot (C) kxa; /Auni (S) k"o 'bowstring'.
15. to break: Hatsa //k"o//k"owa; !Kung (N) //koa 'break, kill'; /Xam (S) //kou//kou tē 'break upon'.
16. to breathe: Hatsa /o, /oa; !Kung (N) /hu; !O !Kung (N) /'o:.
17. brother: Hatsa tsia; Auen (N) tsī, cī; !Kung (N) siŋ 'younger brother'; !O !Kung (N) cē; Naron (C) asi 'sister'.
18. buffalo: Sandawe /eu; !Kung (N) /gau, /kau; Hiechware (C) /hao; Nama Hottentot (C) /gao; Korana Hottentot (C) /gao; Hukwe (C) gau; //Kxau (S) /hau 'elephant'.
19. to bury: Hatsa //k"uma, //k"ume; Auen, !Kung, !O !Kung (N) !kumma; /Auni (S) !kum 'grave'.
20. to carry: Hatsa tene; Auen (N) tane, tani, tere; !Kung (N) tanni, tenne; Naron (C) tane, tani, tene; Nama Hottentot (C) tani; /Auni (S) tane, tani, tare.
21. claw: Sandawe /noa; Nama Hottentot (C) /nowo 'to scratch'.
22. to come (1): Hatsa !i 'come, approach'; /Xam (S) !i.
23. to come (2): Hatsa dza, dze; Auen, !Kung, !O !Kung (N) ca; Hiechware, Hukwe (C) ja; /Xam, ≠ Khomani, Batwa, /Auni, Masarwa, /Nu //En (S) sa, se.
24. to cook: Hatsa //k"oa; Sandawe xoante; !Kung (N) //k'u 'be warm'; /Xam, // !Ke (S) //kwonna 'be warm'; /Nu //En (S) //k?ũ 'be hot'.
25. to cry: Sandawe k'e; Auen k'ai (N); !Kung (N) k'ai 'roaring of animals'; Naron (C) k"xai; //ŋ !Ke, Batwa, /Nu //En (S) k"a.

26. to cut (1): Sandawe /ne; Naron (C) /ni; Nama Hottentot (C) ≠nai; /Xam (S) /i:, /ĩ.
27. to cut (2): Hatsa ≠xe; Auen (N) ≠xe; Naron (C) ≠xe.
28. to cut open: Hatsa //ka:ata; !O !Kung //ka?a 'cut, chop'; Masarwa (S) //ka?a 'cut, chop'.
29. to descend: Sandawe //?a, //gwa; Auen (N) //gwa; Naron (C) //gwā; Nama Hottentot (C) //gōā; /Xam (S) //koe; Masarwa (S) //gwa 'set (of sun)'.
30. to die: Hatsa //ia 'die, be dead'; !Kung, !O !Kung (N) //ke 'die, be dead'; Batwa (S) //keo 'be finished'.
31. to divide: Hatsa //kaka, //ka//ka; !Kung (N) //ka//kã 'to tear'.
32. dust: Sandawe tlaraŋ; Nama Hottentot (C) tsəra.
33. ear: Sandawe keke 'ear'; ke?e 'to hear'; Hiechware (C) cece 'to hear'; cee 'ear'; Naron (C) ≠ke:; Nama Hottentot (C) ≠gai.
34. to eat: Hatsa !nai; !Kung (N) !nai 'to bite'.
35. elephant: Hatsa be//k??au; Auen (N) !xo:, !kho; !Kung (N) !xoi, !kho, ko; !O !Kung (N) !xoi; Hiechware (C) cowa; Naron (C) ≠khoab, ≠kxoa, ≠ko:aba; Hukwe (C) koa, kwa; Nama Hottentot (C) !xo:; /Xam (S) ≠xoa, !kua.
36. excrements: Hatsa hiciya; Sandawe tso; Hiechware, Naron, Hukwe (C) cu; /Xam (S) tsai 'to excrete'; ≠ Khomani (S) txei 'to excrete'; /Nu //En (S) txu:i.
37. to fall: Hatsa //k??aiya; Hiechware (C) /xaiye; /Xam (S) xaitan, !kai'tən.

38. fat (noun): Hatsa hits'ape; Sandawe tsaŋ; !Kung (N) jaŋ, dzaŋ; /Xam (S) soeŋ; //ŋ !Ke (S) sʔyŋ.
39. to flow (of blood): Hatsa ša; !Kung (N) ša.
40. foot: Sandawe !ŋoa; Nama Hottentot (C) !noas 'heel'; Masarwa (S) !numma; /Nusan (S) !nū.
41. four: Sandawe haka; Nama Hottentot (C) haka; Naron (C) haga; Hiechware (C) haka; ≠ Khomani, // Ku //E (S) haka.
42. to give: Hatsa ma; Auen (N) ma; Naron, Nama Hottentot (C) ma.
43. to go out: Sandawe tu; !Kung (N) tuʔa 'go'; !O !Kung (N) toa 'go away'; Hiechware (C) cwa; Batwa (S) soa 'go away'; /Xam (S) tu:i 'leave, go away from'.
44. to grow: Hatsa tissi; Hiechware (C) tsii.
45. hair: Hatsa halepe; Sandawe ts'e.
46. hare: Hatsa !kɔŋga; Auen (N) !ko:ma; Naron (C) !oa; /Nu //En (S) !gōō; //Kxau (S) !koa.
47. to hear: Hatsa //nae; !O !Kung (N) //nə; /Xam (S) //no-igtu 'ear'.
48. to hit: Hatsa txla; Sandawe ka; Auen (N) txa, txa: 'shoot, strike'; Hiechware (C) kwa.
49. hole: Sandawe !kwe; /Xam (S) !kwe!kwe; Masarwa, /Nu //En (S) 'mouth, doorway'.
50. home: Hatsa //neam; /Xam, ≠ Khomani, Batwa, /Auni, Masarwa, /Nu //En (S) //neiŋ, //nei.
51. to jump: Sandawe tho 'jump, fly'; !O !Kung (N) tē 'fly'; !Kung (N) to:ɔ 'rise'; Auen (N) tori 'shoot off, let fly'; Nama Hottentot (C) toe 'fly'; //ŋ !Ke (S) to:u.

52. to kill (1): Hatsa //k??ɔ, //k??ɔna; /Xam (S)
 //k??ɔro.
53. to kill (2): Hatsa //o; Auen (N) //o; Naron, Nama
 Hottentot (C) //o 'die'.
54. knife: Sandawe kogo 'sword'; Hiechware (C)
 kagho; Mohissa (C) kaho.
55. to know: Hatsa tša; Auen (N) ts'a 'hear'; !Kung,
 !O !Kung (N) sa, sa: 'hear, under-
 stand, feel'.
56. to lack: Hatsa kua; Auen, !Kung (N) kwanna,
 kwalla, kwarra; Griqualand (S) kuā.
57. lightening: Hatsa etapi 'to lighten'; !Kung (N)
 dabara; Hiechware (C) dhebe; Naron
 (C) tabe 'to lighten'; /Auni (S) taba,
 tyaba 'to lighten'.
58. little: Sandawe ma 'a little'; Auen, !Kung,
 !O !Kung (N) ma; Masarwa, /Nu
 //En (S) ma.
59. lizard: Sandawe tl'anga; Auen (N) tsāĩ; !Kung
 (N) tsxaŋ.
60. louse: Sandawe man/ʔa; /Xam (S) Omoen;
 //ŋ !Ke (S) Omoinya.
61. lung: Hatsa co; Auen (N) co; !Kung (N) soā,
 sōa, sūʔa, swā; !O !Kung (N) co;
 Hiechware (C) šo; Naron (C) co;
 Nama Hottentot so:b.
62. to make: Hatsa cikina; Hiechware (C) ca khna.
63. to marry: Hatsa hu; Auen (N) hoa; Naron, Nama
 Hottentot (C) ho 'bear children'.
64. to meet: Sandawe !ʔo 'find, meet, receive';
 Nama Hottentot (C) !oa.
65. mountain: Sandawe gawa; Hiechware (C) !goa;
 Naron (C) !gabi; /Xam (S) !kou
 'stone, mountain'; /Nusan (S) !gou
 'mountain, hill'.

66. night: Sandawe tue; Nogau (N) du; Auen, /Kung, !O !Kung (N) šu 'lie down'; Hiechware (C) due 'be dark'; /Auni (S) toa 'lie down'; Masarwa (S) tu 'lie down'.
67. nose: Hatsa ndawe, ntawa, ntawe; Sandawe /nati, ne?ati; /Xam (S) /noetu (early), /nutu; ~~≠~~nutu; ~~≠~~ Khomani, //Kxau, //Ku //E /nutu; /Nusan (S) /nodu; /Nu //En (S) /nuša; Masarwa (S) /nuca.
68. to open: Hatsa //k??wau; !Kung (N) //kwobba; Auen (N) //kabba 'unwind'; Naron (C) //koba; Nama Hottentot (C) //khowa-am; /Xam (S) //kau?etən.
69. to paint: Hatsa tambi; /Xam (S) tam.
70. person: Hatsa akwiti 'woman'; akwiako 'daughter'; akwibi 'young ones'; !Kung, !O !Kung (N) !ku; Nama Hottentot (C) khoi; /Xam (S) !kwi, !ku.
71. to pick up: Hatsa guki; Auen, !Kung, !O !Kung (N) gu; Naron (C) gui; /Xam (S) ui.
72. to place: Hatsa //ku; !Kung, !O !Kung //ku 'place upon'; Nama Hottentot (C) //gui 'put down'; /Xam (S) //ko; /Auni (S) //kwa 'put in'.
73. to pour: Sandawe kwi 'spill'; /Xam (S) kui; //ŋ !Ke ku.
74. rain: Hatsa atiya; tu 'to rain'; Sandawe tl?oa; Nogau (N) du; Naron, Nama Hottentot (C) tu 'to rain'; Korana Hottentot (C) du; Hiechware (C) tu; //Ku //E (S) du 'rain water'.
75. to remove: Hatsa //kowa; /Xam (S) //kau:wa 'take away'; /Auni (S) //ko, //kō 'take'; Masarwa (S) //k??we 'take off'.
76. to rub: Hatsa garinyan; Auen (N) !gori; !Kung (N) !go:ɔ; Hiechware (C) garii

- 'caress'; Nama Hottentot (C) !guri;
/Xam (S) !guru; Masarwa (S) geri.
77. to run: Hatsa ci; Sandawe tha; Auen (N) cʔʔa;
/Nu //En (S) ša, sa; Batwa (S) ci
'go'.
78. to run away: Hatsa //ka//ka; /Auni, Masarwa, /Nu
//En (S) //ka 'go, walk, run, bring'.
79. to say: Sandawe Ga; !O !Kung (N) ka; Nama
Hottentot (C) gawa, gowa; /Xam (S)
ka; //ǀ!Ke (S) koa.
80. to scratch: Sandawe xoa; Nama Hottentot (C) xoa;
Masarwa (C) xa.
81. to see: Sandawe /a; Seroa, ≠ Khomani (S) /a.
82. to sew: Hatsa //apa; !Kung (N) //abba 'string,
sinew'; Hiechware (C) //kaba 'thread';
Naron (C) //abba 'string, sinew';
Masarwa (S) //aʔme.
83. skin: Hatsa ašoko; Naron (C) co; ≠ Khomani
(S) gyo.
84. slate: Hatsa /ka:/ka: 'flat stones'; /Xam (S)
/ka/kagən.
85. small (1): Hatsa komi 'small, young'; !Kung (N)
koma.
86. small (2): Hatsa /itsʔeiya 'short, small'; /Xam
(S) ēise 'be short'; /Nu //En (S)
'short'.
87. to smell: Sandawe hime 'to stink'; Hiechware (C)
hmee; Naron (C) ham.
88. smoke: Hatsa tsʔikxowa; Masarwa (S) cikai
'to smoke'; cxai 'flare up, smoke'.
89. to snort, to groan: Sandawe samu; !Kung (N) swē 'snuff
the air'; Naron (C) 'to snuff'; Nama
Hottentot (C) sunī 'sniff, smell from';
/Xam sū: 'flow, snore, hum'; ≠
Khomani (S) sūʔwa 'blow the nose'.
90. spirit, soul: Sandawe /ɲome; Hiechware (C) /gom
'soul'; Nama Hottentot (C) /om.

91. to stand (1): Sandawe Le (plural verb); Auen (N) tso; !Kung (N) tsau; !O !Kung (N) tsou; Hiechware (C) tʔe; Naron (C) te.
92. to stand (2): Hatsa //ka; Auen, !Kung, !O !Kung (N) //ga; Batwa (S) //kowa; Masarwa (S) //kaba; Griqualand (S) //ga.
93. to stay: Hatsa tai; !O !Kung (N) ta, ta:; /Xam (S) ta, ta: 'lie, remain'; //Kxau (S) ta 'lie, remain'.
94. stick (1): Sandawe dzwa; Hiechware (C) joa.
95. stick (2): Hatsa //kau 'stick for carrying poison'; !Kung (N) //gao 'walking stick'; /Xam, ≠ Khomani, Batwa, /Auni, Masarwa, /Nu //En, etc. //ka 'stick, tree'.
96. strong: Sandawe /ʔe(se); Nama Hottentot (C) /gai; /Xam (S) /gi:; Seroa (S) /kei.
97. to swim: Hatsa !ka; Naron (C) !kha.
98. tail: Hatsa tsaho; Sandawe tsowa; Nama Hottentot (C) tsoa 'buttocks'; Naron (C) cau; Hiechware (C) tsau 'hand, finger, arm, tail'.
99. to take, fetch: Hatsa !e; /Nu //En (S) !e.
100. there: Hatsa /kii 'there, this way'; Auen (N) /ke: 'here'; /Xam (S) /ke: 'there, that'; Batwa (S) /ki; Masarwa (S) /ki 'there, here'; /Nu //En (S) /ki 'where?'
101. thread: Hatsa acu 'sinew, thread'; !Kung (N) so, tso:, tso 'sinew, thread'; !O !Kung (N) soʔo 'sinew, bowstring'; Auen (N) co. 'sinew'.
102. to throw: Hatsa //ai, //aia 'throw, fall'; Auen (N) //gaiʔ 'throw in'.
103. to tie on: Hatsa //ki; Naron (C) //kai; /Xam (S) //ki:, //ki//ki: 'fix, adhere'; /Nu //En (S) //ke 'make, build'; Masarwa (S) //ki 'adhere'.

104. to try: Sandawe //ʔue; /Xam (S) //gaue 'seek'.
105. to understand: Hatsa tsaha, tsaieta; !Kung (N) saa; Hiechware (C) tsomhe; Masarwa (S) taʔaŋ.
106. valley: Sandawe Goʔa; Naron (C) !xubi; Nama Hottentot (C) !kxowi.
107. vulva: Hatsa ukxowa; /Xam (S) //khau.
108. to waken: Hatsa /eke 'rise, get up'; Sandawe /ʔeku (transitive).
109. water: Sandawe tsʔa; !Kung (N) ša, ca 'rain'; !O !Kung (N) ca 'rain'; Hiechware (C) tsaa; Naron (C) ca.
110. well: Sandawe //ʔaŋ; Masarwa (S) //gāna 'water hole'; Batwa (S) //ʔa.
111. wind: Hatsa tsocepi; !O !Kung (N) tsū 'to blow'; Batwa (S) šuwī, cu:se; /Xam, Griqualand (S) tsʔu 'blow'; Auni (S) tsu, tsʔuse 'blow'; Ki/hazi, /Nu //En (S) tsu 'blow'.
112. to wish: Sandawe ge; Hiechware (C) kaa; Korana Hottentot (C) ka; /Xam (S) ka.
113. woman: Sandawe tamesu, tamitsu; !O !Kung (N) dama.
114. to wrap: Hatsa //kuba; !O !Kung (N) //kuba 'cover'.
115. wrong (noun): Sandawe tsoro; Nama Hottentot (C) soro 'wrong' (adjective).
116. year: Hatsa curi; Auen (N) kuri; !Kung (N) guri; !O !Kung (N) kuri; Hiechware (C) nacuri 'last year', nocuri 'this year'; Naron (C) kuri; Nama Hottentot (C) guri(b).

Notes

1. The click sounds are velar injectives, that is a velar closure is made simultaneously with one farther forward, labial, as in the Southern Bushmen labial clicks, or by the front or tip of the tongue

as in the other clicks. The back of the tongue is then moved back rarifying the air and producing a partial vacuum which is filled by inrushing air when the front closure is released. The subsequent release of the back or velar closure can occur in a variety of ways. The consonants k, g, h, kh, n, etc., written after the click symbols in the usual orthography indicate the release as velar unvoiced, voiced, etc. Hence this symbol indicates a part of the click. Both the click closure and the subsequent release should be considered members of a single click phoneme.

2. C. Meinhof, Die Sprachen der Hamiten (Hamburg, 1912); W. Planert, Ueber die Sprache der Hottentotten und Buschmaenner (Mittheilungen des Seminars für Orientalische Sprachen, vol. 8, abt. 3, pp. 104-176, Berlin, 1905).

3. D. F. Bleek, Comparative Vocabularies of Bushman Languages (Cambridge, 1929).

4. South African Journal of Science, vol. 23, 1926, p. 860.

5. The second person plural Hottentot pronouns may also be plausibly interpreted as containing u, the common Southern Bushman pronoun, as their basic element. Nama has sako 'masculine', saso 'feminine' sadu, sado 'common'. Final o is a contraction of au as is indicated by the Korana Hottentot sakau, sasau, sadu. sa- is the first and second person pronominal base, discussed in the text. Masculine ka, feminine sa, common d, are gender elements which occur in other pronouns. This leaves u as the indication of the second person plural in agreement with Southern Bushman.

It would be somewhat more venturesome to interpret Nama and Korana first person sake, sase, sada as similarly contracted from sa-ka-i, sa-sa-i (sada instead of the expected sadi militates somewhat against this view). In this case the first person plural element is -i, which again coincides with Southern Bushman first person plural pronoun.

6. In general, I use the orthography of D. Bleek's Bushman Dictionary (New Haven, 1956). In citations from Dempwolff's Sandawe material I have omitted his click release ' which he describes as a smooth release, hence phonetically perhaps similar to the k or g release of Bushman and Hottentot to which it generally corresponds. For Nama Hottentot, I have in general phonemecized in accordance with Beech's excellent description. It should be noted that many Hatsa nouns begin with ha-, ho- or hi-. This may be related to the already mentioned demonstrative element ha-. It should be disregarded in comparisons in order to arrive at the base of the word. Likewise, the gender and number suffixes -wa, -ya, -ko, -pe, -pi should be eliminated in making comparisons. Similarly, the Naron and Hottentot gender suffixes should be disregarded in comparisons.

The Bushman language designated SII in Bleek's Bushman vocabularies and cited in the more recently published dictionary as such has inadvertently not been named in the introduction to the latter work. It is cited as Griqualand in the present word list.

V. CHARI-NILE

As was indicated in a previous chapter, a Hamitic classification for the Nilo-Hamitic languages is to be rejected. The closest relatives of these languages are the group of languages traditionally called Nilotic. Indeed the relationship of these languages is so close that they form together a subgroup of a wider Eastern Sudanic family. The term Nilotic may be extended to include both the Nilotic and Nilo-Hamitic languages, a terminological decision for which there is some precedent in the literature. Further, the Nandi-Suk group is as distant genetically from the remainder of Nilo-Hamitic as it is from Nilotic proper. Therefore, following a suggestion of Köhler,¹ three coordinate groups of languages are included in Nilotic. It thus becomes apparent that just as with the traditional term Hamitic, Nilo-Hamitic does not designate a valid linguistic entity and can be dispensed with. This chapter falls into two parts, a consideration of the Eastern Sudanic grouping with particular reference to the Nilo-Hamitic problem and the evidence for the wider Chari-Nile family of which Eastern Sudanic is a part.² In a later chapter the still larger Nilo-Saharan family, of which Chari-Nile is a part, will be considered.

The Eastern Sudanic family has the following ten branches:³

1. Nubian: (a) Nile Nubian (Mahas-Fadidja and Kenuzi-Dongola); (b) Kordofanian Nubian: Dair, Dilling, Gulfan, Garko, Kadero, Kundugr; (c) Midob; (d) Birked.
2. Murle (Beir), Longarim, Didinga, Suri, Mekan, Murzu, Surma (including Tirma and Zulmanu), Masongo.
3. Barea.
4. Ingassana (Tabi).
5. Nyima, Afitti.
6. Temein, Teis-um-Danab.
7. Merarit, Tama, Sungor.
8. Dagu of Darfur, Baygo, Sila, Dagu of Dar Dagu (Wadai), Dagu of Western Kordofan, Njalgulgule, Shatt, Liguri.
9. Nilotic: (a) Western: (1) Burun, (2) Shilluk, Anuak, Acholi, Lango, Alur, Luo, Jur, Bor, (3) Dinka, Nuer; (b) Eastern: (1) Bari,

Fajulu, Kakwa, Mondari, (2a) Jie, Dodoth, Karamojong, Teso, Topotha, Turkana, (2b) Masai; (3) Southern: Nandi, Suk, Tatoga.

10. Nyangiya, Teuso.

Before attempting to establish the validity of the general Eastern Sudanic grouping, I shall first seek to prove the reality of the Nilotic branch as listed above, that is, to demonstrate the relationship between the so-called Nilo-Hamitic and the Nilotic languages. As the traditional name Nilo-Hamitic indicates, these languages have often been considered either "Hamitic" or fundamentally Hamitic-influenced.⁴ The various versions of the Nilo-Hamitic hypotheses are considered below.

Lexical comparison of the Nilotic languages reveals vocabulary resemblances in fundamental noun, adjective, and verb stems that are so obvious and extensive in number that it would be pointless to enumerate them. In a list of common nouns, resemblances between two groups would run well over fifty percent.⁵ Nor does anyone take the impossible position of denying their existence. They are simply discounted by many authors in favor of supposed Hamitic structural features in morphology. In the exposition which follows, I shall attempt to show that there are many highly specific points of resemblance to the Nilotic languages in morphology as well as in vocabulary, while there is little that points in the direction of Hamito-Semitic.

1. Personal pronouns. There is practical identity in the set of singular pronouns used as subjects of verbs in the Nilotic and the Nilo-Hamitic languages. Thus Masai among the Nilo-Hamitic languages with a-mat 'I drink', i-mat 'thou drinkest', e-mat 'he, she, it drinks' parallels Lango, a Nilotic language, which has a-mato 'I drink', i-mato 'thou drinkest', e-mato or o-mato 'he, she, it drinks'. Forms similar to these are found throughout both groups of languages. The same sequence a, i, e is found in the independent singular pronouns of both groups with the addition of an n element. In the meaning 'I' we may compare Nilo-Hamitic Nandi, Suk ane, Lotuko ani, Karamojong ano, Kakwa an with Nilotic Shilluk an, Anuak ana, Dinka, Nuer yan, Alur, Luo ani. In the second person, we have Nilo-Hamitic Nandi inye, Suk nyi, Turkana ion, Nilotic Shilluk in, Dinka yin, Anuak ini. For the third person singular independent pronoun, the Nilo-Hamitic languages generally employ masculine and feminine demonstratives, but Masai ninye, Nandi ine still remind us of Anuak ena, Dinka yen, Shilluk en, Luo ino.

In the plural pronouns the Nilotic languages use the same set both in independent use and as verb subjects. These forms are in general comparable to the Nilo-Hamitic independent plural pronouns. There

is a general tendency in both groups to use a -k plural suffix in these forms, carried out most completely in the Nilo-Hamitic Nandi acek 'we', okwek 'you', icek (<ikek) 'they' and the Nilotic Dinka γok 'we', wek 'you', kek 'they'. There is considerable diversity even between relatively closely related languages in the plural pronouns. We may reconstruct the first person plural pronouns as *k_o on the basis of the Nilotic Nuer -k_o verbal, k_on independent and the Nilo-Hamitic Lotuko xoxoi (<k_ok_oi), Karamojong eko-k, Turkana xo-si (<ko-si). In the second plural, Nilotic Nuer ye, Dinka we-k and Great Lakes Teso ye-s, Turkana e-θ seem to point to *we or *ye. The third person plural pronouns are clearly *ke as evidenced by Nuer k_e, Dinka ke-k, Nilo-Hamitic Bari se (<ke), Teso ke-s, Turkana ke-θ, Nandi ice-k (<ike-k).

For personal possessive pronouns both groups suffix forms to the noun which are generally identical with the dependent verbal subject pronouns which have already been discussed. However, Dinka and Nuer in the Nilotic group show an interesting divergence in that -u appears in the second person singular in place of the expected -i. We likewise find u in Acholi, suffixed to kinship forms. This same u occurs in combination with other elements in Nandi—γun after singular nouns and -kuk after plurals. Likewise in Turkana we have it as -o in the form -kon 'thy' where -kin would have been expected in the series kan 'my', kon 'thy', ken 'his, hers, its'. Another divergence is Dinka -ya 'my' which seems to correspond to Nandi -yo;, Bari -io.

To compare with this mass of detailed resemblances between the Great Lakes and the Nilotic personal pronouns, Hamito-Semitic responds with fortuitous resemblances of Nandi ane etc. to Semitic ?ana;, Galla ani, 'I'. As has been seen, these Nilo-Hamitic forms consist of a-, the dependent pronoun, plus -n, -ne. On the other hand the Hamito-Semitic forms display a pronominal base ?an seen in Semitic ?an-ta 'thou' etc. so that ?ana has usually been analyzed as ?an plus a:. We have to do then with an accidental convergence in a single form. In general the Hamito-Semitic personal pronouns are totally different from those of the Nilo-Hamitic languages.

2. Interrogative pronouns. In the forms for the interrogative pronouns, the Nilotic and Nilo-Hamitic languages show close agreement.

'who?': Nilo-Hamitic—Turkana γai, Lotuko γai, Masai ayae, Bari γa. Nilotic—Dinka, Nuer, Anuak γa.

'what?': Nilo-Hamitic—Bari, γyo, Turkana no, Lotuko nainu, Masai aino. Nilotic—Nuer γu, Dinka γo, Shilluk ay_u. These forms exhibit no similarity to the Hamito-Semitic forms.

3. Noun plurals. Both the Nilotic and the Nilo-Hamitic languages show considerable variety of noun plural formation. There are important points of detailed agreement. The ubiquitous k plural appears in nouns in both groups. It particularly characterizes mass nouns, that is liquids and other indefinitely divisible substances, thus, Nilotic — Shilluk fik 'water', ča:k 'milk'; Nilo-Hamitic — Nandi pek 'water', Masai (In)kulak 'urine', (Ink)amulak 'saliva', Bari kamulak 'saliva'. In both groups an -i plural is frequently found. Another formation is the dropping of a final o, u of the singular to form the plural: Nilotic — Shilluk gyeno/gyen 'hen', falo/fal 'knife'; Nilo-Hamitic — Masai ol-kurto/il-kurt 'caterpillar', (en)tutungo/(in)tutuny 'heel', Teso e-moru/i-mor 'hill'. Most important of all, however, because of their high degree of specificity are the plurals involving final consonant replacements combined with internal change in two common words. The variation to be seen in the singular and plural forms of the word for 'cow' in the Nilotic Southern Burun deŋ/duk, Shilluk dean/dok appear also in the Nilo-Hamitic languages as Teso ai-teŋ/ai-tuk, Masai (en)kItēŋ/(in)kišu, Bari ki-teŋ/ki-suk. This alternation reappears in most of the Eastern Sudanic languages. In the word for 'eye', the alternation waŋ/nyin found in the Nilotic Shilluk has its counterpart in Nilo-Hamitic Bari k-ɔŋe/k-ɔnyen, Nandi k-ɔŋ/k-ɔnyan etc. A further similarity in plural formation in the two groups is the occurrence of -t plurals in Nilotic, e.g. Shilluk yei/yat 'boat' as compared with Nilo-Hamitic plurals in -ta, -to, -ti. Paralleling the Nilo-Hamitic -n plurals, we have Nuer -ni and nasal replacements as in Mughaja (Burun) kak/kaŋ 'snake'; Shilluk kwac/kwani 'leopard', aŋado/aŋani 'breast-bone'.

The only real point of resemblance between the Hamito-Semitic languages and the Nilo-Hamitic languages in plural formation is the occurrence of -n plurals in both. Perhaps also the -t plurals might be compared to -ota of Galla and the Semitic feminine plurals in -a:t. The -k plural so common in the Nilotic and Nilo-Hamitic languages is non-existent in Hamito-Semitic except for the -ki plural of Agau, a Cushite language, and this is known to be a secondary formation from ki 'all'. Whatever the truth about this particular formation, no one would posit a -k plural for Hamito-Semitic. The characteristic partial reduplications of the Cushite and Chad Hamito-Semitic groups do not occur in the Great Lakes languages nor internal change to a.⁶ Considering the variety of plural forms found in both Hamito-Semitic and the Nilo-Hamitic languages, the instances cited need be no more than accidental convergences.

4. Demonstratives and Relatives. The alternation n singular / k plural displayed in Shilluk an/ak 'this', 'these', Acholi ē:nò/è:gò (same

meaning), is found in Nandi among the Nilo-Hamitic languages in the forms ni/cu (<ku) 'this', 'these', and the use of singular ne, plural ce (<ke) as a relative.⁷ The Bari adjectival form ron/rok 'bad' also seems to belong here. The fact that the Nandi forms are prefixed while the Nilotic ones are suffixed is not too remarkable. In the Romance languages the definite article which derives from a Latin demonstrative is suffixed in Romanian and prefixed in the western Romance languages. It is likewise probable that the ti plural demonstrative and relative of Nuer in the Nilotic group is cognate with the ti possessive and relative of Bari employed after plural nouns. None of these forms occur in Hamito-Semitic languages.

The detailed similarities in morphology just cited, in conjunction with the large number of vocabulary items common to the two groups seem sufficient to prove the genetic relationship of the Nilotic and the so-called Nilo-Hamitic languages beyond any reasonable doubt.

If this is so, the reader may wonder why these languages have been usually called Nilo-Hamitic. As a matter of fact, the term Nilo-Hamitic has been used by different writers with widely varying meanings. It seems to have been all things to all men. To some, for example Bernhard Struck who accepted Meinhof's thesis that these languages were Hamitic pure and simple, the term seems to have meant merely Hamitic languages in the Nilotic area. He states: "Besides, the term Nilo-Hamitic indicates in a very appropriate manner the Hamites inhabiting the Nile valley in a north-south direction." This is evidently C. G. Seligman's view, though he correlates the linguistic term Nilo-Hamitic with a racial designation Half-Hamite, indicating Negro admixture. A different view is that of D. Westermann, who groups together the Nilotic and Nilo-Hamitic languages under the term Nilotic but calls the northern division Niloto-Sudanic and the southern, Niloto-Hamitic. He remarks: So the line between Niloto-Sudanic and Niloto-Hamitic is not easy to define; they all have components of Sudanic and Hamitic origin, only that in some cases the first is prevalent, in others the latter.⁸

Still another nuance of opinion is that of G. W. Murray, who extends the term Niloto-Hamitic to Nubian also. (We have seen that Nubian is an Eastern Sudanic language.) After stating that in Nilotic, Bari, Masai, and Nubian we have "four nearly allied dialects" we are informed that at a later period Hamito-Semitic influences . . . permeated three of the groups, Nubian, Bari, and Masai, which we therefore call Niloto-Hamitic, and to a slight extent affected the Shilluk group also.⁹ To this Hamito-Semitic influence is ascribed the plural suffixes, some of the verbal derivative affixes, the gender system, and other complex morphological features of the Great Lakes languages.

We also have the view of A. N. Tucker who states that the Nilo-Hamitic languages are defined by three characteristics:

1. a large common vocabulary of Nilotic stems;
2. a large common vocabulary of non-Nilotic stems;
3. a large common vocabulary of Hamitic-like prefixes and suffixes.¹⁰

It can be seen that these opinions are of two main types: those which assert that the Great Lakes languages are Hamitic and those according to which they are basically Nilotic but have undergone Hamitic structural influence to the point where they must be considered a kind of linguistic hybrid.

The first point of view is most strongly represented by Carl Meinhof, who has sought to present actual proof of the Hamitic connections of these languages. In his volume Die Sprachen der Hamiten, one chapter is devoted to the Masai language as representative of the Nilo-Hamitic languages.¹¹ A perusal of this chapter is sufficient to show the weakness of the case Meinhof tries to present. In this work the section under each language called Weitverbreiteste Bildungselemente always provides the key to the validity of the Hamitic hypothesis with regard to the language under discussion. Where languages are actually Hamito-Semitic, as in the case of Hausa, a wealth of concrete forms, plural formatives, verbal derivate affixes, whole conjugational paradigms, can be cited. Where the case is extremely weak, as in the instance of Fulani, this section becomes very meager. This portion of the chapter on the Masai language consists of six short paragraphs. In the first Meinhof adduces the masculine and feminine articles of Masai and relates them to hypothetical Fulani forms for the personal and impersonal respectively. We have seen that Fulani is not Hamitic and further, that the Fulani prefix system has been misinterpreted by Meinhof. The Masai -in plurals, which I have discussed above, are also mentioned in this paragraph. The second statement compares the Masai verbal suffix -u meaning 'motion hither' with Hausa -o: in the same meaning. Now -u in Masai is clearly a development of the -un of related languages. Indeed -un reappears in Masai whenever a vowel follows and must be considered the fundamental form on the basis even of the Masai data. The third paragraph concerns the -u future and imperative and again involves comparison only with Fulani which has been shown not to be Hamitic. The fourth item involves a comparison only with Hottentot, which it is now generally agreed is non-Hamitic. Its position in the Khoisan family has already been sufficiently indicated. Finally the Masai formation of multiples of ten by a suffix -tam is compared to the similar construction in Somali. This is clearly an instance of borrowing since Masai

only resembles the neighboring Somali among the host of Hamito-Semitic languages and because it is evident that Masai has borrowed all its numerals from six upward from the Somali-Galla group of Cushite languages. The final paragraph is cryptic as to meaning. I shall quote it in full: "Compare te- in composition with substantives to form prepositions." It does not tell us with what to compare te-, nor can I discover any connection with the preceding paragraph.

To sum up, all that Meinhof is able to adduce in the way of valid specific morphological evidence is a single plural suffix, the -n plural, to which he might perhaps have added the -t plural.

Meinhof seeks to strengthen his case by the citation of thirty Masai words in his comparative Hamitic vocabulary at the end of the same volume. Of these, ten are clearly borrowed from the neighboring Cushite languages, e.g. Masai tekitam, Somali (Cushite) digetam 'twenty'. Of the remaining twenty entries, one half range from the phonetically implausible to the fantastic, e.g. Masai uni 'three' is stated to be a development of an earlier *kuni, for which there is no proof given.¹² This reconstructed form is then compared with Egyptian xmt and Bedaue emhay! In other instances an ingenious Hamitic etymology is proposed when an obvious Nilotic one is at hand. Thus Masai mat 'to drink' is connected with Hausa mo:da: 'drinking vessel' and Somali mu:d 'brandy' when we have in Nilotic, Lango mato, Shilluk ma:do, preterit mat, etc., meaning 'to drink'. This leaves us with a remainder of ten etymologies which have any degree of plausibility. Altogether this is hardly more than a chance number of similarities. If one were to compare English to all the Hamito-Semitic languages, I should imagine that ten possible etymologies might be found.

Meinhof seems simply unaware of the numerous relations in fundamental vocabulary between the Nilotic and Nilo-Hamitic languages. It is this fact which has led to more complex formulations of the relationship of the Hamitic and Nilo-Hamitic languages such as that of Tucker, cited above. I believe that the morphological similarities between the Nilotic languages and the Nilo-Hamitic languages already adduced likewise exclude interpretations such as those of Westermann and Tucker.

It would seem that the basic reason why people have not accepted the relationship of the Nilotic and the Nilo-Hamitic languages is that they have appeared to be very different structurally. Friedrich Müller long ago, comparing Dinka, a Nilotic language, and Bari, a Nilo-Hamitic language, saw that they were related in spite of superficial differences. "In spite of their apparently diverse structures, we maintain that the two languages, that is Dinka and Bari, are profoundly [innerlich] related."¹³ The Nilotic languages seem to be predominantly

isolating, tend to monosyllabism, and employ tonal distinctions. They conform to the "Sudanic" stereotype and were at first classified by Westermann with his Sudanic. The Nilotic languages were held to represent primeval simplicity as against the agglutinating tendencies of the Nilo-Hamitic group. The complex morphology, and, above all, the presence of grammatical gender in these languages were attributed by some writers to Hamitic influence working on an undeniable Nilotic base of vocabulary.

But are the Nilotic languages indeed so simple? When thorough descriptive accounts are available, such as that by Father Crazzolaro on the Nuer language, we encounter a system of noun cases and the existence of verbal derived forms.¹⁴ For example the noun for 'tongue' in Nuer has the following forms: lêp, nominative singular; léab, genitive singular; lèb, locative singular; lîif, nominative plural, lufnā, genitive and locative plural. The Nuer word for 'mouth' is inflected thus: θók, nominative singular; θwɔ`h, genitive singular; θóγ, locative singular; θúuh, nominative plural; θúuhnā, genitive and locative plural. From mā ðè 'he drinks' we have applicative máàðè 'he drinks something', mā`āðé 'he causes to drink'. If this is primeval simplicity, I prefer an uncomplicated inflectional language like classical Latin or Sanskrit!

It is clear that the predominant monosyllabism of languages like Shilluk and Nuer is historically secondary, just as in the case of Chinese or English. The intricate internal variations of languages like Nuer must be the result of changes induced by former affixes which have been dropped after influencing the root. This is the manner in which internal changes are normally known to develop where historical evidence is available. Thus the English umlaut alternatives foot/feet is known to have arisen from a former -i in the plural which modified o: to e: before it dropped. This general process is obvious from the internal evidence of Nuer itself where final -a has resulted in the diphthongization of a previous vowel by anticipation of the final -a. For example, the variation, lêp, nominative / leab, genitive, in the above example, is plausibly explained by the loss of a final genitive -a (< *lêpa). This formative -a still occurs as a genitive in other words in Nuer. The shift p>b is the result of voicing by the former vowel that has disappeared. In Nuer unvoiced consonants never occur intervocalically. Similarly in Nuer and in Dinka, the suffixed and still present personal pronouns produce internal modifications in the root. So I would interpret the constant raising of the root-vowel in Dinka to form the plurals of nouns as the result of the former -i plural suffix found so frequently in allied languages such as Shilluk.¹⁵ It is precisely analogous in origin to the Umlaut plurals of Germanic languages. Finally, there is the fact that two widely separate Nilotic

languages, the Burun of the northeast and Alur in the south (as recorded by Czekanowski) still show final vowels in most nouns where they have been lost in other Nilotic languages. Thus we have Northern Burun wongu 'eye' where Shilluk has wonj, idu for Shilluk yit 'ear' etc. Instead of the -k plurals of Shilluk, we have -ku, -ka which cannot be new formations since they agree with formatives in other Eastern Sudanic languages (Nubian and Barea). Likewise the singular formative -it in Mughaja (a Burun dialect) gurit 'stone' agrees with suffixes in the Nilo-Hamitic languages as well as Nubian.

It is true that the Nilo-Hamitic languages have a gender system; so have French and Chinook. The specific affixes which denote gender in the Nilo-Hamitic languages are l masculine, n feminine. They show no similarity to the gender affirmatives of the Hamito-Semitic languages. On the other hand we have in the Nilotic Shilluk, ña 'child', ña-l 'boy', and ña-n 'girl' with precisely the same gender-denoting elements as those of the Great Lakes languages.

Another structural feature of the Nilo-Hamitic languages which has been interpreted as an evidence of Hamito-Semitic influence is the presence of a system of verbal derivative affixes with causative reflexive, inchoative and other meanings. Here again, the affirmatives of the Nilo-Hamitic languages exhibit practically no affinity to those of the Hamito-Semitic languages while a closer examination of the facts again indicates real resemblances to the Nilotic languages. The Nilotic languages, as we have seen, do have verbal derivational forms. These are partly indicated by internal changes of vowel quantity, quality, and tone in the verb root, partly also by changes of final consonants. These latter consonantal alternations can be plausibly analyzed as the result of affixes similar to those of the Nilo-Hamitic languages. For example, in Bari and Lotuko, there appears an inchoative suffix -an 'to become', e.g. Bari dar-an 'to become red'. The Nilotic Shilluk replaces a final stop by its corresponding nasal to give the same meaning, e.g. Shilluk rač 'bad', renyo 'to become bad'; nok 'little', noŋo 'to become little'.¹⁶ The final -o is the usual Shilluk present suffix. The case for this connection is strengthened by the appearance of the same inchoative suffix in other Eastern Sudanic languages, Nubian and Barea.

Another instance is the alternation between a final midpalatal or dental stop and its corresponding nasal found in a number of instances in Nuer and associated with motion away from and toward the speaker respectively. Thus we have Nuer čóóóé 'he enters away from' and čúunè 'he enters toward'. In the Great Lakes languages, motion away from is indicated in the Nandi subgroup of languages by -te while Bari has -or, -od. Motion towards is indicated by -un in Bari, Teso, and Masai. Compare also Lotuko iweta, 'go!' iwená, 'come!'. The suffix

-ki, -kin with the dative meaning 'to do for somebody' has cognates not indeed in Nilotic, but in Didinga, another Eastern Sudanic language, which has -eki in the same meaning. In general, not only in the formal means of expressing these categories, but semantically, the resemblance of the Nilo-Hamitic verbal derivate system is to the other Nilotic and other Eastern Sudanic languages rather than to Hamito-Semitic. The Eastern Sudanic languages show a more extensive set of meaning categories than the Hamito-Semitic. We find not only causative, reflexive, and passive as in Hamito-Semitic but such additional types as applicative, dative, inchoative, and directional. In fact, outside of the divergence in the concrete methods of the two groups of languages in expressing gender and other meaning categories, it must remain one of the higher mysteries of linguistic science how, in accordance with most versions of the Nilo-Hamitic hypothesis, the three-gender systems of the Masai and Teso could have arisen from the Hamitic two gender system, the numerous and complex Great Lakes plural formations could have derived from the simpler and less numerous methods of Hamitic languages, and how the Great Lakes system of verbal derivatives with its large number of categories could have originated in the comparatively uncomplicated Hamitic system.

To sum up. The evidence of both vocabulary and morphology indicates genetic relationship of the Nilo-Hamitic and Nilotic languages. Where the Nilo-Hamitic languages border Hamitic languages of the Cushitic group, there has been, not unexpectedly, a certain amount of word-borrowing which has been moderate in scope. This contact situation has not significantly affected the basic structure of the Great Lakes languages.

Borrowing by the Turkana from the Somali has been particularly frequent, by the Masai and Nandi somewhat less so. It has usually been assumed a priori, that the borrowing must always have been in one direction, from Hamitic to Great Lakes, apparently in agreement with the general assumption of Hamitic superiority. In some instances it is possible to show that the borrowing must have been by Hamitic speakers from Nilo-Hamitic languages. In other instances, the evidence is not sufficient to decide the question. In the common Somali word biyo, piyo, 'water' (also found in a few smaller neighboring Nilo-Hamitic Cushitic groups), there can be little doubt of borrowing from Nilo-Hamitic or other East Sudanic languages on the basis of distributions. While isolated in Cushitic as well as in Hamito-Semitic generally, it is a common Eastern Sudanic word found in Nandi peiyo, which may be its immediate source in Somali, in Dinka piu, Nuer pi, Tabi fi-k, etc. Finally it is worth remarking that recent studies indicate that the Nilo-Hamitic languages resemble the Nilotic in being tonal whereas the Hamito-Semitic languages are, in general, non-tonal.

Evidence for the validity of the Eastern Sudanic group is presented here in the form of a comparative word list and a set of morphological elements. Since a substantial proportion of these latter recur in the wider Chari-Nile family which is the subject of the latter portion of this chapter, a consolidated list is given there. Since the distribution of each element is discussed, it is possible from these data to determine which are exclusively Eastern Sudanic and which are found in other branches of the Chari-Nile family.

Eastern Sudanic Comparative Word List

- | | |
|---------------|---|
| 1. all: | (1) Midob <u>tuma</u> ; Dair <u>tuəŋ</u> .
(2) Mekan <u>udamu</u> .
(9) Lotuko <u>ddaŋ</u> ; Turkana <u>da:da:n</u> ;
Karamojung <u>da:daŋ</u> . |
| 2. ant: | (1) Kenuzi Dongola <u>go:r</u> ; Mahas <u>gu:ar</u> .
(9) Bari <u>kIgwur(te)</u> . |
| 3. armpit: | (2) Didinga <u>kalkic</u> .
(9) Nandi <u>kulkul</u> . |
| 4. to arrive: | (1) Dulman <u>tare</u> (imperative); Dair
<u>ɔ:tir</u> 'in the vicinity'; Dilling <u>tar</u> ;
Old Nubian <u>tar</u> .
(2) Didinga <u>dolan</u> .
(3) Barea <u>til</u> , <u>tül</u> .
(5) Nyima <u>ɬɔr</u> 'come'.
(9) Bari <u>dʔur</u> ; Lotuko <u>(na)tiru</u> 'arrival';
Turkana <u>dol</u> . |
| 5. ashes: | (1) Nile Nubian <u>obur(ti)</u> .
(2) Murle <u>bur</u> .
(9) Shilluk <u>bur</u> ; Lango <u>buru</u> ; Bor <u>bur</u> ;
Alur <u>burru</u> ; Achali <u>bvuuru</u> . |
| 6. to ask: | (1) Mahas <u>issige:.</u>
(7) Sungor <u>isek</u> .
(9) Nuer, Dinka <u>thiec</u> . |
| 7. back (1): | (5) Nyima <u>ɛrɛŋ</u> .
(9) Luo <u>agur</u> ; Teso <u>agule</u> 'at the back
of'. |
| 8. back (2): | (4) Ingassana <u>oiny</u> .
(7) Tama <u>nei</u> .
(8) Dagu of Darfur <u>o:nei</u> . |

9. backbone (cf. back 1): (9) South Burun neiyo; Nuer ɲɛ:k; Lango ɲec.
(2) Didinga karot.
(9) Lango oguru; Turkana egur; Nandi rot; Suk kurot.
10. bad: (1) Fadidja u:z; Mahas, Dongola u:s; Old Nubian akossi; Kenuzi u:s, kos.
(2) Didinga gasi.
(3) Barea koš(ko).
11. to be: (1) Nile Nubian a.
(2) Didinga a.
(9) Bari, Masai, Nuer, Dinka a.
12. to be sweet: (2) Didinga med.
(9) Dinka mit; Shilluk mst.
13. belly: (1) Nile Nubian tu; Old Nubian tu.
(3) Barea taua.
(7) Sungor ut.
(9) Turkana etau 'heart'; Lango etau 'heart of an animal'.
14. bird: (1) Mahas, Fadidja kawar(ti); Dilling komil(ti); Garko kaban(du).
(2) Longarim kiballe?; Murle kiballeci; Didinga kibalic.
(3) Barea karba.
15. bitter: (2) Longarim akate; Didinga xaxat 'be bitter'.
(9) Dinka kec; Shilluk ke:c; Luo kec; Acholi kɛ:c.
16. black (1): (4) Ingassana dui.
(6) Teis-um-Danab ntutin.
(9) Nandi tui.
17. black (2): (2) Didinga hola; Murle ocoli.
(3) Barea sur(ko).
(9) Nuer, Dinka col; Lango sol.
18. blood: (1) Kenuzi ger; Dilling ogur; Midob uggur.
(2) Tirma koro.
(5) Nyima wili; Afitti ole.

- (9) Nuer kwa:r; Acholi kwa:r; Alur (ma)kwaru 'red'; Turkana eren 'red'; Bari kari 'redness'.
19. body: (6) Teis-um-Danab om/komik 'belly'.
(9) Acholi kum.
20. to boil: (1) Mahas wal.
(9) Shilluk wa:lo; Bari walala.
21. bone: (1) Kenuzi ki:d; Kundugr koidu; Dilling koed.
(3) Barea ketti.
(9) Karamojong, Turkana akoit; Masai (ol)oit; Lotuko axoty; Bari koyuty.
22. to break: (1) Kenuzi, Dongola kor(j).
(3) Barea kor 'divide'.
(9) Masai gIl; Bari gwalak.
23. breast: (3) Barea kena.
(9) Nandi kina; Masai (ol)kina; Bari kinat.
24. to build: (1) Nile Nubian gony.
(6) Temein gany.
(9) Shilluk ger.
25. to burn: (1) Mahas urre; Dongola ulle.
(3) Barea wor.
(5) Temein alu 'cook (imperative)'.
(9) Bari ?yur; Masai yier 'cook porridge'; Lotuko IlIlIaja 'roast'; Nandi ilal 'kindle'.
26. to buy: (7) Tama er.
(9) Nandi al; Suk olan; Acholi wIlo 'sell'.
27. child: (1) Mahas gar, ga 'son'.
(4) Ingassana ajai:r.
(9) Nuer ga:θ- (gar- in compounds); Masai (e)gerai; Bari ngərə; Lotuko ngairio(k) (plural).
(10) Nyangiya nger 'girl'.
28. cold: (1) Gulfan, Dair kid.
(7) Merarit ki:ri.
(9) Nandi kaitit.

29. to come: (1) Nile Nubian kire; Old Nubian ki, kire.
 (2) Murle kakun.
 (7) Merarit ko:ka.
 (10) Nyangiya kats (imperative).
30. to count: (2) Didinga gil.
 (3) Bari ken.
 (9) Nuer, Dinka kwen.
31. to cover: (1) Dongola kom 'envelop'.
 (3) Barea gömmē, gümme.
 (9) Dinka kum; Shilluk kum; Nuer kwom; Lango gyum.
32. cow: (1) Kenuzi, Mahas ti.
 (2) Didinga taṇa / tena.
 (4) Ingassana tom / tok.
 (5) Temein ntɛŋ / kɪtuk.
 (7) Merarit, Tama te:.
 (8) Dagu of Darfur teinyei / tukkei; Sila teinyi.
 (9) Shilluk dean / dok; Bari kiteŋ; Lotuko (nɛ)teŋ; Teso akiteŋ; Masai (ɛn)kɪteŋ / (in)kišu; Nandi teny / tic.
 (10) Nyangiya dhio.
33. to cut: (8) Njalgulgule time (imperative).
 (9) Dinka tem; Achili to:mo; Nuer tɛm; Lango tum'o; Nandi tem 'cut trees'.
34. to desire: (1) Kenuzi, Dongola ner.
 (9) Bari nyar; Masai nyor; Dinka niar.
35. to die: (1) Nile Nubian di:; Dair, Dilling, Dulman ti.
 (3) Barea di.
 (9) Dinka, Shilluk, Anuak tou; Bari tuan; Masai tua.
36. dog: (3) Barea wos.
 (7) Merarit wi:s.
 (8) Dagu of Darfur, Sila i:si.
37. donkey: (1) Nile Nubian kaj.
 (8) Dagu of Darfur, Baygo kacinei; Sila kacei.
 (9) Dinka akaja; Bari kayne.

38. dove: (1) Kenuzi, Dongola kuru.
(7) Merarit okur.
(9) Nuer kur; Shilluk akur; Bari gure; Turkana akuri.
39. to drink: (4) Ingassana mada.
(9) Nuer ma:t; Shilluk ma:do; Lotuko mata; Bari mata (passive); Masai mat.
40. earth (1): (1) Kordofan Nubian twə 'under'; Old Nubian tawo 'under'.
(8) Dagu of Darfur wadei.
(9) Teso adayi 'dust'.
41. earth (2): (2) Mekan ba:, bwi:.
(9) Dinka piny; Shilluk feny; Nuer, Anuak peny.
42. egg: (1) Mahas, Fadidja kombu:.
(2) Tirma kob; Didinga kobi.
(4) Ingassana kumi.
(7) Merarit kwobo.
43. enclosure: (1) Mahas angi.
(9) Masai (enk)an 'home, kraal'; Bari an.
44. excrement (1): (1) Nile Nubian uny; Kundugr unyu.
(9) Bari kin; Lotuko ino.
45. excrement (2): (3) Barea iš.
(7) Sungor iši.
46. to expel: (1) Nile Nubian tur.
(9) Masai itur; Bari tore.
47. face: (1) Nile Nubian ma:ny 'eye'.
(2) Didinga mu:m 'eye'.
(9) Masai (enk)omon.
48. to fall: (1) Kenuzi digire, digir; Dongola digir; Dilling tiŋer; Garko tiŋ.
(7) Merarit dug(ney).
(9) Lotuko doxi(no).
49. to fear: (1) Dilling er.
(3) Borea kor (noun).
(9) Masai ure; Teso akuryanari (infinitive); Nandi nyokorio (noun).

50. fire (1):
- (1) Mahas, Old Nubian maša 'sun'; Kenuzi, Dongola masi(1) 'sun'.
 - (4) Ingassana mo.
 - (8) Dagu of Darfur, Sila ma:si.
 - (9) Dinka, Nuer, Shilluk mac; Masai (en)kima; Nandi maa; Lotuko (ne)ema; Bari kimaŋ.
51. fire (2):
- (1) Modob ussi; Gulfan e:s.
 - (9) Masai isuI 'burn'.
52. five:
- (1) Kenuzi diju; Dongola diji; Dair dišu.
 - (3) Barea de-, ja- (in higher numerals).
 - (8) Sila -dak and Dagu of Darfur, Baygo -da (in higher numerals).
 - (9) Dinka djec; Nuer dhieec; Southern Burun doi, doik; Dinka de-, do- (in higher numerals).
53. fly:
- (1) Mahas, Dongola kulti.
 - (2) Didinga, Murle, Longarim kironit.
 - (5) Nyima kwələŋ; Afitti kwələŋga.
 - (9) Bari kadongonti; Nandi kaliaŋ.
54. forest:
- (3) Barea tüm 'tree'.
 - (6) Nyima tuma, toma 'tree'.
 - (9) Acholi tim; Dinka tim 'tree'; Masai (en)tim 'wood'.
 - (10) Nyangiya idhim 'firewood'.
55. to go:
- (7) Merarit la; Tama lo; Erenga lu:.
 - (9) Dinka lo; Masai lo.
56. to go out:
- (1) Mahas fal; Dair bal; Old Nubian pal.
 - (4) Ingassana pala 'descend'.
 - (9) Shilluk welo; Dinka fal 'leave'; Bari wala.
57. grass:
- (4) Ingassana lel.
 - (5) Nyima lawā.
 - (9) Shilluk elēi 'a grass from which ropes are made'.
58. guest:
- (3) Barea hömet / hömena.
 - (9) Dinka kaman; Shilluk kemo 'to visit'; Bari komonit.

59. hand:
- (1) Mahas, Fadidja eddi.
 - (2) Didinga, Murle, Longarim adhit.
 - (3) Barea ad.
 - (5) Afitti aaṭa.
 - (8) Dagu of Darfur, Sila, Baygo andei.
60. to hate:
- (1) Kenuzi, Dongola mo:n.
 - (9) Shilluk ma:no; Dinka man; Bari man; Masai men 'despise'.
61. head:
- (1) Dongola, Kenuzi, Mahas, Gulfan ur.
 - (3) Barea kele.
 - (4) Ingassana ol.
 - (7) Merarit ure:.
 - (9) Bari uret 'crown'.
62. to hear:
- (1) Mahas, Fadidja ukk, ukkire.
 - (7) Merarit ig.
63. hippopotamus:
- (1) Kenuzi, Dongola erit.
 - (9) Shilluk rau; Dinka rou; Nuer rou; Bari jaro.
64. honey:
- (5) Nyima ami.
 - (9) Nandi kumia; Suk komat.
65. house:
- (1) Kenuzi, Dongola ka:.
 - (4) Ingassana we:.
 - (6) Teis-um-Danab kwi (plural).
 - (9) Shilluk ka 'place'; Jur kan 'here', kaca 'there'; Acholi ka 'place'; Turkana akie; Nandi ka.
 - (10) Nyangiya o/oik.
66. jaw:
- (1) Kenuzi, Dongola jakum.
 - (4) Ingassana ijum 'beard'.
 - (9) Bari nyekem 'chin, jaw'; Lotuko ejoxom 'chin'; Suk ṇacam 'chin'; Dinka gem 'cheek'; Nuer jyom 'cheek'.
67. knee:
- (1) Mahas, Kenuzi kur(ti); Dilling kute; Kundugr kuttu.
 - (2) Murle kodhoṅ; Longarim kudhuṅ.
 - (9) Nandi kutuṅ.
68. to lie down:
- (1) Dongola, Kenuzi bu; Fadidja fi:.
 - (7) Merarit ab(ney).

69. louse: (1) Dilling itid.
(9) Bari ciro(tat); Nandi iseria; Suk inserian.
70. male (1): (2) Didinga mac.
(7) Merarit mo.
(9) Dinka moc.
71. male (2): (1) Modob erre 'man'.
(9) Lotuko alle, alyawa; Turkana (eki)li; Masai (ɔ)le 'man'.
72. man: (1) Kenuzi, Dongola id; Old Nubian it.
(2) Didinga et.
(3) Barea eite.
73. meat: (2) Didinga, Longarim idʔiq.
(9) Shilluk, Lango, Dinka, Anuak riŋo; Nuer riŋ; Turkana (aki)riŋ; Masai (en)kirinjo; Karamojong (agi)riŋ.
74. milk (1): (1) Kenuzi er(ti); ir(ti).
(2) Didinga i:ra.
(5) Nyima elo; Afitti olo.
(9) Bari le; Turkana (aki)li; Teso akile; Masai kule.
75. milk (2): (1) Mahas su; Birked eši; Kenuz, Dongola ici.
(3) Barea sa / sata.
(7) Merarit zun.
(9) Dinka ca; Nuer cak; Shilluk cak; Nandi ce.
76. moon: (4) Ingassana туру.
(8) Dagu tuluŋei.
(9) Bari tyer(ja) 'to shine'.
77. mother: (1) Gulfan aya; Midob iya.
(9) Suk iyu; Nandi eiyo.
(10) Nyangiya yoiyao 'thy mother'.
78. mouth: (1) Mahas ag; Kenuzi, Dongola agil; Kundugr oglu.
(3) Barea auro.
(4) Ingassana ag.
(5) Nyima ŋal; Afitti ŋgala.

- (7) Merarit kul.
 (8) Dagu of Darfur akkei.
 (10) Nyangiya ak.
79. name:
 (1) Dongola, Kenuzi eri.
 (3) Barea ade.
 (9) Dinka rin; Bari karIn.
80. navel:
 (1) Fadidja si:r.
 (9) Masai sororua; Dinka co:r; Suk serum.
81. neck:
 (1) Nile Nubian gumur.
 (9) Shilluk muto; Nandi kimut; Bari murut; Masai (en)murtu.
82. night:
 (1) Mahas awar; Dulman kwalo 'at night'.
 (9) Shilluk, Nuer war; Lango owor; Karamojong awara, akwar; Masai (en)kewarie.
83. one:
 (3) Barea doko, toko.
 (7) Merarit tok 'ten'.
 (9) Dinka tok.
 (10) Nyangiya odok.
84. person:
 (1) Mahas ko:, koi 'master, possessor' [for semantics cf. German Herr].
 (3) Barea ku.
 (5) Nyima kwai 'man'.
 (9) Dinka koi.
85. to pour:
 (1) Kenuzi, Dongola bog.
 (9) Dinka byok; Nuer bok 'throw'; Bari buk; Nandi apuk; Masai ibuko: 'pour away'.
86. rain:
 (1) Kenuzi, Dongola aru; Old Nubian aru 'to water'; Dair, Galfan are.
 (5) Nyima arini; Afitti aranga.
 (7) Tama ar 'sky, rain'.
 (8) Dagu of Darfur ko:rei.
 (9) Dinka uar 'river'; Masai (en)kare 'water'; Lotuko (na)are 'water'; Karamojong (agi)ru; Turkana (aki)ru; Bari kare 'river', ru 'to water'.
 (10) Nyangiya war.

87. rich: (1) Kenuzi, Dongola ber 'be rich'.
(9) Lotuko bara 'be rich'; Teso pwar 'be many'; Lango po:l 'be many'; Acholi po:l 'many'.
88. road: (1) Dilling okul; Kondugr ongul; Kenuzi gir.
(9) Bari gar.
89. to see: (1) Mahas, Fadidja gu:nye; Dilling gel; Garko gele; Dulman gele.
(2) Longarim gini.
(7) Sungor go:n.
(9) Nuer gwill; Lotuko Igony; Nandi kere.
90. to seize: (1) Mahas dumm.
(9) Dinka dom; Bari dum; Masai tum 'get, acquire'.
91. sheep: (1) Dair or(ti); Mahas ur(ti).
(4) Ingassana er.
(9) Masai (en)ker; Lotuko (na)ker.
92. shield: (1) Gulfan koru; Dair kori; Dongola, Kenuzi karu.
(3) Barea kodo/kotta.
93. to sing: (1) Mahas, Fadidja or, ir; Gulfan ware; Dilling war(er).
(7) Merarit ere.
(9) Shilluk wor; Lango wero; Luo wer; Teso yore; Bari yolo.
94. to sleep: (1) Nile Nubian ne:re.
(9) Nuer nyen; Dinka nin; Shilluk næn.
95. small: (1) Nile Nubian to:d / tu:nyi 'child'; -to:d (diminutive suffix).
(3) Barea di / dad 'child'; didi 'small'.
(7) Merarit tadan, tett 'child'.
(9) Shilluk ten; Dinka tine; -tet (diminutive suffix); Nuer töt; Bari dit.
96. smoke (1): (2) Didinga burst.
(9) Lotuko afuro; Karamojong apuru; Nandi puret; Bari kəpuret.

97. smoke (2): (1) Nile Nubian tulli.
(9) Dinka tol; Nuer tuol.
98. snake: (1) Kenuzi, Dongola kak.
(2) Didinga xuka:t, kukat.
(8) Sila ko:kei.
(9) North Burun kak; South Burun kaŋ; Lotuko kak.
99. some: (1) Mahas kid.
(2) Didinga kidica / kidicik.
(5) Nyima kəd(In) 'small'.
(9) Dinka ketoi 'a trifle'; Masai kete 'a little'; Bari cit; Nandi kitegin 'a little of something'.
100. spear: (4) Ingassana mus.
(9) Nuer muθ.
101. to split (1): (1) Mahas, Fadidja fag; Kenuzi, Dongola bag.
(9) Bari pəggu; Lotuko ppek; Shilluk pa:ŋ; Nuer bak.
102. to split (2): (1) Nile Nubian kak.
(9) Dinka kak 'cut'; Shilluk ka:go; Lango kako; Nuer kage; Bari kagu.
103. star (1): (1) Dair winji; Kadero u:ndu.
(3) Barea wini.
104. star (2): (2) Didinga munyac; Murle munya:tot; Tirma munyinya.
(7) Sungor minyit.
105. to steal: (3) Barea hol.
(9) Shilluk kwalo; Dinka kwat; Bari kola.
106. stick: (1) Mahas, Dongola gale:.
(4) Ingassana ma:gult.
(9) Karamojong agulit.
107. stone (1): (1) Mahas kid; Fadidja kit.
(7) Erenga kat.
(9) Anuak kidi; Shilluk kit; Lango, Alur kidi.

108. stone (2): (1) Kenuzi, Dongola kul; Birgid kur.
 (6) Temein kureṭ.
 (7) Merarit kura.
 (9) Dinka kur; Lango got; North Burun gurit; Bari kodu 'hill'.
109. strong: (1) Dongola, Kenuzi kombo 'thick, hard, strong'.
 (2) Didinga kom 'be strong'.
 (9) Nandi ki:m.
110. sun: (2) Didinga kor.
 (8) Dagū of Darfur urōṅei.
 (9) Dinka akol; Bari kōlōṅ; Masai (enk)olōṅ; Karamojong akolōṅ; Turkana ekolōṅ.
111. tail: (1) Kondugr ile.
 (2) Longarim, Didinga kula?.
 (9) Dinka yol; Teso ekori.
112. ten: (1) Kordofan Nubian bure.
 (7) Merarit mer.
 (9) Bari mere.
113. thirst: (2) Didinga kōra?; Longarim kōra.
 (9) Nuer rau; Anuak, Alur rio; Dinka rou; Shilluk ryou; Lango oreo; Bari kure.
114. thing: (2) Didinga gi.
 (9) Acholi gi; Shilluk gin / gik; Nandi kii.
115. throat: (1) Nile Nubian go:s.
 (3) Barea koso.
 (9) Masai (ol)gos.
116. tongue: (1) Garko jalde; Kondugr jaldu.
 (4) Ingassana kalat.
 (7) Merarit la:t.
 (8) Dagū of Western Kordofan kuldaṅ.
117. tooth: (1) Mahas nid; Kenuzi nihta, ni:ta.
 (2) Didinga nigitat / nigit.
 (3) Barea nihi / nihitta.
 (4) Ingassana niet, nyigitu.
 (10) Nyangiya njik.

118. tree: (1) Birged ka:n.
 (2) Didinga kət / kəna.
 (7) Merarit kidi / kiŋ.
 (9) Masai (ol)cani; Lotuko (nə)yəni;
 Shilluk yat / yən; Nuer jiat / jen.
119. two: (1) Dair, Gulfan ora; Dulman ore.
 (3) Barea arega.
 (7) Merarit ware.
 (9) Lotuko arega; Masai are; Bari
ori; Shilluk aryau; Dinka rou;
 Nuer rou.
120. urine: (2) Didinga xula.
 (9) Anuak la; Masai (In)kulak; Bari
kula; Lotuko axula.
121. to wash: (1) Fadidja, Mahas jug.
 (9) Bari jogga.
122. water: (4) Ingassana fik, feko.
 (6) Temein bəŋ.
 (9) Nuer, Acholi, Lango, Shilluk,
 Luo pi; Burun piuk; Teso (aki)pi;
 Karamojong (agi)pi; Nandi peik.
123. 'what?': (1) Kordofan Nubian de 'who?'.
 (9) Jur di; Shilluk adi; Bari ada, da
 'how?'; Nuer IdI, dI 'how?'.
 'how?'; Nuer IdI, dI 'how?'.
124. white (1): (1) Kenuzi, Dongola aro.
 (2) Didinga ora.
 (3) Barea er(enko).
125. white (2): (5) Nyima fəfər 'very white'.
 (8) Sila papara.
126. 'who?': (1) Mahas, Fadidja na, nai; Kenuzi,
 Dongola ni.
 (2) Didinga ɲani.
 (3) Barea na, nan.
 (5) Nyima ɲa.
 (7) Merarit na.
 (8) Nuer, Dinka, Anuak, Lango ɲa;
 Nandi no; Karamojong ɲai; Bari
ɲa; Lotuko ɲai.

127. wife: (1) Birked ein; Dongola, Kenuzi eny.
 (2) Didinga ṇa.
 (3) Nandi kwany; Burun iṇ.
128. wind: (2) Tirma uru.
 (3) Barea wolwol.
 (4) Ingassana ailtu.
129. wing: (1) Mahas awir; Kenuzi, Dongola aur,
abir; Old Nubian aur.
 (2) Didinga wir 'to fly'.
 (9) Shilluk ober; Masai (enk)opiro
 'feather'; Bari kupirət 'feather'.
130. with: (2) Didinga ki.
 (8) Wau (Dagu) ka 'and'.
 (9) Shilluk ki, ka; Lango ki, ka;
 Acholi ki; Anuak ke; Nuer ke;
 Lotuko, Turkana, Teso ka; Bari
ko.
131. yesterday: (1) Nile Nubian wil; Gulfan wal.
 (2) Didinga bʔa:lo.
 (8) Wau (Dagu) nabala 'tomorrow'.
 (9) Dinka wara(kol); Acholi oworo;
 Bari (ko)bʔure 'tomorrow'.

The results attained thus far in this study may be summarized as follows. Starting from two problems, the position of Bantu in relation to Westermann's West Sudanic and validity of Meinhof's suggestions regarding the extension of Hamitic, four extensive linguistic stocks have been defined: Niger-Congo, Afroasiatic, Khoisan and Eastern Sudanic. This, however, still leaves a considerable number of languages unaccounted for, chiefly in the eastern portion of the area formerly reckoned as Sudanic. In the chapter on Niger-Congo, the Songhai language of the western Sudan, the Central Sudanic group and the Saharan group were mentioned as not affiliated with Niger-Congo and these have not thus far been assigned to any larger group. In addition to these three, we may mention the following six languages or language groups: Berta, Kunama, Maban, Fur, Coman and Kordofanian. Of these nine additional languages or language groups, three show a particularly close relationship to Eastern Sudanic. These are Berta, Kunama and Central Sudanic which thus, with Eastern Sudanic, form a wider grouping, the Chari-Nile language family. The remainder of this chapter is devoted to a consideration of the evidence for

this grouping. A listing, with subgroupings, of the extensive Central Sudanic subgroup is followed by presentation of grammatical evidence regarding both the Chari-Nile and its Eastern Sudanic subfamily. Finally, there is a comparative word list of the Chari-Nile family.

The Central Sudanic Languages

1. Bongo, Baka, Morokodo, Beli, Gberi, Sara dialects (Mad-jinngay, Gulai, Mbai, Gamba, Kaba, Dendje, Laka), Vale, Nduka, Tana, Horo, Bagirmi, Kuka, Kenga, Disa, Bubalia.
2. Kreish.
3. Binga, Yulu, Kara.
4. Moru, Avukaya, Logo, Keliko, Lugbara, Madi.
5. Mangbetu, Lombi, Popoi, Makere, Meje, Asua.
6. Mangbutu, Mamvu, Lese, Myuba, Efe.
7. Lendu.

Eastern Sudanic and Chari-Nile Morphological Elements

1. First person singular pronoun in a. This pronoun usually contrasts with i of the second person singular as verb subject, verb object, and independent pronoun. As possessive its original contrast seems to have been with u as the indicator of the second person singular. There is a variant form ai which usually occurs as an independent pronoun. The first person singular a is found in almost all branches of the Eastern Sudanic family. (1) In Nile Nubian ai is the independent pronoun. As possessive with kinship terms a- indicates first person as against i- second person, e.g. Fadidja, Mahas abo 'my father', ibo 'thy father'. In Kordofanian Nubian an a suffixed to the verb forms the first singular imperative as against i in the second person singular. (2) Didinga has first person singular subject-verb suffix -na as against second person singular -ni. The respective independent pronouns are nana and nina. Masongo has -a verb subject first person singular, -in for second person singular. (4) Ingassana has a(ne) first person singular independent pronouns as against second singular o(ne). (5) Nyima has a, ai as first person singular pronouns. (6) Temein nan 'I' and nin 'thou'. (7) Merarit, Tama and Sungor have wa as first person singular pronoun. (8) Dagu of Darfur has a- verb subject as against i- in the second person singular. The independent pronouns

are first person singular a:ga, second person singular i:gi. Baygo has an first person singular independent; second person singular ini. (9) A contrast a- first person singular as against i- second person singular is practically universal in the Nilotic languages, e.g. Shilluk, Dinka, Nuer, etc. a; Masai, Turkana, Teso, Lutuko, etc. a; Nandi, Suk a.

In other branches of Chari-Nile, a is first person singular is likewise found and in similar contrast with the second person singular. Kunama has a as first person possessive and as first person verb object. Berta has a as first person singular subject pronoun. In Central Sudanic these elements are usually strengthened by nasal prefix, e.g. Lese ma-, first person singular subject pronoun, ni-, second person singular subject pronoun. The contrast is found in pure form in certain tenses of the verb in Lokai Madi where we have a- first person singular subject pronoun, i- second person singular pronoun. The more frequent form ma is found throughout the Sara-Bagirmi group, in Lendu, Moru, Madi, and in Kreish as amma.

2. Second person singular pronoun in i. A number of examples of this have been given under (1). The favorite strengthened form of this pronoun, particularly when employed as an independent pronoun, involves an n- or ny- prefix or an -n suffix. (1) Nubian Midob in; Nile Nubian ir. (2) Didinga i. (5) Nyima i. (6) Temein nin. (7) Sungor, Tama, Erenga i. (8) Baygo i. (9) Dinka, Nuer, Acholi, Masai, Lotuko, Nandi, etc. i.

In Central Sudanic, forms without nasal strengthening are found in Bongo, Sara, Bagirmi as i in addition to the Lokai Madi form cited under (1). Otherwise, ni is found as in Lendu and Lese, mi in Moru, Madi, and imi in Mangbetu as against first person ima.

3. Second person singular possessive in u. This form of the second person singular is particularly characteristic of irregular kinship possessives with internal change. Examples of this usage are common in Nilotic, e.g. Dinka wamaath / wamuth 'my brother / thy brother'; Shilluk mia / miu 'my mother / thy mother'; Bari baba / muji / monye 'my father / thy father / his father'. With these and numerous other examples that might be cited, we can compare Didinga baba / manyu / manyi 'my father / thy father / his father'. In Kordofanian Nubian of Dilling we see a striking exemplification of u as an internal element of the second person alongside of -i as a suffix in am-baga / hugi / haga 'my father / thy father / his father'. Compare also Temein apa / konyun / kanyuna 'my father / thy father / his father'.

The more general use of -u as a possessive is found in Dinka, Nuer, Nandi, Didinga, Ingassana and Merarit. The pattern by which

in Mangbetu the possessive employs a suffix -(ndr)a / -(ndr)u 'my / thy' as against the a / i contrast as verb subject is a striking point of agreement with Eastern Sudanic. Likewise Binga in Central Sudanic has a second person singular possessive -nun.

It should be noted that whereas both -i and -u occur widely as second person singular indicators, there is no instance in which u functions as verbal subject while -i is the possessive in the same language, whereas the opposite pattern occurs widely (e.g., Nandi, Nuer, Didinga, Mangbetu).

4. Third person singular pronoun in e. This is most frequently found with a first person singular (no. 1) and i second person singular (no. 2). In Dilling (Kordofanian Nubian) we have as the verb imperative suffixes in three persons of the singular -a / -i / -e. This same pattern is observed in the Didinga pronominal subject suffixes -na / -ni / -ne. In Nilotic, Dinka auxiliaries are conjugated in the singular with the suffixes -aa / -ii / -ee. The Nuer verb suffixes -ä / -i / -ε to express the pronominal singular subject while the same -ε is found for the third person singular possessive along with first person -a (no. 1) but second person -u (no. 3). In Lango the verb subject pronouns are prefixed a- / i- / e- with o- also occurring in the third person. In Eastern Nilotic, Masai and Karamojong we have a- / i- / e- as prefixed subject pronouns in the singular. The examples cited here are from exhaustive study of this widespread Eastern Sudanic pattern which is particularly prominent in Nilotic.

5. Third person demonstrative in t. (1) Nile Nubian te(r); Dair tu; Dilling tendi. (2) Didinga ci. (3) Barea ti. (7) Merarit te.

6. Third person singular possessive and independent pronoun in n. (1) Dilling er-an 'his, her master' (cf. er-i 'thy master'). (4) Ingassana -inin 'his, her' (the first -in is a singular indicator). (9) Shilluk -n in mən 'his, her mother', wən 'his, her father' etc.; Central Sudanic Mangbetu -ne 'his, her' with kinship terms; Binga -n 'his, her'.

With this is probably connected the following third person singular demonstrative and independent pronoun: (2) Didinga nəni 'he, she'. (4) Ingassana ine 'he, she'. (5) Nyima ən 'he, she'. (7) Merarit an 'he, she'. (8) Wau Daju an 'this'. (9) Shilluk ni 'this'; Nandi ine 'he, she'; Kunama ena 'this, that'; Berta Fazoglo ine 'he, she'; Central Sudanic Barma (Sara) ina 'this, that'; Mangbetu ine 'he, she, that'; Sara ne 'he, she'; Mamvu, Mongbutu ini 'this'; Logo ni 'he, she'.

7. Third person subject k- independent constructions. There is striking agreement between Southern Nilotic Nandi and Suk ko- which functions as a third person subject indicator in the singular and plural

subjunctive and Miza (Moru) in Central Sudanic which has ka- or k- as third person subject of the subjunctive and indefinite. With this we should probably compare Kunama k-, all the examples except one cited by Reinisch being subject of a dependent clause.¹⁷ Note also that in Shilluk go is used in historical narrative instead of the usual third person singular pronoun e (no. 4), particularly after the conjunctions ka 'and' and de 'but'.

8. Second person plural in w. (1) Gulfan wi; Dair u; Fadidja, Mahas u(r) independent pronouns of the second person plural; Birked udi second person plural independent pronoun as against the second person singular idi (cf. no. 2); Midob -wi suffixed subject pronoun of the second person plural indicative; Kenuzi and Dongola second person imperative plural -we. (4) Ingassana u- second person plural subject pronoun. (8) Daju of Wau iwe second person plural independent pronoun. (9) Dinka wek; Shilluk wu; Nandi okwek; Suk akwa second person plural independent pronouns. The k of the Dinka, Nandi and Suk forms is a plural indicator (cf. no. 25).

9. Second person plural in t. Eastern Nilotic Bari -ta second plural imperative, ta second plural independent pronoun; Teso -ete, -ite; Lotuko -to, -oto; Karamojong -ete second plural indicative. These forms may be compared to Berta second plural indicative and imperative -aθa.

10. Third person plural in -i. In Barea a number of verbs suffix -i to express a third person plural subject. This formation is probably related to Lotuko -i in the same usage and the Masai passive in -i, historically a third person plural subject, i.e. 'they kill me' = 'I am killed'.¹⁸ It also occurs in the Moru-Madi group of Central Sudanic.

11. ti plural demonstrative and relative. (3) Barea -te- (in -tego plural suffix for adjectives formed with relative -go). (9) Nuer te; Bari ti. Probably Turkana -θ and Teso -s pronominal plurals belong here.

12. ma relative and adjective formant. (3) Barea -mo (participial) (9) West Nilotic ma- (Nuer singular only). Elsewhere in Chari-Nile this item is found as Kunama -ma and Mangbetu m-.

13. ko relative and adjective formant. (1) Nile Nubian -go; Dilling participle in -iko. (3) Barea -go. (6) Merarit -k. (9) Bari ko-.

14. n feminine. (1) Nile Nubian en in id-en 'woman' as compared to id 'man'. (4) Ingassana -nye, ne. (9) Jur nyi- in feminine proper names; Shilluk -n in nya-n 'daughter'; Masai, Bari, etc. have n as feminine indicator. With these Eastern Sudanic forms we may compare

Central Sudanic Bagirmi -ne 'woman' suffixed as a feminine derivational element.

15. m masculine. (8) Ngalgulgule and probably other languages of the Dagu group have an m masculine indicator contrasting with c feminine. (9) Dinka bull names have ma- as against a- for cows. Lotuko monye 'father', compared with xonye (< konye) 'mother' shows this same element. For k as a possible feminine element, see no. 36.

16. Nominative singular in -i. (1) Old Nubian -i. (2) Didinga -i; Beir -i.

17. Genitive singular in -o. (1) Old Nubian -u. (2) Didinga -o; Masongo -o. (5) Nyima -o, -u. (9) Nuer -a. In Central Sudanic, the southern and central languages of the Moru-Madi group have a genitive in -a.

18. Genitive in n. (1) Nile Nubian -n; Dilling -n, -nini. (2) Masongo -on. (5) Nyima -on, -un. (7) Merarit -n. In Kunama a genitival n survives in a few phrases, e.g. aba-n-kin 'from me'. In Central Sudanic, Barth records a genitival -na in Bagirmi. Likewise Lese has a genitival -na and some of the Moru-Madi languages have -ni.

19. Accusative singular in k. (1) Nile Nubian Fadidja and Mahas -ka, Kenuzi and Dongola -ki; Old Nubian -k; Kordofanian Nubian -gi, -ge. (2) Mekan -ge. (7) Merarit ḡ (< k). Reinisch mentions a suffix ga to mark the object in Barea (*Grammatik der Bareasprache*, p. 67). In Central Sudanic, Barth cites an accusative particle -ga for Bagirmi.¹⁹

20. Locative singular in t. (1) Nile Nubian -do. (2) Didinga -to, -ti. (3) Barea -t, -tu, -ti. (4) Ingassana -te. (7) Merarit -ta. (8) Dagu of Darfur ti. (9) Dinka -t; Masai t-; Lotuko tɔ~to 'on'. With these Eastern Sudanic forms, we may compare Kunama -ta and in Central Sudanic Mengbetu t-; Bongo do; Kreish ta; Lese -ta 'to'.

21. Locative singular in l. (1) Nile Nubian -la. (3) Barea -li. (4) Ingassana -ul. (5) Nyima -Il. (9) Lotuko li~Il. Outside of Eastern Sudanic, we find Kunama -la: and in Central Sudanic Moru-Madi -le.

22. Locative plural in -ni. (2) Didinga -ni. (9) Nuer -ni, -na.

23. Abstract and singular suffix in t. (1) Nile Nubian -d, -id; Dilling -ti. (2) Didinga -it. (3) Barea, verbal noun in -do. (5) Nyima verbal nouns in -da. (6) Temein -it. (7) Merarit -t. (9) Burun -it; Bari -it, -et; Lotuko it; Nandi -do, -to. Kunama forms abstracts by suffixing -da.

24. Nouns of unity in -tot. (1) Nile Nubian -to:d. (6) Temein -təʃ. (9) Dinka tet; Bari tot~tat~tət (vowel harmony variants). The general meaning is a single particle of an extended or collective entity, e.g. Bari pioŋ 'water'; pioŋtot 'drop of water'.

25. Plurals in k. (1) Nile Nubian -gu. (2) Didinga k; Masongo -ke. (3) Barea ka (-gu in demonstratives). (4) Ingassana -k. (5) Nyima -gi. (6) Temein -k. (7) Merarit -ŋ (< k). (8) Njalgulgule -ge. (9) Plurals in k are found in practically all Nilotic languages. In Central Sudanic, Sara has -k, -g, -ge and Binga -gi, -ggi, Lugbara and Keliko ki.

As a prefix plural k- is very frequent in Temein. Elsewhere it with interrogatives and kinship terms, e.g. Nilotic Bari ŋa / koŋa 'who?'; baba / kobaba 'father'; Didinga ŋani / kiŋani 'who?'; baba / kibaba 'father'.

26. Plurals in t. (1) Dair -du. (2) Didinga -ta. (3) Barea -ta. (9) Shilluk, Dinka, Nuer -t; Masai -ta, -to; Bari -ta. A -ti plural also occurs in Berta, e.g. Sillok eri / ereti 'breast'.

27. Plurals in n. (1) Dair -in; Dilling -eni, -iny, -ni. (2) Didinga -ni, -na, -n. (6) Temein -n, -In. (9) Nuer ni; Lango -an, -a, -ni; Shilluk -ni; Masai, Lotuko, Teso -in; Nandi -en, -in.

28. Plurals in -i. (1) Nile Nubian -i. (2) Didinga -i. (6) Temein -i. (9) Shilluk, Acholi, Lango -i; Masai -i; Bari -e. Outside of Eastern Sudanic there are Kunama -i, Berta -e and Central Sudanic Moru-Madi -e, -i, and Binga -i, -yi, -y. Mangbetu has an -i plural in agent nouns.

29. Special plurals involving consonant alternations. See Eastern Sudanic word list under 'cow', 'small', 'tree'.

30. Animate plural in -r. In Old Nubian animate plurals in ri-gu contrast with inanimate plurals in ni-gu (for gu see no. 23). In Western Nilotic, we find Dinka ran / ror 'person'; tik / dyar 'woman'; nyan / nyira 'sister'; Shilluk rit / ror 'king'; Lango nyako / anyira 'sister'.

In Eastern Nilotic Masai plural -ra is found in the words for sibling, e.g. (ol)alaše / (il)alašera 'brother'. Such plurals are also found in certain kinship terms in Lotuko as well as the word for 'friend'. Teso has -r plurals not confined to animates.

31. 'Name' as a syntactic plural. In certain dialects of Dinka and in Bari the word for 'name' takes plural agreements for no obvious semantic reason. This same peculiarity is found in the cognate word for name in Central Sudanic Mangbetu. See 'name' in the Eastern Sudanic and Chari-Nile word lists.

32. n / k singular-plural alternation. This pattern is particularly common in demonstratives, adjectives and nouns of agent. (2) Didinga cyen / cegi 'this'; ina / iga 'of what sort?'; adhan / adhok 'father's sister'; inono / igogo 'he / they'; Beir ceni / cegi 'this'. (3) Barea copula no / ge. (4) Ingassana wietin / wietaka 'good'. (9) Western Nilotic: Dinka kan / kak 'this', nən / kək 'which?', thiin / thiik 'small'; Shilluk an / ak 'this', gin / gik 'thing'; Luo ni / gi 'this'. Eastern Nilotic: Teso enyoina / inyoika 'which?'; Bari kaderanit / kaderak 'cook' (for -it as the singular suffix see no. 23), -ron / -rok 'bad'; Masai torron / torrok 'bad'; Turkana atona / atoka 'dead body', akolomon / akolomok 'adulterer'. Eastern Sudanic: Nandi ni / cu < ku 'this'.

Many more examples could be cited. In Teso the verb 'to die' has a stem twan with singular subject and twak with plural subject. In adjectives, the n / k pattern can be considered a participial form from intransitive verbs. In Central Sudanic we have Moru ɔno / koi 'this'; ana / kai 'that' with addition of -i plural (no. 28).

33. t / k singular-plural alternation. (7) Tama and Eranga, particularly in ethnic names. (9) Western Nilotic: Dinka -tui / -kui 'that'; dət / kək 'other', i.e. 'different'; -d- / -k- with possessive suffixes on singular and plural nouns respectively d- / k- similarly to the foregoing as independent possessive referring to singular and plural nouns; Nuer -d- / -k- with possessives as in Dinka. Eastern Nilotic: Bari bunit / bunok 'doctor'; urənit / urənok 'liar' etc., also in the possessive suffixes for the second person with singular nouns -ilot (masc.) -inot (fem.) with plural nouns -kulək (masc.) -kunək (fem.). In Masai 'that' ('right over there') lido / lekua (masc.); idia / neku (fem.); idie / nekue (place gender). The Nandi article -t, -da, -do / k also belongs here.

34. a- abstract, participial and agent prefix. (5) Nyima a- from verb root as in a-ɲil 'amusing'. (9) Western Nilotic: Shilluk a- 'past participle' (see Kohnen p. 9); Acholi a-jwaka 'medicine man' cf. jok 'spirit'; Lango a- in similar uses. Eastern Nilotic: Bari a-toan 'dead'; abeleŋa 'broken'; arema 'bloody', etc.; Masai a- with suffix -ni / k (no. 32) to express agent. With these we may compare Kunama a- 'agent' and Central Sudanic Mangbetu a- as 'substantivizer of adjectives'.

35. k- nominal derivatives. These are most commonly infinitive or other deverbal forms. They are particularly common in Nilotic, e.g. Dinka cam 'to eat', kecam 'food'; Lango ciko 'to ensnare', kiciki 'obstacle'; Masai lɔɔr 'to be white', klɔɔrra 'whiteness'; Teso infinitive in aki-; Suk nyur 'to meet', kinyurio 'a meeting'; Nandi icilil 'to err', kacililo 'error'. Agent and place of action are other meanings,

e.g. Masai Irrag 'to lie down', kIrragata 'place of lying down'. We may compare Didinga kiboki 'a digging stick' with the cognate Bari verb bok 'to dig'. In Central Sudanic such examples as Sara oji 'to smoke', kweji 'tobacco'; Mangbetu abuo 'to advise', kubuo 'advice' show that this pattern of derivation existed in the ancestral Chari-Nile language.

36. 'movable' k-. A perusal of the Eastern Sudanic and Chari-Nile word lists, as well as the Nilo-Saharan list in the following chapter, will show that in certain substantival forms some languages show forms with prefixed k- and others without this prefix. Even closely related languages may differ in this respect. Occasionally variants with and without k- occur in the same language. I have given this k- element the conventional name 'movable k-'. In Masai certain grammatically feminine nouns show this k preceded by the feminine article en-. In constructions without the article this k- likewise disappears, e.g. en-k-ouu with the article and ouu without the article in the meaning 'eye'. In addition to the examples cited under no. 15 which tend to show that k- was originally a feminine definite indicator, we may add Masai otI 'small' (masc.), kItI 'small' (fem.); Teso onaci 'brother', kinaci 'sister'; Lotuko lonyi 'brother', xenie 'sister' where as usual Lotuko x in non-final position corresponds to k in other languages. Further investigation of this hypothesis is called for.

37. Verb plural in -k. (2) Didinga -k. (3) Barea -k, -ge. (7) Merarit -key. (8) Dagu of Darfur -k (first person plural only). Central Sudanic Logbara and Keliko -ki. Central Sudanic Moru like Dagu employs this for the first person plural only.

38. Verbal dative 'to do for or to someone'. (2) Didinga -eki. (6) Temein -agi. (9) Teso, Bari, Masai -kin; Lotuko -k; Nandi -ci, -cin. Nuer eka probably belongs here also.

39. Inchoative in -n. (1) Nile Nubian -an, -an. (3) Barea -en. (5) Nyima -ən, -ən. (9) Shilluk nasal replacement; Bari, Lotuko -an.

40. Causative in t-. (3) Barea d- as in al 'go', dal 'bring' (five examples). (9) Masai It-; Bari t-; Lotuko It-. This is possibly to be connected with Kunama -da.

41. Passive or intransitive in -a, -o. (2) Didinga -o (reflexive). (9) Nuer passive of auxiliaries, e.g. ci 'past active' caa 'past passive'; Masai 'neuter form' -a, -o (choice depends on vowel harmony system); Bari -a, ~o~ə (choice depends on vowel harmony); Teso -o; Lotuko so-called long stem with reflexive-passive as one of its two basic meanings and with same vowel harmony alternants as Bari.

42. Past in k. (1) Dongola -ko. (2) Masongo -ko. (8) Dagu of Darfur ka- (probably). (9) Nuer ke- (past of adjective verb); Lotuko x-; Masai -ak, -ok as seen in past passive -aki~oki (where i is passive, for which see no. 10, and choice of alternants depends on vowel harmony); Turkana k- (in irregular verb); Nandi k-; Suk k-. With these Eastern Sudanic forms, we may compare Kunama -ke and Central Sudanic Bagirmi -ka, -ga.

43. Future in ba, bi. (1) Kenuzi bi; Dongola bu; Mahas, Fadidja fa. (9) Nuer, Dinka bi; Shilluk, Acholi, Lango, Nandi ip.

44. Plural verbs in l. Logo, Moru and Lugbara in Central Sudanic prefix l- to express plurality of action. In Kunama a few verbs have a separate stem for dual and plural subject with prefix la-.

45. Verbal negative in k. (2) Masongo ku-, kwa-. (3) Barea ka-. (9) Dinka kec 'past negative'; Nuer ke 'past negative'; Shilluk ku 'prohibitive'; Bari ko 'pregative of past and imperative'. In Central Sudanic negatives in ko-, ku- are found throughout the Moru-Madi group and Mangbetu has a ka negative.

46. Verbal negative in m or b. (1) Nubian m-, e.g. Nile Nubian esk 'to be able'; mesk 'not to be able'. (2) Didinga ma 'prohibitive'. (3) Barea ma. (7) Merarit m-. (8) Dagu of Darfur ba. (9) Shilluk ba.

Chari-Nile Comparative Word List

- | | |
|-------------|--|
| 1. all: | Kunama <u>tumma</u> .
Eastern Sudanic: 'all'. |
| 2. anus: | Kunama <u>kura</u> .
Eastern Sudanic: Temein <u>kukuruk(it)</u>
'buttocks'. |
| 3. arm (1): | Berta <u>boe</u> .
Eastern Sudanic: Didinga <u>iba</u> . |
| 4. arm (2): | Central Sudanic: Mangbutu <u>adi</u> ;
Mamvu <u>edi</u> ; Moru, Logo, Lugbara,
Avukaya <u>dri</u> 'hand'; Madi <u>dri</u> , <u>di</u>
'hand'; Mangbetu <u>ete</u> 'arm, hand';
Lombi <u>eteo</u> 'hand'.
Eastern Sudanic: 'hand'. |
| 5. armpit: | Berta (Fazoglo) <u>yonyolen</u> 'elbow'.
Kunama <u>ukunkula</u> 'elbow, armpit'.
Eastern Sudanic: 'armpit'. |

6. to arrive: Kunama do:la: 'near'.
Eastern Sudanic: 'to arrive'.
7. ashes: Berta (Bertat) bubuda.
Central Sudanic: Bongo burruku;
Keliko ɔforago; Lugbara ɔfora.
Eastern Sudanic: 'ashes'.
8. back (1): Kunama kula.
Berta: Tornasi ungora; Malkan gorum.
Central Sudanic: Avukaya ugule, ogule;
Logo, Keliko gole; Lugbara ogoro.
Eastern Sudanic: 'back (1)'.
9. bad: Berta (Fazoglo) zu.
Central Sudanic: Kaba kasu; Kreish
gosidi; Moru kozi(ro); Logo konzi;
Keliko onzi; Gulai ose.
Eastern Sudanic: 'bad'.
10. to be: Central Sudanic: Mangbetu a; Moru a;
Binga a (singular).
Eastern Sudanic: 'to be'.
11. beard: Berta bus.
Central Sudanic: Kreish bibusu;
Mangbetu busu 'white hair'.
12. beautiful: Central Sudanic: Lese ngela 'good'.
Eastern Sudanic: Bari kwekwelen;
kwelen, kelan 'beauty'; Lotuko
mgadda 'good'.
13. belly: Berta (Fazoglo) io.
Central Sudanic: Lendu o; Moru ye,
ia, ?a; Avukaya, Logo, Keliko,
Madi ?a; Lugbara ?ya; Mangbetu o.
Eastern Sudanic: Dinka yac; Lango
ic; Acholi I; Alur ihje; Nuer ec
(Nilotic only).
14. black: Central Sudanic: Lendu titi.
Eastern Sudanic: 'black (1)'.
15. blood (1): Central Sudanic: Madi kari, ari;
Mangbetu ali; Sara are, 'red';
Mvuba goru.
Eastern Sudanic: 'blood'.

16. blood (2):
Berta: Sillok gyefa; Malkan giewa;
Tornasi kefe; Bertat ga:fa.
Kunama kokoba.
Eastern Sudanic: Dongola, Kenuzi
ge:w; Kundugr o:go (Nubian only).
17. to break:
Berta gula.
Eastern Sudanic: 'to break'.
18. to burn:
Kunama taku.
Central Sudanic: Kreish oŝaki;
Bagirmi saga.
Eastern Sudanic: Lotuko osuaya;
Nyangiya tak 'fire'.
19. to call:
Central Sudanic: Sara kor.
Eastern Sudanic: Suk, Nandi kur;
Dinka col (Nilotic only).
20. child:
Berta gad.
Eastern Sudanic: 'child'.
21. cold:
Kunama giggida.
Central Sudanic: Moru kid?I; Mamru
ketu.
Eastern Sudanic: 'cold'.
22. to come:
Kunama ko.
Central Sudanic: Moru ekyi; Madi
eki; Mangbetu eku.
Eastern Sudanic: 'to come'.
23. to cook:
Kunama ili.
Central Sudanic: Lendu ri; Madi d?i;
Keliko, Lugbara ad?i; Mangbetu
odi.
Eastern Sudanic: 'to burn'.
24. to count:
Kunama kala.
Berta (Fazoglo) gera, hana.
Eastern Sudanic: 'to count'.
25. to cover:
Central Sudanic: Bagirmi dobu 'close,
cover'.
Eastern Sudanic: Nandi tup 'to bury';
Suk tip 'to bury'; Masai Itoip 'to
cover' (but the Masai form probably
contains the causative prefix It-).

26. cow: Berta tu.
Central Sudanic: Moru, Madi ti;
Lendu tszz.
Eastern Sudanic: 'cow'.
27. to dance: Kunama ba.
Central Sudanic: Mangbetu obe;
Mamru ube; Lendu be.
Eastern Sudanic: Nile Nubian ba:ne.
28. day: Central Sudanic: Kreish kadda;
Bagirmi kada, 'sun, day'; Mangbutu
kora; Moru ud?u; Madi od?u.
Eastern Sudanic: 'sun'.
29. to die (1): Kunama ti, tu.
Central Sudanic: Madi d?i 'to kill';
Logo d?i 'to kill'; Lendu dhe.
Eastern Sudanic: 'to die'.
30. to die (2): Kunama ya: 'kill'.
Eastern Sudanic: Masai ye; Ingassana
iy.
31. dog: Central Sudanic: Mittu wisi; Bongo
bisi; Mangbetu si; Lendu tsee;
Lokai (Madi) otse.
Eastern Sudanic: 'dog'.
32. earth (1): Central Sudanic: Lendu dzz; Mangbetu
di 'dung'.
Eastern Sudanic: 'earth' (1).
33. earth (2): Central Sudanic: Mangbetu pe; Sara
be 'land'; Bongo bihi.
Eastern Sudanic: 'earth' (2).
34. egg: Central Sudanic: Lese kabobo; Moru
ubwo; Dendje (Sara) kobe; Bagirmi
kabo; Nduka kap.
Eastern Sudanic: 'egg'.
35. excrement: Central Sudanic: Bulala isi; Bongo
iši; Moru ze.
Eastern Sudanic: 'excrement' (2).
36. face: Central Sudanic: Madi mi 'eye';
Mangbetu mwo 'eye'; Bagirmi kamo

- ‘eye, face’; Sara kami ‘eye’;
 Kreish mummu ‘eye’.
 Eastern Sudanic: ‘face’.
37. to fall (1): Kunama dunga.
 Eastern Sudanic: ‘to fall’.
38. to fall (2): Kunama du.
 Central Sudanic: Mangbetu ode;
 Bagirmi oto; Madi dʔε; Kreish ade,
ode ‘descend’; Lendu dʔedʔε.
 Eastern Sudanic: Bari dʔodʔo; Lotuko
do; Masai duo ‘descend’; Teso ado
 (Nilotic only).
39. to fear: Central Sudanic: Madi ori; Mangbetu
ru; Moru uri, kuri; Keliko ru.
 Eastern Sudanic: ‘to fear’.
40. fire (1): Berta: Fazoglo mo; Sillok, Malkan,
 Tornasi ma.
 Eastern Sudanic: ‘fire (1)’.
41. fire (2): Kunama ito ‘burn’.
 Central Saharan: Madi asi; Kreish
ošo; Lega kasua, kasi; Lendu kazz;
 Mangbetu osu ‘burn’.
 Eastern Sudanic: ‘fire (2)’.
42. fly: Berta (Fazoglo) xorɔŋ, horɔŋ.
 Eastern Sudanic: ‘fly’.
43. to go (1): Kunama li.
 Central Sudanic: Lugbara lu; Kreish
lo; Mangbutu, Mamvu uro; Efe
oro; Lendu ra.
 Eastern Sudanic: ‘to go’.
44. to go (2): Kunama ga.
 Central Sudanic: Mangbetu oku ‘go
 away’.
 Eastern Sudanic: Murle ako; Tirma
oko.
45. to go out: Kunama foro.
 Eastern Sudanic: ‘to go out’.
46. grass: Central Sudanic: Mangbetu luε.
 Eastern Sudanic: ‘grass’.

47. head: Berta allo; Sillok, Malkan, Tornasi
ola; Bertat alu, kulu.
Central Sudanic: Kreish oro 'above';
Bagirmi ra 'above'; Mangbetu ro
'sky'; Madi oru 'up'; Moru kuru
'up'; Lendu ru(na) 'up' (cf. gu(na)
'down').
Eastern Sudanic: 'head'.
48. to hear: Kunama uku(na) 'ear' (literally 'that
which hears', -na being agentive).
Central Sudanic: Mangbetu oga;
Bagirmi o:ga; Bongo ugga; Efe odze.
Eastern Sudanic: 'to hear'.
49. heavy: Kunama taggi(ma).
Eastern Sudanic: Dinka thyek; Nuer
thyek (Nilotic only).
50. hole: Kunama aburr.
Berta boro.
Central Sudanic: Mangbetu polo;
Lugbara b?uro.
Eastern Sudanic: Lango bur.
51. honey (1): Central Sudanic: Miza kume-εpe 'bee
(εpe = honey); Moru, Avukaya kumu
'fly'; Kreish immih; Mangbetu
kokoma 'mosquito'.
Eastern Sudanic: 'honey'.
52. honey (2): Kunama enene.
Central Sudanic: Keliko, Lugbara anyu.
Eastern Sudanic: Ingassana ain.
53. house: Kunama ka 'place'.
Central Sudanic: Kreish koyo; Mittu,
Gberi koko.
Eastern Sudanic: 'house'.
54. jaw: Kunama goma 'jaw, chin, beard'.
Central Sudanic: Kreish ušammo 'chin'.
Eastern Sudanic: 'jaw'.
55. to kill: Kunama ille.
Central Sudanic: Kreish iri.
Eastern Sudanic: Turkana ari; Nuer
liu 'die'; Nyima lo 'death'.

56. knee: Berta kudu, kusu.
Central Sudanic: Mangbetu kati.
Eastern Sudanic: 'knee'.
57. to laugh: Kunama ke:ke:, jiji.
Central Sudanic: Meru gugu, ga;
Bongo ikuggu; Bagirmi akkogo.
Eastern Sudanic: Fadidja jig, jij;
Mahas jij.
58. to lie down: Kunama abe.
Central Sudanic: Mangbutu ubu, abu
'to sleep'; Madjinngay, Mbai bi:
'lie down, sleep'; Dindje, Kaba bi
'sleep'; Efe abuabu 'sleep'; Kreish
bibi 'sleep'; Lese (k)abu 'sleep'.
Eastern Sudanic: 'to lie down'.
59. louse: Kunama tila.
Eastern Sudanic: 'louse'.
60. to love: Kunama dag 'ask, want'.
Central Sudanic: Mangbetu alanga;
Sara dig.
Eastern Sudanic: Murle ron ~ ron
'want'; Bari dʔek 'ask'; Dinka,
Nuer thiec 'ask'.
61. man (1): Berta: Bertat ide.
Central Sudanic: Dindje, Kaba de;
Baka oda; Kreish uddu.
Eastern Sudanic: 'man'.
62. man (2): Kunama aba.
Central Sudanic: Mangbetu mbi
'person'; Keliko, Lugbara bʔa
'person'; Lendu ba.
Eastern Sudanic: Lotuko (x)aba
'husband'; Tabi -fui / -fiuk 'male'.
63. meat (1): Central Sudanic: Mangbetu ri, riŋi;
Lombi eri.
Eastern Sudanic: 'meat'.
64. meat (2): Kunama nya.
Berta (Fazoglo) o:ŋ.
Central Sudanic: Mangbetu nyinyi.
Eastern Sudanic: Barea no; Ingassana
ony.

65. milk: Berta: Fazoglo err; Sillok i:ri.
Eastern Sudanic: 'milk (1)'.
66. moon: Kunama tera 'moon, to shine'.
Central Sudanic: Mangbetu туру, туру
'star'.
Eastern Sudanic: 'moon'.
67. mother: Central Sudanic: Madi ia; Lega ia;
Lendu i; Mangbetu aya; Lombi yaiya.
Eastern Sudanic: 'mother'.
68. mouth: Kunama u:da.
Berta: Sillok utu; Tornasi udu.
Central Sudanic: Mongbutu uti; Moru ti.
69. name: Central Sudanic: Mangbetu eru; Moru,
Madi ru; Bagirmi ri.
Eastern Sudanic: 'name'.
70. navel: Central Sudanic: Bagirmi kumo.
Eastern Sudanic: 'body'.
71. neck: Berta mbe.
Central Sudanic: Moru embɛ; Avukaya
embɛ; Keliko ombɛ; Mangbetu mbu.
72. one: Central Sudanic: Dendje doko 'ten';
Mbai dog 'ten'.
Eastern Sudanic: 'one'.
73. person: Kunama ka.
Berta hoa 'people'.
Central Sudanic: Lendu ke.
Eastern Sudanic: 'person'.
74. to put: Kunama tu.
Central Sudanic: Mangbetu etu.
Eastern Sudanic: Dinka twel; Bari ti,
tin; Suk ten (Nilotic only).
75. rain: Berta ro; Sillok aro; Malkan aro.
Central Sudanic: Madi oru 'sky';
Lendu ra, arra 'sky'; Momvu karu,
karo 'sky'; Mangbetu ru 'sky'.
Eastern Sudanic: 'rain'.
76. rich: Kunama abura.
Central Sudanic: Lendu birobiro 'many'.
Eastern Sudanic: 'rich'.

77. road: Berta (Fazoglo) gagal.
Central Sudanic: Bulala kori, göri.
Eastern Sudanic: 'road'.
78. rope: Berta tsera.
Eastern Sudanic: Alur, Shilluk, Luo
tol; Acholi tol 'cord'; Anuak tol
(Nilotic only).
79. salt: Kunama kunda.
Central Sudanic: Sara kate, kata;
Mangbetu gandju.
Eastern Sudanic: Nuer kad; Anuak
kado; Dinka kada; Shilluk ka:do
(Nilotic only).
80. to see: Kunama galli 'to look'.
Eastern Sudanic: 'to see'.
81. self: Central Sudanic: Logbara ro; Mangbetu
-eri (preceded by plural nouns =
'each other'); Lendu ro; Bagirmi
ro 'body'.
Eastern Sudanic: Lango -ere (reflexive);
Shilluk ri-; Jur ri-; Nuer r..
82. shoulder: Central Sudanic: Keliko, Logbara kIdI;
Moissala (Sara) kad 'side'.
Eastern Sudanic: Bari kIdI; Dinka ket
(Nilotic only).
83. sick: Kunama bada 'sickness'.
Berta (Bertat) bedi.
Eastern Sudanic: Shilluk budo.
84. side: Berta gario.
Central Sudanic: Mangbetu kwelia;
Bagirmi gal; Avukaya, Logo,
Keliko gara.
Eastern Sudanic: Nuer guar 'ribs'.
85. to sing: Berta (Fazoglo) hera.
Central Sudanic: Mongbutu woara;
Mangbetu olia.
Eastern Sudanic: 'to sing'.
86. to sleep: Kunama niji.
Central Sudanic: Madi nonu.
Eastern Sudanic: 'to sleep'.

87. snake: Berta: Sillok kuke.
Eastern Sudanic: 'snake'.
88. to split: Kunama fak.
Eastern Sudanic: 'to split (1)'.
89. star: Central Sudanic: Bongo kirr; Mittu
keru; Baka kele.
Eastern Sudanic: Masai (ɔl)akIra;
Nuer kwil; Dinke kwel; Shilluk
kyelo (Nilotic only).
90. stick: Kunama be:la.
Eastern Sudanic: Lango abela; Turkana,
Karamojong ebela; Bari bʔibʔili.
91. stone: Berta bele, bar; Sillok pela; Malkan
fela; Tornasi bela.
Central Sudanic: Mangbetu bula; Sara
mbal, bal.
92. tail (1): Berta (Fazoglo) abwe.
Central Sudanic: Moru avi; Avukaya
avɛ.
Eastern Sudanic: Alur ihve; Acholi
iib, yip; Lango ip; Shilluk yip;
Karamojong i:p.
93. tail (2): Central Sudanic: Bulala ile; Disa akela;
Nduka kila; Dendje kela.
Eastern Sudanic: 'tail'.
94. thing: Kunama na.
Central Sudanic: Moru, Avukaya, Logo,
Keliko, Lugbara nga; Madi ngaa;
Makunda (Sara) ne.
Eastern Sudanic: Bari no.
95. thirst: Berta (Bertat) rau.
Central Sudanic: Keliko ure; Lugbara
uri; Logo ɔle.
Eastern Sudanic: 'thirst'.
96. thorn: Central Sudanic: Moru kukyi, ukyi;
Logo kuci; Keliko kutse; Madi oki,
ɔki; Mangbetu koko.
Eastern Sudanic: Dinka kou; Nuer
kwok; Turkana akokai; Masai
-kigui; Lotuko (ne:)kwa.

97. to throw: Kunama fa:.
Central Sudanic: Madi be; Lendu bu
'throw away'; Mamvu ebi; Moru
ɔvɔ.
Eastern Sudanic: Mahas af; Dongola
ab; Kenuzi ab, abbi (Nubian only).
98. tongue: Kunama ɲe:la:.
Berta: Sillok, Malkan kula; Tornasi
unkala; Fazoglo halad.
Central Sudanic: Mangbetu kadra;
Mamvu kedru; Mongbutu kadru;
Lendu leda.
Eastern Sudanic: 'tongue'.
99. two: Chari-Nile: Lendu rro; Mangbutu adru;
Moru ärr, IrrI; Madi eri, ri; Logo,
Lugbara iri; Mangbetu rue; Tele
rwio; Bongo riio.
Eastern Sudanic: 'two'.
100. to wash: Kanama saki:.
Eastern Sudanic: 'to wash'.
101. water: Kunama biyo.
Berta (Fazoglo) fie.
Eastern Sudanic: 'water'.
102. what?: Central Sudanic: Bagirmi di; Madi
ad?u; Kreish adde 'where?'.
Eastern Sudanic: 'what?'.
103. white: Kunama ara:.
Eastern Sudanic 'white (1)'.
104. who?: Kunama na 'who? which?'.
Eastern Sudanic 'who?'.
105. wind: Central Sudanic: Moru ɔlI, ɔrI; Keliko
ɔlI; Madi ɔli; Mangbetu lai.
Eastern Sudanic: 'wind'.
106. yesterday: Central Sudanic: Mangbetu oburu
'yesterday, tomorrow'; Laka bulloe,
'tomorrow'; Mbai biri 'tomorrow'.
Eastern Sudanic: 'yesterday'.

Notes

1. Oswin Köhler, Geschichte der Erforschung der nilotischen Sprachen (Berlin, 1955). In the table of Eastern Sudanic languages which follows, Köhler's terminology of Western Nilotic, Eastern Nilotic, Southern Nilotic is adopted. If anything, Eastern Nilotic [Bari-Masai] is closer to Western Nilotic [Nilotic in the traditional sense] than it is to Southern Nilotic [Nandi-Suk] and may once have formed a unity with it.

2. This name, first suggested by William E. Welmers in his review of SALC (Language 32:556-63, 1956) replaces the term Macro-Sudanic of the earlier work.

3. Nyima and Afitti were omitted in SALC. Subgroups (6) and (10) were considered independent under the names Temainian and Nyangiya. The appearance of new material on Temein by Stevenson clarified the status as Eastern Sudanic as seen already by A. E. Meeussen, Zaire, 1957, p. 270.

The position of Nyangiya remains somewhat uncertain and its assignment here is to be considered tentative.

4. In the discussion which follows, for convenience of exposition, the term Nilo-Hamitic is retained for Eastern and Southern Nilotic and Northern Nilotic is referred to simply as Nilotic.

5. Thus in a list of 42 words based on the Niger-Congo list in SALC and chosen by J. Hohenberger to refute the thesis presented here, Nilotic (Western Nilotic) shows 28 cognates with the Bari-Masai group of Nilo-Hamitic. For a more detailed discussion, see J. H. Greenberg, "Nilotic, 'Nilo-Hamitic' and Hamito-Semitic, a Reply," Africa 27:364-78, 1957.

6. A few examples of internal change to a might be cited from Nilo-Hamitic languages, e.g. Bari kɛɛ / kala 'tooth' but whereas the Afroasiatic pattern is the replacement of any vowel by a, the Nilo-Hamitic instances must be considered as part of an all-pervasive system of vowel harmony lacking in Afroasiatic and in which such other plurals as Bari koropoti / kɔrɔpɔ 'leaf' occur which involve other pairs of adjacent vowels differing in height.

7. That Nandi c arises from k is shown within Nandi itself by the fact that roots in final c change this back to original k before suffixes (e.g. ruwac 'to advise' and ruwak-in 'advisor') and by correspondences with related languages. For example the Nandi verbal dative in -ci, -cin, is related to the Masai verbal dative in -ki, -kin.

8. D. Westermann, The Shilluk People (Berlin, 1912), p. 33.

9. G. W. Murray, "The Nilotic Languages, a Comparative Essay," Journal of the Royal Anthropological Institute 50:327-68, 1920, p. 360.

10. Distribution of the Nilotic and Nilo-Hamitic Languages of Africa (London, 1948).
11. Hamburg, 1912, pp. 211-25.
12. Probably the masculine okuni rather than a reconstructed form is meant but this is not clearly stated.
13. Grundriss der Sprachwissenschaft (Wien, 1876), vol. 1, part 2, p. 181.
14. J. P. Crazzolaro, Outlines of a Nuer Grammar (Wien, 1933).
15. This has been seen for Alur, another Nilotic language by M. Vanneste in "Regels der Welluidenheit in de Aluur-taal (Mahagi)" (Congo, vol. 2, pp. 49-51, 1925). Vanneste states: "'t zijn daar misschien vormen van umlaut veroorzaakt door de i, o of u van der uitgang" (p. 50).
16. The Shilluk People, p. 58.
17. For these examples, see Leo Reinish, Die Kunama-Sprache in Nord-ost Afrika (Wien, 1881), p. 28.
18. For details see J. H. Greenberg, "Origin of the Masai Passive" (Africa 29:171-6, 1959).
19. Barth, Heinrich, Sammlung und Bearbeitung Central-Afrikanischer Vokabularien (Gotha 1862-6), p. 275. The form cited by Barth is conceivably the result of Kanuri influence on his bilingual informant.

VI. NILO-SAHARAN

In previous chapters four major language groupings have been defined: Niger-Congo, Chari-Nile, Afroasiatic and Khoisan. Of the six relatively minor languages or language groups, an overall comparison leads to the result that five are decisively closer to Chari-Nile while the sixth, the Kordofanian, shows significantly greater resemblance to the other large family of languages spoken only by Negroes, Niger-Congo. To the new grouping which consists of Songhai, Saharan, Maban, Fur and Coman in addition to Chari-Nile, the name Nilo-Saharan is given. This chapter is devoted to a review of the evidence for the Nilo-Saharan unit while in the next chapter the composition of Kordofanian and its relationship to Niger-Congo will be discussed.

The Nilo-Saharan family consists thus of six branches as follows:

1. Songhai.
2. Saharan: (a) Kanuri, Kanembu; (b) Teda, Daza; (c) Zaghawa, Berti.
3. Maban: Maba, Runga, Mimi (of Nachtigal), Mime (of Gaudemroy-Demombynes).¹
4. Fur.
5. Chari-Nile (as outlined in Chapter V).
6. Coman: Koma, Ganza, Uduk, Gule, Gumuz, Mao.

It will be convenient to consider the grammatical evidence for Nilo-Saharan in accordance with the same numbering system utilized in the previous chapter for the discussion of the common grammatical features of the Chari-Nile subfamily since a considerable number of these elements are characteristic of the wider Nilo-Saharan grouping. A few additional items are added to the earlier list at the end.

1. Evidence for a or its common variant ai as a first person singular pronoun, usually in contrast with i (no. 2) for the second person singular as in Chari-Nile, is found in all remaining branches of Nilo-Saharan as follows: (1) Songhai ai; (2) Zaghawa ai; (3) Maba a-; (4) Fur a-; (6) Koma a-.

2. The second person singular in i, often strengthened by a nasal consonant prefix as in Chari-Nile languages. We have (1) Songhai ni; (2) Kanuri nyi; (3) Maba mi; (4) Fur dyi² (?); (5) Koma i-.³

5. Third person demonstrative in t. (2) Kanuru tutu / tunyi 'this'; Kanembu to 'that'; Teda, Daza te, tee 'this'.

6. Third person singular independent pronoun in n. (2) Teda, Daza ini 'this'; (4) Fur ene, en 'that'.

8. Second person plural in w. This is found in the verb in Saharan languages, Zaghawa -u, Kanuri -wi. With this we may compare the Songhai second person plural pronoun wor in which -r is probably the animate plural element (no. 30). The Songhai personal pronoun pattern, first person plural ye-r, second person plural wo-r, is probably to be connected with Kanuri verb subject suffixes -ye and -wi respectively. As examples of first person plural in y-, Eastern Sudanic Bari yi 'we'; Masai iyook 'we' (with plural -k) may be cited.

12. ma relative and adjective formant. (1) Songhai -ma; (2) Kanuri, Daza -ma; (6) Koma -ma. The meanings here are quite comparable to those in the Chari-Nile languages.

13. ko relative and adjective formant. (1) Songhai -ko; (3) Maba -ko.⁴

18. Genitive in n. (3) Maba -n; (4) Fur -n.

19. Accusative in k. (2) Kanuri -ka; (3) Maba -go (in personal pronouns).

21. Locative in l. This probably found in Kanuri -la-n 'in' in which -n is a general locative element also found in -mben 'through'.

23. Abstract and singular suffix in t. The Kanuri verbal noun in -tə, -ta probably belongs here as well as the Maba verbal noun in -da(k), where -k is the common singular termination.

25. Plurals in k. (3) Mimi (N) -ko; Maba -k.

26. Plurals in t. (3) Mimi (N) -tu, -d; Maba -tu.

27. Plurals in n. (1) Songhai -an; (3) Mimi (N) -ni.

28. Plurals in i. (3) Maba, Mimi (N) -i.

30. Animate plural in r. As mentioned earlier, this probably appears in the Songhai first and second person plural pronouns.

31. "Name" as a syntactic plural. The recurrence of this feature in Fur is a noteworthy indication of relationship between Fur and

Chari-Nile. As mentioned in no. 33, Fur exhibits the t / k pattern in prefixed form for most nouns. The form cited for 'name', therefore, Meinhof kario, Macmichael keriu, is in all probability a plural. Once more, the root itself is cognate with Mangbetu and the Eastern Sudanic forms.

32. n / k singular-plural alternation. This is a common principle of contrast in Maba in the verb for singular action versus plural action. Teso in Eastern Nilotic shows an exact parallel as described under this number in the chapter on Chari-Nile languages.

33. t / k singular-plural alternation. There is here a close parallel between Fur and Chari-Nile languages, particularly Dinka and Nuer both of which, like Fur, have d- as the singular element and k- as the plural, probably the original form when not in word final position. In the latter case -t occurs instead of d. In Fur d- is prefixed to most nouns in the singular and this is replaced by k- in the plural. We have n- in the singular in a few nouns with nasal consonants in the root where assimilation has occurred. In Fur these elements are likewise used as the base for possessive pronouns agreeing with singular and plural nouns respectively. This usage is exactly like that found in Dinka.

35. k- nominal derivatives. In Kanuri k- is a nominal derivative prefix, e.g. gala- 'to put in office'; kagala 'a political office'.

36. "movable" k-. This is probably connected with item no. 35. In Saharan as between Teda and Daza on the one hand and Kanuri and Kanembu on the other, the best attested languages of the group, there are examples of the typical phenomenon of variant forms with and without the k- prefix, e.g. Kanuri kəmalī, Daza melle 'ant'.

37. Verb plural in -k. The Kanuri imperative plural second person -go probably belongs here. The Fur first person plural subject prefix ki- has close parallels in Eastern Nilotic as does Maba ka- as first person plural object pronoun prefixed to the verb.

38. Verbal dative. Kanuri -kə-, -gə- suffixed to the root is doubtless related to the -ki ~ -kin formation of Eastern Sudanic.

40. Causative in t-. In agreement with Eastern Sudanic Kanuri has a tə- prefix for the causative in a few verbs of the 'strong' conjugation (-skin verbs). More often the same element occurs in the form yitə-. This involves an agreement in detail with Masai and Lotuko. In Kanuri there is a small group of verbs with divergent inflection marked by a y- prefix in certain forms (Lukas' 'verbs in y-'). This reminds us of the i- class of verbs in Masai, Lotuko and

other Eastern Sudanic languages. There is the further remarkable peculiarity that, just as in Masai and Lotuko verbs whether of the i-class or not, become i- verbs in the t- causative, prefixing It-, so in Kanuri practically all verbs become verbs in y- in their inflection when they prefix the causative t- in the form yitə-.

41. Passive or intransitive in -a, -o. This is probably to be found in Songhai -a as a suffix marking the intransitive or passive form of the verb.

42. Past in k. Kanuri -k, -ko.

46. Verb negative in m or b. Kanuri ba; Fur a ---- ba.

47. Verb reflexive in r. This is based on suffixation of the word for 'self'. For examples see Nilo-Saharan word list under 'self'; Chari-Nile under 'self'; Eastern Sudanic under 'body'.

48. Singular in a or o. Mimi (N) agrees with Nilotic languages in sometimes marking the singular by a suffix a which is dropped in the plural, e.g. Mimi kabala / kabal 'bird', cf. Nandi kaceia / kacei 'star'.

Nilo-Saharan Comparative Word List⁵

- | | |
|-------------|--|
| 1. above: | Fur <u>ere</u> .
Chari-Nile: 'head'. |
| 2. all: | Maba <u>dum</u> .
Chari-Nile: 'all'. |
| 3. ant: | Maba <u>gurgeri(k)</u> .
Eastern Sudanic: 'ant'. |
| 4. anus: | Songhai: Gao <u>nkoro</u> 'buttocks'.
Saharan: Kanuri <u>kuli</u> ; Teda <u>kulo</u> .
Chari-Nile: 'anus'.
Coman: Buldiit <u>kul(ma)</u> 'buttocks'. |
| 5. arm (1): | Songhai: Gao <u>kamba</u> ; Djerma <u>kambe</u> .
Saharan: Daza <u>kobe</u> ; Berti <u>abi</u> ;
Zaghawa <u>ba</u> .
Maba <u>abi</u> , <u>bi</u> 'shoulder'.
Coman: Koma (Madin) <u>kwop</u> ; Ganza
(Yabus) <u>kwaba</u> ; Uduk <u>abi</u> . |
| 6. arm (2): | Maban: Maba <u>karak</u> / <u>karnyi</u> ; Kunga
<u>kara</u> ; Mimi (N) <u>rai</u> .
Chari-Nile: 'arm (2)'. |

7. armpit: Saharan: Daza kilikili; Zaghawa kallikalli.
Chari-Nile: 'armpit'.
8. to arrive: Songhai: Djerma dira.
Chari-Nile: 'to arrive'.
Coman: Gumuz tona.
9. ashes: Songhai: Gao bonni, borhon; Djerma boron.
Chari-Nile: 'ashes'.
10. to ask: Songhai: Djerma ha; Gao hã.
Saharan: Daza ha.
Chari-Nile: Kunama he 'wish'.
11. aunt: Saharan: Zaghawa anya 'paternal aunt'.
Fur anya 'paternal aunt'.
Chari-Nile: Nile Nubian any.
12. back: Songhai: Gao kora 'behind'.
Saharan: Kanembu kare; Kanuri karere 'spine'.
Chari-Nile: 'back (1)'.
13. bark: Songhai: Gao kokosi.
Saharan: Kanuri kaskaši; Teda kuši.
Chari-Nile: Lendu kosa 'skin'; Mvuba hozi 'skin'.
14. to be: Fur a 'there is'.
Chari-Nile: 'to be'.
15. beard: Chari-Nile: 'beard'.
Coman: Gumuz bes; Ganza (E Coma) ponzo; Ganza (Gwama) pu:nzu.
16. beautiful: Saharan: Kanuri ngəla 'good'; Daza gale 'beautiful, good'.
Chari-Nile: 'beautiful'.
Coman: Gule agaro 'beautiful, good'.
17. bee: Saharan: Kanuri kəmagən 'bee, honey'.
Maba: kimin.
Chari-Nile: 'honey'.
Coman: Ganza (Yabus) kum.
18. bird: Songhai: Gao kyiraw; Djerma tyuro.
Saharan: Kanuri gubori; Teda kebri.

- Maba: Mimi (N) ka:wala; Maba kebele(k) 'wing'.
 Chari-Nile: Eastern Sudanic 'bird'.
19. to bite: Maba aisi / gisi; kisi(k) 'biting'.
 Chari-Nile: Nuer kac; Dinka kac; Luo kec; Bari koja, etc.
 Coman: Gumus kus 'tooth'.
20. bitter: Songhai: Gao hotta.
 Saharan: Kanembu kuotu.
 Chari-Nile: Eastern Sudanic 'bitter'.
21. black: Chari-Nile: 'black (1)'.
 Coman: Ganza (E Loma) tetodo;
 Northern Mao tu:ta.
22. blood (1): Songhai kuri.
 Saharan: Daza gere; Teda gre, gore, gere.
 Maban: Maba eri; Mimi (N) ari.
 Chari-Nile: 'blood (1)'.
 Coman: Buldiit kelli 'red'.
23. blood (2): Fur kewa.
 Chari-Nile: 'blood (2)'.
24. boy: Saharan: Zaghawa burr 'children'.
 Maban: Mimi (N) ma:r.
 Chari-Nile: Madi b?ara.
 Coman: Northern Mao meri 'child'.
25. to break: Songhai: Gao keyri.
 Saharan: Manuri kal; Daza ker, ger.
 Maba ked-arongi.
 Chari-Nile: 'to break'.
26. breast: Songhai: Gao gani 'animal breast'.
 Saharan: Kanuri nganji 'chest'.
 Maban: Maba angun; Mimi (N) akun.
 Chari-Nile: Eastern Sudanic 'breast'.
 Coman: Gule kukaian.
27. to bring (1): Saharan: Daza kor; Zaghawa kor.
 Maban: Mimi (G) kara.
 Chari-Nile: Shilluk kad~kal; Acholi kelo.

28. to bring (2): Songhai: Gao, Djerma kate.
Saharan: Zaghawa katte-; Daza ked-;
Kanuri kutə-.
29. brother: Songhai: Gao bere; Djerma bere
'older brother'.
Fur bara 'sibling'.
30. to build (1): Saharan: Kanuri təm; Kanembu tum;
Daza tom.
Fur tumu.
31. to build (2): Songhai: Gao tyin.
Saharan: Kanuri gana.
Chari-Nile: Eastern Sudanic 'to build'.
32. to buy: Saharan: Zaghawa la.
Fur ulu 'buy, sell'.
Chari-Nile: Eastern Sudanic 'to buy'.
33. to call: Saharan: Daza kul.
Mabana: Maba auri / guri; Mimi (G)
kar.
Chari-Nile: 'to call'.
34. chin: Songhai: Gao kaba 'beard'; Djerma
kabe.
Saharan: Kanuri ngumi; Daza jaɣam
'to chew'.
Chari-Nile: 'jaw'.
35. cloud: Saharan: Daza kedi.
Fur kuttu, kotu.
36. cold: Saharan: Teda kiri(de); Daza kiri.
Maban: Maba kera.
Chari-Nile: 'cold'.
37. to come: Songhai: Gao, Djerma ka.
Saharan: Berti kai; Zaghawa koi.
Chari-Nile: 'to come'.
38. to cook: Saharan: Kanuri war.
Fur iri.
Chari-Nile: 'to cook'.
39. to cover (1): Songhai: Gao, Djerma dabu 'to close,
to cover'.
Chari-Nile: 'to cover (1)'.

40. to cover (2): Songhai: Saharan gum.
 Chari-Nile: Eastern Sudanic 'to cover'.
 Coman: Koma (Madin) kum-kin 'to close'.
41. cow: Maban: Maba dek / de; Mimi (G) .de;
 Runga do.
 Chari-Nile: 'cow'.
42. to cut: Saharan: Zaghawa timme 'to cut off'.
 Maban: Maba atami / datami.
 Chari-Nile: Eastern Sudanic 'to cut'.
43. to dance: Saharan: Teda abi (noun).
 Chari-Nile: 'to dance'.
 Coman: Koma ba: (noun).
44. day: Saharan: Zaghawa utto 'sun'.
 Fur udo.
 Chari-Nile: 'day'.
 Coman: Gule ta: 'sun, day'; Koma (Madin) tai 'day'.
45. to die: Maban: Maba tyo 'dead'; Runga tye 'dead'.
 Chari-Nile: 'to die'.
46. dog: Songhai: Gao hanši; Djerma ansi.
 Fur asa.
 Chari-Nile: 'dog'.
47. to drink: Maban: Mimi ab (N).
 Fur aba; bu (noun).
 Chari-Nile: Lendu mbu; Madi mvu;
 Mangbetu ombuo.
 Coman: Koma (Madin) epa; Gule fa.
48. dry (1): Saharan: Daja njor(de); Teda njoro.
 Maban: Maba nojir; Mimi (G) negiri.
49. dry (2): Songhai: Djerma ko 'be dry', kogu 'dry'; Gao koga.
 Saharan: Zaghawa koa.
 Chari-Nile: Mangbetu akwo 'to dry up, become thin'; Efe kokikoki.
 Coman: E Coma akakus, akakas;
 Yabus ikkaya-kun 'dry season'.

50. dung: Songhai: Timbuktu moro.
 Saharan: Kanuru məli 'horse dung'.
 Chari-Nile: Masai emodie; Moru mur;
 Nuer mun 'dirt'.
51. earth: Songhai: Gao dau; Timbuktu dow 'dust'.
 Saharan: Zaghawa iddi.
 Chari-Nile: 'earth (1)'.
 Coman: Gule du.
52. egg (1): Chari-Nile: 'egg'.
 Coman: Koma (Buldiit, Modin) kumu.
53. egg (2): Songhai: Gao guri; Songhai gunguri.
 Fur kilo.
 Chari-Nile: Berta gogolo; Mittu kele.
54. elephant: Saharan: Daza kuwun; Teda kuhun.
 Maban: Maba ngon.
 Chari-Nile: Dinka akoon; Nuer gwor.
 Coman: Ganza (E Coma) kual; Gule
gal.
55. excrement: Songhai: Gao wiri 'dung'.
 Saharan: Kanuri bəli.
 Maban: Runga aber; Mimi (G) pul.
56. face: Songhai: Gao mo 'eye'; Djerma moy
 'eye'.
 Fur kumi.
 Chari-Nile: 'face'.
57. to fall (1): Maban: Maba onguni / donguni; Mimi
 (N) dungel.
 Chari-Nile: 'fall (1)'.
58. to fall (2): Songhai: Gao do 'go down towards
 the river'.
 Saharan: Kanuri du(ruskin) (Barth);
 Zaghawa te(ge), toi(ge).
 Chari-Nile: 'fall (2)'.
59. to fear: Saharan: Kanuri ri-.
 Chari-Nile: 'to fear'.
60. finger: Fur tori.
 Chari-Nile: Burun tuli; Tirma teri;
 Berta (Malkan) sora.

61. fire: Saharan: Berti azza.
 Maban: Maba uosi(k); Mimi (G) su.
 Fur uto, udu.
 Chari-Nile: 'fire (2)'.
 Coman: Koma (Buldiit) wutti; (Madin) woti; Uduk ot.
62. flesh: Songhai: Gao baši.
 Coman: Gumuz bic?a.
63. fly: Maban: Maba anyin (pl.).
 Chari-Nile: Lokai (Madi) onyu; Dilling unini.
64. to give: Songhai: Gao, Djerma no.
 Saharan: Teda (Barth) nin- 'give you'.
 Maban: Maba onyioi / nyioi.
 Chari-Nile: Barea nin; Didinga nya, iny; Murle anyi.
65. to go: Songhai: Gao koi, ko; Djerma koi.
 Maban: Maba aiei / giei 'walk'.
 Saharan: Zaghawa ke-; Kanembu kaki 'walk'.
 Chari-Nile: 'to go (2)'.
 Coman: Gule kauo 'go!'.
66. to go down: Saharan: Djerma zeri 'fall'.
 Maban: Maba usuri / zuri.
 Chari-Nile: Lotuko isur(ok).
67. to go out: Songhai: Djerma, Timbuktu farta.
 Chari-Nile: 'to go out'.
68. grass: Saharan: Daza elle 'grass, green';
 Zaghawa e:rne; Teda illi.
 Maban: Maba lua; Mimi (G) luha.
 Chari-Nile: 'grass'.
69. green: Songhai: Gao kukurey 'become yellow';
kara(nta) 'yellow'.
 Saharan: Kanuri kəri; Zaghawa girri 'green, yellow'; Daza kuli 'yellow'.
 Chari-Nile: Berta gure; Lotuko Igara 'to be green'.
70. hair: Songhai: Gao hambiri, hamni.
 Maban: Maba kamur 'beard'.
 Coman: Uduk amur; Ganza mul; Koma muli.

71. heavy: Saharan: Zaghawa tegi(li); Daza tiki(de).
 Chari-Nile: 'heavy'.
 Coman: Buldiit ntika.
72. hole (1): Saharan: Zaghawa agha, agga 'pit'.
 Maban: Runga agu.
73. hole (2): Saharan: Daza bolo; Aza buru.
 Chari-Nile: 'hole'.
74. honey: Saharan: Zaghawa enne.
 Chari-Nile: 'honey (2)'.
75. horn (1): Songhai: Djerma illi; Gao hilli.
 Chari-Nile: Kunama gi:la; Barea kelli; Afitti gwur(tu).
76. horn (2): Maban: Maba kami(k); Mimi (G) kamin.
 Coman: Koma (Madin) kwap?; Gumuz koma; Ganza (Yabus) akwaf; (E Coma) kumbere.
77. hot: Songhai: Gao dunga 'warm'.
 Fur toke.
 Chari-Nile: Barea tok, dok, dog 'to be hot'; Dinka tuc 'heat'; Bagirmi sungo 'heat'.
78. house: Saharan: Zaghawa ke, ko 'place';
 Teda, Daza kwei, koy 'place'.
 Chari-Nile: 'house'.
 Coman: Gumuz gogua 'hut'; Koma (Buldiit, Kusgilo, Chiita) ku; Ganza ka.
79. husband: Maban: Maba mašu(k).
 Chari-Nile: Eastern Sudanic 'male (1)'.
80. to kill (1): Saharan: Zaghawa li.
 Maban: Maba ei / li 'die'.
 Chari-Nile: 'to kill'.
81. to kill (2): Songhai: Gao wi.
 Saharan: Kanembu yeyi; Daza i.
 Maban: Maba wu.
 Fur: wai 'die'.
 Chari-Nile: 'die (2)'.
 Coman: Koma (Madan) ui 'die'.

82. knee: Saharan: Zaghawa kurru.
Maban: Maba kikkirŋi 'to kneel'.
Chari-Nile: 'knee'.
83. knot: Songhai: Gao kuli 'to knot, tie'.
Chari-Nile: Kunama kinkila; Lotuko xeколи.
84. large: Saharan: Teda, Daza bo, bu.
Fur apa.
Chari-Nile: Murle äpi.
Coman: Gumuz obo(ma).
85. left: Fur oguro.
Chari-Nile: Bagirmi geli; Lendu gru;
Moru gari; Lotuko (ne)goroŋ.
86. to lie down: Songhai: Gao haha:bu 'yawn, sleep'.
Saharan: Kanuri bo.
Maban: Maba abi / bi.
Chari-Nile: 'to lie down'.
87. lightning: Songhai: Gao meli; Djerma mali.
Saharan: Kanuri mollək.
Maban: Maba muoldak.
Fur ulmella.
Chari-Nile: Bari (kI) mamalangu 'it is
lightening'; Nuer mar 'to thunder',
mar nhial 'lightning—nhial = sky';
Kunama bil 'to flash, lighten'.
Coman: Gumuz mudde(ma).
88. lion: Songhai: Djerma mar 'leopard'.
Saharan: Berti muddu.
Maban: Maba amara(k).
Fur murru.
Chari-Nile: Bari kəmiru; Ingassana
beri(t); Keliko kāmiru (but other
Moru-Madi languages kāmi).
89. louse: Maban: Maba til 'louse, flea'.
Chari-Nile: 'louse'.
90. to love: Saharan: Daza tag; Kanuri rag;
Zaghawa tag.
Chari-Nile: 'to love'.

91. male: Songhai: Gao aru.
Saharan: Daza oro.
Chari-Nile: Eastern Sudanic 'male (2)'.
92. man: Saharan: Kanuri bi 'male'; Berti fa
'husband, man'.
Fur aba 'husband'.
Chari-Nile: 'man (2)'.
93. many: Saharan: Zaghawa aburo.
Maban: Mimi (G) bol 'much'.
Chari-Nile: 'rich'.
94. meat: Saharan: Daza yini; Berti ni.
Maban: Maba niu; Mimi (N) ne; Mimi
(G) nyu.
Fur nen, nino.
Chari-Nile: 'meat (2)'.
95. mother: Saharan: Kanuri ya; Kanembu yia, ya;
Daza aya; Berti yo.
Maban: Runga ya.
Fur iya.
Chari-Nile: 'mother'.
Coman: Gumuz iyo.
96. mouth: Fur udo.
Chari-Nile: 'mouth'.
Coman: Koma (Madin) tʔa; Gule suwa;
Ganza (E Coma) tuwa.
97. name: Fur kario 'name'.
Chari-Nile: 'name'.
98. navel (1): Saharan: Daza sour; Kanuri suro
'belly'.
Chari-Nile: Eastern Sudanic 'navel'.
99. navel (2): Songhai: Gao humo.
Saharan: Daza gumaro 'stomach'.
Chari-Nile: 'navel'.
100. neck: Saharan: Kanuri bədi 'nape'.
Maban: Maba biti(k).
Chari-Nile: Merarit wit; Lotuko
afIdIn 'nape'.
101. new: Songhai: Gao taga 'be new'; Djerma
itegi.

- Saharan: Daza eski; Teda eski 'young'.
Coman: Buldiit ntaiki(s).
102. night: Songhai: Songhai tyini.
Saharan: Zaghawa gilli.
Chari-Nile: Madi ini; Mangbetu kini.
103. one: Maban: Maba tek; Mimi (G) deg;
Runga ituk 'ten'.
Fur tok, dik.
Chari-Nile: 'one'.
104. to open: Songhai: Gao feri.
Saharan: Kanuri fərem; Daza fir, for.
Fur falaŋ (adjective).
105. ox: Saharan: Kanuri fe 'cow, cattle'.
Chari-Nile: Didinga bi 'cow'.
Coman: Koma (Buldiit, Kusgilo) piʔi;
(Madin) bipe, bipi 'bull'; Gule ib
'cow'.
106. person (1): Songhai: boro.
Saharan: Berti baru 'man'.
Chari-Nile: Didinga boro 'man';
Kreish belu 'man'; Mangbetu belu.
107. person (2): Songhai: -koi (agent i.e. 'person who').
Saharan: Kanuri kwa; Kanembu koa.
Maban: kai 'people'.
Chari-Nile: 'person'.
108. to put: Songhai: Gao dan; Djerma dan.
Saharan: Daza ton; Zaghawa tel.
109. rain: Songhai: Gao, Djerma hari.
Saharan: Daza war 'to water'.
Fur ara, koro.
Chari-Nile: 'rain'.
Coman: Koma (Chiita, Buldiit) war
'God' (for the semantics compare
Nuer kot 'rain, God').
110. red: Maban: kukuio(k); Mimi (G) kukeya.
Chari-Nile: Avukaya kaka; Logo keka;
Lendu kaka; Lugbara eka; Disa
kake (Central Sudanic only).
Coman: Ganza (E Coma) akuku(s).

111. road: Saharan: Kanuri dälva; Kanembu dual;
Teda tire, teri.
Fur dora.
Chari-Nile: Dinka dhöl; Nduka doro.
Coman: Gule adon.
112. rope: Songhai: Gao šillei.
Chari-Nile: 'rope'.
Coman: Koma (Buldiit) šul; (Kusgilo)
(Chiita) tirra.
113. to run: Songhai: Gao zuru; Songhai dyur.
Chari-Nile: Kunama ijari.
Coman: Koma (Madin) zerri.
114. sand: Saharan: Zaghawa sigge.
Maban: Mimi (G) siki; Runga sage.
Chari-Nile: Moru, Avukaya sInyI;
Miza sIngo; Bagirmi siṇaka;
Madi tswInyakwi; Masai
sInyai.
115. to say: Saharan: Zaghawa oi 'speak'; Daza io
'tell'.
Fur u.
Chari-Nile: Mahas i; Kenuzi we, e;
Dongola we; Old Nubian i; Dair
we; Nuer we.
116. to see: Maban: Mimi (N) kal 'eye'.
Fur agil.
Chari-Nile: 'to see'.
Coman: Koma (Chiita) gil.
117. seed: Songhai: Gao dumi.
Maban: Maba dammantu (pl.).
118. self: Saharan: Zaghawa erri; Kanuri ro.
Maban: -ri 'reflexive, passive'.
Chari-Nile: 'self'.
119. sheep: Fur uli, uri.
Chari-Nile: Eastern Sudanic 'sheep'.
120. shoulder: Saharan: Kanembu nguru.
Maban: Maba korkoru(k).
Chari-Nile: Nuer jar; Bari gele.
Coman: Koma (Chiita, Kusgilo) kalak;
(Buldiit) kalon.

121. side: Songhai: Gao kyeraw.
Saharan: Kanembu kolo.
Chari-Nile: 'side'.
122. to sing (1): Songhai: Gao don; Djerma doni.
Saharan: Daza töon 'song'.
123. to sing (2): Maban: Maba orire.
Chari-Nile: 'to sing'.
124. small (1): Saharan: Kanuri kolkol; Teda kore.
Maban: Maba kola(k).
Chari-Nile: Kunama kura; Dinka kor.
125. small (2): Saharan: Teda tene, tini 'thin';
Zaghawa dufi 'thin'.
Fur itiŋ.
Chari-Nile: Moissala (Sara) ten;
Eastern Sudanic 'small'.
Coman: Koma (Madin) tson.
126. smoke: Songhai: Gao, Djerma dullu.
Chari-Nile: Eastern Sudanic 'smoke
(2)'.
Coman: Gule dyurret.
127. star (1): Fur uri / wuriŋa (Salt, wurre).
Chari-Nile: 'star (1)'.
128. star (2): Maban: Maba menue(k).
Chari-Nile: Eastern Sudanic 'star (2)'.
129. to steal: Saharan: Teda, Daza gon.
Maban: Maba ani / geni.
130. stick: Songhai: Djerma, Gao turi.
Maban: Maba dolo.
Chari-Nile: Bagirmi tila; Bari ture
(Luluba Madi ture is probably
borrowing from Bari).
Coman: Koma (Buldiit) tila.
131. stone: Maban: Maba kodo(k); Mimi (G) kudu.
Chari-Nile: Eastern Sudanic 'stone (2)'.
132. sweat: Songhai: Gao sungei.
Saharan: Kanuri zungu.
133. tail: Maban: Maba olu(k).
Chari-Nile: 'tail (2)'.

134. to taste: Songhai: Gao taba.
Saharan: Kanuri tambu.
Chari-Nile: Dinka thyep.
135. thick: Songhai: Gao kom 'be thick'.
Maban: Maba komolo(k) 'hard'.
Chari-Nile: Eastern Sudanic 'strong'.
136. thirst: Songhai: Gao dyaw; Djerma go.
Saharan: Daza gwi, gwe.
Chari-Nile: Kreish goggayo.
137. thorn: Songhai: Gao kardyi; Djerma kargi.
Saharan: Kanuri kalgi.
Chari-Nile: Nubian kirgise.
138. to throw: Fur afu.
Chari-Nile: 'to throw'.
139. to tie: Saharan: Kanembu kas.
Maban: Maba auši / guši.
140. tongue (1): Fur (d)ali.
Chari-Nile: 'tongue'.
Coman: Uduk let; Koma (Kusgilo) litta.
141. tongue (2): Saharan: Kanembu dələm.
Maban: Maba delmi(k).
142. two: Songhai: Timbuktu kari 'twin'.
Chari-Nile: 'two'.
143. urine: Saharan: Kanuri collo; Kanembu njelli.
Maban: Mimi (N) sa:r.
Chari-Nile: Berta sara; Kreish soddo.
144. to vomit: Songhai: Gao, Djerma, Timbuktu yeri.
Saharan: Daza arak.
Chari-Nile: Kreish yedde.
145. vulva: Songhai: Gao buti; Djerma bute.
Coman: Koma (Madin) bitt; Ganza (E Coma) pit.
146. water: Saharan: Kanuri inji.
Maban: Maba inji; Mimi (G) engi.
147. to weave: Saharan: Kanuri saga.
Maban: Maba uski / zuki.

148. what?:
 Songhai: Djerma de.
 Saharan: Daza ndi; Kanuri ndu 'who?'.
 Chari-Nile: 'what?'.
 Coman: Uduk dadi.
149. which?:
 Saharan: Daza ka.
 Fur ka 'what?'.
 Chari-Nile: Masai ka-.
150. white (1):
 Maban: Maba fafara(k); Runga farr.
 Chari-Nile: Eastern Sudanic 'white (2)'.
151. white (2):
 Fur pota.
 Chari-Nile: Ingassana po:den; Berta
fudi; Nyangiya bet.
 Coman: Gule bit; Kusgilo mpata.
152. who?:
 Saharan: Daza nya.
 Maban: Maba nyia.
 Chari-Nile: 'who?'.
153. wife (1):
 Songhai: Gao wanda.
 Saharan: Daza ade; Berti ad; Teda adi.
 Chari-Nile: Nile Nubian id; Tabi ot,
ato; Lendu dhi 'woman'.
154. wife (2):
 Fur (duo)nya.
 Chari-Nile: Bagirmi ne; Eastern
 Sudanic 'wife'.
155. wind:
 Fur (d)aulu.
 Maban: Maba auli(k).
 Chari-Nile: 'wind'.
156. wing:
 Songhai: Gao fata.
 Saharan: Kanuri fefeto.
157. with:
 Saharan: Daza ke.
 Fur ki.
 Chari-Nile: Eastern Sudanic 'with'.
 Coman: Gumuz ka.
158. year (1):
 Songhai: Djerma giri; Gao dyiri.
 Saharan: Kanuri ngəli; Kanembu
ngo:li.
 Coman: Koma (Madin) kwoli.
159. year (2):
 Fur aye.
 Chari-Nile: Lugbara ayi 'rainy season';
 Madi ayi; Mamvu aye; Masai ai 'rain'.

160. yellow: Songhai: Djerma moni.
 Saharan: Daza mini.
 Chari-Nile: Berta (Fazoglo) beni
 'red'; Didinga mani.
161. yesterday: Saharan: Zaghawa berya 'yesterday';
 Kanuri bali 'tomorrow'.
 Chari-Nile: 'yesterday'.

Notes

1. Two distinct languages called Mimi have been reported in the African linguistic literature, one by M. Gaudefroy-Demombynes in "Documents sur les langues de l'Oubangui-Chari" (Actes du XVI Congrès International des Orientalistes, Alger, 1905) and the other by G. Nachtigal as edited by J. Lukas and O. Völkers in "G. Nachtigal's Aufzeichnungen über die Mimi-Sprache," Zeitschrift für Eingeborenen-Sprachen 29:145-54 (1939). These are referred to hereafter as Mimi (G) and Mimi (N) respectively.

2. Klingenheben records yi.

3. This is based on the assertion of A. N. Tucker and M. A. Bryan in The Non-Bantu Languages of North-Eastern Africa (Oxford, University Press, 1956) p. 152 "the a / i alternance is found in Koma . . ." The first person a- is attested in Reidhead's unpublished Koma material. In his data on Uduk we likewise find aa as the independent first person pronoun.

4. For Maban -ko see H. Barth, Sammlung und Bearbeitung Centralafrikanischer Vokabularien (Gotha, 1862) p. 315.

5. In this list Maba verbs are cited in the first and second person singular of the present, the root normally appears in the second person singular.

VII. NIGER-KORDOFANIAN

Those languages of the Nuba hills of Kordofan which have not already been assigned to various subgroups of the Eastern Sudanic subdivision of the Chari-Nile family (i.e. Dagu, Temein and Nubian) form a single Kordofanian family. These languages fall into five clearly distinguishable subgroups of which the fourth (Tumtum) shows considerable divergence from the remainder. The languages of the Kordofanian family are as follows:

1. Koalib group: Koalib, Kanderma, Heiban, Laro, Otoro, Kawama,¹ Shwai, Tira, Moro, Fungor.
2. Tegali group: Tegali, Rashad, Tagoi, Tumale.
3. Talodi group: Talodi, Lafofa, Eliri, Masakin, Tacho, Lumun, El Amira.
4. Tumtum group: Tumtum, Tuleshi, Keiga, Karondi, Krongo, Miri, Kadugli, Katcha.
5. Katla group: Katla, Tima.

In addition to significant resemblances in fundamental vocabulary, there is also agreement in certain specific morphologic features which stand out in spite of the relative scantiness of the material. The chief points of grammatical coincidence are to be found in pronominal forms, particularly the independent pronouns of the singular and in the noun prefix system. These prefixes are generally paired, one in each class for the singular and one in the plural. The mechanism is very similar to that of the Niger-Congo family. Significant resemblances among the independent singular pronouns include the following:

First person: (1) Otoro, Kawama ni; (2) Tegali, Rashad, Moreb ni, Tumale ngi; (3) Eliri ani; ni (verb subject).

Second person: (1) Heiban, Otoro, Koalib na, Kawama no; (2) Tegali, Rashad no, Moreb no, Tumale ngo; (3) Eliri ano; Talodi no; (4) Kamdang, Miri, Kadugli, Katcha oo; Tumtum, Keiga oo; (5) Katla, Tima nan.

Third person: (1) Otoro nu; (2) Rashad, Tegali ngo; Tumale ngu; (3) Eliri ano; (5) Katla nu.

The following is a list of similarities in the nominal prefix systems:

1. (2) Tagoi f/y; (3) Eliri p,b/y,-, Talodi b/i,-, Lafofa p,b/-;
(4) Tumtum b/y,-; (5) Katla b/-.
2. (2) Tagoi t/n; (3) Eliri t/n; (4) Katcha, Krongo t/n.
3. (1) Kawama k/n; Otoro g/n, Laro k,g/nw, Heiban g,k/ny; (3) Eliri g/n.
4. (3) Eliri, El Amira k/-, Lafofa ki,ku,k/-,a, Masakin k/w;
(5) Katla g/-, Tima k/-.
5. (1) Koalib ku/l, Kanderma u,-/li,l, Kawama kw,k/l,d, Otoro gw/l, Heiban gw,kw/l, Schwai, Moro, Tira w,u/l (agreements k,g/l);
(3) Talodi k,g/l.
6. (3) Eliri -/k; Masakin w/k, Lafofa -,w/k; (4) Tumtum -/gi.
7. (1) Koalib t/r, Kanderma d/r, Otoro ɗ/d, Heiban d/d, Tira ɗ/r,
Moro ɗ/ar; (3) Talodi t,ɗ/r, Masakin, Lafofa t/r.
8. (1) Koalib t/ny; (2) Tagoi, Moreb c/ny; Tumale j/ny; (4) Kamdang, Miri, Kudugli s/any, Keiga s/ay, Katcha s/ny.
- 9.² (1) Koalib, Otoro, Heiban etc. n; (2) Tagoi n; (3) Talodi, Masakin, Lafofa, El Amira n.
10. (1) Koalib -/y (agreements w/y); (2) Tagoi w/y.
11. (1) Heiban l/w; Laro l/w; (2) Tagoi ye,y/a,; (3) Talodi dj/m,
Eliri dj,tj,t/m; Masakin θ/m, y/m, Lafofa t/m.
12. (1) Koalib, Otoro, Heiban n/ny; (3) Masakin n/n.
13. (1) Tira ɖ/- (agreements ɖ/k,g); (3) Lafofa t/k; (4) Tumtum, Miri, Kadugli etc. t/k.

The typological resemblance between the Kordofanian and Niger-Congo noun classes has already been noted. The specific sound-meaning correspondence which first suggested itself is the striking resemblance between 9 and 11 in the above Kordofanian list and the Niger-Congo classes li/a,ma (ma is chiefly found in Bantu but is known elsewhere, e.g. the West Atlantic Gola) and the ma class denoting liquids and sometimes abstracts.³ In both these instances, Kordofanian languages have n corresponding to Niger-Congo m, except Kordofanian group 3 which has m in the plural of 9. Further, the Kordofanian l/n class corresponds quite well in meaning to Niger-Congo li/a,ma including, for example, the word for "egg" and for fruits. In addition, Tagoi singular ye, y suggests the existence of

a variant form without l as in the widespread Bantu i- for li-, a form found also in other Niger-Congo languages.

The correspondence between Kordofanian ŋ and Niger-Congo m suggested by Kordofanian noun-classes 9 and 11 leads to other possible or highly probable etymological relationships. One example is the word for "tongue" to be found in the word list at the end of this chapter. Further, the Kordofanian first, second and third person singular pronouns cited above would most plausibly be reconstructed as ŋi, ŋo or ŋa and ŋo or ŋu respectively. In Niger-Congo languages respective forms with m for Kordofanian ŋ are very widespread in each case. In Fulani all three are found: mi, first person singular, ma second person singular, and mo object pronoun of the third person singular. This mo is very probably the source of the Bantu innovation *mo- as the prefix of the singular person class for o- in other Niger-Congo languages. In Bantu, likewise, *mo- is the object pronoun of the third person singular.

Another possible point of resemblance is the existence of a suffix instead of the prefix for the personal class in Masakin and Otoro of group 1 of the Kordofanian languages. This suffix is only applied to kinship terms, proper names and some pronouns in Otoro (-ŋa) and in Masakin to proper names and kinship terms (-ŋe). In Niger-Congo in the Togo languages we find Akpafu -ma as a suffix for some nouns in the personal class instead of the usual prefix. In Likpe there is likewise a suffix -ma in place of the prefix in some nouns of the personal and animal class including kinship terms.

There are other important points of resemblance between the Kordofanian and Niger-Congo noun class systems. It was noted above that the Niger-Congo li-, i- class designates fruits as does the corresponding Kordofanian class. The Tagoi variant ye-, y- was cited. Class 10 in the Kordofanian list has its Tagoi representative the class w/y. This class designates the tree as against the fruit. This Tagoi class corresponds to the u/i class of Niger-Congo (Bantu mu-/mi-) which similarly designates trees. Tula in the Adamwa group has w/y in agreements corresponding exactly to Tagoi w/y. In Koalib of group 1 of the Kordofanian languages t- is employed as the singular of the liquid class - in the meaning "a drop of . . ." In Nyoro, and other Bantu languages the same usage is found for the prefix (o)tu-. Thus Koalib t-au/y-au, "a drop of water"/"water" corresponds to Nyoro (o)tu-izi/(a)ma-izi "a drop of water"/"water."

In Katla of group 5 of the Kordofanian languages a b- prefix forms abstract nouns from adjectives. This is exactly like the Bantu prefix bu-, also found in other Niger-Congo languages.

In the above list of Kordofanian noun classes, the first item which contains a bilabial prefix in the singular is commonly used to designate large animals, along with other meanings, e.g. Tago f-aran "cow"; f-ūṇan "elephant"; Katla bwan/wan "sheep"; Keiga b-aduruk "pig" etc. In Niger-Congo, western Fulani has a -ba class for large animals. In the Voltaic subgroup one finds Kanjaga -b, Mossi -fo, Dagomba -ho in this meaning. In the Benue-Congo subgroup, some Plateau languages have related prefixes: Gure pi-, Amo f-, Kurama bI-, bu-, Janji bi-, etc. In Bantu this probably survives in the word for "pig" *(ṅ)-godobe, *(ṅ)-godoba. That this -be, -ba is a suffix is highly probable from three considerations. Virtually all other nouns in Bantu are disyllabic. In some Bantu languages the word for "pig" shows reflexes of an earlier *ṅ-godo rather than *ṅ-godobe. Finally the word may well be a borrowing from Kanuri godu "wart-hog" or from some language neighboring Kanuri with a similar form.

Number 5 in the above list of Kordofanian noun classes, with singular most commonly k- and plural l- is the personal class. Since the personal class in Niger-Congo languages is normally u/ba, there would seem to be no resemblance here. However, there is widespread evidence in Niger-Congo for k- as a pronominal indicator of the singular personal of the personal class. These include the Fulani third singular pronoun kanko, in which kan is a base for independent pronouns in general, the Fulani suffix -ko found in gor-ko/wor-be "man" and in agent nouns, cf. Wolof gor "man", Temne ko, "third person singular object pronouns", k- base for agreements with the singular personal class as well as the independent pronoun kono; Wolof ko "third person singular object pronoun" and k- singular demonstrative with the word for "man"; Serer-sin oxa suffix of the singular personal class; Jukun ku, third person singular pronoun; Tula -k 'possessed by member of the singular personal class'; and in the Eastern subgroup of Adamawa-Eastern as independent personal pronouns of the third person Amadi ko; Barambu ko; Zande ko (masculine); Nzakara ko (masculine); Mongwandi ku.

Bantu k- prefix for persons is found in such examples as Ganda kabaka 'king' and elsewhere. It seems probable that the second and third person singular possessive suffixes -ko / -ke are to be explained in this way.

The Kordofanian l- plural may be related to the Mande -lu, -nu pronominal and nominal plural.

Finally, mention may be made of the curious alternation in the frequently homonymous words for 'rope' and 'vein.' The word for 'vein' is generally li or ri and never shows a suffix -k in either family. The word for 'rope' shows variants with final -k in both Niger-Congo

and Kordofanian. For details, see the following word list under the entries for 'rope' and 'vein'.

In summary, the present investigation leads to the classification of African languages into four families: Congo-Kordofanian, Nilo-Saharan, Afroasiatic and Khoisan. The extinct language of Meroe is left unclassified for lack of evidence. Malagasy, the language of Madagascar, is not included in the present study. It is, of course, a member of the Malayo-Polynesian language family.

Niger-Kordofanian Comparative Word List

1. all: Niger-Congo: (4) Akpafu pete; (5) Janji vat; (6) Mboi fyet, Roba bwat, Zinna pit, Mumuye piti.
Kordofanian: (1) Heiban pet.
2. and: Niger-Congo: (3) Mossi ne; Kasele, Chala na; (4) Twi ne, na; Avatime na, Ga ni; (6) Zande, Sango na.
Kordofanian: (2) Tagoi na.
3. antelope: Niger-Congo: (1) Gola odi, oli 'ox'; (2) Mano di 'cow'; Gio du 'cow'; (4) Avatime olu, Ewe lu 'female antelope'; Ahlõ ulu 'female antelope'.
Kordofanian: (1) Kawama (Otoro) uris / juri; (3) Talodi uri / gri.
4. arm: Niger-Congo: (1) Mandyak (ka)nyen; Dyola (ka)nen; Degha noni, Siti nonne, Legba (Tem) nin; (4) Likpe (ko)ni, Gã nine, Santrokofi (ko)ne; (6) Mumbake nena, Chamba neni, Vere naŋ, Namshi nāne.
Kordofanian: (2) Tagoi (c)inIn, Rashad nin, nin.
5. to be: Niger-Congo: to be (2).
Kordofanian: (1) Heiban ro; (2) Tagoi iri (auxiliary).
6. to bear (a child): Niger-Congo: (3) Kasele ma; Bariba mā; (4) Nyangbo mā; Nupe ma, Gbari ma, Idoma ma, Ibo mua, Bini mo 'bear fruit'; (5) Tiv umə 'bear fruit'.

- Kordofanian: (3) Masakin (ŋ)ome 'child';
(5) Katla omv.
7. to beat: Niger-Congo: (1) Gola bula; (2) Huela bere; (3) Kasele boa, Minianka bwo; (4) Twi, Guang boro, Nupe wulu.
Kordofanian: (2) Tumale berr; Tegali obori.
8. to beg: Niger-Congo: (2) Dan dekə 'ask'; (3) Kabre tex; (4) Proto-Ijo təgə, təkə 'beg, pray'.
Kordofanian: (1) Heiban otaijo 'demand!'
9. belly: Niger-Congo: (1) Temne (k)or, Banyun (bi)er; (4) Yoruba ara 'body', Ibo aro 'body'; (5) Tiv iyor 'body', Nungu oro.
Kordofanian: (1) Kanderma ari, Otoro (g)are, Laro (l)ari; (3) Masakin (ð)arr; (4) Tumtum adi; (5) Katla (g)uth, Tima (k)urun.
10. to bite: Niger-Congo: 'to bite'.
Kordofanian: (5) Katla lami.
11. blood: Niger-Congo: (1) Bidyogo ninye; (2) Mwa nyē, Dan nyō, Loko no; (3) Senadi (Senufo) nyi?əni 'red'; (5) Akunakuna enyi, Zumper anyin.
Kordofanian: (1) Koa lib (ŋ)in, Heiban (ŋ)in; (3) El Amira nyi.
12. to break off: Niger-Congo: (2) Soninke kara, Vai kari, Susu gira; (3) Delo kara 'cut off'; (5) Mambila keri.
Kordofanian: (1) Koalib agIr, Otoro geri, akIr.
13. to buy: Niger-Congo: (3) Mossi da, ra, Delo le, Kasele da; (4) Yoruba ra, Avatime da 'sell', Anyimere la.
Kordofanian: (5) Katla la, Tima el.
14. child: Niger-Congo: (4) Baula, Avikam ba; (5) Gurmana (Kamuku) baa; (6) Kumba va; Gengle ava, Waka va(gi)

[this is a variant of the extremely common Niger-Congo form bi].

Kordofanian: (5) Tima (c)iba.

15. to cut:

Niger-Congo: 'to cut'.

Kordofanian: (4) Katcha tɛ, Kadugli atɛ,
Tumtum, Karondi ati.

16. ear:

Niger-Congo: (1) Bullom nui, Gola
(ke)nu; (3) Awuna ni 'to hear';
Lobi nu; (4) Avatime, Likpe nu
'to hear', Grebo nuã; (5) Korop
(lu)nu.

Kordofanian: (1) Otoro, Heiban (g)öni,
Koalib (k)öni, Laro (l)öni; (2)
Tegali, Rashad nu; (3) Talodi
(k)enu, Masakin (k)inu; (5) Katla
gunu, Tima (k)ɔɔ.

17. to eat:

Niger-Congo: 'to eat'.

Kordofanian: (3) El Amira le; (5)
Katla le.

18. elephant:

Niger-Congo: (1) Konyagi inyi, Fulani
nyi:(wa), Gola onyã; (4) Ewe nyĩ,
Bini eni, Akposo uni; (5) Yeskwa
eni, Kaninkwom ini, Basherawa
nyii.

Kordofanian: (2) Tagoi (fə)ɲIn, Tumale
(f)uɲen; (3) Lafofa unyi.

19. far:

Niger-Congo: 'long'.

Kordofanian: (5) Katla arra.

20. head:

Niger-Congo: 'head'.

Kordofanian: (4) Tumtum, Krongo odu,
Karondi adu, Keiga dʔo 'top', Katcha
dʔo 'top', Tira (o)tu 'roof'.

21. hill:

Niger-Congo: (2) Busa kpi 'mountain',
Kweni kpi; (4) Gã kpo; Gwa ogba
'mountain'; (5) Nungu agbo, Ninzam
igbu.

Kordofanian: (2) Tagoi (c)ibe.

22. to know:

Niger-Congo: (3) Kasele nyĩ, Lobi ni
'understand'; Senadi (Senufo) nya;

- (4) Ewe nya; Bini ne, Ahlo ni; (5) Yergam nyi; (6) Gbanziro, Monjombo nyi.
Kordofanian: (4) Krongo ni.
23. large: Niger-Congo: (1) Diamb (Dyola) faf, Limba boi; (2) Malinke, Vai ba, Kpelle bayi; (3) Dagomba bi: 'be large', Supide (Senufo) pei 'become large'; (4) Santrokofi opē 'thick', Twi pipri 'thick', Proto-Ijo *opu; (6) Juman (Masa) fo, Kam boli.
Kordofanian: (1) Heiban ipa; (3) Eliri o:pi; (4) Tumtum fifi (plural stem).
24. mouse: Niger-Congo: (1) Limba foi; (4) Nupe (e)fia, Bini ofē, Krawi pwe; (5) Bute mfa, Yergam ipi, Dangana (Afusare) ipi.
Kordofanian: (3) Lafofa poi, Eliri powi, El Amira pou; (4) Karondi (ni)fa, Miri fife, Krongo (ni)fi.
25. mouth: Niger-Congo: 'mouth'.
Kordofanian: (1) Moro nyua, Kanderma (lo)nyo, Kawama (li)nu; (3) Lafofa (ka)nyi, El Amira (gi)ny; (4) Tumtum nina; (5) Katla ṅṅ.
26. oil: Niger-Congo: (3) Dagomba kpa, Kanjaga kpa 'oil, fat', Tobote (m)kpa(m) 'oil, fat'; (4) Newole (Bete) kpo; (6) Zande kpai 'fat, oil'; Barambu, Pambia kpa.
Kordofanian: (4) Krongo aba 'fat'; Tuleshi (k)oba.
27. to remain: Niger-Congo: (2) Samo gwa, Bisa, Busa go; (3) Tobote ka; Kabre kake; (4) Gwa ka, Newole (Bete) ko, Twi ka, Nupe ke.
Kordofanian: (2) Tegali ka: 'remain!'.
28. river: Niger-Congo: (1) Konyagi (u)obe, Temne (ra)boṅ; (2) Malinke, Bambara ba, Koranko bye; (3) Supide (Senufo)

ba, Awuna bu(ga), Chala bo; (4) Guang ɔbɔ̃, Akposo obe; (5) Abua ɔbe, Piti (u)vi; (6) Lakka ba, Mbum mbi, Monjombo bae, ba.

Kordofanian: (1) Heiban (d̥)Ibir̥ta; (3) Masakin (t̥)abɔ.

29. rope:

Niger-Congo: (4) Grebo li, Bini iri, Idoma oli, Proto-Ijo ɖigi; (5) Pyem rək, Jaba lik, Koro (ko)li, Boritsu uleɣ.

Kordofanian: (1) Koalib (t̥)ar 'string'; Tira (ð)ar, Heiban (k)arr; (3) Talodi (t̥)ɔrək, Masakin (t̥)ɔrr; (4) Kamdang (n̄d̥)ɔrIk, Krong (n̄d̥)-ɔri, Miri ruk, Kudugli ro, Katcha (ba)ro 'small rope'.

30. to run:

Niger-Congo: (2) Malinke bori, Busa bare, Ligbi fere; (4) Gã bele, Metyibo fere; (6) Bwaka ibali.

Kordofanian: (3) Masakin pər; (5) Katla bəri.

31. shoulder:

Niger-Congo: (1) Gola gbã 'shoulder, arm'; (2) Mano gbã, Mwa gbe 'arm'; (3) Dagari kpanka(ne) 'arm'; Mamprusi kpunkpɔŋo 'arm'; Bassa agba, Yoruba akpa 'arm'; Bowili (kɔ)kpɔ 'arm'; Nupe ekpa; (6) Gbanziri kpwa 'arm', Mundu kpa 'arm'.

Kordofanian: (1) Otoro (g)-əbo; (3) Eliri (c)ebi.

32. skin:

Niger-Congo: 'skin'.

Kordofanian: (4) Krongo ndigoŋo / koŋo 'bark'.

33. small:

Niger-Congo: (1) Sherbro tiŋ; (2) Kono dɛne, Bozo dena, Kpelle doŋ; (4) Lobi dun; (6) Zande toni.

Kordofanian: (1) Kanderma dan, Heiban itiny; (2) Tagoi oduwan; (5) Tima taɛn.

34. to speak: Niger-Congo: (3) Siti sima, Natioero homa 'say'; (4) Twi asɛm 'word'; (5) Efik sem 'speak a language'; Swahili (Bantu) sem-.
Kordofanian: (1) Heiban jaɲa; (3) Masakin sɛmɔ 'language'; (4) Krongo ajama, Miri, Katcha toma 'language' [but t- in Miri, Katcha forms may be noun-forming prefix].
35. spear: Niger-Congo: (1) Gola (ke)kpɛ; (2) Mende kpa, Kpelle kpala; (3) Mamprusi kpane, Tobote (ke)kpaɲ, Kusasi kpan; (4) Ewe akplɔ, Idoma ɔkpa; (5) Kaje (də)kpan, Yeskwa angba.
Kordofanian: (3) Lafofa (d)ebi, Eliri (t)ebii.
36. star: Niger-Congo: (1) Gola (ke)du; Bulom ului, Biafada uel; (2) Supide (Senufo) wodo, Minianka woro, Malinke dolo; (6) Bwaka ulu, Mbum ru.
Kordofanian: (3) Lafofa (ti)ro, El Amira lo, Masakin (ɔ)ɔɔɔ.
37. to steal: Niger-Congo: (2) Susu munya; (3) Kabre mllu, Tem ɲmele, Chala ɲmele; (4) Bowili mũ 'seize', Gã mɔ 'seize', Idoma miɛ 'seize'.
Kordofanian: (2) Tumale (dyi)mron 'thief'; (3) Masakin (ca)mali 'thief'; (4) Krongo monni.
38. sun: Niger-Congo: (1) Temne (a)nei, Mandyak unu; (2) Numu nyi; Dan nyě, Mano nyɛɛ; (4) Grebo nyɛɛ, Ijo ene.
Kordofanian: (1) Otoro (a)nyɛn, Koalib aɲwun; (2) Tegali ani, Rashad ani; (3) Lumun (j)ini; (5) Katla (g)ine, Tima (k)ine.
39. tail: Niger-Congo: (4) Twi eɖua, Ibo odo, Yoruba iru, Guang oɖu; (5) Rukuba undu, Irigwe (u)ru; (6) Gbaya do.
Kordofanian: (3) Masakin (t)udi; (4) Krongo idi.

40. to take: Niger-Congo: (2) Soninke fa 'steal'; (3) Awuma fa, Degha po; (4) Anyimere fa, Twi fa, Guang fo; (5) Jaba pu.
Kordofanian: (1) Heiban apo 'take!'.
Kordofanian: (2) Tumale aiman.
41. to think: Niger-Congo: 'to know'.
Kordofanian: (2) Tumale aiman.
42. thorn: Niger-Congo: (3) Mossi gwaga, Nafana ugo; (4) Ibo ogu, Idoma uje, Nupe eka; (5) Pyem ka, Nungu gego.
Kordofanian: (1) Koalib (t) ugwi, Otoro (ð) ugi, Heiban (t) ugi.
43. three: Niger-Congo: 'three'.
Kordofanian: (1) Kawama toli, Heiban tiril; (2) Tagoi (y) ita; Tumale ndata; (3) Lafofa (ba) tad(an), Eliri etak; (5) Katla attat, Tima ehoat.
44. throat: Niger-Congo: 'neck'.
Kordofanian: (3) Masakin (t) ungurru.
45. tongue: Niger-Congo: 'tongue'.
Kordofanian: (1) Laro (li) ṅala, Shwai ṅurun, Koalib (tl) ṅlla; (3) Talodi loṅe, Lafofa liṅi, Eliri (le) loṅe, El Amira liṅ, Masakin (tho) loṅe.
46. tooth: Niger-Congo: 'tooth'.
Kordofanian: (2) Tagoi (t) InyIn, Tegali nyin; (3) Talodi (j) Inyi, El Amira (c) inyi, Lafofa (t) anyi; (4) Miri tInIni / InIni, Karondi (tIn) ini.
47. tortoise: Niger-Congo: (2) Bozo (Soninke) kuṅ, Susu kure; (3) Minianka korokoroṅo; (4) Twi akyekyere; (5) Proto-Bantu *-kudu.
Kordofanian: (3) Masakin (k) ərəṛə; (4) Keiga koṅ / nagoṅ.
48. urine: Niger-Congo: (1) Balante sara, Dyola suir 'to urinate', Fulani salba 'to urinate'; (2) Busa osoro-bo; (3) Dyan siri 'to urinate'; (4) Agatu

- itsre-enyi (enyi = 'water'); (5) Pyem (mwə)šar.
- Kordofanian: (4) Katcha kIsɔɔɔɔ / nagIsɔɔɔɔ.
49. vein: Niger-Congo: (4) Igala ili, Idoma ili, Ebe (Nupe) edi; (5) Bute li, Nungu riri.
- Kordofanian: (1) Koalib (t)iri, Heiban (d)iri; (2) Tagoi, Moreb (ka)ri; (4) Krongo (b)ari, Tuleshi (b)ar, Katcha (b)arɛɛ.
50. white: Niger-Congo: 'white'.
- Kordofanian: (3) Masakin ipu; (4) Krongo ofiro.
51. to wish (1): Niger-Congo: (2) Kpelle tine, Susu tiŋ; (3) Mossi tula; (4) Lefana tuna, Santrokofi tuna 'allow'; (5) Proto-Bantu *tuna; Efik itoŋ (noun).
- Kordofanian: (4) Krongo tuna 'to seek'.
52. to wish (2): Niger-Congo: (3) Mossi da, Tobote la, Minianka la; (4) Bini la, Guang lale, Likpe la.
- Kordofanian: (1) Heiban ari, Otoro ra; (3) Talodi ere.

Notes

1. This language reported by Brenda Seligman (Zeitschrift fuer Kolonialsprechen I, 1910-11) appears to be the same as Stevenson's Otoro.

2. This class usually has no singular since it designates liquids and abstracts.

3. Some of these resemblances, at least as far as Bantu is concerned, have already been pointed out by Meinhof and Stevenson.

INDEX TO LANGUAGE CLASSIFICATION

Each language in the index is followed, first by its classification according to the table given below and then, in most cases, by an indication of its position on one of the maps accompanying this volume. The first letter refers to the map and the subsequent letter and number to the grid square.

In the present state of our knowledge, any listing of languages is necessarily unsatisfactory in many respects. The map locations are for identification purposes only. For further details the reader is referred to various regional works, particularly those in the Handbook of African Languages series of the International African Institute.

Languages spoken in a number of areas are only entered once on the map. Thus Fulani is only indicated in one of the main West Atlantic areas and not elsewhere. When reference is made to some other language, then the number of the language itself is not to be found on any of the maps. The reason for this may be that it is merely a variant name, that the group is too small to be indicated on a map of the present scale or that they live within the speech area of another people. In a very few cases the exact location was not available but presumed to be very close to that of the group to which reference is made.

KEY TO LANGUAGE CLASSIFICATION

I.	Congo-Kordofanian	II. E. 4	Kunama
I. A	Niger-Congo	II. F	Koman
I. A. 1	West Atlantic	III.	Afroasiatic
I. A. 2	Mande	III. A	Semitic
I. A. 3	Voltaic	III. B	Egyptian
I. A. 4	Kwa	III. C	Berber
I. A. 5	Benue-Congo	III. D	Cushitic
I. A. 6	Adamawa	III. D. 1	Northern Cushitic
I. B	Kordofanian	III. D. 2	Central Cushitic
I. B. 1	Koalib	III. D. 3	Eastern Cushitic
I. B. 2	Tegali	III. D. 4	Western Cushitic
I. B. 3	Talodi	III. D. 5	Southern Cushitic
I. B. 4	Tumtum	III. E	Chad
I. B. 5	Katla	IV.	Khoisan
II.	Nilo-Saharan	IV. A	South African Khoisan
II. A	Songhai	IV. A. 1	Northern South African Khoisan
II. B	Saharan	IV. A. 2	Central South African Khoisan
II. C	Maban	IV. A. 3	Southern South African Khoisan
II. D	Fur	IV. B	Sandawe
II. E	Chari-Nile	IV. C	Hatsa
II. E. 1	Eastern Sudanic		
II. E. 2	Central Sudanic		
II. E. 3	Berta		

INDEX OF LANGUAGES

1. Abe I. A. 4; A-F7
2. Abine I. A. 5; B-F4
3. Abua I. A. 5; B-F3
4. Abure I. A. 4; A-G8
5. Acholi II. E. 1; C-F3
6. Adangme I. A. 4; A-G10
7. Adele I. A. 4; A-E10
8. Adyukru I. A. 4; A-G7
9. Afar III. D. 3; D-C7
10. Afawa III. E; B-C4
11. Afitti II. E. 1; D-C6
12. Affade III. E; B-B7
13. Afo I. A. 5; B-D3
14. Afusare I. A. 5; B-D4
15. Agatu I. A. 4; B-E3
16. Ahlõ I. A. 4; A-F10
17. Akan I. A. 4; (see individual languages)
18. Akoiyang I. A. 5; B-F4
19. Akpafu I. A. 4; A-F10
20. Akposo I. A. 4; A-F10
21. Akunakuna I. A. 5; B-F4
22. Akye I. A. 4; A-F, G8
23. Aladian I. A. 4; A-G7
24. Alaba III. D. 3; C-E5
25. Alawa III. D. 5; (see 695)
26. Alur II. E. 1; C-F2
27. Amadi I. A. 6; (see 446)
28. Amap I. A. 5; B-C4
29. Amar III. D. 4; C-E5
30. Amharic III. A; C-B6
31. Anaguta I. A. 5; B-D4
32. Andoni I. A. 5; B-F3
33. Anfillo III. D. 4; C-C4
34. Angas III. E; B-D4
35. Ankwe III. E; B-D4
36. Anuak II. E. 1; C-C, D3
37. Anyi I. A. 4; A-F8
38. Anyimere I. A. 4; A-E10
39. Arabic III. A; (not entered)
40. Arbore III. D. 3; C-E5
41. Argobba III. A; C-C6
42. Ari I. A. 4; A-G7
43. Asiga I. A. 5; B-F4
44. Asua II. E. 2; D-D5
45. Aten I. A. 5; B-D4
46. Auen IV. A. 1; D-G5
47. Auni IV. A. 3; D-G5
48. Auyokawa III. E; B-B5
49. Avatime I. A. 4; A-F9, 10
50. Avikam I. A. 4; A-G7
51. Avukaya II. E. 2; C-E2
52. Awiya III. D. 2; C-B5
53. Awuna I. A. 3; A-D8
54. Ayu I. A. 5; B-D4
55. Bachama III. E; B-D5
56. Baditu III. D. 4; C-E5
57. Badyara I. A. 1; A-C3
58. Baga I. A. 1; A-D2
59. Bagirmi II. E. 2; B-C8
60. Bai I. A. 6; D-D5
61. Baka II. E. 2; C-E1
62. Bako III. D. 4; C-D, E5
63. Bakwe I. A. 4; A-G6
64. Balante I. A. 1; A-C2
65. Balda III. E; B-C6
66. Bamanga I. A. 6; (see 476)
67. Bambara I. A. 2; A-C6
68. Bana III. D. 4; (see 62)
69. Bana III. E; (see 469)
70. Banana III. E; B-D8
71. Banda I. A. 6; D-D5

72. Bangba I. A. 6; D-D5
73. Bantu I. A. 5; (not entered)
74. Banyun I. A. 1; A-C1
75. Barambo I. A. 6; D-D5
76. Barawa III. E; B-C, D4
77. Barea II. E. 1; D-C6
78. Barein III. E; B-C9
79. Bargu I. A. 3; (see 81)
80. Bari II. E. 1; C-E2
81. Bariba I. A. 3; B-C1
82. Basa I. A. 5; B-E3
83. Basari I. A. 1; A-C3
84. Basari I. A. 3; (see 675)
85. Basherawa I. A. 5; B-D5
86. Basketo III. D. 4; C-E5
87. Bassa I. A. 4; A-F5
88. Bata III. E; B-D6
89. Batu I. A. 5; B-E5
90. Batwa IV. A. 3; D-G6
91. Baule I. A. 4; A-F7
92. Baygo II. E. 1; D-C5
93. Baza III. E; (see 211)
94. Bedanga III. E; (see 626)
95. Bedauye III. D. 1; D-C6
96. Bede III. E; B-B5
97. Beir II. E. 1; C-E3
98. Beja III. D. 1; (see 95)
99. Beli II. E. 2; C-D1
100. Benesho III. D. 4; C-D4
101. Berber III. C; (not entered)
102. Berta II. E. 3; C-B4
103. Berti II. B; D-C5
104. Bete I. A. 4; A-F6
105. Biafada I. A. 1; A-D2
106. Bidyogo I. A. 1; A-D1
107. Bilin III. D. 2; (see 115)
108. Binga II. E. 2; D-D5
109. Bini I. A. 4; B-E2
110. Birifor I. A. 3; A-D8
111. Birked II. E. 1; D-C5
112. Birom I. A. 5; B-D4
113. Bisa I. A. 2; A-D9
114. Bitare I. A. 5; B-E5
115. Bogo III. D. 2; D-C6
116. Boki I. A. 5; B-E4
117. Bolewa III. E; B-C5
118. Bongo II. E. 2; D-D5
119. Bor II. E. 1; C-D2
120. Boritsu I. A. 5; B-D5
121. Bowili I. A. 4; A-F10
122. Bua I. A. 6; B-C8
123. Bubalia II. E. 2; B-B7
124. Buduma III. E; B-A7
125. Buji I. A. 5; B-C4
126. Bulea I. A. 3; (see 342)
127. Bulom I. A. 1; A-E3
128. Bura III. E; B-C6
129. Burji III. D. 3; C-E5
130. Burun II. E. 1; C-B4
131. Burungi III. D. 5; D-E6
132. Busa I. A. 2; B-C2
133. Butawa I. A. 5; C-C4
134. Bute I. A. 5; B-F6
135. Bviri I. A. 6; D-D5
136. Bwaka I. A. 6; D-D4
137. Bwamu I. A. 3; A-D8
138. Bwol III. E; B-D4
139. Cassanga I. A. 1; A-C1, 2
140. Chala I. A. 3; A-F10
141. Cham I. A. 6; B-D5
- [142. Cham III. E; B-D5 (omit)]
143. Chamba I. A. 3; (see 350)
144. Chamba I. A. 6; B-D5
145. Chara III. D. 4; C-D5
146. Chawai I. A. 5; B-D4
147. Cheke III. E; B-C6
148. Chibak III. E; B-C6
149. Chip III. E; B-D4
150. Chiri III. E; B-D8
151. Chongee III. E; B-D5
152. Cobiana I. A. 1; A-C1
153. Daba III. E; B-C6
154. Dadiya I. A. 6; B-D5
155. Dagari I. A. 3; A-D8
156. Dagomba I. A. 3; A-E9
157. Dagu II. E. 1; D-C5
158. Dair II. E. 1; D-C6
159. Daka I. A. 6; B-D5

160. Dakakari I. A. 5; B-C2
161. Dama I. A. 6; B-D7
162. Damot III. D. 2; C-B5
163. Dan I. A. 2; A-F6
164. Darasa III. D. 3; C-D6
165. Daza II. B; D-C4
166. De I. A. 4; A-F4
167. Degha I. A. 3; A-E8
168. Dek I. A. 6; (see 412)
169. Delo I. A. 3; A-E10
170. Demsa III. E; B-D6
171. Dendje II. E. 2; B-D9
172. Dera III. E; (see 338)
173. Didinga II. E. 1; C-E3
174. Dilling II. E. 1; C-A1
175. Dime III. D. 4; C-D5
176. Dimuk III. E; B-D4
177. Dinka II. E. 1; C-D1
178. Diryawa III. E; B-C5
179. Disa II. E. 2; B-C9
180. Djerma II. A; A-B10
181. Dodoth II. E. 1; C-F3, 4
182. Doghosie I. A. 3; A-D8
183. Doghosie-Fing I. A. 3;
(see 182)
184. Dogon I. A. 3; A-B8
185. Doko III. D. 4; C-D5
186. Dollo III. D. 4; C-D5
187. Donga I. A. 6; (see 144)
188. Dongola II. E. 1; D-C6
189. Dormo III. E; B-D8
190. Dukawa I. A. 5; B-C2
191. Durru I. A. 6; B-E6
192. Dyalonke I. A. 2; A-D4
193. Dyan I. A. 3; A-D8
194. Dyimini I. A. 3; A-E7
195. Dyola I. A. 1; A-C1
196. Dyula I. A. 2; A-D7
197. Efe II. E. 2; D-D5
198. Efik I. A. 5; B-F4
199. Eggon I. A. 5; B-D4
200. Egyptian III. B; (extinct)
201. Ekuri I. A. 5; B-F4
202. El Amira I. B. 3; C-B2
203. Eliri I. B. 3; C-B2
204. Eregba I. A. 5; (extinct)
205. Ewe I. A. 4; A-F10
206. Fadidja II. E. 1; D-B6
207. Fajulu II. E. 1; C-E2
208. Fali I. A. 6; B-D6
209. Fali of Jilbu III. E; (see 211)
210. Fali of Kiria III. E; B-C6
211. Fali of Mubi III. E; B-C6
212. Fazoglo II. E. 3; (see 102)
213. Feroqe I. A. 6; (see 541)
214. Fiome III. D. 5; (see 258)
215. Foro I. A. 3; A-D7
216. Fulani I. A. 1; A-D3
217. Fulse I. A. 3; (see 402)
218. Fur II. D; D-C5
219. Gã I. A. 4; A-G9
220. Gabere III. E; B-D8
221. Gabin III. E; B-C6
222. Gade I. A. 4; B-D3
223. Galla III. D. 3; C-C5
224. Gamba II. E. 2; B-D8
225. Gamergu III. E; B-C6
226. Gan I. A. 3; A-F7
227. Ganawuri I. A. 5; (see 45)
228. Ganza II. F; C-C3, 4
229. Gao II. A; A-A10
230. Gardula III. D. 3; C-E5
231. Garko II. E. 1; D-C5
232. Garo III. D. 4; C-D5
233. Gauar III. E; B-C7
234. Gayi I. A. 5; B-E5
235. Gayi III. D. 4; C-E5
236. Gbandi I. A. 2; A-F5
237. Gbanziri I. A. 6; D-D5
238. Gbari I. A. 4; B-D2
239. Gbaya I. A. 6; B-F8
240. Gberi II. E. 2; C-D1
241. Gbunde I. A. 2; A-E4
242. Ge'ez III. A; (extinct)
243. Geleba III. D. 3; C-E5
244. Gengle I. A. 6; B-D5
245. Gerawa III. E; B-C4
246. Gerka III. E; B-D4

247. Gerumawa III. E; B-C4
248. Gezawa III. E; B-C4, 5
249. Gidder III. E; B-C7
250. Gidole III. D. 3; C-E5
251. Gimira III. D. 4; C-D4
252. Gio I. A. 2; (see 163)
253. Gisiga III. E; B-C7
254. Gofa III. D. 4; C-D, E5
255. Gola I. A. 1; A-F4
256. Golo I. A. 6; D-D5
257. Goram III. E; B-D4
258. Goroa III. D. 5; D-E6
259. Gouin I. A. 3; A-D7
260. Gowaze III. D. 3; C-E5
261. Grebo I. A. 4; A-G5
262. Guang I. A. 4; A-E9
263. Gude III. E; (see 725)
264. Gudo III. E; B-D6
265. Guerze I. A. 2; (see 385)
266. Gulai II. E. 2; B-D8
267. Gule II. F; C-B3
268. Gulei III. E; (see 189)
269. Gulfan II. E. 1; C-B2
270. Gulfei III. E; (see 383)
271. Gumuz II. F; C-B4
272. Gurage III. A; C-C6
273. Gure I. A. 5; B-C4
274. Gurma I. A. 3; A-D10
275. Guro I. A. 2; (see 407)
276. Gwa I. A. 4; A-G8
277. Gwandara III. E; B-D4
278. Hadya III. D. 3; C-C5
279. Harari III. A; D-C, D7
280. Haruro III. D. 4; C-D6
281. Hatsa IV. C; D-E6
282. Hausa III. E; B-B3
283. Heiban I. B. 1; C-B2
284. Hiechware IV. A. 2; D-F, G5
285. Hiji III. E; B-C6
286. Hina III. E; B-C6, 7
287. Hinna III. E; B-C5
288. Holma III. E; B-C, D6
289. Hona III. E; B-C6
290. Horo II. E. 2; B-D9
291. Hottentot IV. A. 2; (see 531, 379)
292. Huela I. A. 2; A-E8
293. Ibibio I. A. 5; B-F3
294. Ibo I. A. 4; B-F3
295. Idoma I. A. 4; B-E4
296. Igala I. A. 4; B-E3
297. Igbira I. A. 4; B-E3
298. Ijo I. A. 4; B-F3
299. Indri I. A. 6; (see 541)
300. Ingassana II. E. 1; C-B3, 4
301. Iraqw III. D. 5; D-E6
302. Irigwe I. A. 5; B-D4
303. Ishan I. A. 4; B-E3
304. Iyala I. A. 4; B-E4
305. Jaba I. A. 5; B-D4
306. Janjero III. D. 4; C-C, D5
307. Janji I. A. 5; (see 400)
- [308. Jarawa I. A. 5; B-C4 (Bantu) (omit)]
309. Jen I. A. 6; B-D5
310. Jera III. E; B-C5, 6
311. Jie II. E. 1; C-F3, 4
312. Jimo III. E; (see 730)
313. Jorto III. E; B-D4
314. Jukun I. A. 5; B-E4
315. Jur II. E. 1; D-D5
316. Kaba II. E. 2; B-D9
317. Kaba III. D. 4; C-D4
318. Kabre I. A. 3; A-D10
319. Kachicheri I. A. 5; B-D4
320. Kadara I. A. 5; B-D3
321. Kadero II. E. 1; C-A2
322. Kadugli I. B. 4; (between 358 and 423)
323. Kafa III. D. 4; C-D5
324. Kagoro I. A. 5; B-D4
325. Kahugu I. A. 5; B-C4
326. Kaje I. A. 5; B-D4
327. Kakwa II. E. 1; C-F2
328. Kaleri I. A. 5; B-D4
329. Kam I. A. 6; B-D5
330. Kamantan I. A. 5; B-D4
331. Kambari I. A. 5; B-C2
332. Kambata III. D. 3; C-D5

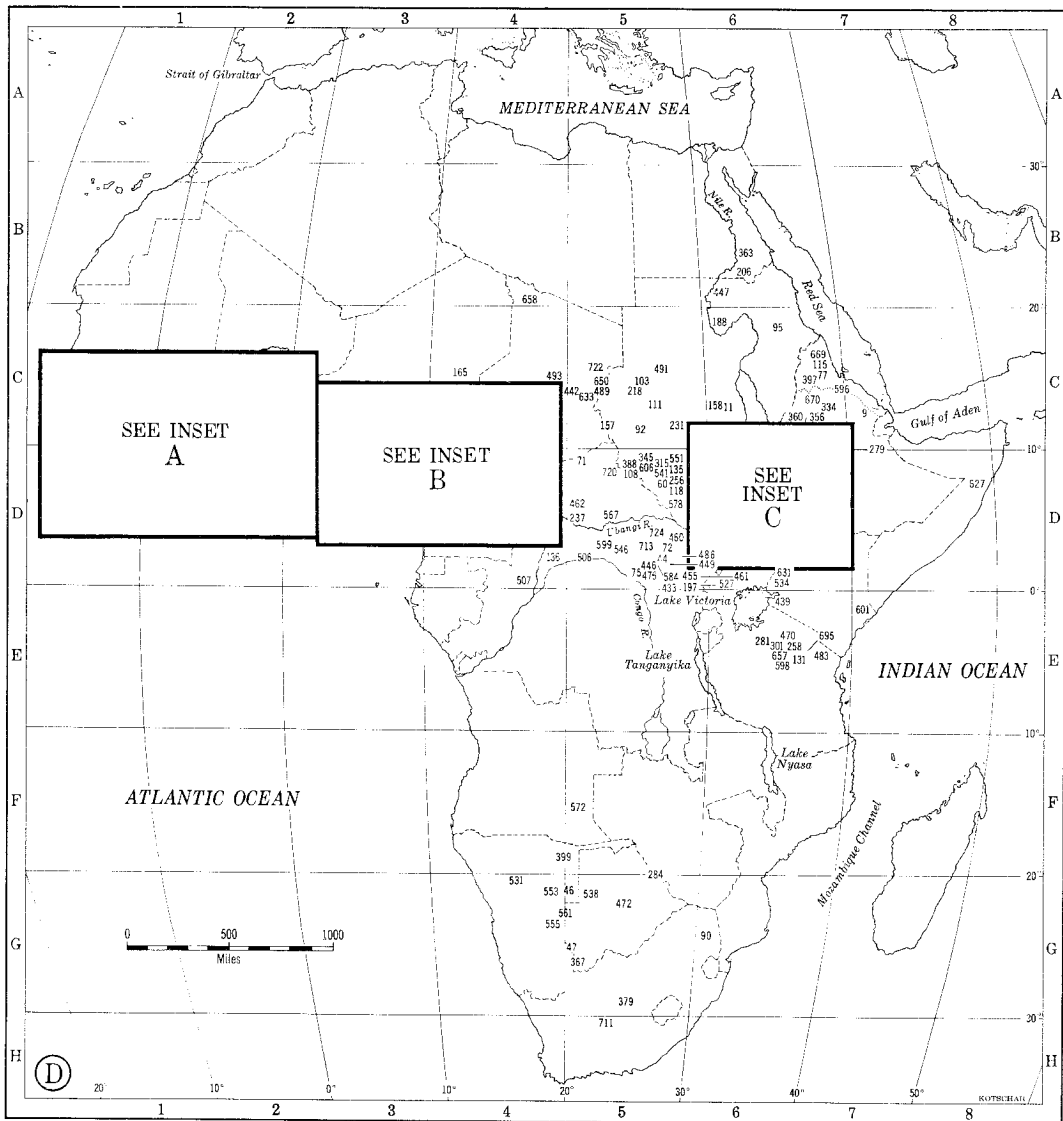
333. Kamdang I. B. 4; C-B1
334. Kamir III. D. 2; D-C6
335. Kamu I. A. 6; B-D5
336. Kamuku I. A. 5; B-C3
337. Kana I. A. 5; B-F3
338. Kanakuru III. E; B-D6
339. Kanderma I. B. 1; C-B2
340. Kanembu II. B; B-B6
341. Kaninkwom I. A. 5; B-D4
342. Kanjaga I. A. 3; A-D8
343. Kanuri II. B; B-C6
344. Kapsiki III. E; B-C6
345. Kara II. E. 2; D-D5
346. Karamojong II. E. 1; C-F4
347. Karbo III. E; B-C9
348. Karekare III. E; B-C5
349. Karondi I. B. 4; C-B2
350. Kasele I. A. 3; A-E10
351. Kasena I. A. 3; A-D9
352. Katab I. A. 5; B-D4
353. Katcha I. B. 4; C-B1
354. Katla I. B. 5; C-B1
355. Kawama I. B. 1; (see 574)
356. Kayla III. D. 2; D-C6
357. Kebu I. A. 4; A-E10
358. Keiga I. B. 4; C-B1
359. Keliko II. E. 2; C-F2
360. Kemant III. D. 2; D-C6
361. Kenga II. E. 2; B-C8
362. Kentu I. A. 5; B-E5
363. Kenuzi II. E. 1; D-B6
364. Kerre III. D. 4; C-E5
365. Khamta III. D. 2; (see 334)
366. Khasonke I. A. 2; A-B4
367. ≠Khomani IV. A. 3; D-G5
368. Kilba III. E; B-C6
369. Kirifawa III. E; B-C5
370. Kissi I. A. 1; A-F4
371. Koalib I. B. 1; C-B2
372. Kobochi III. E; (see 568)
373. Koke I. A. 6; B-C8
374. Kolbila I. A. 6; B-D6
375. Koma II. F; C-C4
376. Kono I. A. 2; A-E4
377. Konso III. D. 3; C-E5
378. Konyagi I. A. 1; A-C3
379. Korana IV. A. 2; D-G5
380. Koranko I. A. 2; A-E4
381. Koro I. A. 5; B-D4
382. Korop I. A. 5; (see 569)
383. Kotoko III. E; B-C7
384. Kotopo I. A. 6; B-E5
385. Kpelle I. A. 2; A-F5
386. Kpere I. A. 6; B-F6
387. Krawi I. A. 4; A-G5
388. Kreish II. E. 2; D-D5
389. Krongo I. B. 4; C-B1
390. Kru I. A. 4; A-G5
391. Kudawa I. A. 5; B-C4
392. Kuka II. E. 2; B-B7, 8
393. Kukuruku I. A. 4; B-E3
394. Kulango I. A. 3; A-E8
395. Kulung III. E; B-D7
396. Kumba I. A. 6; B-D6
397. Kunama II. E. 4; D-C6
398. Kundugr II. E. 1; (see 321)
399. !Kung IV. A. 1; D-F4, 5
400. Kurama I. A. 5; B-C4
401. Kuri III. E; B-B7
402. Kurumba I. A. 3; A-C8
403. Kusasi I. A. 3; A-D9
404. Kuseri III. E; (see 383)
405. Kutev I. A. 5; (see 729)
406. Kutin I. A. 6; B-D6
407. Kweni I. A. 2; A-F6
408. Kwolla III. E; B-D4
409. Kyama I. A. 4; A-G7
410. Kyan I. A. 3; A-C7
411. Laka II. E. 2; B-D8
412. Lakka I. A. 6; B-D7
413. Lame III. E; B-D7
414. Landoma I. A. 1; A-D2
415. Lango II. E. 1; C-F3
416. Lafofa I. B. 3; C-B2
417. Laro I. B. 1; C-B2
418. Lefana I. A. 4; A-F10
419. Lekon I. A. 6; (see 144)
420. Lendu II. E. 2; C-G2

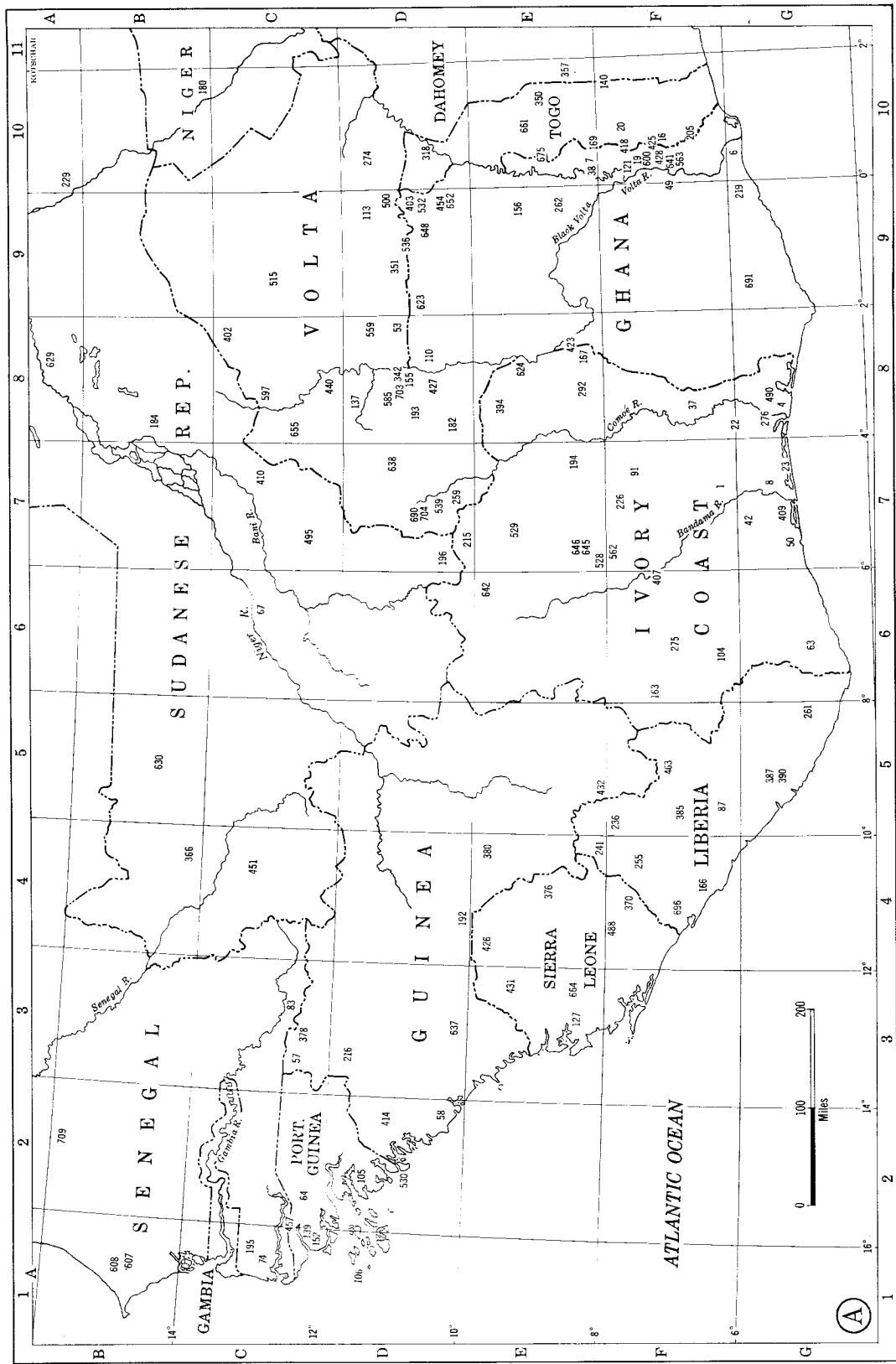
421. Lese II. E. 2; C-F1
422. Libo I. A. 6; B-D6
423. Ligbi I. A. 2; A-E8
424. Liguri II. E. 1; C-B1
425. Likpe I. A. 4; A-F10
426. Limba I. A. 1; A-E4
427. Lobi I. A. 3; A-D8
428. Logba I. A. 4; A-F10
429. Logo II. E. 2; C-F1, 2
430. Logone III. E; (see 383)
431. Loko I. A. 2; A-E3
432. Loma I. A. 2; A-E5
433. Lombi II. E. 2; D-D, E5
434. Longarim II. E. 1; C-E3
435. Longuda I. A. 6; B-D5
436. Lotuko II. E. 1; C-E3
437. Lugbara II. E. 2; C-F2
438. Lumun I. B. 3 (see 672)
439. Luo II. E. 1; D-E6
440. Lyele I. A. 3; A-C8
441. Ma I. A. 6; (see 446)
442. Maba II. C; D-C4, 5
443. Mada I. A. 5; B-D4
444. Madi II. E. 2; C-F2
445. Madjinngay II. E. 2; B-D9
446. Madyo I. A. 6; D-D5
447. Mahas II. E. 1; D-B6
448. Maji III. D. 4; C-D4
449. Makere II. E. 2; D-D5
450. Malabu III. E; (see 211)
451. Malinke I. A. 2; A-C4
452. Malkan II. E. 3; C-B5
453. Mambila I. A. 5; B-E5
454. Mamprusi I. A. 3; A-D9
455. Mamvu II. E. 2; D-D5
456. Mandara III. E; B-C7
457. Mandyak I. A. 1; A-C1, 2
458. Mangaya I. A. 6; B-F8
459. Mangbei I. A. 6; B-D7
460. Mangbetu II. E. 2; D-D5
461. Mangbutu II. E. 2; D-D5
462. Manja I. A. 6; D-D5
463. Mano I. A. 2; A-F5
464. Mao II. F; C-C4
465. Mao III. D. 4; (see 33)
466. Margi III. E; B-C6
467. Marille III. D. 3; (see 243)
468. Masa I. A. 6; B-C7
469. Masa III. E; B-D8
470. Masai II. E. 1; D-E6
471. Masakin I. B. 3; C-B1
472. Masarwa IV. A. 3; D-G5
473. Masongo II. E. 1; C-C, D4
474. Matakam III. E; B-C7
475. Mayogo I. A. 6; (see 72)
476. Mba I. A. 6; D-D5
477. Mbai II. E. 2; B-D8
478. Mbaka I. A. 6; (see 136)
479. Mbarike I. A. 5; (see 729)
480. Mbembe I. A. 5; B-E4
481. Mbere I. A. 6; B-E7
482. Mboi I. A. 6; B-D6
483. Mbugu III. D. 5; D-E6
484. Mbulunge III. D. 5; (see 131)
485. Mbum I. A. 6; B-F6
486. Meje II. E. 2; D-D5
487. Mekan II. E. 1; C-D4
488. Mende I. A. 2; A-F4
489. Merarit II. E. 1; D-C5
490. Metyibo I. A. 4; A-G8
491. Midob II. E. 1; D-C5
492. Miltu III. E; B-C8
493. Mimi (of Nachtigal) II. C;
D-C4
494. Mimi (of Gaudefroy-Demom-
bynes) II. C; (location not known)
495. Minianka I. A. 3; A-C7
496. Miri I. B. 4; C-B1
497. Miriam III. E; B-D4
498. Mittu II. E. 2; C-D2
499. Miyawa III. E; B-C4, 5
500. Moba I. A. 3; A-D9
501. Mober III. E; B-B6
502. Mocha III. D. 4; C-D4
503. Modgel III. E; B-D8
504. Mofu III. E; B-C7
505. Mondari II. E. 1; C-E2
506. Mondunga I. A. 6; B-G9

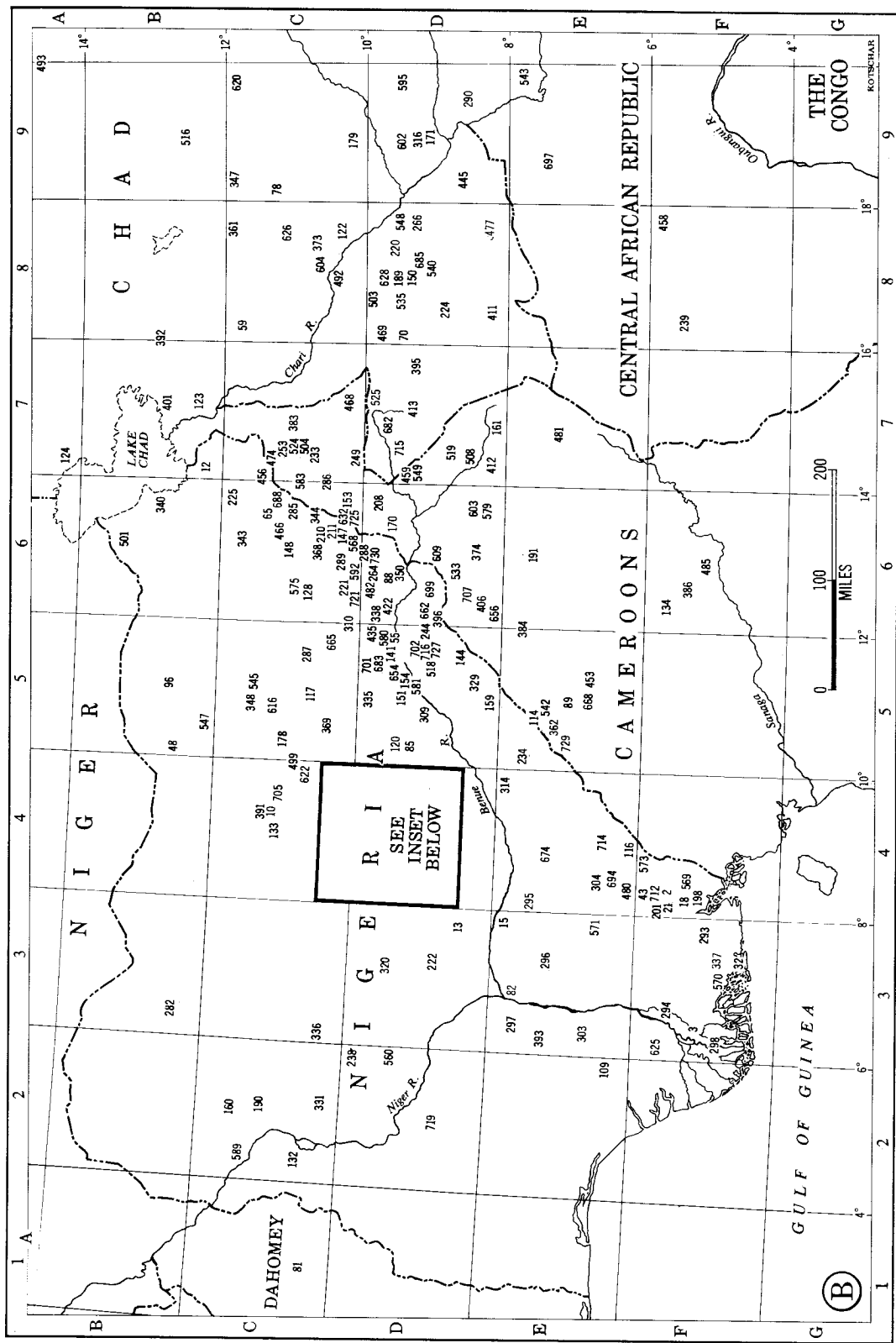
507. Monjombo I. A. 6; D-D4
508. Mono I. A. 6; B-D7
509. Montol III. E; B-D4
510. Moreb I. B. 2; C-A2
511. Moro I. B. 1; C-B2
512. Morokodo II. E. 2; C-E1, 2
513. Moru II. E. 2; C-E2
514. Morwa I. A. 5; B-D4
515. Mossi I. A. 3; A-C9
516. Mubi III. E; B-B9
517. Mumbake I. A. 6; (see 144)
518. Mumuye I. A. 6; B-D5
519. Mundang I. A. 6; B-D7
520. Mundu I. A. 6; C-E1, 2
521. Munga I. A. 6; (see 309)
522. Murle II. E. 1; C-E5
523. Murzu II. E. 1; C-E5
524. Musgoi III. E; B-C7
525. Musgu III. E; B-D7
526. Maturua III. E; (see 253)
527. Mvuba II. E. 2; D-D5
528. Mwa I. A. 2; A-E7
529. Nafana I. A. 3; A-E7
530. Nalu I. A. 1; A-D2
531. Nama IV. A. 2; D-G4
532. Namnam I. A. 3; A-D9
533. Namshi I. A. 6; B-D6
534. Nandi II. E. 1; D-D6
535. Nangire III. E; B-D8
536. Nankanse I. A. 3; A-D9
537. Nao III. D. 4; C-D4
538. Naron IV. A. 2; D-G5
539. Natioro I. A. 3; A-D7
540. Ndam III. E; B-D8
541. Ndogo I. A. 6; D-D5
542. Ndoro I. A. 5; B-E5
543. Nduka II. E. 2; B-E9
544. Ngala III. E; (see 383)
545. Ngamo III. E; B-C5
546. Ngbandi I. A. 6; D-D5
547. Ngizim III. E; B-B5
548. Nielim I. A. 6; B-D8
549. Nimbari I. A. 6; B-D7
550. Ninzam I. A. 5; B-D4
551. Njalgulgule II. E. 1; D-D5
552. Njei III. E; (see 568)
553. Nogau IV. A. 1; D-G4
554. Nubian II. E. 1; (see individual language)
555. /Nu //En IV. A. 3; D-G4
556. Nuer II. E. 1; C-C2
557. Numu I. A. 2; (see 292)
558. Nungu I. A. 5; B-D4
559. Nunuma I. A. 3; A-D8
560. Nupe I. A. 4; B-D2
561. /Nusan IV. A. 3; D-G4, 5
562. Nwa I. A. 2; A-F7
563. Nyangbo I. A. 4; A-F10
564. Nyangiya II. E. 1; C-F3
565. Nyidu I. A. 5; (see 362)
566. Nyima II. E. 1; C-A1
567. Nzakara I. A. 6; D-D5
568. Nzangi III. E; B-C6
569. Ododop I. A. 5; B-F4
570. Ogoni I. A. 5; B-F3
571. Okpoto-Mteze I. A. 5; B-E3
572. !O !Kung IV. A. 1; D-F5
573. Olulomo I. A. 5; B-F4
574. Otoro I. B. 1; C-B2
575. Pabir III. E; B-C6
576. Pai I. A. 5; B-D4
577. Pajade I. A. 1; (see 57)
578. Pambia I. A. 6; D-D5
579. Pape I. A. 6; B-D6
580. Pero III. E; B-D5
581. Pia III. E; B-D5
582. Piti I. A. 5; B-C, D4
583. Podokwo III. E; B-C6, 7
584. Popoi II. E. 2; D-D5
585. Puguli I. A. 3; A-D8
586. Pyem I. A. 5; B-D4
587. Quara III. D. 2; C-B5
588. Rashad I. B. 2; C-B2
589. Reshe I. A. 5; B-C2
590. Reshiat III. D. 3; (see 243)
591. Ribina I. A. 5; B-C4
592. Roba I. A. 6; B-C6
593. Ron III. E; B-D4

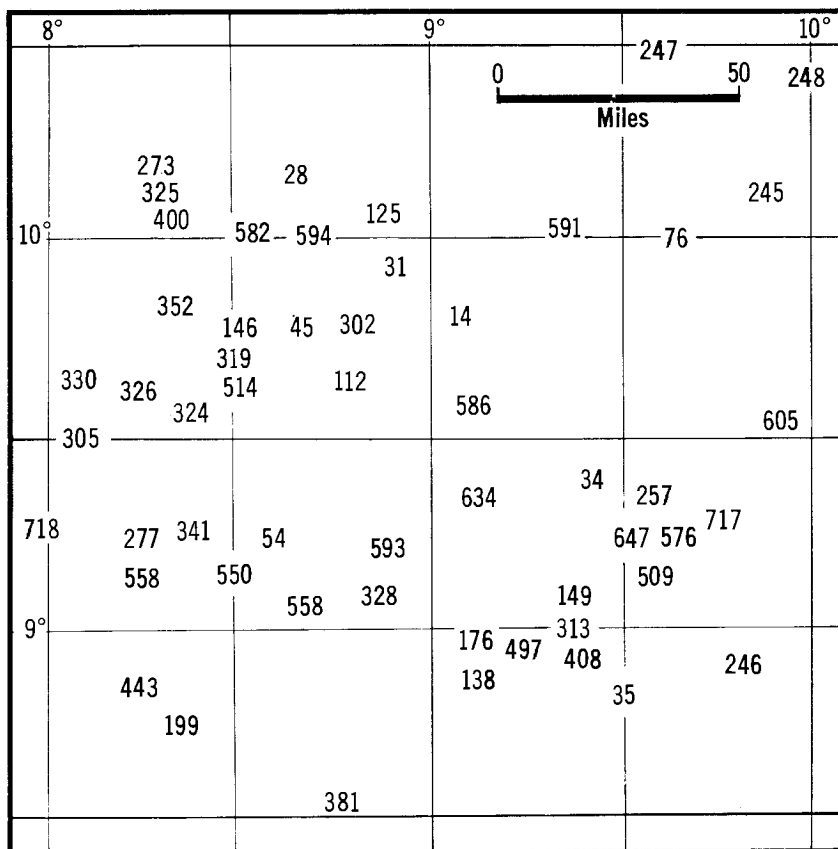
594. Rukuba I. A. 5; B-C, D4
595. Runga II. C; B-D9
596. Saho III. D. 3; D-C6, 7
597. Samo I. A. 2; A-C8
598. Sandawe IV. B; D-E6
599. Sango I. A. 6; D-D5
600. Santrokofi I. A. 4; A-F10
601. Sanye III. D. 5; D-E7
602. Sara II. E. 2; B-D9
603. Sari I. A. 6; B-D6
604. Sarwa III. E; B-C8
605. Seiyawa III. E; B-D4
606. Sere I. A. 6; D-D5
607. Serer-Non I. A. 1; A-B1
608. Serer-Sin I. A. 1; A-B1
609. Sewe I. A. 6; B-D6
610. Shabun I. B. 1; (see 618)
611. Shako III. D. 4; C-D4
612. Shatt II. E. 1; C-B1
613. She III. D. 4; C-D4
614. Shilluk II. E. 1; C-B, C2
615. Shinasha III. D. 4; C-B4
616. Shirawa III. E; B-C5
617. Shoe III. E; (see 383)
618. Shwai I. B. 1; C-B2
619. Sidamo III. D. 3; C-D6
620. Sila II. E. 1; B-C9
621. Sillok II. E. 3; C-B3
622. Sirawa III. E; B-C4
623. Sisala I. A. 3; A-D9
624. Siti I. A. 3; A-E8
625. Sobo I. A. 4; B-F3
626. Sokoro III. E; B-C8
627. Somali III. D. 3; D-D7
628. Somrai III. E; B-D8
629. Songhai II. A; A-A8
630. Soninke I. A. 2; A-B5
631. Suk II. E. 1; D-D6
632. Sukur III. E; B-C6
633. Sungor II. E. 1; D-C5
634. Sura III. E; B-D4
635. Suri II. E. 1; C-D4
636. Surma II. E. 1; (see 673, 728)
637. Susu I. A. 2; A-D3
638. Sya I. A. 2; A-D7
639. Tabi II. E. 1; (see 300)
640. Tacho I. B. 3; (see 673)
641. Tafi I. A. 4; A-F10
642. Tagba I. A. 3; A-E6
643. Tagbo I. A. 6; (see 541)
644. Tagoi I. B. 2; C-B2
645. Tagwana I. A. 3; A-E7
646. Takponin I. A. 3; A-E7
647. Tal III. E; B-D4
648. Talensi I. A. 3; A-D9
649. Talodi I. B. 3; C-B2
650. Tama II. E. 1; D-C5
651. Tambaro III. D. 3; C-D5
652. Tamprusi I. A. 3; A-D9
653. Tana II. E. 2; (see 697)
654. Tangale III. E; B-D5
655. Tara I. A. 3; A-C8
656. Taram I. A. 6; B-D6
657. Tatoga II. E. 1; D-E6
658. Teda II. B; D-B4
659. Tegali I. B. 2; C-B2
660. Teis-um-Danab II. E. 1;
(between 684 and 423)
661. Tem I. A. 3; A-E10
662. Teme I. A. 6; B-D6
663. Temein II. E. 1; C-B1
664. Temne I. A. 1; A-E3
665. Tera III. E; B-C5
666. Teso II. E. 1; C-F3
667. Teuso II. E. 1; C-E4
668. Tigong I. A. 5; B-E5
669. Tigre III. A; D-C6
670. Tigrinya III. A; D-C6
671. Tima I. B. 5; C-B1
672. Tira I. B. 1; C-B2
673. Tirma II. E. 1; C-D4
674. Tiv I. A. 5; B-E4
675. Tobote I. A. 3; A-E10
676. Togoyo I. A. 6; (see 541)
677. Topotha II. E. 1; C-E4
678. Tornasi II. E. 3; (see 102)
679. Torona I. B. 3; (see 672)
680. Tsamai III. D. 4; C-E5

- | | |
|-----------------------------------|------------------------------|
| 681. Tuareg III. C; (not entered) | 706. Woga III. E; (see 688) |
| 682. Tuburi III. E; B-D7 | 707. Woko I. A. 6; B-D6 |
| 683. Tula I. A. 6; B-D5 | 708. Wolamo III. D. 4; C-D5 |
| 684. Tuleshi I. B. 4; C-B1 | 709. Wolof I. A. 1; A-B2 |
| 685. Tumak III. E; B-D8 | 710. Wom I. A. 6; (see 144) |
| 686. Tumale I. B. 2; C-A2 | 711. /Xam IV. A. 3; D-H5 |
| 687. Tumtum I. B. 4; C-B2 | 712. Yako I. A. 5; B-F4 |
| 688. Tur III. E; B-C6 | 713. Yakoma I. A. 6; D-D5 |
| 689. Turkana II. E. 1; C-F4 | 714. Yakoro I. A. 5; B-E4 |
| 690. Turuka I. A. 3; A-D7 | 715. Yasing I. A. 6; B-D7 |
| 691. Twi I. A. 4; A-G9 | 716. Yendang I. A. 6; B-D5 |
| 692. Uduk II. F; C-B3, 4 | 717. Yergam I. A. 5; B-D4 |
| 693. Uge I. A. 5; (see 116) | 718. Yeskwa I. A. 5; B-D3, 4 |
| 694. Ukelle I. A. 5; B-E4 | 719. Yoruba I. A. 4; B-D2 |
| 695. Uwassi III. D. 5; D-E6 | 720. Yulu II. E. 2; D-D5 |
| 696. Vai I. A. 2; A-F4 | 721. Yungur I. A. 6; B-C6 |
| 697. Vale II. E. 2; B-E9 | 722. Zaghawa II. B; D-C5 |
| 698. Vemgo III. E; (see 688) | 723. Zala III. D. 4; C-D5 |
| 699. Vere I. A. 6; B-D6 | 724. Zande I. A. 6; D-D5 |
| 700. Vizik III. E; (see 688) | 725. Zany III. E; B-C6 |
| 701. Waja I. A. 6; B-D5 | 726. Zaysse III. D. 4; C-E5 |
| 702. Waka I. A. 6; B-D5 | 727. Zinna I. A. 6; B-D5 |
| 703. Wala I. A. 3; A-D8 | 728. Zulmanu II. E. 1; C-D4 |
| 704. Wara I. A. 3; A-D7 | 729. Zumper I. A. 5; B-E5 |
| 705. Warjawa III. E; B-C4 | 730. Zumu III. E; B-D6 |

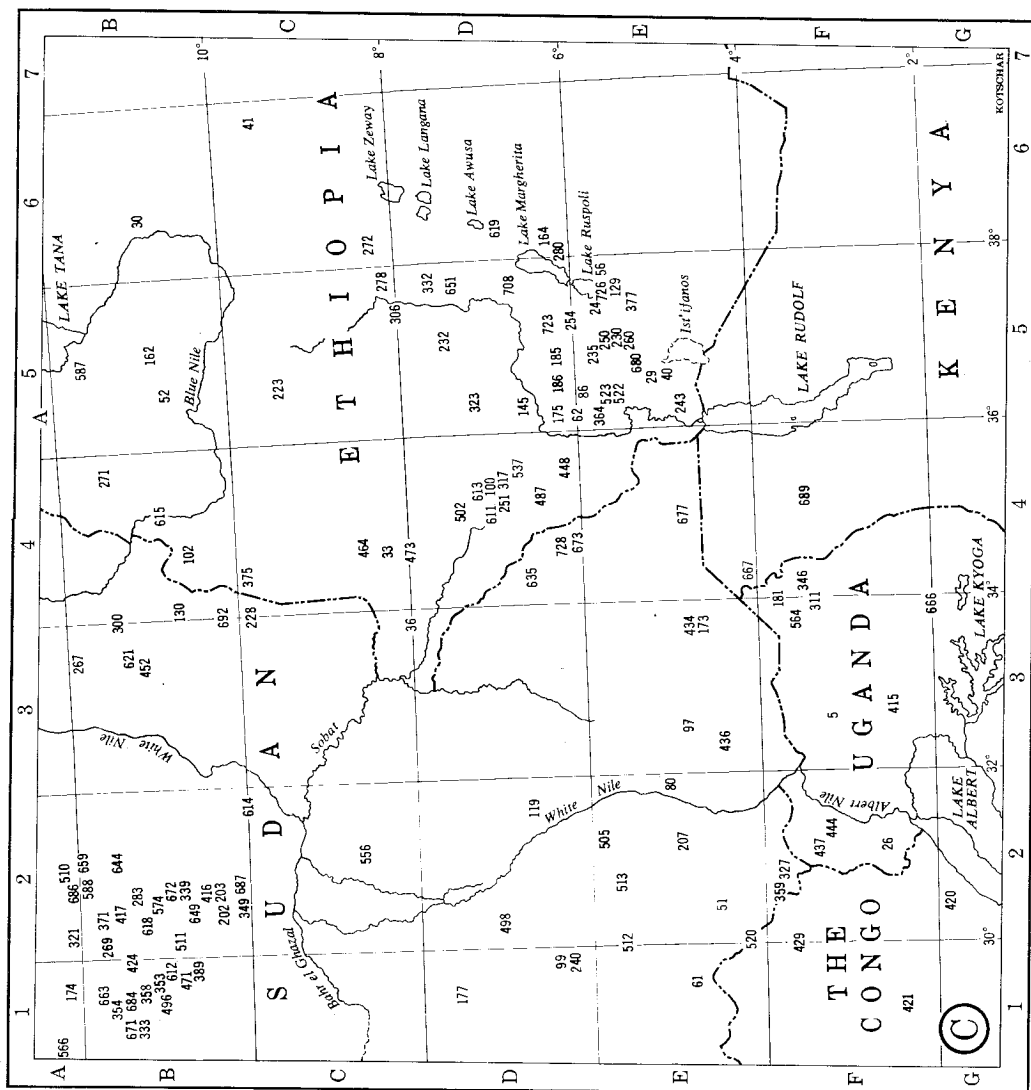








ENLARGEMENT OF PORTIONS OF BC4-BD4



SUMMARY OF CLASSIFICATION

I. CONGO - KORDOFANIAN

- I.A. Niger - Congo
 - I.A.1 West Atlantic
 - I.A.2 Mande
 - I.A.3 Voltaic
 - I.A.4 Kwa
 - I.A.5 Benue - Congo
 - I.A.6 Adamawa - Eastern

I.B. Kordofanian

- I.B.1 Koalib
 - I.B.2 Tegal
 - I.B.3 Talodi
 - I.B.4 Tumtum
 - I.B.5 Katla
- } not shown

II. NILO - SAHARAN

- II.A. Songhai
- II.B. Saharan
- II.C. Maban
- II.D. Fur
- II.E. Chari - Nile
 - II.E.1 Eastern Sudanic
 - II.E.2 Central Sudanic
 - II.E.3 Gerta
 - II.E.4 Kunama
- II.F. Koman

III. AFROASIATIC

- III.A. Semitic
- III.B. Egyptian
- III.C. Berber
- III.D. Cushitic

- III.D.1 Northern Cushitic
- III.D.2 Central Cushitic
- III.D.3 Eastern Cushitic
- III.D.4 Western Cushitic
- III.D.5 Southern Cushitic

III.E. Chad

IV. KHOISAN

- IV.A. South African Khoisan
 - IV.A.1 Northern South African Khoisan
 - IV.A.2 Central South African Khoisan
 - IV.A.3 Southern South African Khoisan
- IV.B. Sandawe
- IV.C. Hatsa

