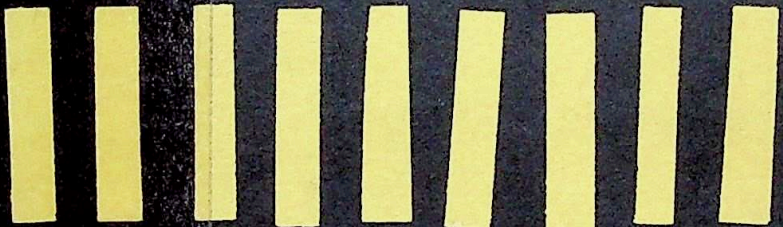


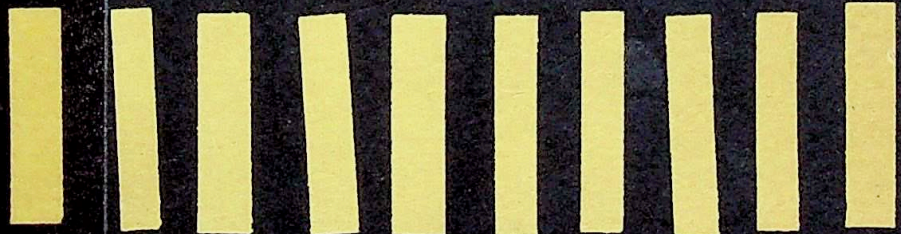
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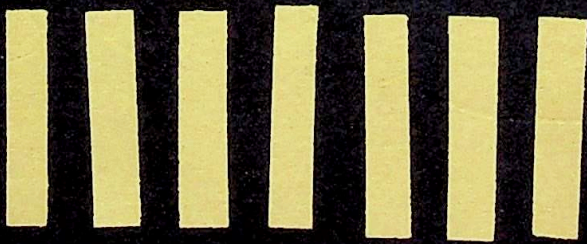
**STUDIES IN AFRICAN**



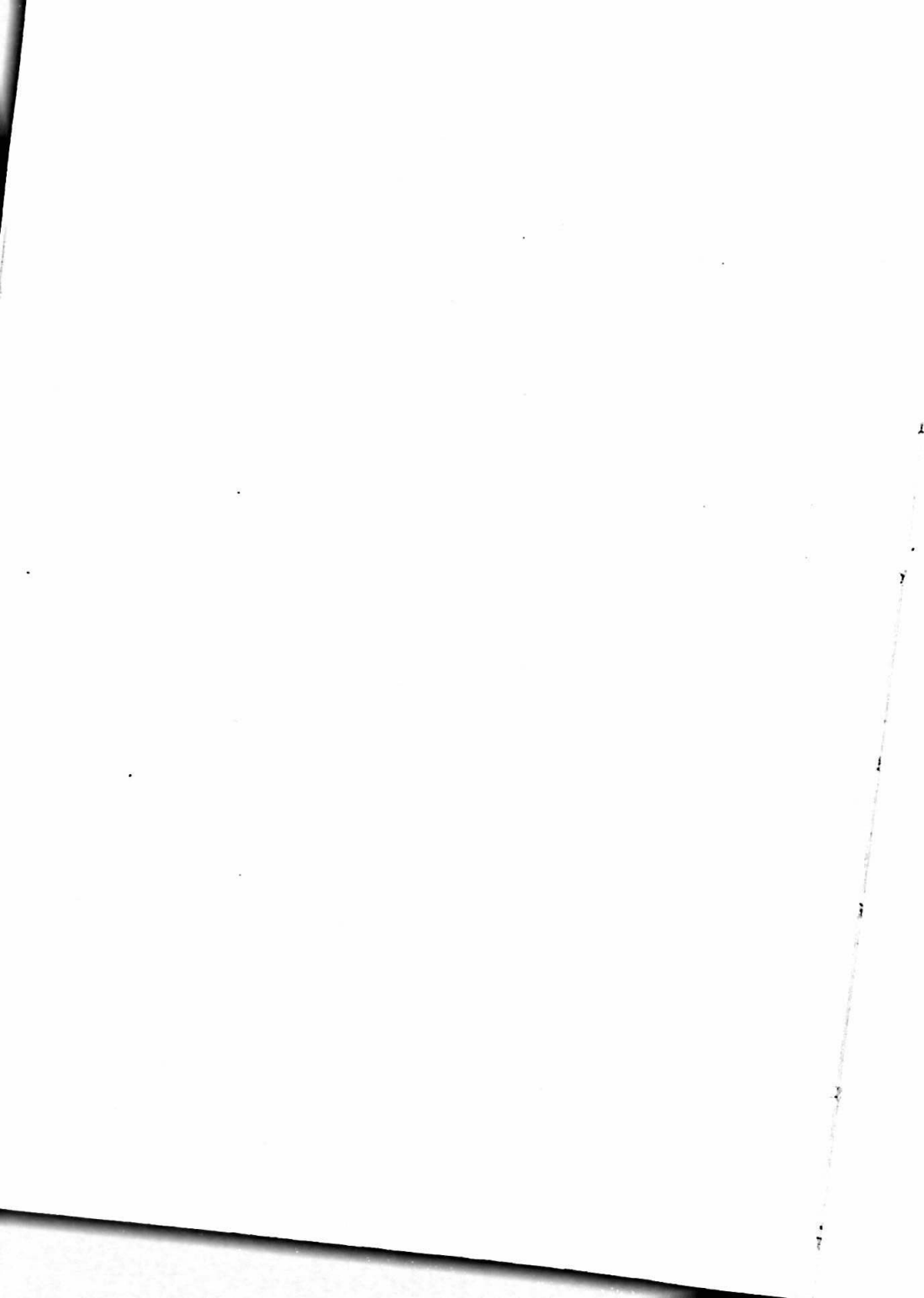
**LINGUISTIC CLASSIFICATION**



**by Joseph H. Greenberg**



*Compass Publishing Company*



STUDIES IN  
AFRICAN LINGUISTIC  
CLASSIFICATION

JOSEPH H. GREENBERG  
COLUMBIA UNIVERSITY

Reprinted from the Southwestern Journal of Anthropology for

THE  
LANGUAGE AND COMMUNICATION  
RESEARCH CENTER  
COLUMBIA UNIVERSITY

THE  
PROGRAM  
& OF AFRICAN STUDIES  
NORTHWESTERN UNIVERSITY

THE COMPASS PUBLISHING COMPANY, NEW HAVEN

1955

*This book has been reprinted by photo offset with minor corrections from the following issues of the Southwestern Journal of Anthropology:*

VOL. 5, Nos. 2, 3, 4, pp. 79-100, 190-198, 309-317, (1949);

VOL. 6, Nos. 1, 2, 3, 4, pp. 47-63, 143-160, 223-237, 388-398,  
(1950);

VOL. 10, No. 4, pp. 405-415 (1954).

[French translation of the articles in Vols. 5 and 6 by Claude TARDITS in Bulletin de l'Institut français d'Afrique noire, XVI (1954), série B, 1-2 (janv.-avril), p. 83/142; XVII (1955), série B, 1-2 (janv.-avril), p. 59/108.]

*Acknowledgement is hereby made to Professor Leslie Spier, editor of the Southwestern Journal of Anthropology, who kindly gave his permission for the re-printing of this series of articles; and, to Professor Frank Tannenbaum, Chairman of University Seminars at Columbia University, for his generous support of this publication.*

## FOREWORD

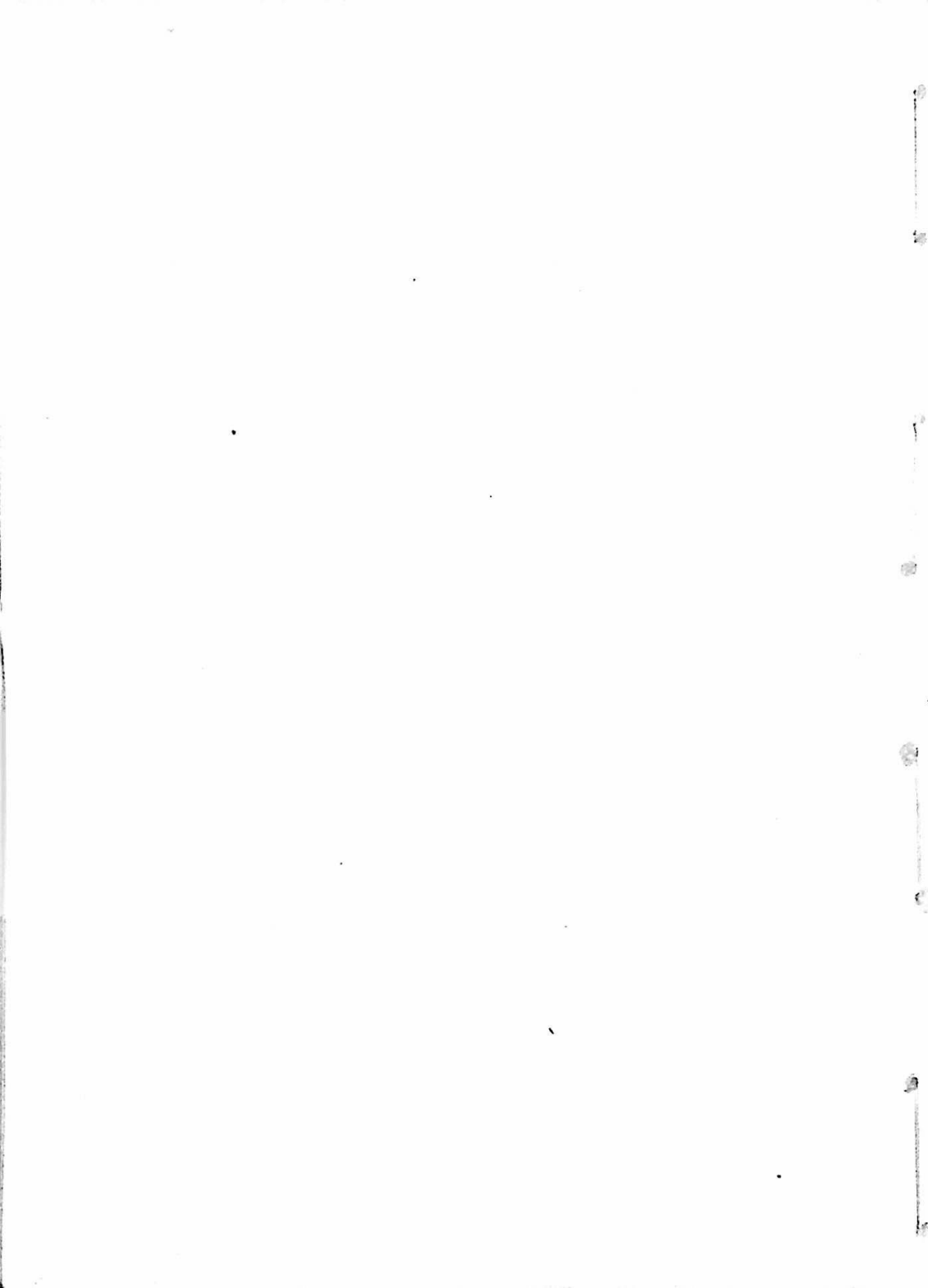
The attention which Dr. Greenberg's articles on the reclassification of African languages has attracted indicates the magnitude of the contribution they have made to African linguistics. The discussion they have aroused is the more remarkable in view of the fact that their original place of publication, though one of the distinguished organs of anthropology of the United States, is primarily devoted neither to linguistics nor to Africa.

It should be made clear, however, that the significance of Dr. Greenberg's papers is by no means restricted to the field of African linguistics. The study of African languages has, of necessity, been marked by a degree of specialization that has not been conducive to reassessing the methodological bases of long accepted classifications of these tongues, which he is thus the first to re-examine. Theoretical linguistics, also, has in recent years been marked by a major degree of attention devoted to problems of structural analysis; to this, his genetic and historical approach goes far to underscore the need to take into account the more dynamic aspects that underlie linguistic distributions and lead to an understanding of linguistic change. Even more widely applicable is his consideration of the Nilo-Hamitic problem, with its undertones of racialism and presumed associated linguistic superiority, which, as he says, points the danger of assuming a causal relationship between race, language and culture.

There should be little doubt that the republication of these important papers will further stimulate the discussion of the basic methodological and theoretical problems they pose. In doing this, the present volume will be compounding the contribution already made by Dr. Greenberg to general linguistics and to African studies.

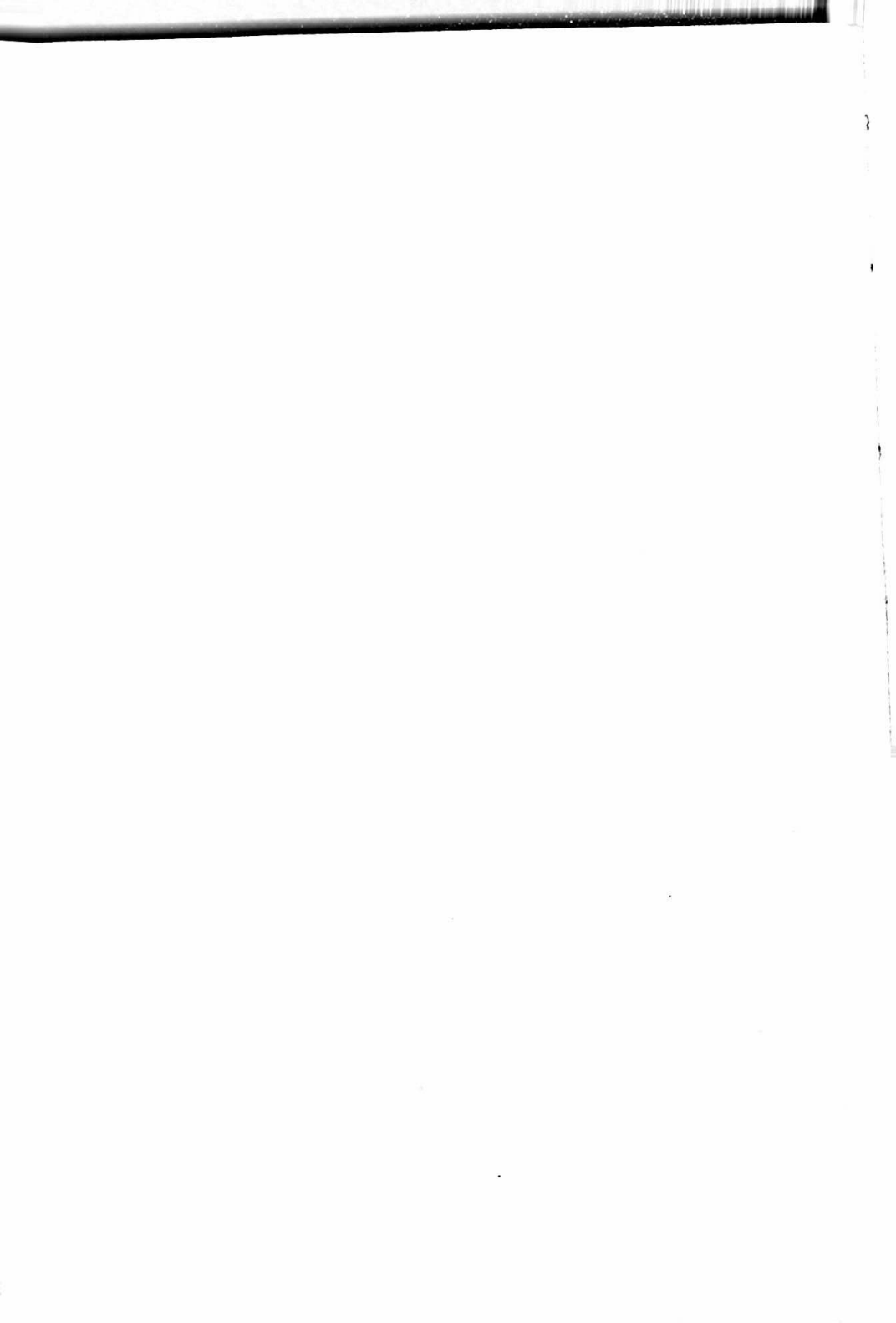
Melville J. Herskovits

Program of African Studies  
Northwestern University  
8 March, 1955



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## INTRODUCTION

FROM THE PRESENT SERIES there will emerge a complete genetic reclassification of the languages of Africa. These results are so at variance from the commonly accepted scheme that a brief methodological foreword seems in order.

There is nothing recondite about the methods which I have employed. It is the common-sense recognition that certain resemblances between languages can only be explained on the hypothesis of genetic relationship. It is based on the type of conviction which moved Sir William Jones in 1786 to state that Sanskrit, Latin, and Greek "have sprung from a common source which, perhaps, no longer exists." What impressed Sir William was not the presence of a gender or case system, or the fact that the languages under consideration were inflectional in type or that certain types of phoneme sequences were present or absent in all of them, or even the existence of regular phonetic correspondence; the membership of the Indo-European language family was accurately established decades before scientific workers began to insist on rigorous comparison. What impressed him was, to state it in the technical terminology of present day linguistics, the presence of many morphemes in the three languages which resembled each other both in form and meaning. Such lexical resemblances, whether in root or inflectional morphemes are *sine qua non* for the establishment of all relations of a more obvious type. Only when these have been established may one use more

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<sup>1</sup> As contemplated at present, later parts of this series of articles (to be published in the Southwestern Journal of Anthropology) will include studies of Fulani, Bantu, the Kordofan languages, and the East Sudanic. All the maps for this series were prepared by Vincent Kotschar.

## STUDIES IN AFRICAN LINGUISTIC CLASSIFICATION

subtle methods such as those employed by Sapir in North America. And here, until further methodological ones are developed, it is unlikely that generally accepted results can be attained. But under no circumstances can we reject results attained from obvious lexical resemblances in fundamental vocabulary in favor of those based on vague structural traits. The principle of limited possibilities must always be kept in mind. The most thorough-going resemblance in some aspects of general structure, e.g., the case systems of the Penutian languages of California and the Indo-European language, is not sufficient. Many languages have evolved case systems independently. On the other hand, when faced with such correspondences as consonant stems; nominative Greek *s*, Sanskrit *s*; genitive Greek *os*, Sanskrit *as*; locative Greek *i*, Sanskrit *e*, we see that the possibility of this being the result of pure chance is infinitesimal.

Using this common-sense notion, I have given first place in setting up hypotheses of relationship to comparisons of vocabulary. I have then followed up such hypotheses with an examination of all available grammatical material. In not a single instance have I been forced to retract an initial thesis which seemed probable on the basis of lexical resemblances. This should not be surprising. Powell classified American Indian languages almost entirely in this manner, perforce, and in no case has his analysis proved incorrect. Students of language are often led to believe that fundamental vocabulary is borrowed with such frequency that lexical resemblances are almost valueless. Moreover, the word *structure*, used to cover a multitude of different phenomena of varying degree of stability and specificity—phonetic, morphophonemic, syntactic, etc.—sounds far more impressive. Even in English where we are told that foreign vocabulary amounts to sixty to seventy per cent of the lexicon, non-Anglo-Saxon words have barely touched the fundamental vocabulary.<sup>2</sup>

For Africa, we could not ignore the evidence of vocabulary, even if we wished. For the vast majority of languages this is the only material available, so we must, willy-nilly, learn to use and evaluate it. For almost every large group, however, there is at least one grammatical sketch, so that for all except the most obvious groupings presented here, there is further evidence of this type. There is a further, internal check, in that grouping based on fundamental vocabulary has never led me to contradictory classifications. If such words were borrowed freely, one would expect that on some occasions A might show many

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<sup>2</sup> Were one to set up for the Germanic languages comparative vocabularies of common nouns, verbs, and adjectives like those customary in African, English would not be significantly out of line. See, for example, the short sample list of Leonard Bloomfield, *Language* (New York, 1933), p. 299.

## INTRODUCTION

resemblances to B and at the same time to C, while B and C were totally unlike. In other words A would be a *Mischsprache* of elements of B and C. This never seems to occur. Just as much as in Europe or Asia our evidence leads to unambiguous results.

This method may seem highly subjective. It is far less so than the application of vague structural criteria. Wherever a large number of linguistic scholars have been interested in the language of a particular area, Europe for example, there is general agreement about the more obvious relationships. All the groupings suggested here are in the class of the obvious. So few linguists have been interested in the entire gamut of African languages that the scientific consensus has not had the opportunity to operate as in more favored areas. I am convinced that any examination of the material by other linguistic scholars with an understanding of the genetic method would lead to practically the same results. If I seem to differ with classifications which have appeared in hundreds of places, the disagreement resolves itself into one with a very small number of primary sources. In fact, the only modern classifications for the entire continent which have obtained any currency are those of Meinhof and the far less influential one of Drexel. Drexel, I have discussed elsewhere.<sup>3</sup> His specific constructs are here refuted by implication. On the other hand, I always indicate specifically where I differ with Meinhof both because his classification has become standard and because its intrinsic merits are greater than Drexel's.

The basic criticism of Meinhof's method is simply that it does not lead to genetic classifications. It 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—Tagoy, Tumele, and Tegele—are similar, probably to the point of mutual intelligibility. Meinhof classified Tagoy and Tumele as pre-Hamitic, but Tegele he assigned to Sudanic simply because it did not have noun prefixes.

A comparison of vocabulary shows that numerals [*sci.* of Tegele] completely agree

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<sup>3</sup> Joseph H. Greenberg, *The Classification of African Languages* (*American Anthropologist*, vol. 50, pp. 24-29, 1948).

## STUDIES IN AFRICAN LINGUISTIC CLASSIFICATION

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.<sup>4</sup>

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,<sup>5</sup> observers with a minimum of formal linguistic training and blissfully ignorant of Meinhof's standard classification, group the languages of Kordofan, with essential correctness, into eight stocks, larger than the usually accepted number for the entire continent. They naïvely classify Tegele along with Tumoy and Tumele.

In fact, one of the indications of the weakness of the official classification is that individuals who know particular areas intensively have often, in their ignorance, produced non-orthodox classifications. The case of Mac Diarmids, just cited, is one in point. This is particularly true in the Sudan where a vast number of divergent languages have been placed in a single family without adequate proof ever having been presented. Lukas<sup>6</sup> finds no less than nineteen groups (some reduction is possible here) in a restricted area of the central Sudan alone. Tucker,<sup>7</sup> working merely in the southern portion of the central Sudan, cannot, by his utmost efforts, reduce the number of stocks below two. He is aware, however, of the standard classification and gives the usual typology in his introduction. He apparently accepts the ultimate relation of his two stocks in what can only be characterized as a scientific act of faith.

From the examples cited—and they could be multiplied many times—it should not be surprising that my classification differs radically from the usually accepted scheme. Although I have no overall confirmation of my analysis, I find again and again that results from restricted areas are in agreement with those attained independently by investigators with an intensive knowledge of

<sup>4</sup> *Zeitschrift für Kolonialsprachen*, vol. 7, 1916, p. 110.

<sup>5</sup> P. A. and D. N. MacDiarmid, *The Languages of the Nuba Mountains* (Sudan Notes and Records, vol. 14, pp. 15-48, 1931).

<sup>6</sup> Johannes Lukas, *Zentralsudanische Studien* (Hansische Universität, Abhandlungen aus dem Gebiet der Auslandskunde, vol. 45, Hamburg, 1937).

<sup>7</sup> A. N. Tucker, *The Eastern Sudanic Languages* (London, 1940).

## INTRODUCTION

some particular area. Thus, I connected Nubian, the Nilotic languages, and the so-called Nilo-Hamitic languages (Masai, Nandi, etc.) before having read Murray's similar hypothesis.<sup>8</sup> I consider all this corroborative of the general correctness of my analysis but would strongly welcome the investigation of the entire field by other linguists.

In all cases I have examined the linguistic material myself and have never accepted anyone's statement concerning the connection between two languages without verification. In a few cases where there is no published material, I have provisionally accepted the analyses of those to whom unpublished material was available but never without specific indication.

The classification set forth here is a conservative one. I feel that far greater harm is done by a premature acceptance of a possibility than by a provisional rejection coupled with an allusion to its existence. This is particularly true in African languages where the primary evidence is not likely to be checked for long periods and where anyone who sets forth a general scheme assumes a greater burden of scientific responsibility than in areas where there is a more active scholarly interest.

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<sup>8</sup> G. W. Murray, *The Nilotic Languages, a Comparative Essay* (Journal, Royal Anthropological Institute, vol. 44, pp. 397-411, 1914).

## THE NIGER CONGO FAMILY

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,<sup>1</sup> 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, Gā, 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 his most recent study explicitly admits this, remarking that the term Sudanic languages "bezeichnet Sprachen eines

<sup>1</sup> D. Westermann, *Die Sudansprachen, eine sprachvergleichende Studie* (Hamburg, 1911).

## THE NIGER CONGO FAMILY

gemeinsamen Typus, deren genetische Einheit nur teilweise nachweisbar ist."<sup>2</sup>

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.<sup>3</sup> 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.<sup>4</sup>

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.<sup>5</sup>

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. Proof of this will be given in a separate article in this series devoted to Fulani. I differ from Westermann also in that I exclude the Songhai languages of the central Niger valley. The material adduced by Westermann is suggestive only of a possible relationship, on a higher genetic plane, with West Sudanic as a whole.<sup>6</sup>

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<sup>2</sup> 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.

<sup>3</sup> D. Westermann, *Die westlichen Sudansprachen und ihre Beziehungen zum Bantu* (Mitteilungen des Seminars für orientalische Sprachen, vol. 30, Berlin, 1927).

<sup>4</sup> *Nominalklassen in westafrikanischen Klassensprachen und in Bantusprachen* (Mitteilungen des Seminars für orientalische Sprachen, vol. 38, part 3, pp. 1-55, 1935).

<sup>5</sup> See the references in notes 11 and 12. Further material is presented in Westermann's *Westsudanic Studies* (Mitteilungen des Seminars für orientalische Sprachen, vols. 28, 29, 31), *passim*.

<sup>6</sup> D. Westermann, *Ein Beitrag zur Kenntnis der Zarma-Songai am Niger* (Zeitschrift

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The evidence presented by Westermann, in the studies already cited, for the connection of Bantu with the West Sudanic nucleus is sufficient to show genetic relationship, although Westermann is apparently wary of drawing this conclusion because of the long-continued tradition of assigning a separate status to Bantu. In a subsequent article in this series, I shall seek to show that the case for the inclusion of Bantu is actually better than that for many language groups of West Sudanic whose affiliation has never been questioned. I shall also demonstrate that 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 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, Icelandic, and Norwegian. Arguments for borrowing to account for the undeniably close resemblance of Bantu to these languages (they are no farther apart than English and German) will be considered and shown to be totally inadequate.<sup>7</sup> I have renamed this subfamily, of which Bantu is but one of some twenty odd members, the Central branch in order to cut all connection with the traditional conception.

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 three additional

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für Eingeborenen-Sprachen, vol. 11, pp. 47-74, 1920). After subtraction of the obvious loan-words from the neighboring Mossi-Grunshi and Mandingo groups and the elimination of a number of improbable comparisons, there remains a small residue of striking resemblances. The decision whether these are early loans, whether they are the result of remote relationship, or whether, finally, Songhai is a West Sudanic language which has changed more rapidly than other languages of the group, had best be postponed until the development of rigorous reconstructions of the West Sudanic parent language.

<sup>7</sup> 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-Altai 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.

# THE NIGER CONGO FAMILY

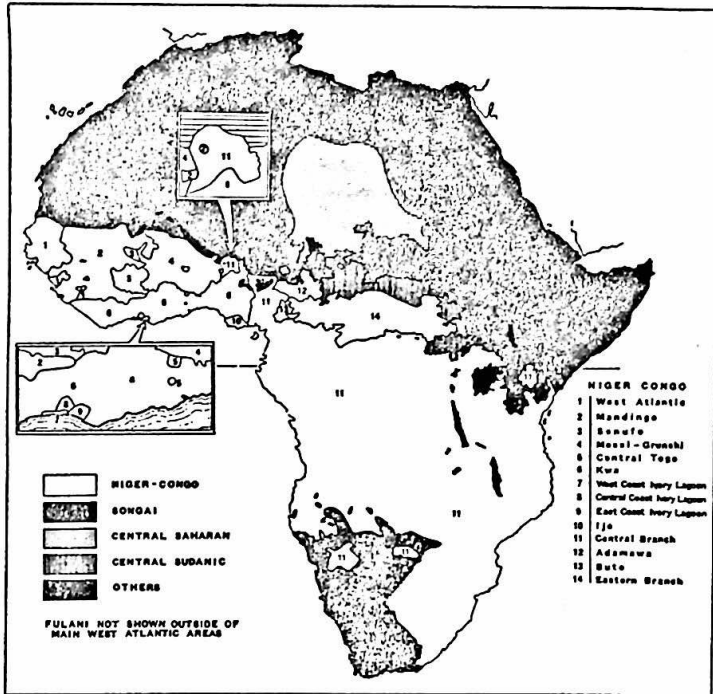


FIG. 1. Distribution of the Niger-Congo and other linguistic families.

## STUDIES IN AFRICAN LINGUISTIC CLASSIFICATION

genetic subgroupings beyond those distinguished within the West Sudanic nucleus. It includes such well-known languages as Bute, Mbum, Gbaya, Zande, Sango, and Banda. A complete listing is given below.

In regard to the southern portion of the central Sudan, Tucker saw that "these languages . . . are sharply divided into two opposing camps."<sup>8</sup> One of these is the eastward extension of the Niger-Congo family. The other is a separate and independent group, whose relationship to the Niger-Congo family, if any, is remote. This family I call Central Sudanic. It includes Bongo, Baka, Bagirmi, Sara, Kredj, Kara, Yulu, Mangbetu, Momvu-Balese (with the language of the Efe pygmies), Lendu, Logbara, Avokaya, Moru, and Madi. Farther north still another large group, hitherto called "Sudanic," forms a separate language family. This group, which I call Central Saharan, includes Kanuri, Teda, Dazza, Zaghawa, Baele, Bideyat, and Berti. The map (Fig. 1) gives the extension of the Niger-Congo, Songhai, Central Sudanic, and Central Saharan families. Blank areas are Hamitic, East Sudanic (Nilotic, Nilo-Hamitic, Nubian, and others), or smaller independent families.

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

1. West Atlantic: Wolof, Serer-Sin, Fulani, Serer-Nono, Dyola, Biafada-Pajade, Bijogo, Konyagi, Nalu, Bulanda, Banyun, Cobiana-Cassanga,<sup>9</sup> Bolama-Sarar-Pepel-Kanyop, Temne-Baga-Landoma, Bulom-Kissi-Mampa, Limba, Gola
2. Mandingo languages
3. Senufo<sup>10</sup>
4. Mossi-Grunshi: Mossi group, Grunshi group, Tem group, Bargu group, Gurma group, Kilinga
5. Central Togo: Logba, Adele, Sankotrofi, Likpe, Akpafu, Lefana, Bowili, Akposo, Avatime, Nyangbo-tafi, Ahlō, Kebu, Anyimere
6. Kwa: Kru group, Agni-Twi group (including Mekyibo and Abure),<sup>11</sup> Fō group, Gā group, Guang, Yoruba group, Nupe group, Edo group, Ibo
7. Western Ivory Coast Lagoon: Alagiā, Avikam
8. Central Ivory Coast Lagoon: Ajukru, Ari, Abe

<sup>8</sup> Tucker, *The Eastern Sudanic Languages*, p. viii.

<sup>9</sup> Languages recently reported as spoken in Portuguese Guinea. See J. Basso Marques, *Familiaridade idiomática entre Cobianas e Cassangas* (Boletim Cultural da Guiné Portuguesa, vol. 2, pp. 875-914, 1947).

<sup>10</sup> Classified by Westermann with Mossi-Grunshi.

<sup>11</sup> Mekyibo and Abure are put together by Westermann along with my groups 7, 8 and 9 to form an Ivory Coast Lagoon subdivision of his Kwa family.

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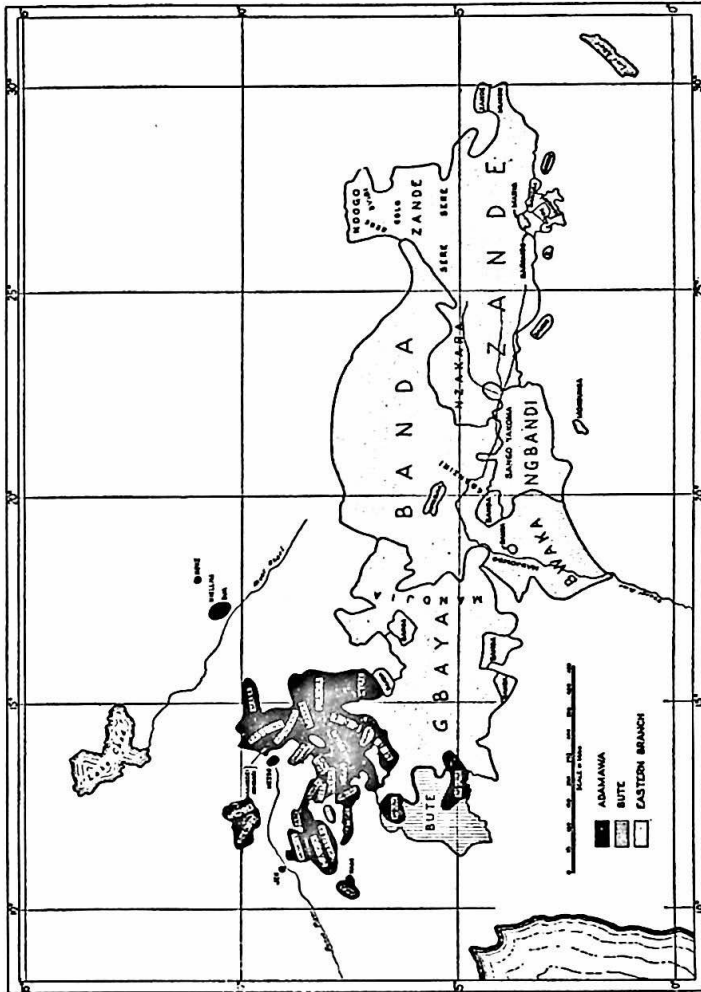


FIG. 2. Eastward extension of Niger-Congo linguistic groups.

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9. Eastern Ivory Coast Lagoon: Gwa, Kyama
10. Ijo
11. Central Branch: Cross River languages (Efik, Uwet, Korop, Abua, Akuna-kuna, Ololumo, Okuni, Ikom, Nki, Dama, Gayi, Yakoro, Ekoi-Nde), Yala, Munshi, Afudu, Boritsu, Mbarike (Zumper), Yergum, Ham (Jaba), Koro,<sup>12</sup> Piti-Chawai-Berom,<sup>13</sup> Gure-Kahugu, Mada-Ninzam,<sup>14</sup> Afo, Bassa-Kamuku-Kambari-Gurmana-Reshe,<sup>15</sup> Yeskwa, Jukun-Kyentu-Nidu Bitare, Tigong, Batu, Ndoro, Bantu,<sup>16</sup> Mambila-Suga
12. Adamawa: Mumuye, Kam, Jen, Longuda, Yungur, Messo, Nimbari (Nyamnyam), Mangbei, Vere group (Vere, Kotopo, Kolbila, Durru, Sara, Pape, Mamshi), Chamba, Daka, Bua-Nielim-Koke, Mbum group (Mbum, Mberé, Yassing, Mundang, Dama-Mono, Laka), Masa
13. Bute
14. Eastern Branch:<sup>17</sup> Gbaya-Manjia, Bwaka-Gbanziri-Monjombo, Sango-Yakoma-Ngbandi, Banda group, Nzakara, Monjombo, Zande, Mondunga,<sup>18</sup> Mundu-Mayogu-Bangba, Barambo, Madyo, Ndogo-Sere-Bviri-Golo
15. Eregba<sup>19</sup>

The remainder of this article will consist of a demonstration of the relationship of the eastern subgroups (12, 13, 14) to the West Sudanic of Westermann. The morphologic evidence will be considered first.

<sup>12</sup> Doubtful.

<sup>13</sup> Perhaps Ganawuri belongs here also. There are a number of presumably "Semi-Bantu" languages from this area for which no published materials exist.

<sup>14</sup> Numerals only. See H. F. Mathews, *Notes on the Nungu Tribe, Nassarawa Province* (Harvard *Varia Africana*, vol. 1, pp. 83-94, Cambridge, 1917).

<sup>15</sup> Reshe is a recently reported language from an island in the Niger River; see P. C. Harris, *Notes on the Reshe Language* (*Journal of African Studies*, vol. 5, pp. 221-242, 1946).

<sup>16</sup> Languages usually considered Semi-Bantu but most probably Bantu are Bafut, Ndob, the Bamum-Bali group, Penyin (Banyen), Banyang, and the Jarawa language spoken in widely scattered speech-islands including Mama (central Nigeria), Wurkum (eastern Nigeria), Nagumi (Cameroons), and Mboa (French Equatorial Africa). The rest of the languages are spoken in the Cameroons. Unpublished material by Mlle Dugast on the Banyen language, made available to me by Professor Andre Martinet, completely confirms the suspicions of Bantu affiliation which I had previously entertained on the basis of vocabularies alone.

<sup>17</sup> There are some indications that branches 12 and 14 form a unity. I assign Gbaya to the Eastern Branch with some hesitancy since it displays evidence of affiliation with the Adamawa branch.

<sup>18</sup> Apparently, the only material available concerning this language is the brief notice by E. de Boek, *Twee Taaligeenaardigheden bij de Mondunga* (Kongo-Overzee, vol. 2, pp. 282-284, 1936).

<sup>19</sup> Eregba, apparently now extinct, was probably spoken somewhere in central Nigeria near the Benue River. It is reported only in S. W. Koelle, *Polyglotta Africana* (London, 1857).

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In respect to morphology languages may differ greatly in complexity and the morphologic section of the grammar of a language may be long or short. If the morpheme coincides with the word, as supposedly in classical Chinese, there is no morphology at all, though we still have syntax, which is that branch of linguistic description which deals with construction involving words. Languages with highly complex morphologies allow numerous points at which comparisons testing genetic relationship may be made. The case system or verb conjugation systems of Indo-European languages are instances in point. Proto-Niger-Congo had apparently very little in the way of morphologic complication. Hence comparison of morphology can only play a minor role in comparison.

The trait of Proto-Niger-Congo morphology which provides the main material for comparison is the system of noun classification by pairs 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 Central Branch in general as well as other subfamilies, sometimes as suffixes, as in many of the Mossi-Grunshi languages, sometimes as both simultaneously as in some of the Mossi-Grunshi languages and sporadically elsewhere. Of the eastern languages, the Adamawa branch shows suffixes, Bute a few remnants of suffixes, and the Eastern Branch some uncertain traces of prefixes and for one language apparently 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 Mandingo 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-bòkò* 'arm') in

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*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,' *bɔ-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,' *mɔd-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 *nɔ-r/nɔ* '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*, Voko *to-go*, Sari *to-ko* 'ear' and other words. The *ma* affix for mass nouns in Vogo *ga-me* 'blood,' *bu-me* 'beer' and similar words and the *-bo* affix in Vere *ta-p*, Vogo *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 Kussassi of the Mossi-Grunshi group with the same affix). Mass nouns exhibit *-ba*, a suffix reminiscent of forms in some of the Central 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

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*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 Messo 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 vocabulary of Masa furnished by Lukas the only sure instance of a Niger-Congo suffix seems to be *-ko* which appears as *go* in *lo-go-r* 'ear' where *-r* appears to be the first person possessive.

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 *nɔ-r* 'eye,' *nɔ* 'eyes,' probably an instance of the *le/a* alternation with phonetic developments parallel to those for Vere cited above. Similarly, Teme has *nɔ-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 *hɔ-ka* 'nose.' Kumba has likewise retained the *ma* affix for mass nouns in *me-m* 'water,' *dei-m* 'blood,' *nɔ-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 the suffix, are given for the same word. There is evidence for the *-le* suffix in Nielim *tu-la* 'ear,' Koke *gi-l* 'eye,'

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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.'

In Bute most nouns form plurals by means of a *-b* suffix which seems to be a generalization of the personal plural class affix *ba*. That *-b* originates in *-ba* is made likely by the forms *ŋge* 'he,' *ŋga-ba* 'they.' Even if the interpretation of the general *-b* plural given here is incorrect, the form *ŋga-ba* itself provides evidence of the survival of the *ba* affix in pronominal use. Bute also has the *ma* mass-noun affix in such words as *mpfu-m* 'water,' *su-m* 'beer,' *ti-m* 'blood.'

In general, the languages of the 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-nu* '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 *ya-*, *yo-* 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-yuro* '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 Mondunga language, whose assignment to the Eastern group is uncertain because of lack of material, exhibits a thorough-going suffixial system which is difficult to derive from the general Niger-Congo system.

The word lists which follow are intended to demonstrate the resemblance in fundamental vocabulary between the languages of the eastern subgroups (12, 13, 14) and the western subgroups (1-11) generally equivalent, as explained above, to Westermann's West Sudanic. Citations are limited to common words for which material is available for a number of languages. It should be borne in mind that

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for most of the languages all that is available is a short vocabulary of some hundred words and a few phrases, in some cases vocabulary only. This also accounts for the lack of prominence of verb forms. For many of the languages, the equivalents of even such common concepts as 'eat,' 'drink,' 'give' are not known. All in all, however, the case is rather better for the affiliation of these branches to the Niger-Congo family than that for the Mandingo and West Atlantic branches of the western area.

Affixes are separated by hyphens from the stem morphemes. No elements are treated as affixes unless internal or comparative evidence of the type already discussed provides justification.<sup>20</sup>

Since almost none of the languages of the eastern groups have been the object of a reliable phonemic analysis and most are only known from the transcription of phonetically untrained observers, it is not surprising that the phonetic correspondences at time seem rather capricious. Moreover, probably all the languages are tonal, but only for Sango is there any tonal data. Tonal phenomena may well be limiting conditions for some of the apparently random variations.

Quotations from the western languages are designed to be as representative of the different subgroupings as possible and to show phonetic developments parallel to those of the eastern groups. In many instances cognate forms from well over one hundred languages of the western subgroups could have been cited. All the forms quoted are well attested in the western groups from a variety of languages. In the eastern groups I have usually restricted citation to a single dialect as representative of a language group, unless the form seemed particularly instructive.<sup>21</sup>

<sup>20</sup> It is the loose assumption of such prefixes and suffixes, by which almost anything can be proven in languages with short words, along with other weaknesses, which nullifies the attempt of B. Struck to document Westermann's first assumption of a general relationship of all the languages of the Sudan in his *Einige Sudan-Wortstämme* (Zeitschrift für Kolonial-sprachen, vol. 2, pp. 231-253, 309-323, 1911).

<sup>21</sup> The numbers after each quotation indicate the subgroup of Niger-Congo to which the language in question belongs. Chief sources from which information regarding languages of the eastern branches have been drawn are C. K. Meek, *Tribal Studies in Northern Nigeria* (2 vols., London, 1931); F. Strümpel, *Vergleichendes Wörterverzeichnis der Heidensprachen Adamawas* (Zeitschrift für Ethnologie, vol. 42, pp. 444-488, 1910) and *Wörterverzeichnis der heidensprachen des Mandara-Gebirges (Adamawa)* (Zeitschrift für Eingeborenen-Sprachen, vol. 13, pp. 47-74, 109-148, 1922); M. Gaudefoy-Demombynes, *Documents sur les langues de l'Oubangi-Chari* (Actes due XIVe Congres International des Orientalistes, pp. 172-330, Algiers, 1905); J. Lukas, *Zentralsudanische Studien* (Hamburg, 1937); F. Eboue, *Les Peuples de l'Oubangi-Chari* (Paris, 1933); J. Czekanowski, *Forschungen im Nil-Kongo-Zwischengebiet* (Leipzig, 1917), as well as works on individual languages.

*Orthographic Note:* Because certain characters are not available at this printing, a few substitutions for proper orthography have been made. Thus, *n* has been substituted for *d* with

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*Animal, meat*: E-Longuda *nyɔmɔ* (12), Yungur *namo* (12), Kam *nam* (12), Nimbari *nom-si* (12), Mangbei *nama* (12), Bua *nyam* (12), Namshi *nam-bo* (12), Bute *niem* (13), Zande *nya* (14), Barambo *nya* (14)

W-Degha *nama* (4), Adele *ε-nay* (5), Twi *nam* (6), Avikam *e-nyā* (7), Gwa *enā* (9), Ijo *nama* (10), Munshi *i-nyam* (11), Proto-Bantu *\*nyama* (11)

*bad*: E-Bute *be* (13)

W-Gurma *bi-a* (4), Kɔso *bi* 'to be bad' (5), Nupe *bi* 'to be bad' (6), Ekoi *bi* (11), Proto-Bantu *\*be* (11)

*to be (a)*: E-Bute *be* (13), Gbaya *be* (14), Gbanziri *ba* (14)

W-Temne *ba* (1), Bambara *bɛ* (2), Gbanyang *be* (4), Ahlō *ba* (5), Efik, *ba* (11), Proto-Bantu *\*ba*, *\*bɛ* (11)

*to be (b)*: E-Gbaya *de* (14), Bwaka *le* (14), Banda *le* (14)

W-Temne *re* (1), Mende *le* (2), Akasele *de* (4), Ahlō *le* (5), Ewe *le* (6), Proto-Bantu *\*le* (11)<sup>22</sup>

*belly*: E-Mumuye *buru* (12), Chamba *fu* (12), Nielim *hul* (12), Bute *bur* (13), Nzakara *yuru* (14), Bwaka *bu* (14), Madyo *mvuru* (14), Barambo *bulu* (14), Mayogu *ebu* (14), Azande *vu-se* (14), Banda *ovu* (14)

W-Kissi *pu-re* (1), Bambara *furu* (2), Mossi *pu-ga* (4), Kebu *e-futu* (5), Igara *e-fu* (6), Proto-Bantu *\*pu* (11)

*bird*: E-Kam *nu* (12), Nimbari *nun-gu* (12), Chamba *nu-a* (12), Kotopo *no* (12), Bua *ne* (12), Gbanziri *nu* (14), Ndogo *no* (14), Gbaya *noi*, *nwe* (14)

W-Pajade *u-noune* (1), Mende *noni* (2), Alagia *e-nene* (7), Akpet *ɔ-noi* (11), Ham *nu* (11), Proto-Bantu *\*-nɔni* (11)

*to bite*: E-Daka *lom* (12), Vere *rɔm* (12), Bute *nɔm* (13), Mayogu *nanumu* (14) Madye *romgo* (14)

W-Bambara *dumu* 'eat' (2), Grunshi *dum* (4), Kebu *dom* (5), Efik *dum* (11), Proto-Bantu *\*lom* (11), Akunakuna *num* (11)

*black*: E-Jen *bi* (12), Daka *vir-ki* (12), Mumuye *viri* (12), Zande *bi* (14), Nzakara *bibiri* (14), Gbanziri *bi* (14), Ndogo *bvibvi* (14), Sango *bi* 'night' (14), Banda *bi* 'at night' (14)

W-Temne *bi* (1), Bozo *bibi* (2), Kulango *bi* (4), Ahlō *bibi* (5), Kuku-ruku *bi* 'to be dark' (6), Efik *bire* 'to be black' (11)

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a period beneath (a voiced apical stop); epsilon followed by tilde for epsilon with tilde above (a nasalized, low front unrounded vowel); inverted c with tilde following for inverted c with tilde above (a nasalized, low back rounded vowel)—Editor.

<sup>22</sup> Regular correspondence involving *d*, *l*, *n* and *r* are found throughout the Niger-Congo languages.

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*bow*: E-Chamba *ta-pa* (12), Namshi *ta-bo* (12), Mumuye *ta* (12), Nimbari *ton-gu* (12), Mangbei *san-ga* (12), Gbaya *te-go* (14)

W-Gola *ta* 'shoot with a bow' (1), Gbanyang *ta* (4), Lefana *ɔ-ta* (5), Ibo *u-ta* (6), Munshi *ta* (11), Proto-Bantu *\*-ta* (11)

*breast*: E-Messo *bet-ku* (12), Yassing *bi* (12), Jen *mi* (12), Mumuye *mi* (12)

W-Biafada *bili* (1), Basari *de-bil* (4), Likpe *le-mi* (5), Akposo *e-vi* (5), Nupe *e-be* (6), Kyentu *a-mē* (11), Proto-Bantu *\*-bele* (11)

*child*: E-Mangbei *bi-ga* (12), Yassing *bie* (12), Koke *ba* (12), Gbaya *be* (14), Ndogo *bvi* (14)

W-Fulani *bi* (1), Mossi *bi-ga* (4), Adele *e-bi* (5), Ewe *vi* (6), Gwa *bi* 'small' (9), Proto-Bantu *\*bi-al* 'give birth' (11)

*to come*: E-Kaka *ba* (12), Bute *ba* 'future auxiliary' (13), Ndogo *bva* 'future auxiliary' (14)

W-Dagari *ba* 'future auxiliary' (4), Ahlō *ba* (5), Twi *ba* (6), Nupe *ba* 'future auxiliary' (6), Avikam *ba* (7), Abe *ba* (8), Ekoi *ba* (11)

*cow*: E-Kam *nak* (12), Yungur *na* (12), Bua *nya* (12), Namshi *na-yo* (12)

W-Fulani *nag-ge* (1), Serer Sin *nak* (1), Soninke *na* (2), Issala *nɔho* (4), Gbari *nako* (6), Ham *nyak* (11)

*day, sun*: E-Vere *ula* 'day' (12), Mumuye *la* 'sun' (12), Mbum *lo* 'day' (12), Sango *la* 'sun' (14), Mayogu *ela* 'sun' (14), Barambo *ora* 'day' (14)

W-Dyola *la* 'day' (2), Dagari *da* 'day' (4), Gā *la* 'fire' (6), Abe *la* 'fire' (8), Boritsu *u-la* 'fire' (11)

*to die*: E-Bute *ku* 'to kill,' 'to die' (13), Sango *kui* (14), Zande *kpi* (14), Gbanziri *kpwī* (14)

W-Senufo *ku* (3), Dagari *kpi* (4), Likpe *kpi* (5), Ewe *ku* (6), Edo *ku* 'to kill' (6), Kyama *ku* (9), Proto-Bantu *\*ku* (11)

*dog*: E-Mangbei *vwa* (12), Yungur *bwe* (12), Daka *vo-na* (12), Sango *mbo* (14), Gbanziri *mbo* (14), Ndogo *bvo* (14)

W-Pajade *ji-ba* (1), Kposo *ɔ-va* (5), Nupe *a-ba* (6), Kyama *gba* (9), Proto-Bantu *\*m-bwa* (11)

*to drink*: E-Nielim *nyi* (12), Longuda *nyo* (12), Sango *nio* (14), Gbanziri *nzo* (14)

W-Mossi *nyu* (4), Lefana *ni* (5), Gā *nū* (6), Proto-Bantu *\*nyo* (11)

*ear*: E-Longuda *tu-la* (12), Nimbari *to-gu* (12), Mangbei *su-go* (12), Messo *tu* (12), Waka (Mumuye) *to* (12), Mbum *su-k* (12), Nielim *tu-la* (12), Sari *to-ko* (12), Masa *to-go-r* (12), Bute *to* (13), Zande *tu-e* (14), Ndogo *tu* (14), Barambo *tu, tuku* (14), Banda *otu* (14)

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- W-Ahlō ɔ-tɔ (5), Ewe to (6), Gure ku-to (11), Proto-Bantu \*le-to  
 \*ko-to (11)  
 to eat: E-Messo li (12), Namshi le (12) Yassing re (12), Daka li (12),  
 Gbaya li (14), Zande ri (14), Barambo le (14)  
 W-Temne di (1), Mwī li (2), Foro li (3), Mossi di, ri, li (4), Anyi-  
 mere di (5), Ibo ri, li (6), Gwa di (9), Proto-Bantu \*le (11)  
 eye: E-Yungur nu (12), Longuda nyu-la (12), Kam anu (12), Jen niŋ (12),  
 Kumba (Mumuye) nɔ-r (12), Vere nɔ-r (12), Nielim nyi (12)  
 W-Mampa nyeny (1), Nafana nye-ne (3), Issala ni (4), Ahlō e-nu  
 (5), Ewe nu (6), Efik e-nyin (11)  
 fish: E-Masa ʒi (12), Mbum seo, nzui (12), Laka (Mbum group) sui (12).  
 Koke sa-p (12), Gbanziri si (14), Ndogo se (14), Sango susu (14)  
 W-Bulom si-su (1), Kisi sun-o (1), Ibo a-zū (6), Munshi e-su (11),  
 Proto-Bantu \*n-swe (11)  
 fly: E-Daka ge (12), Jen ize<sup>-</sup> (12), Vere guŋku-s (12), Bute ŋgi-b (13),  
 Gbaya dzi (14), Gbanziri ŋgi, ŋguŋgu (14), Zande zi, zī (14)  
 W-Ibo i-ji, o-ji (6), Ekoi ejij (11), Ololumo e-kinki (11), Kahugu  
 ku-ge (11), Proto-Bantu \*-ge (11)  
 four: E-Munga (Jen) nyia (12), Kam nar (12), Messo nan (12), Mbum  
 nyiaŋ (12), Nielim neni (12), Yassing nei (12), Chamba nara (12), Daka  
 nasa (12), Vere nar-ko (12), Longuda nnyet (12), Mangbei bi-na (12), Bute  
 nasi-b (13), Gbaya nara (14), Gbanziri bo-na (14) Banda va-na (14), Nadyo  
 wo-na (14)  
 W-Fulani nai (1), Bambara nani (2), Mossi a-nasi (4), Adele a-na  
 (5), Ibo a-na (6), Avikam a-nā (7), Abe e-nā (8), Gwa nwāni (9), Ijo i-nei  
 (10), Koro a-nar (11), Efik i-na (11), Proto-Bantu \*nai  
 fowl, chicken: E-Mbum kaka (12), Vere kɔku-s (12), Chamba ko-a (12),  
 Mangbei kaga (12), Gbanziri koko (14)  
 W-Bale koko (5), Guang koko (6), Proto-Bantu \*-kɔkɔ (11)  
 to give: E-Longuda na (12), Yungur na (12), Bute naha (13)  
 W-Mwin na (2), Senufu na (3), Ewe na (6), Avikam na (7), Munshi  
 na (11)  
 goat: E-Yungur mbwere (12), Bua mbi (12), Yendang (Mumuye group)  
 bi (12), Messo viu (12), Chamba vi-a (12), Nimbari be-gu (12), Durru (Vere  
 group) bi-o (12), Kam impili (12), Gbanziri bele (14), Ndogo be (14)  
 W-Wolof bei (1), Ahlō a-gbo (5), Alagia o-buri (7), Ibo o-bori (10),  
 Abua ebweli (11), Proto-Bantu \*m-boli (11)  
 head: E-Nielim su (12), Daka ti-i (12), Mono, Laka (Mbum group) tu-l

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(12), Mata (Mbum group) *to* (12)

W-Akpafu *i-ti* (5), Twi *e-ti* (6), Esopon *i-su* (11), Ikrom *de-tu* (11), Proto-Bantu \**to* (11)

*knee*: E-Longuda *kɔɔ-dum-le* (12), Chamba *dundu-la* (12), Kam *a-lunu* (12), Nimbari *lo-gu* (12), Namshi *dodu-ko* (12), Gengle (Mumuye group) *ruy* (12), Bute *jujne* (13)

W-Mampa *i-loɣk, i-doyk* (1), Mossi *dun-di* (4), Akunakuna *a-roɣ* (11), Efik *e-doy* (11), Proto-Bantu \**lu* (11)

*to laugh*: E-Jen *mama* (12), Gbaya *mama* (14), Banda *omo* (14), Zande *moma* (14), Gbanziri *mo* (14)

W-Bulom *mam* (1), Chala *mɔ* (4), Adele *moma* (5), Nupe *mɔ* (6), Efik *mam* (11)

*leg*: E-Masa *kul* (12), Messo *kuri* (12), Nimbari *kura* (12), Bute *gul, gur* (13), Madyo *kula* (14), Ndogo *ko* (14), Gbaya *ku* (14)

W-Dagomba *gba-le* (4), Anyimere *de-kpare* (5), Kebu *ke-gbari-ko* (5), Newole *kɔɔle* (6), Bitare *u-guru* (11), Proto-Bantu \**golo* (11)

*leopard*: E-Daka *gbe* (12), Chamba *go-a* (12), Vere *go, go-z* (12), Mumuye *gbe* (12), Gbaya *go* (14), Sango *že* (14)

W-Bulom *i-gbe* (1), Akasele *egbe* (4), Ibo *a-go* (6), Proto-Bantu \**gwe* (11)

*man*: E-Daka *ne* (12), Kam *nyi* (12), Longuda *nyi-re* (12)

W-Nalu *nyie* (1), Mende *nu* (2), Mossi *ni* (4), Adele *e-ni* (5), Yoruba *ε-ni* (6), Ekoi *ni* (11)

*moon*: E-Munga (Jen) *fi* (12), Yungur *fe* (12), Nimbari *fuo* (12), Mangbei *fia* (12), Bua *fio* (12), Nielim *pien* (12), Laka (Mbum group) *feo* (12), Mayogu *epe* (14), Gbanziri *pe* (14), Ndogo *pfi* (14)

W-Bulom *i-pa* (1), Pajade *fa* (1), Puguli *pɛno* (4) Likpe *ko-fa* (5), Igbira *u-fe* (6), Avikam *pɛ* (7), Kyama *pɛ* (9), Ham *fi* (11)

*mouth*: E-Munga (Jen) *mwa* (12), Nielim *mu* (12), Nimbari *nyi-ge* (12), Messo *nyau* (12), Gbaya *mu* (14), Madyo *mumu* (14), Gbaya *nu, ɲmu* (14), Banda *a-ma* (14)

W-Gola *nya* (1), Nafana *nyo* (3), Dagomba *nnɔ-le* (4), Ahlō *e-nu* (5), Ewe *nu* (6), Alagia *o-mwa* (7), Abe *o-nwa* (8), Efik *i-nua* (11), Proto-Bantu \**nwa* (11)<sup>23</sup>

<sup>23</sup> The base-form must be \**nwa*, from which \**mwa* develops by assimilation of the dental nasal to the labial position of the *n* in some languages. Further simplification of *mwa* to *ma* is found in some instances.

## STUDIES IN AFRICAN LINGUISTIC CLASSIFICATION

*neck*: E-Nimbari *koli* (12), Namshi *kol-ko* (12), Mangbei *goa* (12), Messo *gono* (12), Bute *kor* (13), Sango *golo, goro, gon* (14), Zande *goro* (14), Mayogo *guru* (14), Gbanziri *golo* (14), Barambo *golo* (14)

W-Limba *kɔnt* (1), Kpelle *kɔŋ* (2), Twi *e-kɔŋ* (6), Nde *ŋ-kɔŋ* (11), Ololumo *de-kolo* (11), Ikom *kɛ-koro* (11)

*nose*: E-Messo *ono* (12), Chamba *nyi-ra* (12), Bute *nyo-r* (13), Gbanziri *ŋō* (14), Manjombo *nyɔ* (14)

W-Mano *nyu* (2), Konjaga *nyu-r* (4), Birifo *nyi* (4), Sankotrofi *o-ŋu* (5), Avatime *li-nyɔ* (5), Alagia *i-nyi* (7), Ijo *nini* (10), Yala *e-ŋu* (11)

*saliva*: E-Mbum *sa-m* (12), Vere *to-tu* (12), Chamba *so-ra* (12), Gbaya *sa* (14), Ndogo *tso* (14)

W-Avatime *si-ta* (5), Ewe *ta* (6), Proto-Bantu *\*-ta* (11)

*salt*: E-Mbum *to-m* (12), Mumuye *tā* (12), Gbaya *tō, toy* (14)

W-Bulanda *tom* (1), Bijogo *n-to* (1), Legba *to-m* (4), Basa *to* (6)

*to say*: E-Bute *ta* (13), Gbaya *tɔ* (14), Banda *to* (14)

W-Akyulo *ta* (4), Dagari *tɔ-he* (4), Adele *ta* (5), Edo *ta* (6)

*to sleep*: E-Nielim *lelo* (12), Gbanziri *lala* (14), Banda *lo* (14), Gbaya *ra* (14)

W-Bulom *lɔl* (1), Likpe *lɛ* (5), Ibo *la* (6), Alagia *peda* (7), Yala *la* (11), Proto-Bantu *\*lal-* (11)

*stone*: E-Munga (Jen) *tei* (12), Kam *a-tal* (12), Nimbari *tali* (12), Mumuye *tari* (12), Bua *ta* (12), Mangbei *sa* (12), Bute *seule* (13), Gbaya *ta* (14), Sango *te* (14)

W-Gurma *tan-i* (4), Adele *de-ta* (5), Gā *tɛ* (6), Kamuku *tale* (11), Proto-Bantu *\*-tale* (11)

*ten*: E-Jen *fwia* (12), Munga (Jen) *fu* (12), Yungur *pu* (12), Kam *buu* (12), Mbum *bu* (12), Duli (Vere group) *bo* (12), Gbaya *bu, bua, buko* (14)

W-Wolof *buko* (1), Mende *pu* (2), Akyulo *fuya* (4), Lipke *fu* (5), Grebo *pu* (6), Munshi *pu* (11)

*three*: E-Munga (Jen) *tat* (12), Mumuye *tati* (12), Nimbari *tat* (12), Bua *ter* (12), Longuda *sar* (12), Kam *čar* (12), Nielim *teri* (12), Masa *ata* (12), Yassing (Mbum group) *sai* (12), Daka *tara* (12), Chamba *tora* (12), Vere *tari-ko* (12), Namshi *tatu* (12), Bute *tare-b* (13), Gbaya *tare* (14), Sango *ota* (14), Mayogo *ba-ta* (14), Zanda *bia-ta* (14), Nzakara *ata* (14), Gbanziri *bo-ta* (14), Banda *vo-ta* (14)

W-Fulani *tati* (1), Nafana *tare* (3), Gurma *ta, n-ta* (4), Kebu *ta* (5), Yoruba *e-ta* (6), Ijo *tere* (10), Kagoro *tat* (11), Proto-Bantu *\*tato* (11)

## THE NIGER CONGO FAMILY

*tongue*: E-Munga *lyem* (12), Kam *a-lim* (12), Teme (Mumuye group) *lem* (12), Mbum *lima* (12), Mangbei *na-lim-no* (12), Yungur *liemie* (12), Gbaya *lembe* (14)

W-Pajade *pu-leme* (1), Tobote *le-limbi-ri* (4), Adele *ge-leme* (5), Yagwa *u-leme* (11), Proto-Bantu *\*-leme* (11)

*tooth*: E-Daka *nyine* (12), Koki *ni* (12), Bute *nyin* (13), Gbaya *nini* (14)

W-Bola *pu-nyi* (1), Bambara *nyin* (2), Dagomba *nyine* (4), Lefana *a-nyi* (5), Igbira *a-nyī* (6), Avikam *e-nyini* (7), Ari *a-nye* (8), Kamuku *li-nye* (11)

*tree* (a): E-Chamba *ti-a* (12), Daka *ti-ma* (12), Longuda *ti-ka* (12), Nimbari *te* (12), Koke *teo* (12), Teme (Mumuye group) *te* (12), Vere *te* (12), Gbaya *te* (14)

W-Nalu *n-ti* (1), Dagari *ti-a* (4), Ahlō *e-ti* (5), Ewe *a-ti* (6), Alagia *e-te* (7), Ari *ti* 'fire wood' (8), Ijo *te* (10), Ekoi *e-ti* (11), Proto-Bantu *\*-te* (11)

*tree* (b): E-Bute *kon* (13)

W-Gola *kulu* (1), Vai *koy* (2), Ibo *-ko* 'firewood' (6), Yergum *a-kun* (11), Proto-Bantu *\*-koni* 'firewood' (11)

*two*: E-Nimbari *bala* (12), Messo *bala* (12), Daka *bara* (12), Bute *bine-b* (13)

W-Temne *ki-bari* 'twins' (1), Avatime *o-ba* (5), Twi *e-bien* (6), Nde *i-bal* (11), Suga *bala* (11), Proto-Bantu *\*-bale*, *\*-bele* (11),

*white*: E-Mumuye *puru* (12), Mbum *fu* 'to be white' (12), Daka *bur-ki* (12), Mangbei *pu* (12), Bute *eburi* (13), Sango *vulu* (14), Zande *pu-si* (14)

W-Dyola *fur* (1), Mende *puru* (2), Akyulo *pua* (4), Adele *fu* (5), Tewi *puro* (6), Ewe *fu* (6), Munshi *popo* (11)

## THE CLASSIFICATION OF FULANI

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 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-be*. The word for 'thief' is *guy-jo* in the singular, *wuy-be* 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."<sup>1</sup> The Hamitic

<sup>1</sup> F. W. Taylor, *A First Grammar of the Adamawa Dialect of the Fulani Language* (Oxford, 1921), p. 10.

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Fig. 1. Map showing the location of Fulani and related languages in West Africa.

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origin of Fulani is accepted by Jeffrey 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."<sup>2</sup> 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 in the first article of this series.<sup>3</sup> 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."<sup>4</sup> 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.

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

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

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

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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'di* belongs to the *di* class; *dawa'di di 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 alterant 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:<sup>5</sup>

<i>B</i>	<i>SS</i>	<i>SF</i>	<i>SN</i>	<i>FS</i>	<i>FF</i>	<i>FN</i>
*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-be* 'men'. I have used a table similar to

<sup>5</sup> 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. *B* and *D* in the Fulani words stand for implosive sounds.

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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 alterants: 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.

In the Fulani verb forms with a singular subject the initial consonant is one of the fricative series, while in the plural we find the prenasalized form *gorko wari* 'the man came', *worbe ngari* 'men came'. The base form is then *\*gari*. In accordance with the table above, Serer has *kor gar* 'the man came', *gor ngar* 'the men came'. Jeffrey's hypothetical children were comparative linguists! This highly unique alternation of verb forms—singular fricative, plural prenasalized—is, as far as I know, only shared by Fulani and Serer. Our knowledge of the verb system of most of this group however is very meager.

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 *re* > *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. *hav-*, S. *xad*; black: F. *bal-*, S. *bal-ig* 'to be black'; child: F. *bi*, S. *bi*; come:

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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 bi* (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. *libdi* (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. *ʔand*, S. *and*; laugh: F. *jal-*, S. *jal*; man: F. *gor-kò* 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. If we resort to unprovable "sub-stratum" explanations of the divergences of Fulani from other languages of the group, we face the following situation. Fulani is actually nearer to the hypothetical Niger-Congo parent language than Serer or most of the other languages of the

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area. Fulani has retained such common Niger-Congo noun morphemes as *dem* 'tongue', *nyi* 'tooth', *tati* 'three', *nai* 'four' where Serer has lost them. The system of noun classes in Fulani is the most conservative in the area. If we note, for example, the comparisons of Fulani noun-classes with those of the West Sudanese languages in general carried out by Westermann, we see that the resemblance is close and obvious.<sup>6</sup> If we are to resort to sub-stratum theories to account for divergent developments, the highly specialized morphology and phonetics of such languages as Nalu, Banyun, and Bulanda in this area require it.

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

<sup>6</sup> See D. Westermann, *Die westlichen Sudansprachen* (Berlin, 1927). Westermann at one time sought to explain the class-affixes of Gola, a language of the West Atlantic subgroup of his West Sudanic (Niger-Congo) family, by borrowing from Fulani. Meinhof himself notes the strong resemblance between the Fulani and Bantu class-affixes in the section of *Die Sprachen der Hamiten* devoted to Fulani, and we have seen that the Bantu group is a member of the Niger-Congo family.

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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,<sup>7</sup> 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 *dam* 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 *dido*, *didi* 'two' is cognate with Bedauey *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 *sakua* 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.

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<sup>7</sup> *Die Permutationen des Biafada und des Ful* (Zeitschrift für Eingeborenen-Sprachen, vol. 25, pp. 180-213, 268-272, 1924). See also his valuable essay, *Die Suffixklassen des Ful* (same series, Beiheft 23, 1941).

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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 in a later article in this series 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.

## THE POSITION OF BANTU

IN THE FIRST ARTICLE of the present series, 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 article of this series 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.<sup>1</sup> This material, which might be vastly extended, showed regular correspondences such as the following: Proto-Bantu \*v = Proto-Sudanic \*b, Proto-Bantu \*ɣ = Proto-Sudanic \*g; in the vowel system Proto-Bantu \*i, \*i, \*e, \*a, \*o, \*u, \*û corresponded respectively with Proto-Sudanic \*i, \*i, \*e, \*a, \*ua, \*u, \*u.<sup>2</sup> Occasionally Proto-Bantu u corresponds to Proto-West Sudanic 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

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

2 Proto-Bantu forms are quoted throughout in the transcription employed by Meinhof. *û* and *i* stand for very close back and front vowels respectively.

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others, showed close resemblances to the well-known prefixes of Bantu both in form and meaning, thus:

<i>PWS</i>	<i>PB</i>	<i>Meaning</i>
u	$\gamma u^3$	Singular, personal class and animate non-personal class
ba	$\gamma a$	plural, personal class
i	$\gamma i^3$	plural, animate non-personal class
li	li	singular of paired objects
a	$\gamma a^3$	plural of paired objects
ma	ma	liquids and other mass nouns
bu	$\gamma u$	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. It would easily fill this entire issue!

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.

In order not to duplicate material already available, the reader is referred to the above-mentioned study of Westermann.<sup>4</sup> Likewise a number of Proto-Bantu forms are incidentally cited in the latter section of the first article of this series. 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

<sup>3</sup> Here again, I quote Meinhof's reconstructions; *u*, *i* and *a* respectively in place of  $\gamma u$ ,  $\gamma i$ ,  $\gamma a$ , seems more likely.

<sup>4</sup> See Note 1 above.

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same 50 nouns in Dyula, a typical Mandingo 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.<sup>5</sup> 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 deny the genetic relation-

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<sup>5</sup> Some writers, e.g. Johnston, have extended the term Semi-Bantu to all West Sudanic languages with noun prefixes, thus including languages as far west as the Atlantic. This usage is not referred to here.

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ship of British and American English, 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 I. C. Ward's excellent tonal study.<sup>6</sup> Unfortunately relatively few forms are cited in this work, but among them are fifteen words for which Proto-Bantu tonal data have been deduced.<sup>7</sup> The result, as can be seen from the following citations, is virtual tonal identity. Noun prefixes are omitted. Efik *-tó*, Bantu *\*-té* 'tree'; Efik *-tòŋ*, Bantu *\*-tó* 'ear'; Efik *-kút*, Bantu *\*-kúdù* 'tortoise'; Efik *-kpè*, Bantu *\*-gvè* 'leopard'; Efik *-buá*, Bantu *\*-bwá* 'dog'; Efik *-nuèn*, Bantu *\*-nòni* 'bird'; Efik *-bà*, Bantu *\*-bàlè* 'two'; Efik *-tá*, Bantu *\*-tátù* 'three'; Efik *-nàŋ*, Bantu *\*-nài* 'four'; Efik *-tiòn*, Bantu *\*-tánò* 'five'; Efik *di*, Bantu *lè* 'to be'; Efik *kpá*, Bantu *kuá* 'to die'; Efik *tè*, Bantu *tè* 'to say'; Efik *dóm*, Bantu *\*lóm-* 'to bite'; Efik *diá*, Bantu *\*lé* 'to eat'.

We also have Abraham's tonal material for another Semi-Bantu language, Munshi. Here again there is, in general, excellent agreement with reconstructed Proto-Bantu tonal forms. Most striking of all is the following. Not only is there point-for-point correspondence with the Bantu noun-prefixes but the peculiar tonal configuration by which all the pronouns referring to the noun clauses are high, except those of Meinhof's class 1 and class 9 which are low, is found both in Munshi and the Bantu languages.<sup>8</sup> A more intimate point of contact or one less likely to be borrowed is difficult to imagine.

2. *The irreversibility of certain changes.* In the Bantu languages we find a noun class with the prefix *ma-*. This class functions as the plural of the *li-* class which includes many objects which come in pairs. The *ma-* class also occurs in many names of liquids and other mass, i.e. indefinitely divisible substances. These nouns have no singular, or rather the singular-plural dichotomy is irrelevant. This disparity in meaning within the *ma-* class has often been noted by Bantu specialists. The explanation is clear if one considers the other West Sudanic

6 *The Phonetic and Tonal Structure of Efik* (Cambridge, 1933).

7 J. H. Greenberg, *The Tonal System of Proto-Bantu* (Word, vol. 4, pp. 196-208, 1948).

8 R. C. Abraham, *The Grammar of Tiv* (Kaduna, 1933), p. 13.

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(Niger-Congo) languages. Here we have a set of classes referring to paired objects *li-* singular, *a-* plural and an entirely distinct *ma-* class referring to liquids and other mass nouns. The replacement of *-a* by *ma-*, a Bantu innovation, has caused these two classes to fall together in Bantu. The speakers of Semi-Bantu and other West Sudanic languages must have been comparative linguists to sort out these classes once more after they had coincided in Bantu. Here the Bantu situation can be explained by reference to the Semi-Bantu languages, but not vice-versa and borrowing by the Semi-Bantu languages is thus ruled out as a possibility.

Likewise in the analogous Bantu innovations *\*mu-* for *\*u-* and *\*mi-* for *\*i-* in the case of two other noun prefixes, the Bantu pronominals referring to these classes show *\*yu* and *\*yi*, rather than the expected *\*mu* and *\*mi*.<sup>9</sup> 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 *vi-ala* 'to give birth'. As a derivative from *vi* '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 *vi-ala* into its constituent elements and the abstraction of the form *\*vi-* 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

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<sup>9</sup> See Note 3 above.

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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. *All West Sudanic words found in Bantu are found in Semi-Bantu also.* There appear to be no contrary instances to this rule. If there is genetic relationship of the kind assumed here the explanation of this phenomenon is simple. Just as no inherited Indo-European form can appear in English without having gone through Proto-Germanic, so no Proto-West Sudanic (= Proto-Niger-Congo) form can appear in Bantu unless it has been retained by the primitive language from which both Bantu and Semi-Bantu languages are descended. We do not have any direct record of this language any more than in the case of Proto-Germanic. There are, however, well over sixty Semi-Bantu languages. That some particular inherited form would be lost in all sixty languages simultaneously is highly unlikely. In practically all instances Proto-West Sudanic forms found in Bantu are also present in a good number of Semi-Bantu languages. This situation is difficult to account for on the basis of borrowing. It would involve a conspiracy on the part of the extremely diverse and numerous Semi-Bantu languages to always borrow the same terms from Bantu.

It may be well to explain at this point that the Semi-Bantu languages do not form a genetic unity as against the Bantu languages. They exhibit great diversity and, on the basis of special resemblances between individual languages, it has not been possible to reduce the number of distinct sub-groups beyond twenty-three.<sup>10</sup> Bantu is, then, simply one among twenty-four genetic sub-groupings within the subfamily of the Niger-Congo languages which I call the Central branch on geographical grounds. The term Semi-Bantu is no more justified than the term Semi-French to describe Italian, Spanish, Portuguese, and Rumanian. It has no usefulness beyond such a discussion as the present one.

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.<sup>11</sup> Such languages are Bamum, Bali,

<sup>10</sup> See the listing at the end of this article.

<sup>11</sup> For example, N. W. Thomas has considered Jarawa to be Bantu while other writers have called it Semi-Bantu.

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Banyen (Penin), Manyang-Konguang, 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. On the basis of vocabulary alone, I came to the conclusion some time ago that these languages must be Bantu and that the border-line between Bantu and Semi-Bantu is actually a clear one. These languages again and again show Bantu forms for those words in which Bantu is distinct from the Semi-Bantu languages and where Bantu lexical innovations are involved. Such are the words for 'salt', 'house', 'pig', 'crocodile'. Moreover, where information on plurals is available, they share the replacement of *a-* by *ma-* and the merging of this class with the *ma-* liquid, mass noun class discussed above. This conjecture was fully confirmed for the Banyen language at least by unpublished material of Mlle Dugast made available to me by the courtesy of Professor Martinet. No one examining this material can fail to see that this is a genuine Bantu language. Forms are all derivable by regular and frequently unobvious phonetic shifts from standard Proto-Bantu reconstructions. Such special Bantu features appear as the locative in *-ni*, the genitive particles consisting of the class pronoun + *a*, the singular diminutive prefix *hi* < P. B. \**pi* which is not found anywhere outside of Bantu, etc. All of these languages seem to belong to the northwestern group of Bantu languages, of which Duala is the best-known.

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

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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. Here we have not two languages, but twenty-three separate stocks all in the same general area of Nigeria and the Cameroons. 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. 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.

Tentative genetic sub-groupings of the Central branch, Niger-Congo:<sup>12</sup>

1. Cross River, 2. Yala, 3. Munshi, 4. Afudu, 5. Boritsü, 6. Mbarike (Zumper), 7. Yergum, 8. Jaba (Ham), 9. Kagoro-Katab, 10. Burum, Piti-Chawai-Kurama, Ganawuri?, 11. Gure-Kahugu, 12. Yeskwa, 13. Kamuku-Bassa,

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<sup>12</sup> There is no published material on Rukuba and several other presumably Semi-Bantu languages of Northern Nigeria. The classification of Ninzam, Nungu, Mada, and Afo is based on numerals only. The location of Afudu and Boritsü, not reported since S. W. Koelle's *Polyglotta Africana* (London, 1854), is uncertain.



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14. Batu, 15. Ngoro, 16. Jukun, Kyentu, Nidu, 17. Tigong, 18. Mambila-Suga, 19. Bitare, 20. Koro, 21. Ninzam, Nungu, Mada, 22. Afo, 23. Anyang, 24. Bantu.

## HAMITO-SEMITIC

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.<sup>1</sup>

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.<sup>2</sup>

In the present essay 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 of this series of articles on African linguistic classification is 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

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<sup>1</sup> Paris, 1924, p. 24.

<sup>2</sup> 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).

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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 an earlier essay in this series. 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 *ja-l* 'boy', *ja-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. The other sub-

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families are Nuba, Beir-Didinga, Barea, Tabi, Merarit, and Dagu (or Dajo).<sup>3</sup> This linguistic stock will be subject matter of a subsequent essay in this series where full proof concerning the validity of this grouping will be presented. The view that the Nilo-Hamitic is a kind of linguistic hybrid of Nilotic and Hamitic components, consisting of Nilotic bases with Hamitic prefixes and suffixes will likewise be considered and rejected. An actual examination of the evidence will show that, in reality, there are very few resemblances of this order, no more than can be ascribed to chance convergence.

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.<sup>4</sup> Likewise, D. Bleek, in her comparative vocabulary of

<sup>3</sup> The inclusion of Merarit and Dagu, both spoken in areas of the Sudan remote from the Nilotic and Nilo-Hamitic languages, is surprising. Merarit has usually been classed with the neighboring Maba but this connection did not prove valid.

<sup>4</sup> 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).

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Bushman languages, quotes Hottentot forms along with those of the central Bushman group.<sup>5</sup> 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 Bedanye, 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.<sup>6</sup> 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 also to be Hamitic.<sup>7</sup> 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.<sup>8</sup> 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.<sup>9</sup> M. Cohen, in his recent 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.

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

5 D. F. Bleek, *Comparative Vocabularies of the Bushman Languages* (Cambridge, 1929).

6 R. Lepsius, *Standard Alphabet* (2nd ed., London, 1863).

7 *Die Musik-Sprache in Central-Afrika* (Vienna, 1866).

8 *Die Sprachen der Hamiten* (Hamburg, 1912).

9 *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).



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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-Hamitic 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-Hamitic 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 the languages of the western subgroup of Cushitic (Kaffa and similar languages).

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; (b) Ngizim; (c) Bolewa, Ngamo, Karekare, Kanakuru, Angas, Ankwe, Sura, Montoil, Baron, Gurka, Yergum
2. Kotoko group (Mackeri, Ngala, Affade, Klesem, Gulfei, Shoe, Kuseri, Logone, Buduma-Kuri)
3. (a) Bata-Margi group: Bata, Bachama, Malabu, Njei, Zany, Holma, Kobochi, Vadi, Higi, Baza, Falli of Kiria, Kapsiki, Gudu, Vizik, Sukur, Mubi, Cheke, Margi, Chibbak, Bura, Pabir, Kilba, Paduko; (b) Gabin, Hona, Hinna, Tera, Jara
4. (a) Hina, Daba, Musugoi, Gaur; (b) Gisiga, Muturwa, Badda, Muffo, Muffu, Matakam
5. Gidder
6. Wandala (Mandara, Gamergu)
7. Musgu
8. Bana, Banana, Kulung, Lame

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

Unclassified: Bode, Waja, Tula, Tangale, Mober, Gwandara

The morphological resemblances of the Chad-Hamitic 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 Cushite 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 Cushite 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 Cushite languages. Taking our examples from Logone, we have the following:

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

b. Internal change of some other vowel to *a*: Logone *sini*, 'tooth', *san* 'teeth'. In Bedaaye, or North Cushitic, we have 'or 'son', 'ar 'sons'; in Berber *a-jɔɔ* 'bird', *i-jɔɔ* 'birds'. (The initial vowels are a historically distinct formation.)

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 *ɣgun* 'belly', *ɣgwanen* 'bellies'; Berber *a-fus* 'hand', *i-fassen* 'hands'.

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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 *-ʔn*, 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 *ĕ* (<*ki*) 'thy (fem.)'.

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

d. The second person plural possessive Hausa *-ku*, Jara *-kun*, Ngizim *-kum*, Ngamo *-kɔm*, etc., may be compared to Proto-Semitic \**-kumu* 'your (masc.)' /*-kinna* 'your (fem.)'; Egyptian *-ĕn* <*kin* 'your' and Cushitic Bedauye *-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 *yadribu* 'he strikes', *tadribu* 'she strikes'), Berber *idda* 'he goes', *tedda* 'she goes', and Cushite (Bedauye *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.

A number of resemblances between the Chad languages and the other

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branches of Hamito-Semitic are cited at the end of this article. All of these etymologies are at least probable, many quite certain. I have rigorously rejected a number of comparisons, some of which may indeed turn out to be correct, because the forms are only attested from single languages, or a single subgroup of the Chad languages, and are therefore probably recent lexical innovations. Thus, at first glance we might be struck by the resemblance of the Cushite Chamir *zila* 'bird' to the Ngala Chad form *zila* 'bird'. However, both forms are isolated in their respective groups, so that we have here probably an instance of recent convergence. I have only used Chad forms in etymologies if they occur in at least two subgroups. Forty or fifty highly probable etymologies seemed to me more cogent than two-hundred unconvincing ones.

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 coordinate branches: (1) Semitic, (2) Berber, (3) Ancient Egyptian, (4) Cushite, (5) Chad. In regard to its membership there remains only to be added the fact that the existence of the Cushite languages Mbugu, Iraku, and Mbulugwe in Tanganyika, considerably south of the main Cushitic group, has generally been overlooked.<sup>10</sup>

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

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<sup>10</sup> The grouping of the Cushite languages in M. A. Bryan's *The Distribution of the Semitic and Cushitic Languages of Africa* (London, 1947), errs not only in omitting these Southern languages but in other details, most notably that—apparently under the spell of the term Sidamo, the Galla word for heathen—two distinct subfamilies are classified together and the affiliations of eastern Sidamo with the Somali-Galla group is ignored. My conclusions agree with those of M. M. Moreno in his *Manuale di Sidamo* (Rome, 1940). The careful review of the evidence there makes it unnecessary to include formal justification of the classification of Cushite given here in Fig. 3. Such a grouping of the Cushite languages was necessary in order to evaluate the lexical evidence from these languages cited in the word-list at the end of this article. In addition to the languages listed on the map, Doko and Dollo (of uncertain location north of Lake Rudolf) belong to the Western subgroup. The evidence is insufficient in the case of Bako, Kokke Amarr, and Kerre to decide whether the languages are Cushite (see Conti Rossini, *Sui linguaggi parlati a nord dei laghi Rodolfo e Stefania*, in *Festschrift Meinhof*, pp. 247-255). I have been unable to locate E. Cerulli's presumably published material intended to show that the Bako group is non-Cushite. On the basis of the fragmentary evidence available I should be inclined to believe that these languages belong to the Western subfamily of Cushite. M. A. Bryan's abovementioned treatment remains valuable in many respects and the map of the Cushite languages presented here is indebted to hers for many details.

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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.<sup>11</sup> 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."<sup>12</sup>

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.<sup>13</sup>

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.<sup>14</sup>

Haddon in speaking of the Bantu, says:

The widely spread keeping of cattle and refinement of facial characteristics betray Hamitic infusion.<sup>15</sup>

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

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<sup>11</sup> London, 1930.

<sup>12</sup> *Zeitschrift für Kolonialsprachen*, vol. 5, p. 164.

<sup>13</sup> Page 127.

<sup>14</sup> *Die Sprachen der Hamiten*, p. 2.

<sup>15</sup> *The Races of Man* (Cambridge, 1929), p. 42.

## THE POSITION OF BANTU

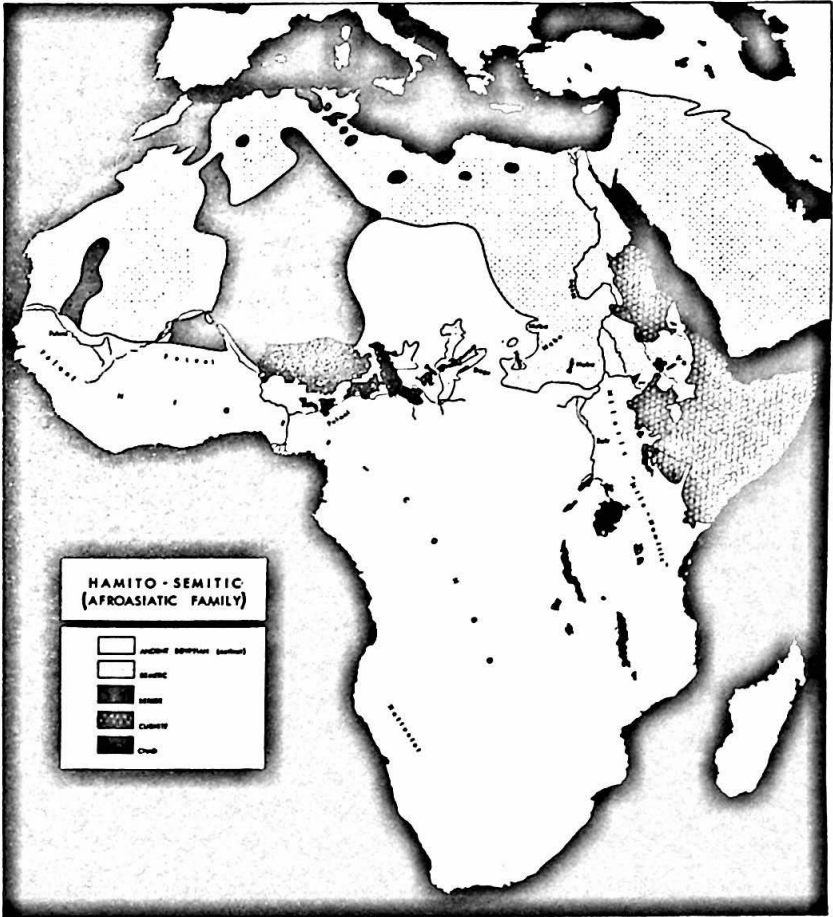


FIG. 2. Continental distribution of Hamito-Semitic (Afroasiatic family).

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. . . the incoming Hamites were pastoral Caucasoids—arriving wave after wave—better armed as well as quicker-witted than the dark agricultural Negroes.<sup>10</sup>

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 rather hesitantly 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 con-

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16 *Races of Africa*, p. 158

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quering 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.

### COMPARATIVE WORD LIST<sup>17</sup>

ass: Chad-Bolewa (1) *koro*; Buduma (2) *koro*; Bana (8) *kurota*; Sokoro (9) *koro*\*

Cushite—Chara (W) *kura*; Kaffa (W) *kuro*\*; Saho (E) *okalo* [62]

back: Chad—Muturuwa (4) *duba*; Matakam (4) *deba*; Gidder (5) *debo-ko*; Musgu (7) *deba*

Cushite—Chamir (C) *dirba*; Bilin (C) *danbi*; Somali (E) *dambo*; Saho (E) *daban*. Semitic—Arabic *dabara* 'to be behind', *dubur* 'back' [332]

to beat: Chad—Hausa (1) *do'ka*; Karekare (1) *duku*; Kilba (3) *digga*.

Cushite—Saho, Afar (E) *tak*; Bilin (C) *dadaku* [340]

black: Chad—Buduma (2) *tsillim*; Kuri (2) *čilim*; Sokoro (7) *silim*.

Cushite—Agau, Bilin (C) *ɟ'alam* 'to be dark'; Bedauye (N) *duluma* 'darkness'. Semitic—Arabic *ʔ.lm* 'darkness'; Akkadian, *šlm* 'darkness' [353]

blood: Chad—Hinna (3) *var*; Gidder (5) *beli*; Musgu (7) *fel*; Karbo (9) *ba'ri*; Somrai (9) *bari*

Cushite—Bedauye (N) *boi*; Chamir (C) *bir*; Saho (E) *bilo*\*

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<sup>17</sup> Numbers after Chad languages refer to subgroupings as listed above. Letters after Cushite 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. 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-Semitique*.

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to be: Chad—Hausa (1<sup>18</sup>) *na*; Karekare (1) *na*; Zumu (3) *na*; Musgu (7) *na*; Somrai (9) *na* (verbal auxiliary)

Cushite—Saho, Afar (E) *na*; Sidamo (E) *no*; Bilin (C) *en*. Egyptian —\* Ancient Egyptian *wnn*; Coptic *ne* (verbal auxiliary). Semitic—Gurage *n, na* [445]

bone: Chad—Hausa (I) *ḳāsi* (<*ḳasi*\*); Karbo (9) *ka'so*, pl. *ka'si*.  
Egyptian—*ḳs*. Berber *i-xs* (<*i-ḳs*) [225]

brother: Chad—Bachama (3) *zino-gi* 'my brothers'; Modgel (9) *sen*; Somrai (9) *sen*

Cushite—Bedauye (N) *san*; Demba (C) *žan, zin*. Egyptian—*sn*.

by, near: Chad—Hausa (I) *gaba* 'in the presence of'; Musgu (7) *gob*; Bana (8) *gobio*

Cushite—Bedauye (N) *gēb*; Bilin (C) *gaba*. Semitic-Ethiopic *gābo* (borrowed from Cushite?)

cattle: Chad—Karekare (I) *lo* 'meat, animal'; Zumu (3) *lio* 'meat, animal'; Mubi (9) *la* 'cattle'

Cushite—Bilin (C) *lau* 'cattle', *luw-i* 'cow'; Saho, Afar (E) *la* 'cattle'; Kule (E) *lo* 'cow'

child: Chad—Affade (2) *ul*; Kuri (2) *wu'li*; Somrai (9) *wi'l*

Berber—*u* 'son', *ul-t* 'daughter'. Semitic—Arabic *walad* 'child'

to come: Chad—Yergum (I) *ba*; Kanakuru (I) *bə* 'go away'; Hona (3) *bai*; Gabin (3) *bei*; Tera (3) *ba*; Kulung (8) *ba*; Sokoro (9) *ba* 'go'

Cushite—Bedauye (N) *ba'y* 'go'; Afar, Galla (E) *ba* 'go'; Sidamo (E) *ba* 'go'. Semitic—Hebrew *bā*; Arabic *ba'* 'return'; Ethiopic *bo*

cold: Chad—Affade (2) *simmade*; Mackeri (2) *simmade* 'wind'; Gidder (5) *semmia* 'wind'; Musgu (7) *simer* 'wind, cold'; Kulung (2) *simeda* 'wind'

Berber—*semmid* 'to be cold'

cow: Chad—Hausa (I) *sa* 'bull'; Kuri (2) *sa*; Margi (3) *hsa* 'bull'; Musgu (7) *saye*; Dam (9) *suwi*

Cushite—Bedauye (N) *ša* 'ox, cow'; Somali (E) *sa'* 'ox, cow'; Mbulunge (5) *se* 'ox'. Berber—Tuareg *esu* 'ox, cow' [279]

day: Chad—Mackeri, Ngala (2) *se*; Margi (3) *āsi-na* 'today'; *āsi-duku* 'tomorrow'; Mubi *ha-ssa* 'now=this day'

<sup>18</sup> By inadvertence a roman I has been substituted for arabic I in a number of instances in this tabulation.—Editor.

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Cushite—Mbugu (S) *azi*; Janjero (W) *āsi* 'now', *ha-šau* 'today'. Berber—*a-ss*, pl. *u-ss-an*

to die: Chad—Hausa (I) *mutu*; Logone (2) *mti*; Hinna (3) *midi*; Musgu (7) *miri*; Mubi (9) *ma't*; Sokoro (9) *mi'ta*

Egyptian—*mw̄t*. Berber—*emm̄t*. Semitic—Arabic *ma'ta*; Ethiopic *motä*; Hebrew *meθ* [488]

dog: Chad—Hausa (I) *kare*; Klesem (2) *kere*; Logone (2) *kəle*; Sukur (3) *kirra*; Muturuwa (4) *kirri*; Gidder (5) *kra*; Mandara (6) *kare*

Cushite—Wollamo (W) *kana*; Kule (E) *karō*; Saho (E) *kare* [189]

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 *suwa*

Berber—*su*. Egyptian—Ancient Egyptian *swr*; Sahidic Coptic *so* [296]

ear: Chad—Affade (2) *sim*; Kuri (2) *summu*; Buduma (2) *hamai* (<*samai*) 'to hear'; Jera (3) *limo*; Matakam (4) *sam*; Gidder (5) *sno-ko*; Mandara (6) *šimma*; Musgu (7) *šem*; Bana (8) *huma-ngu* 'my ear'

Semitic—Arabic *samiʿa* 'to hear'; Hebrew *šmaʿ* 'to hear' [82]

to eat: Chad—Hausa (I) *či* (<*ti*); Bolewa (I) *ti*; Kulung (8) *te* 'food'; Bana (8) *ti-na* 'food'; Mubi (9) *tiya* 'food'; *tuwa* 'eat'

Berber—*ča* 'eat'; *tett* habitual form of same verb. Cushite—Bedauye (N) *tiyu* 'food'; Sidamo (E) *it*; Janjero (W) *ta*'.

egg: Chad—Hausa (I) *kōy*; Ngizim (I) *agw̄di*; Zumu (3) *kwali*; Nzangi (3) *kur̄ei*; Gabin (3) *gēela*.

Berber—Beraber *ti-glay*; Shilh *ta-glay-t*. Cushite—Bilin (C) *kayalu'na*; Saho (E) *un̄kualale*

eye: Chad—Hausa (I) *ido*; Buduma (2) *yil*; Hinna (3) *idi*; Matakam (4) *ere*; Mandara (6) *ije*; Musgu (7) *aray*; Bana (8) *ir-angu* 'my eye'; Sokoro (9) *yi'di*.

Cushite—Bedauye (N) *lili*; Somali (E) *il*, pl. *indo*; Quara (C) *yil*, il; Mbugu (S) *ila*; Galla (E) *ijja*. Egyptian—*yr-t* [62]

fire: Chad—Klesem (2) *ahu*; Affade (2) *hu*; Higi (3) *uhu*; Hina (4) *koho*; Matakam (4) *oko*; Kulung (8) *ako-da*; Sokoro *ako*

Egyptian—*x-t*. Berber—Tuareg *uku* 'be lit'; Shilh *ta-ka-t*

foot: Chad—Bolewa (I) *šeke*; Fali of Kiria (3) *sika*; Cheke (3) *sik̄ə*

Berber—*ta-zux-t* 'leg'. Cushite—Quara (C) *sukana*; Bedauye (N) *sukena*. Semitic—Arabic *sa'k* [265]



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four: Chad—Hausa (I) *pudu*; Bolewa (I) *podo*; Margi (3) *fodu*; Higi (3) *fware*; Muffu (4) *fudo*; Gidder (5) *podo*; Mandara (6) *ufalle*; Musgu (7) *podu*; Bana (8) *fdi*; Mubi (9) *fava*

Cushite—Bedauye (N) *favig*; Somali (E) *afar*; Galla (E) *afur*. Egyptian—Ancient Egyptian *fdw*, Sahidic Coptic *ftow*

head: Chad—Hausa (1) *kay*; Bolewa (1) *ko*; Affade (2) *ko*; Zany (3) *kirre*; Margi (3) *kir*; Gidder (5) *ki-ko*; Modgel (9) *gol*

Cushite—Bilin (C) *kirkirta*; Saho (E) *kalkale*. Berber—Tuareg *a-kekkel* 'brains'. Semitic—Aramaic *gulgul-ta*; Hebrew *galgol-ēt* [212]

heart: Chad—Logone (2) *nəfu*; Falli of Kiria (3) *nəffə*

Cushite—Kaffa (W) *nibbo*; Janjero (W) *niba*; Galla (E) *labbe*. Egyptian—*yb*; Semitic *lbb*

heavens: Chad—Hausa (I) *sama* 'above'; Logone (2) *sama* 'rain'; Gudu (3) *zim*; Mandara (6) *samaya*

Semitic—Arabic *sama*; Assyrian *šam-e*; Hebrew *šom-aym*

house, to build: Chad—Bolewa (I) *bin* 'house'; Kanakuru (I) *mina* 'house'; Logone (2) *ven* 'house'; Kobochi (3) *vine* 'house'; Gisiga (4) *viŋ*; Sokoro (9) *be·ni* 'build'

Cushite—Sidamo (E) *min* 'build', *mine* 'house'; Chamir (C) *ŋin* 'house'. Semitic—Arabic *bana* 'build'; Hebrew *bɔnɔ* 'build'

to know: Chad—Hausa (I) *sani*, *šina* (<*sina*); Logone (2) *sən*; Buduma (2) *hin* (<*sin*)

Berber—*sin*

like, as: Chad—Hausa (I) *ha-ka* 'thus = this like', *ka-ma* 'how? = like what'; Ngamo (I) *aka* 'how?'; Buduma (2) *ki-mi* 'how? = like what'

Cushite—Janjero (W) *akka* 'thus, how?'; Galla *aka* 'how'. Semitic—Proto-Semitic \**ka* 'like'

meat: Chad—Buduma (2) *su*; Muturuwa (4) *use*; Gidder (5) *soa*; Mandara (6) *šo'a*; Barein (9) *su*

Cushite—Bedauye (N) *ša*; Janjero (W) *aša*

mouth: Chad—Angas (I) *po*; Bolewa (I) *bo*; Margi (3) *fam*; Zany (3) *buā*; Kulung (8) *yu-na*; Karbo (9) *biy*

Cushite—Bedauye (N) *yaf*; Bilin (C) *af*; Somali (E) *af*. Semitic—Assyrian *p-u*; Hebrew *pē*; Arabic *fam*; Ethiopic 'af

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name: Chad—Hausa (I) *su'na'*; Angas (I) *sum*; Buduma (2) *summo*; Gabin (3) *Lim*; Somrai (9) *sumo*

Cushite—Bedauye (N) *sim*; Janjero (W) *sun*; Hadiya (E) *sum*. Berber—*i-sem* (borrowed from Arabic?); Semitic—Arabic *ism*; Hebrew *šem*; Assyrian *šum*.

nose: Chad—Klesem (2) *siy*; Sukur (3) *šin*; Kulung (8) *asinan*

Cushite—Somali (E) *san*; Chamir (C) *esiy*; Chara (W) *sinan*

one: Chad—Buduma (2) *kitta'*; Bata (3) *hido'*; Higi (3) *kute*; Musgu (7) *kate*; Sokoro (9) *ke'ti*

Semitic—Hebrew *'eḥōd*; Arabic *'ahad*; Aramaic *ḥad*

six: Chad—Hausa (I) *šidda* (<*sidda*); Gidder (5) *serre*; Musgu (9) *sa'ra*; Modgel (9) *side'*

Egyptian—*sys, srs*. Semitic—Proto-Semitic \**šidθ*; Arabic *sitt*; Hebrew *šeš*

to sleep: Chad—Bolewa (I) *suna* 'dream'; Logone (2) *san* 'sleep', *wisan* 'to sleep'; Bana (8) *sene*; Mubi (9) *sunō*; Sokoro (9) *sonisoni* 'a dream'

Semitic—Arabic *wasina* 'to sleep', *sina* 'act of sleeping'; Hebrew *šeno* 'act of sleeping'

to spit: Chad—Hausa (I) *to'fa*; Logone (2) *tufa*; Kobochi (3) *tife* 'saliva'; Mubi (9) *tuffa*

Cushite—Bedauye (N) *tu'f*; Somali (E) *tuf*; Galla (E) *tufa*; Agau (C) *tif*. Egyptian—*tf*. Semitic—Arabic *taffa*

tongue: Chad—Hausa (I) *ha-rše, ha-lše*; Angas (I) *lis*; Klesem (2) *li'za*; Musgu (7) *alesi*; Mubi (9) *lisi*

Berber—*i-ls, i-lis*. Egyptian—Ancient Egyptian *ns*; Sahidic Coptic *las*. Semitic—Arabic *lisa'n*; Hebrew *lōšon* [436]

tooth: Chad—Klese (2) *sa'ni*; Buduma (2) *sannay*; Gabin (3) *Lena'*; Margi (3) *šir* (<*sin*); Mandala (6) *tsare'*; Musgu (7) *susi*; Banana (8) *sianu*; Mubi (9) *siya'ju*; Karbo (9) *sey-*

Berber—Siwa *a-sen*; Shilh *a-sennan* 'thorn'; Tuareg *e-sin* 'incisor tooth'. Semitic—Arabic *sinn*; Hebrew *šen(n)* [262]

tree: Chad—Bata (3) *kade'*; Njei (3) *kadi*; Chire (8) *gotto*; Gamergu (5) *xatta*

Egyptian—*xt*. Cushite—Somali (E) *ged*; Mbugu (S) *m-xatu*. Semitic—Assyrian *xattu* 'stick, branch' [146]

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water: Chad—Angas (I) *am*; Ngala (2) *am*; Sukur (3) *yiam*; Matakam (4) *iam*; Musgu (7) *yem*; Mubi (9) *ame*

Egyptian—*ym* (Semitic borrowing?) 'sea'. Cushite—Bedauye (N) *yam*. Semitic—Hebrew *yam(m)* 'sea'; Arabic *yamm* 'sea'

what?: Chad—Hausa (1) *me*\*, *mi*\*; *me'ne'ne'*; Angas (1) *me*; Buduma (2) *mini*; Margi (3) *mi*; Mubi (9) *mi*\*. Sokoro (9) *ma* 'question word'

Cushite—Saho (E) *ma*\*, *mi*\* 'who?'; Sidamo (E) *ma*. Egyptian—*m* 'who?, what?'. Berber Shilh *ma* 'who?, what?'. Semitic—Arabic *ma*\*; Hebrew *mē, ma*; Assyrian *mi'n-*; Ethiopic *mi* 'how much?'

woman: Chad—Karekare (I) *men* 'wife'; Cheke (3) *min*; Musgu (7) *muni*

Cushite—Geleba (E) *minne*; Sidamo (E) *men-ti*; Iraku (S) *ameni*; Gimirra (W) *main*.<sup>19</sup>

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<sup>19</sup> Professor Robert Lowie has kindly called my attention to a review by Edward Sapir of Meinhof's *Die Sprachen der Hamiten* in *Current Anthropological Literature*, vol. 2, pp. 21-27, 1913. The following quotations are of interest in reference to the subject matter of the present article.

"I should be inclined to say that Hausa is very probably Hamitic. . . . Hottentot is not Hamitic. . . . Ful [i.e. Fulani] is certainly not Hamitic. . . . I should not be surprised if further research demonstrated beyond cavil that Bantu and Fulani are genetically related. [In the first three articles of this series, I tried to show that they are both part of the Niger-Congo family.]

Sapir is inclined to believe that there may be some relation between Masai and Hamitic. The resemblances noted by Sapir will be accounted for in a later article in this series where I will endeavor to prove that there is a possibility of a remote relationship between Hamito-Semitic, as a whole, and East Sudanic, of which Masai is a member.

I am naturally gratified to find myself in such complete agreement with one whose remarkable perceptiveness in matters of linguistic relationships has assumed almost legendary status.

## THE EASTERN SUDANIC FAMILY

THE EASTERN SUDANIC family of languages consists of the following seven branches: 1. Nubian; 2. Beir-Didinga; 3. Barea; 4. Tabi; 5. Merarit; 6. Dagu; 7. Southern branch: a. Nilotic, consisting of  $\alpha$ . Burun,  $\beta$ . Luo group (Shilluk, Anuak, Bor, Acholi, Lango, Alur, Chopi, Jalu, Luo, Budama),  $\gamma$ . Dinka-Nuer; b. Great Lakes ("Nilo-Hamitic"), consisting of  $\alpha$ . Nandi-Suk,  $\beta$ . Bari, Fajulu, Nyangbara, Kakwa, Masai, Teso, Turkana, Topotha, Karamojo, Latuka.

Before attempting to establish the validity of the general Eastern Sudanic grouping, I shall first seek to prove the reality of the Southern 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.<sup>1</sup> The various versions of the Nilo-Hamitic hypotheses are considered below. In the following discussion, this traditional but misleading term has been replaced by the geographical designation, Great Lakes languages.

Lexical comparison of the Great Lakes and the Nilotic languages reveal 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 over fifty percent.<sup>2</sup> 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 Hamitic-Semitic.

1. *Personal pronouns.* There is practical identity in the set of singular pronouns used as subjects of verbs in the Nilotic and the Great Lakes languages.

<sup>1</sup> As has been indicated in the fourth article of this series, the term "Hamitic" does not refer to any valid linguistic entity. I continue to use it in this article, interchangeably with Hamito-Semitic, in reproducing the arguments of those who employ this term.

<sup>2</sup> Thus, of thirty-one common nouns of the chief Nilotic and Great Lakes languages listed in the *Distribution of the Nilotic and Nilo-Hamitic Languages of Africa* by M. A. Bryan and A. N. Tucker (London, 1948) and not chosen for purpose of such a comparison, nineteen are clearly cognate.

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Thus Masai among the Great Lakes 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 Great Lakes Nandi, Suk *ane*, Latuka *ani*, Karamojo *ano*, Kakwa *an* with Nilotic Shilluk *an*, Anuak *ana*, Dinka, Nuer *yan*, Alur, Nyifwa *ani*. In the second person, we have Great Lakes Nandi *inye*, Suk *nyi*, Turkana *ion*, Nilotic Shilluk *in*, Dinka *yin*, Anuak *ini*. For the third person singular independent pronoun, the Great Lakes languages generally employ masculine and feminine demonstratives, but Masai *ninye*, Nandi *ine* still remind us of Anuak *ena*, Dinka *yen*, Shilluk *en*, Nyifwa *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 Great Lakes 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 Great Lakes Nandi *aček* 'we', *okvek* 'you', *iček* (<*ikek*) 'they' and the Nilotic Dinka *ʔok* '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 *\*kɔ* on the basis of the Nilotic Nuer *-kɔ* verbal, *kɔn* independent and the Great Lakes Latuka *xɔxɔi* (<*kɔkɔi*), Karamojo *eko-k*, Turkana *xo-si* (<*ko-si*). In the second plural, Nilotic Nuer *ye*, Dinka *wε-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 *ke*, Dinka *ke-k*, Great Lakes Bari *se* (<*ke*), Teso *ke-s*, Turkana *ke-θ*, Nandi *iče-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—*ʔuʔ* 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 *kaʔ* 'my', *kon* 'thy', *keʔ* '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 re-

## STUDIES IN AFRICAN LINGUISTIC CLASSIFICATION

semblances of Nandi *ane* etc. to Semitic *?ana:*, Galla *ani*, 'I'. As has been seen, these Great Lakes 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 Great Lakes languages.

2. *Interrogative pronouns.* In the forms for the interrogative pronouns, the Nilotic and Great Lakes languages show close agreement.

'who?': Great Lakes—Turkana *ɲai*, Latuka *ɲai*, Masai *aɲae*, Bari *ɲa*. Nilotic—Dinka, Nuer, Anuak *ɲa*.

'what?': Great Lakes—Bari, *ɲyo*, Turkana *ño*, Latuka *naiñu*, Masai *año*. Nilotic—Nuer *ɲu*, Dinka *ɲo*, Shilluk *aɲu*. These forms exhibit no similarity to the Hamito-Semitic forms.

3. *Noun plurals.* Both the Nilotic and the Great Lakes 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'; Great Lakes—Nandi *pek* 'water', Masai *iy-gulak* 'urine', *iy-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'; Great Lakes—Masai *ol-kurto/il-kurt* 'caterpillar', *en-duduño/in-duduño* '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 *deɲ/duk*, Shilluk *deaɲ/dok* appear also in the Great Lakes languages as Teso *ai-teɲ/ai-tuk*, Masai *eɲ-gi-teɲ/iy-gi-šuk*, Bari *ki-teɲ/ki-suk*.<sup>3</sup> This alternation reappears in most of the Eastern Sudanic languages. In the word for 'eye', the alternation *waɲ/ñin* found in the Nilotic Shilluk has its counterpart in Great Lakes Bari *k-ɔɲɛ/k-ɔñen*, Nandi *k-ɔɲ/k-ɔñan* etc. A further similarity in plural formation in the two groups is the occurrence of

<sup>3</sup> Masai *gi-* and Bari *ki-* (*g-* and *k-* respectively before vowels) are prefixes frequently used before feminine nouns. This element occurs in other Eastern Sudanic languages, Nubian has a *k-* prefix in related words and it is found in Dagu in the pair *arei* 'father-in-law' *karei* 'mother-in-law'. It may well occur in other instances in Dagu since our knowledge of this language is very limited. In Nubian there is no direct proof that it is feminine since the language lacks grammatical gender.

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-*t* plurals in Nilotic, e. g. Shilluk *yey/yat* 'boat' as compared with Great Lakes plurals in -*ta*, -*to*, -*ti*. Paralleling the Great Lakes -*n* plurals, we have Nuer -*ni* and nasal replacements as in Mughaja (Burun) *kak/kaŋ* 'snake'; Shilluk *kwač/kwaŋi* 'leopard', *aŋado/aŋani* 'breast-bone'.

The only real point of resemblance between the Hamito-Semitic languages and the Great Lakes 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 -*at*. The -*k* plural so common in the Nilotic and Great Lakes 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*. Considering the variety of plural forms found in both Hamito-Semitic and the Great Lakes languages, the instances cited need be no more than accidental convergences.<sup>4</sup>

4. *Demonstratives and Relatives.* The alternation *n* singular /*k* plural displayed in Shilluk *an/ak* 'this', 'these', Acholi *è:nò/è:gò* (same meaning), is found in Nandi among the Great Lakes languages in the forms *nu/çu* (<*ku*) 'this', 'these', and the use of singular *ne*, plural *če* (<*ke*) as a relative. The Bari adjectival form *rɔn/rɔk* '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.

5. *The copula a.* Bari, among the Great Lakes languages, employs a form *a* both as a copula connecting noun with adjective and as a formative for the past tense. In Shilluk *a* functions in precisely the same two uses. Elsewhere in the Nilotic languages *a* functions as a copula and a general tense formative (Dinka, Nuer). This *a* reappears frequently in other Eastern Sudanic groups (see the entries under *to be* in the comparative word-list). There is nothing to parallel this in Hamito-Semitic.

The detailed similarities in morphology just cited, in conjunction with the

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<sup>4</sup> How treacherous merely a few resemblances may be when a large number of plural types are involved is shown by the fact that the language of the Yenisei *Osnyak* in remote Siberia has two common Hamitic-Semitic plurals, an *n* suffix and internal change to *a*.

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large number of vocabulary items common to the two groups seem sufficient to prove the genetic relationship of the Nilotic and the Great Lakes or so-called Nilo-Hamitic languages beyond any reasonable doubt.

If this is so, the reader may wonder why the Great Lakes 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."<sup>5</sup> 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 Great Lakes languages under the term Nilotic but calls the northern division (i. e. Nilotic as used in this article) Niloto-Sudanic and the Southern Great Lakes division 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.<sup>6</sup>

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.<sup>7</sup>

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.

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

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<sup>5</sup> B. Struck, "Die Sprache der Tatoga und Irakuleute," p. 119 fn. 4 in F. R. Jaeger, *Das Hochland der Riesenkrater* (Berlin, 1911).

<sup>6</sup> D. Westermann, *The Shilluk People* (Berlin, 1912), p. 33.

<sup>7</sup> G. W. Murray, *The Nilotic Languages, a Comparative Essay* (Journal, Royal Anthropological Institute, vol. 50, pp. 327-368, 1920), p. 360.

## THE EASTERN SUDANIC FAMILY

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.<sup>8</sup>

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, the only writer 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 Great Lakes languages.<sup>9</sup> 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.<sup>10</sup> 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 and whose precise status I shall attempt to show in a subsequent article of this series. Finally the Masai formation of multiples of ten by a suffix *-tam* is compared to the similar construction in Somali.

<sup>8</sup> *Distribution of the Nilotic and Nilo-Hamitic Languages of Africa* (London, 1948), p. 48.

<sup>9</sup> Hamburg, 1912, pp. 211-225.

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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.<sup>11</sup>

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. 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 Great Lakes languages. It is this fact which has led to more complex formulations of the relationship of the Hamitic and Great Lakes languages such as that of Tucker, cited above. I believe that the morphological similarities between the Nilotic languages and the Great Lakes 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 rela-

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<sup>11</sup> See footnote 4 above. Another Great Lakes feature which is sometimes considered the result of Hamitic influence is the verb negative in *m-* of Masai and Nandi. However *m-* verbal negatives are just as widespread in Eastern Sudanic as in Hamito-Semitic and we need not resort to Hamito-Semitic influence as an explanation. For an enumeration of *m-* negatives in Eastern Sudanic see item 25 below in the list of morphological elements common to Eastern Sudanic languages.

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tionship of the Nilotic and the Great Lakes languages is that they have appeared to be very different structurally. Friedrich Müller long ago, comparing Dinka, a Nilotic language, and Bari, a Great Lakes 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."<sup>12</sup> 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 Great Lakes 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 Crazzolara on the Nuer language, we encounter a system of noun cases and the existence of verbal derived forms.<sup>13</sup> For example the noun for 'tongue' in Nuer has the following forms:<sup>13a</sup> *lêp*, nominative singular; *léab*, genitive singular; *lêb*, locative singular; *lûf*, nominative plural, *lufnâ*, genitive and locative plural. The Nuer word for 'mouth' is inflected thus: *θók*, nominative singular; *θπϝ'h*, genitive singular; *θóγ*, locative singular; *θúuh*, nominative plural; *θúuhnâ*, genitive and locative plural. From *mã̀ðè* 'he drinks' we have applicative *mã̀ðèè* 'he drinks something', *mã̀ã̀θé* '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

12 *Grundriss der Sprachwissenschaft* (Wien, 1876), vol. 1, part 2, p. 181.

13 J. P. Crazzolara, *Outlines of a Nuer Grammar* (Wien, 1933).

13a Because of limitations of type available, substitutions have been made in the printing of Nuer words: *é*, *è*, *è* for correspondingly accented epsilon; the grave accent should be superimposed on inverted *c*, the acute accent on *ã*. In certain other words roman *d*, *n*, *t* have been substituted for corresponding fronted forms, which should appear here with inverted breve below these consonants—Editor.

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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, *lɛp*, nominative / *lɛab*, genitive, in the above example, is plausibly explained by the loss of a final genitive *-a* (< \**lɛpa*). 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.<sup>14</sup> 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 *wɔŋgu* 'eye' where Shilluk has *wɔŋ*, *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 Great Lakes languages as well as Nubian.

It is true that the Great Lakes languages have a gender system; so have French and Chinook. The specific affixes which denote gender in the Great Lakes 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, *n̄a* 'child', *n̄a-l* 'boy', and *n̄a-n* 'girl' with precisely the same gender-denoting elements as those of the Great Lakes languages.

Another structural feature of the Great Lakes 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 Great Lakes 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

<sup>14</sup> This has been seen for Alur, another Nilotic language, by M. Vanneste, *Regels der Welluidenheit in de Alur-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).

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alternatives can be plausibly analyzed as the result of affixes similar to those of the Great Lakes languages. For example, in Bari and Latuka, 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', *reño* 'to become bad'; *nɔk* 'little', *nɔŋo* 'to become little'.<sup>15</sup> 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 *čóðθé* '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 Latuka *iweta*, 'go!' *iwena*, '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 Great Lakes verbal derivate system is to the 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 Great Lakes and Nilotic languages. Where the Great Lakes languages border Hamitic languages of the Cushite group, there has been, not unexpectedly, a certain amount of word-borrowing which has been moderate

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<sup>15</sup> *The Shilluk People*, p. 58.

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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 Great Lakes 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 Hamitic Cushite groups), there can be little doubt of borrowing from Great Lakes 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 Great Lakes languages resemble the Nilotic in being tonal whereas the Hamito-Semitic languages are, in general, non-tonal.

The problem of the relationships of the Great Lakes languages has been discussed at this length only because of the widely accepted opinions concerning Hamitic affiliation or influence. I am aware that the very strength of the case that can be made against this common assumption may cause the reader to react against it as a possible oversimplification on the well-known principle that where there is a great deal of smoke there must be at least some fire. I can only ask him to draw his own conclusions after comparing the evidence assembled here with Meinhof's chapter on the Masai language in *Die Sprachen der Hamiten*, which is the only systematic attempt ever made to prove the Hamitic thesis.

It is a familiar hypothesis that the Nilotic languages are related to such other languages in this area as Nuba, Barea, and Didinga.<sup>16</sup> The inclusion of Merarit and Dagù and the exclusion of Kunama will no doubt occasion surprise. Although our material on Merarit and Dagù—particularly the latter—is extremely scarce, a high proportion of common vocabulary resemblances to the other Eastern Sudanic languages is found. Likewise a considerable degree of morphological resemblance is apparent in spite of the scanty material. Particularly striking are the plural formations for 'cow' and 'tree', for which the comparative word lists below may be consulted. The same argument applies to Tabi, on which there is very little published material.

<sup>16</sup> See, for example, C. Conti Rossini, *Lingue Nilotiche* (Rivista degli Studi Orientali, vol. 11, pp. 69-168, 1926).

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On the other hand Kunama, which is almost always mentioned in the same breath as the neighboring Barea, but is actually very different from it, shows vocabulary resemblances only in a few common words, e. g. *aro* 'white', *na* 'who?'. In morphology a few items, the noun plural *-i*, the first person pronoun *a*, the relative *ma* suggest Eastern Sudanic affiliations. In spite of the relatively abundant documentation of this language, the points of similarity both in vocabulary and morphology are significantly fewer than in the other languages. Using Tibetan as a control, I found as many resemblances to other Eastern Sudanic languages in Tibetan as in Kunama. I have therefore rejected this relationship as unproven at the present state of our knowledge.

The evidence for the validity of the Eastern Sudanic grouping is presented here in the form of a catalogue of morphological elements followed by a comparative word-list. Some comparisons involving only the Nubian and the Southern branches (Nilotic and Great Lakes) of the Eastern Sudanic family have been omitted.<sup>17</sup> The rather large number of such comparisons does not, in my opinion, rest upon any special relationship of these two branches but simply reflects the more ample documentation in the case of these languages.

### EASTERN SUDANIC MORPHOLOGICAL ELEMENTS<sup>18</sup>

1. *First person singular subject pronoun.* (1a) Shilluk, *a* (object pronoun), Nuer, Dinka *a*; (1b) Masai, Turkana, Nandi, Teso, Latuka *a*; (2) Nuba *ai*; (3) Didinga *a*; (5) Tabi *a-ne* (independent pronoun); (6) Merarit *wa*; (7) Dagu *a*

2. *Second person subject pronoun—singular.* (1a) Dinka, Nuer, Acholi, Lango *i*; (1b) Masai, Nandi, Teso, Latuka *i*; (2) Nile Nubian *i-r* (independent pronoun), Midob *i-n* (independent pronoun); (3) Didinga *i*; (6) Merarit *i*; (7) Dagu *i*

3. *Second person possessive pronoun.* (1a) Dinka, Nuer, *u*, Acholi *-u* (in relationship terms); (1b) Nandi (*k*) *u* (*k*), etc.; (3) Didinga (*c*) *u* (*ni*); (5) Tabi *u* (*n*); (6) Merarit *onu*

4. *Third person demonstrative.* (2) Nubian *te-r*; (3) Didinga *či*; (4) Barea *ti*; (6) Merarit *te*

5. *n/k singular-plural alternation in demonstratives.* (1a) Shilluk *an/ak* 'this,

17 For such additional comparisons see the above-mentioned essay of G. W. Murray. Not all of his comparisons are convincing, however.

18 In this section and the following word list, the numbers refer to the various branches of the Eastern Sudanic family, as follows: (1a) Nilotic, (1b) Great Lakes, (2) Nubian, (3) Didinga, (4) Barea, (5) Tabi, (6) Merarit, (7) Dagu.

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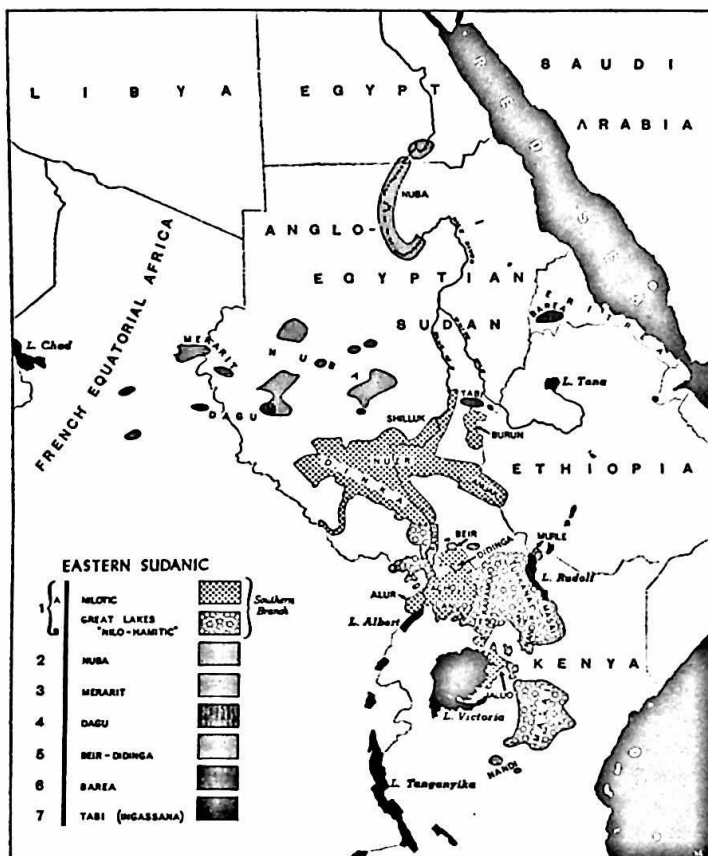


Fig. 1. Distribution of languages of the Eastern Sudanic family.

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these'; (1b) Nandi *nu/čū* (<ku) 'this, these'; (3) Didinga *čyen/čyegi* 'this, these'

6. *ma* relative and adjective formant. (1a) Nilotic *ma-* (Nuer singular only); (4) Barea *-mo* (participle); (7) Dagu *ma-*

7. *ti* plural demonstrative and relative. (1a) Nuer *te*; (1b) Bari *ti* (probably Turkana *θ*, Teso *s* pronominal plurals belong here); (4) Barea *-te-* (in *-tego* adjectival plurals formed by relative *-go*)

8. Relative and adjective formation in *-ko*. (1b) Bari *ko-*; (2) Nubian *-go*; (4) Barea *-go*; (6) Merarit *-k*

9. *n* feminine. (1a) Shilluk *-n* (only in *n̄a-n* 'daughter'); (1b) Masai, Bari, etc.; (2) Nuba *-en* (Nile Nubian *id* 'man', *id-en* 'woman'); (5) Tabi *-ñe*. Compare also Didinga *ŋa* 'woman'

10. *-it, -et* singular noun affirmative. (1a) Burun *-it*; (1b) Bari *-it, -et*, Latuka *-it*; (2) Nubian *-d, -id*; (3) Didinga *-it*; (6) Merarit *-t* (e. g. *kiŋet/kiŋe* 'tree')

11. Plurals in *-k, -ka, -ki, -ku*. (1a) Burun *ku, ka*, Acholi *-gu* (relationship terms) *-gi*, Shilluk *k*; (1b) Bari *ki*, Teso *-ko*, Masai *-k*, etc.; (2) Nubian *-gu*; (3) Didinga *k*; (4) Barea *-ka* (demonstrative *-gu*); (5) Tabi *-k*; (6) Merarit *ŋ* (<*k*)

12. Plurals in *-t, -ta*. (1a) Shilluk, Dinka, Nuer *t*; (1b) Masai *-ta, -to*, Bari *-tā*; (2) Jebel Dair *-du*; (3) Didinga *-ta*; (4) Barea *-ta*

13. Plurals in *-n*. (1a) Nuer *-ni*, Lango *-an, -aŋ, ni*, Shilluk *-ni*; (1b) Masai, Latuka, Teso *-in*, Nandi *-en*; (2) Jebel Dair *-in*; (3) Didinga *-ni, -na, -en*

14. Plurals in *-i*. (1a) Shilluk, Acholi, Lango *-i*; (1b) Masai *-i*, Bari *-e*; (2) Nubian *-i*; (3) Didinga *-i*

15. Special plurals involving consonantal alternations. See word list under 'cow', 'small', 'tree'

16. Nominative singular in *-i*. (2) Old Nubian *-i*; (3) Didinga *-i*

17. Genitive singular in *-o, -u*. (1b) Nuer *-a*; (2) Old Nubian *-u*; (3) Didinga *-o*

18. Locative singular *-t*. (1a) Dinka *-t*; (1b) Masai *t-*; (2) Nubian *-do*; (3) Didinga *-to, -ti*; (4) Barea *-t, -ta, -ti*; (5) Tabi *-te*; (6) Merarit *-ta*; (7) Dagu *-ti*

19. Locative singular in *l*. (2) Nubian *-la*; (4) Barea *-li*; (5) Tabi *-ul*

20. Accusative singular in *k*. (2) Mahas *-ka*, Kenuz, Dongola *-ki*; (6) Merarit *ŋ* (<*k*)

21. Locative plural in *-ni*. (1a) Nuer *-ni, -na*; (3) Didinga *-ni*

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22. *Copula and tense formative a.* (1a) Shilluk, Dinka, Nuer *a*; (1b) Bari *a*; (2) Nubian *a* (copula only)
23. *Verb plural in k.* (3) Didinga *-k*; (4) Barea *-k, -ge*; (6) Merarit *-key*; (7) Dagu *-ka* (first person plural only)
24. *Future in ba, bi.* (1a) Nuer, Dinka *bi*; (1b) Nandi *i-p* (<*i-b*); (2) Nubian *fa, fi, bi*
25. *Verbal negative in m.* (1b) Masai, Nandi *m*; (2) Nubian *m-* (to be inferred from such forms as *esk* 'to be able', *m-esk* 'to be unable'); (3) Didinga *ma* (with imperative); (4) Barea *ma* (with imperative); (6) Merarit *m-*. Compare also Shilluk *ba*, Dagu *ba*
26. *Inchoative in -an.* (1a) Shilluk (nasal substitution); (1b) Bari, Latuka *-an*; (2) Nubian *-an, -aŋ*; (4) Barea *-en*
27. *Verbal dative* 'to do for someone'. (1b) Teso, Bari, Masai, *-kin*, Latuka *-k*, Nandi *-ci, -cin*; (3) Didinga *-eki*

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- back*: -(1a) South Burun *ŋeiyo*;, Nuer *ŋe:k*, Lango *ŋeč*; (5) Tabi *oiñ*; (6) Merarit *ŋei*; (7) Dagu *o:ŋei*
- bone*: (1b) Karamojo *ak-oit*, Nandi *k-o:wet*, Masai *ol-oito*; (2) Kenuz *k-i:d*, Dair *k-oi*; (4) Barea *k-etti*
- backbone*: (1a) Lango *oguru*; (1b) Suk *kurot*, Nandi *rot*, Turkana *egur*; (3) Didinga *karot*
- to be*: (1a) Nuer, Dinka *a*; (1b) Bari, Masai *a*; (2) Nuba *a*; (3) Didinga *a*
- to be in a place*: (1a) Nuer *te*, Anuak *ti*, Lango *tye*; (1b) Masai *tii*; (3) Didinga *-ti* (in); (4) Barea *-t, -ta, -ti* (in, upon); (5) Tabi *-te* (inside); (7) Dagu *te* (in)
- belly*: (1b) Turkana *etau* (heart), Lango *etau* (heart of an animal); (2) Old Nubian *tu*, Nile Nubian *tu*;, Dair *to*; (4) Barea *taua*
- black*: (1a) Nuer, Dinka *čol*, Lango *sol*; (3) Didinga *hol* (?); (4) Barea *sur-ko*
- to boil, be cooked*: (1a) Shilluk *wa:lo*; (1b) Bari *walala*; (2) Mahas *wal breast*: (1b) Nandi *kinet*, Masai *ol-kina*, Bari *kinat*; (4) Barea *kena*
- child*: (1a) Nuer *ga:θ* (*gar-* in compounds); (1b) Masai *eŋ-gerai*, Bari *ŋgöřö*, Latuka *ŋgairi-ok* (plural); (5) Tabi *a:ar*
- cow*: (1a) Shilluk *dyaŋ/dok*; (1b) Bari *ki-teŋ*, Latuka *ne-teŋ*, Teso *aki-teŋ*, Masai *eŋ-gi-teŋ*, Nandi *tany/tič*; (2) Kenuz, Dongola *ti*; (3) Didinga *taja/tena*; (5) Tabi *tom/tok*; (6) Merarit *te*; (7) Dagu *teinyei/tukkei*

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*to desire:* (1a) Dinka *niar*; (1b) Bari *nyar*, Masai *nyor*; (2) Kenuz, Dongola *ner*

*to die:* (1a) Dinka, Shilluk, Anuak *tou*; (1b) Bari *tuan*, Masai *tua*; (2) Nile Nubian *di*; Midob *tiwa* (present tense), Dair, Dilling, Dulman *ti*; (4) Barea *di dog*; (4) Barea *wos*; (6) Merarit *wuši*; (7) Dagu *isi*

*donkey:* (1a) Dinka *akaĵa*; (1b) Bari *kayne*; (2) Nile Nubian *kaġ*; (8) Dagu *kaċei*, *kaċinei*

*dove:* (1a) Nuer *kur*, Shilluk *aċur*; (1b) Bari *gure*, Turkana *aċuri*; (2) Kenuz, Dongola *kuru*; (6) Merarit *okur*

*to drink:* (1a) Nuer *mat*, Shilluk *ma:do*; (1b) Latuka *mata*, Bari *mata* (passive); (5) Tabi *mada*

*enclosure:* (1b) Bari *aŋ*, Masai *aŋ* (kraal); (2) Mahas *aŋgi*

*to expel:* (1b) Bari *tore*, Masai *itur*; (2) Nile Nubian *tur*

*fire:* (1a) Dinka, Nuer, Shilluk *maċ*; (1b) Latuka *ne-ema*, Bari *ki-maŋ*, Masai *eŋ-gi-ma*, Nandi *maa*; (2) Mahas, Old Nubian *maša* (sun), Kenuz, Dongola *masi-l* (sun); (7) Dagu *masi*

*five:* (1a) Dinka *dyeċ*, Nuer *dieeċ*, Southern Burun *doi*, *doik*, Dinka *de-*, *do-* (five—in higher numerals); (2) Kenuz *diĵu*, Dongola *diji*, Dair *dišu*; (4) Barea *de*, *ĵa-* (five—in higher numerals); (7) Dagu *-da*, *-dak* (apparently five in higher numerals)

*forest:* (1a) Acholi *tim*, Dinka *tim* (tree); (4) Barea *tüm* (tree)

*go out:* (1a) Shilluk *welo*, Dinka *fal* (leave); (1b) Bari *wala*; (2) Mahas *fal*, Old Nubian *pal*, Dair *bal*; (5) Tabi *pala* (descend)

*guest:* (1a) Dinka *kaman*, Shilluk *kemo* (to visit); (1b) Bari *komo:nit*; (4) Barea *hömet/hömena*

*hand:* (2) Mahas *eddi*; (3) Didinga *ađit/ađina*; (4) Barea *ad*

*to hate:* (1a) Shilluk *ma:no*, Dinka *man*; (1b) Bari *man*, Masai *men* (despise); (2) Kenuz, Dongola *mo:n*

*head:* (1b) Bari *uret* (crest); (2) Dongola, Kenuz, Mahas, Gulfan *ur*; (5) Tabi *ol*; (6) Merarit *ure*

*hippopotamus:* (1a) Shilluk *rau*, Dinka *rou*, Nuer *rəu*; (1b) Bari *yaro*; (2) Kenuz, Dongola *erit*

*house:* (1a) Anuak *ka* (place), Lango *ka* (place); (1b) Nandi *ka*; (2) Nile Nubian *ka*:

*jaw:* (1a) Dinka *gem* (cheek), Nuer *ĵyom* (cheek); (1b) Bari *nyekem*; (2) Kenuz, Dongola *ĵakum*

*male:* (1a) Dinka *moċ*; (3) Didinga *maċ*; (6) Merarit *mo*

## STUDIES IN AFRICAN LINGUISTIC CLASSIFICATION

*man*: (2) Old Nubian *it*, Kenuz, Dongola *id*; (3) Didinga *et/eta*; (4) Barea *eite*

*meat*: (1a) Anuak, Shilluk, Lango, Dinka *riŋo*, Nuer *riŋ*; (1b) Turkana *aki-riŋ*, Karamojo *agi-riŋ*, Masai *ej-gi-ri*; (3) Didinga *iditŋ*

*milk*: (1a) Dinka *ča*, Nuer *čak*, Shilluk *čak*; (1b) Nandi *če*; (2) Mahas *su*, Birgid *eši*, Kenuz, Dongola *iči*; (4) Barea *sa/sata*; (6) Merarit *zuŋ* (probably <zuk)

*mother (my)*: (1b) Suk *iyu*, Nandi *eiyo*; (2) Kenuz, Dair, Midob *iyo*

*mouth*: (2) Mahas *ag*, Kenuz, Dongola *agil*, Koldegi *aul*; (4) Barea *aulo*; (5) Tabi *ag*; (6) Merarit *kul*; (7) Darfur Dagu *akkei*

*name*: (1a) Dinka *rin*; (1b) Bari *k-arin*; (2) Dongola, Kenuz *eri*; (4) Barea *ade*

*neck*: (1a) Shilluk *muto*; (1b) Nandi *ki-mut*, Bari *murut*, Masai *en-murtu*; (2) Nile Nubian *gumur*

*night*: (1a) Shilluk *war*, Nuer *war*, Lango *owor*; (1b) Karamojo *awara*, *akwar*, Masai *ej-awarie*; (2) Mahas *awar*, Dulman *kwalo* (at night)

*person*: (1a) Dinka *koi*; (2) Nile Nubian *ko*; (4) Barea *ku*

*to pour*: (1a) Dinka *byok*, Nuer *bok* (throw); (1b) Bari *buk*, Nandi *apuk*, Masai *i-buŋ*; (2) Kenuz, Dongola *bog*

*rain, water*: (1a) Dinka *uar* (river); (1b) Masai *ej-are* (water), Latuka *na-are* (water), Karamojo *agi-ru* (rain), Turkana *aki-ru* (rain), Bari *k-are* (river), *ru* (to water); (2) Kenuz, Dongola *aru* (rain), Old Nubian *aru* (to water), Dair, Gulfan *are* (rain); (6) Merarit *ar* (sky, rain); (7) Darfur Dagu *k-o:rei* (rain)

*to seize*: (1a) Dinka *dəm*; (1b) Bari *dum*, Masai *tum*; (2) Mahas *dumm*

*sheep*: (1b) Masai *ej-g-err*, Latuka *na-k-er*; (2) Dair *or-ti*, Mahas *ur-ti*; (5) Tabi *er/erik*

*shield*: (1a) Shilluk *kud*, Dinka *kot*, *kud*; (2) Gulfan *koru*, Dair *kori*, Dongola, Kenuz *karu*; (4) Barea *kodo/kotta*

*small*: (1a) Shilluk *ten*, Dinka *tine*, *-tet* (diminutive suffix), Nuer *tə:t/ɔʔanə*, *tot* (child); (1b) Masai *dito* (child), Bari *dit*; (2) Nile Nubian *to:(d)/tu:ni* (child), *-to:d* (diminutive); (4) Barea *di/dad* (child), *didi* (small); (6) Merarit *tadan*, *tatt* (child)

*smoke*: (1b) Nandi *puret*, Latuka *aburo*, Karamojo *apuru*; (3) Didinga *buret*

*snake*: (1a) North Burun *kak*, South Burun *kay*; (1b) Latuka *kak*; (8) Dagu *kokei*

*some*: (1a) Dinka *ketoi* (a trifle); (1b) Bari *čit*, Nandi *kitegin* (a little of something), Masai *kete* (litttle); (2) Mahas *kid*; (3) Didinga *kidiča/kidičik*

## THE EASTERN SUDANIC FAMILY

- spear*: (1a) Nuer *muθ*; (5) Tabi *mus/musak*  
*to split*: (1a) Dinka *kak* (cut), Shilluk *ka:go*, Lango *kako*, Nuer *kage*;  
 (1b) Bari *kagu*; (2) Nile Nubian *kak*  
*star*: (2) Dair *wini*, Kadero *u:n-du*; (4) Barea *wini*  
*to steal*: (1a) Shilluk *kwalo*, Dinka *kwal*; (1b) Bari *kola*; (4) Barea *hol*  
*stick*: (1b) Karamojo *agulit*; (2) Nile Nubian *ga:le*; (5) Tabi *ma:gult*  
*stone* (No. 1): (1a) Anuak *kidi*, Shilluk *kit*, Lango, Alur *kidi*; (2) Nubian  
*kid*; (6) Erenga Merarit *kat*  
*stone* (No. 2): (1a) Dinka *kur, god*, Lango *got*, North Burun *gur-it*;  
 (1b) Bari *kodu*; (2) Nile Nubian *kul*, Birgid *kur*; (6) Merarit *kura*  
*sun*: (1a) Dinka *ak-ol*; (1b) Bari *k-oloŋ*, Masai *ey-g-oloŋ*, Karamojo  
*ak-oloŋ*, Turkana *ek-oloŋ*; (3) Didinga *k-or*; (7) Dagu *uroŋei*  
*to be sweet*: (1a) Dinka *mit*, Shilluk *mēt*; (3) Didinga *med*  
*ten*: (1b) Bari *mere*; (2) Dair, Dulman, Koldegi, etc., *bure*; (6) Merarit *mer*  
*thing*: (1a) Acholi *gi/gik*, Shilluk *gin/gik*; (1b) Nandi *kii*; (3) Didinga *gi*  
*throat*: (1b) Masi *ol-gos*; (2) Nile Nubian *go:s*; (4) Barea *koso*  
*tooth*: (2) Mahas *nid*, Kenuzi *nih̄ta, ni:ta*; (3) Didinga *nigitat/nigit*;  
 (4) Barea *nih̄/nih̄itta*; (5) Tabi *niet, nyigitu*  
*tree*: (1a) Shilluk *yat/yēn*, Nuer *jiat/jēn*; (1b) Latuka *nā-yāni*, Masai  
*ol-yani*, Nandi *kēt*; (2) Birgid *ka:n*; (3) Didinga *kēt/kēna*; (6) Merarit *kidi/kiŋ*  
*two*: (1a) Shilluk *aryau*, Dinka *rou*, Nuer *rēu*; (1) Latuka *arega*, Masai *are*,  
 Bari *öri*; (2) Dair, Gulfan, Koldagi *ora*, Dulman *ore*; (4) Barea *arega*; (6) Me-  
 rarit *wari*  
*urine*: (1a) Anuak *la*; (1b) Masai *ey-go-lak*, Bari *ko-la*; (3) Didinga *xu-la*  
*water*: (1a) Nuer *pi/pik*, Acholi, Lango, Shilluk, Luo *pi*, Burum *piuk*;  
 (1b) Teso *aki-pi*, Nandi *peik*, Karamojo *agi-pi*; (5) Tabi *fik, feko*  
*white*: (2) Kenuz, Dongola *aro:*; (3) Didinga *ora*; (4) Barea *er-enko*  
*who?* (1a) Nuer, Dinka, Anuak *ŋa*; (1b) Nandi *ŋo*, Karamojo *ŋai*, Bari *ŋa*,  
 Latuka *ŋai*; (2) Mahas *na:*, Kenuz, Dongola *nai*; (3) Didinga *ŋani*; (4) Barea  
*na, nan, nani*; (6) Merarit *na*  
*wing*: (1a) Shilluk *ober*; (2) Mahas *awir*, Kenuz, Dongola *aur, abir*, Old  
 Nubian *aur*; (1b) Masai *opir, obir*, Bari *k-upir*; (3) Didinga *wir* (to fly)

# THE CLICK LANGUAGES

## I. THE KHOISAN AREA

SCHAPERER'S CONVENIENT TERM Khoisan, compounded of the Hottentot's term for themselves (Khoi) and their name for the Bushmen (San), will be used here to refer to the group of physically, culturally, and linguistically distinctive peoples which formerly at least, occupied all of the southern portion of Africa. 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.<sup>1</sup> 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, to be discussed below—Sandawe and Hatsa—contain clicks. These sounds are not known to occur anywhere in the world outside of this African area.

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

<sup>1</sup> 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.

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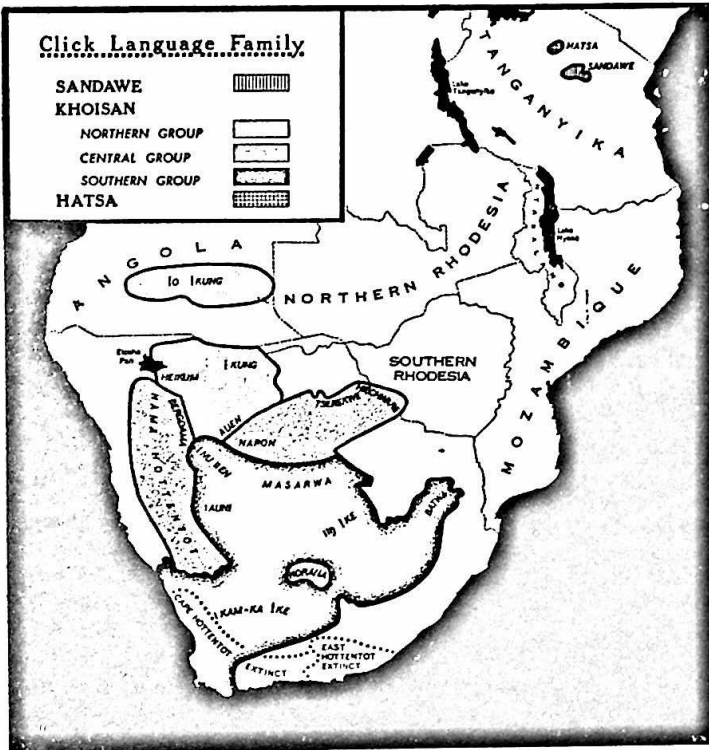


FIG. 1. The distribution of the click language family in South and East Africa.

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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*.<sup>2</sup> 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.<sup>3</sup> 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."<sup>4</sup>

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 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,

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

<sup>3</sup> D. F. Bleek, *Comparative Vocabularies of Bushman Languages* (Cambridge, 1929).

<sup>4</sup> South African Journal of Science, vol. 23, 1926, p. 860.

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and /Kam 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%, /Kam 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 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'; /*apa* '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 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

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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 *gɔ*, that is an intermedial 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 *ni* '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 /Kam (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. This is the universal Khoisan pattern: the Hamito-Semitic languages have characteristically the opposite order. 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.

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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 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. Is it 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 /Kam Bushman, which shows sporadic gender formation. The Hottentot masculine plural *-ku* (*-gu* in the usual Nama orthography) seems to correspond to the /Kam 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

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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 *ŋ*, *ŋa*). 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'.<sup>5</sup>

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 //āi- as a base, but the closely related Naron employs instead *xa*- thus making *xa-ba* 'he', *xa-sa* 'she', etc. This *xa* is very

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<sup>5</sup> 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.

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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.

### II. 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. In addition to ≠, it lacks the labial click of the Southern Bushman languages.

Sandawe displays enough morphological and lexical resemblance to the 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 Khoisan languages is obviously a

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remote one, and all the Khoisan 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 Khoisan than to the others.

Sandawe has a number of morphological features which recall those of the Khoisan family, particularly in the pronouns. First person *tsi* is equivalent to *ti* of Hottentot and Naron, *çi* 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  $\beta$  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 /Kam 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 /Kam (Southern Bushman).

In general, the verb structure of Sandawe resembles that of the Khoisan lan-

## THE CLICK LANGUAGES

guages. 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*.

### SANDAWE-KHOISAN COMPARATIVE WORD LIST<sup>6</sup>

to be able:	Sandawe <i>da</i> .	/Kam (S) <i>də</i> .
to be silent:	Sandawe <i>!kamu</i> .	!O !Kung (N) <i>!gum</i> ; Hottentot (C) <i>!gai</i> .
beget:	Sandawe <i>haba</i> .	Hiechware (C) <i>abaa</i> ; Naron (C) <i>aba</i> .
below:	Sandawe <i>/u-ki</i> .	!O !Kung <i>/ko</i> 'under'; //ŋ !Ke <i>/kāū</i> 'under'.
buffalo:	Sandawe <i>/eu</i> .	Hottentot (C) <i>/gao</i> ; Korana Hottentot (C) <i>/ao</i> ; Hiechware (C) <i>/hao</i> .
carry child in a kaross:	Sandawe <i>habe</i> .	Auen (N) <i>!gabe</i> ; Naron, Hiechware (C) <i>aba</i> ; Hottentot (C) <i>awa</i> ; Masarwa (S) <i>//kabe</i> ; /Nu //En (S) <i>/kabe</i> .
claw:	Sandawe <i>/noa</i> .	Hottentot (C) <i>/noŋo</i> 'to scratch'.
cry:	Sandawe <i>k'e</i> .	Auen (N) <i>k'ai</i> ; Naron (C) <i>k"xai</i> ; //ŋ !Ke, Batwa, /Nu //En (S) <i>k'a</i> .
cut:	Sandawe <i>/ne</i> .	Naron (C) <i>/ni</i> ; Hottentot (C) <i>≠nai</i> .
descend:	Sandawe <i>//'a</i> .	Auen (N) <i>//gwa</i> ; Naron (C) <i>//gwā</i> ;

6 In general, I use the standard orthographies. In the case of Nama Hottentot, I have in general phonemicized the vowels in accordance with Bleek's excellent description, but I have retained the usual writing of the clicks, click releases, and intervocalic consonants in order to retain comparability with forms cited from other languages. For want of the proper type, *O* is employed here for the labial click of Southern Bushman.

In Dempwolff's Sandawe material (*Die Sandawe*, Hamburg, 1916) I have omitted his click release ' which he describes as a smooth release, hence phonetically perhaps not unlike the *k* or *g* release of the Khoisan languages. Indeed, it will be noted that this Sandawe release regularly corresponds to the *k* release of Bushman languages and the *g* release of the conventional Nama orthography.

Many possibly correct etymologies involving different clicks in the Khoisan and Sandawe languages have been omitted. The clicks are difficult to distinguish and in much of our material, no doubt, the clicks are incorrectly indicated.

Comparisons involving Sandawe with Hottentot and Hiechware only occur with some frequency because these are the only two Khoisan languages where there is extensive lexical material.

In the Sandawe transcriptions, unvoiced laterals are indicated by *l* (*l* with a diacritical in Dempwolff's original), lateral affricatives by *tl* (Dempwolff, *l* with diacritic), and unvoiced lateral spirant by *l̥* (Dempwolff, *ls* with diacritic). These sounds correspond to Khoisan *s*, *t*, and *ts* by a type of phonetic shift common in Africa.

STUDIES IN AFRICAN LINGUISTIC CLASSIFICATION

		Hottentot //gōā; /Kam (S) //koa:: Batwa (S) //koe.
draw water:	Sandawe <i>hawe</i> .	Hottentot <i>xawa</i> 'bucket'.
dust:	Sandawe <i>tlaratj</i> .	Hottentot (C) <i>tsəra</i> .
ear:	Sandawe <i>keke</i> 'ear' <i>ke'e</i> 'to hear'.	Hiechware (C) <i>čēčē</i> 'to hear', <i>čēē</i> 'ear'; Naron (C) ≠ <i>ke</i> ::; Hottentot ≠ <i>gai</i> .
excrements:	Sandawe <i>tso</i> .	/Ai San (C) <i>ču</i> ; /Nu //En (S) <i>txu:i</i> .
fat (noun):	Sandawe <i>tsaj</i> .	!Kung (N) <i>dzān</i> ; /Kam (S) <i>səeŋ</i> ; //ŋ !Ke (S) <i>s'γŋ</i> ; Masarwa (S) <i>sāā</i> .
foot:	Sandawe <i>!ŋoa</i> .	/Kam (S) <i>!noa</i> ; Masarwa (S) ≠ <i>nə</i> , // <i>nə</i> ::.
four:	Sandawe <i>haka</i> .	Hottentot (C) <i>haka</i> ; Naron (C) <i>haga</i> ; Hiechware (C) <i>haka</i> ; /Auni (S) <i>haka</i> .
go out:	Sandawe <i>tu</i> .	!Kung (N) <i>toa</i> 'go'; !O !Kung (N) <i>toa</i> 'go'; Hiechware (C) <i>čwa</i> 'go out'; Batwa (S) <i>soa</i> 'go away'.
healthy:	Sandawe <i>'e-se</i> .	Hottentot (C) / <i>gai</i> 'strong'; /Kam (S) /i: 'strong'.
hit:	Sandawe <i>ka</i> .	Hiechware (C) <i>kwa</i> ; Auen (N) <i>txa</i> ::
hole:	Sandawe <i>!kwe</i> .	/Kam (S) <i>!kwe!kwe</i> .
jump, fly:	Sandawe <i>tho</i> .	!O !Kung (N) <i>tē</i> 'fly'; Hottentot (C) <i>toe</i> 'fly'; //ŋ !Ke (S) <i>tə:u</i> 'jump'.
knife:	Sandawe <i>kogo</i> 'sword'.	Hiechware <i>kagho</i> 'knife'.
little:	Sandawe <i>ma</i> 'a little'.	Auen, !Kung, !O !Kung (N) <i>ma</i> ; Mas- arwa, /Nu //En (S) <i>ma</i> .
lizard:	Sandawe <i>tl'aŋga</i> .	Auen (N) <i>tsāi</i> ; !Kung (N) <i>tsxan</i> .
louse:	Sandawe <i>man'a</i> .	/Kam (S) <i>Omoen</i> ; //ŋ !Ke (S) <i>Omoinja</i> .
meet, find:	Sandawe <i>'o</i> .	Hottentot (C) <i>!oa</i> .
mountain:	Sandawe <i>gawa</i> .	Hiechware (C) <i>!goa</i> ; Naron (C) <i>!gabi</i> ; /Kam (S) <i>!kou</i> .
night:	Sandawe <i>tue</i> .	Hiechware (C) <i>due</i> 'to be dark'; /Auni (S) <i>toa</i> 'to lie down'; //ŋ !Ke (S) <i>tu</i> 'to lie down'; Auen, !Kung, !O !Kung (N) <i>šū</i> 'to lie down'.
nose:	Sandawe <i>/nati</i> , <i>ne'ati</i> (L).	/Kam (S) <i>/nur~u</i> ; //ŋ /Ke (S) <i>/nutu</i> ; Batwa (S) <i>/nu</i> ; /Nu //En (S) <i>/niša</i> .

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pour:	Sandawe <i>kwi</i> 'to spill'.	/Kam (S) <i>ku</i> ; //ŋ !Ke (S) <i>ku</i> .
rain:	Sandawe <i>tl'oa</i> .	Hiechware (C) <i>tu</i> ; Naron (C) <i>tu</i> .
run:	Sandawe <i>tha</i> .	Auen (N) <i>tč'a</i> ; /Nu //En (S) <i>ša, sa</i> .
say:	Sandawe <i>Ga</i> .	!O !Kung (N) <i>ka</i> ; Hottentot (C) <i>gawa, gowa</i> ; /Kam (S) <i>ka</i> ; //ŋ !Ke (S) <i>koa</i> .
scratch:	Sandawe <i>xoa</i> .	!O !Kung (N) <i>čxo</i> ; Hottentot (C) <i>xoa</i> ; Masarwa (S) <i>xa</i> .
sister:	Sandawe <i>Lisu</i> (man speaking).	Auen (N) <i>tsisi</i> ; !Kung (N) <i>tasiŋ</i> 'younger sister'; Naron (C) <i>ti</i> .
to smell:	Sandawe <i>hime</i> 'to stink'.	Hiechware (C) <i>hmee</i> .
snort, groan:	Sandawe <i>samu</i> .	//ŋ !Ke (S) <i>sə̃ri</i> ; Batwa (S) <i>sō</i> ; !Kung (N) <i>swē</i> ; Naron (C) <i>sō</i> ; Hottentot (C) <i>sunī</i> .
spirit, soul:	Sandawe / <i>nome</i> .	Hiechware (C) / <i>gom</i> ; Hottentot (C) / <i>om</i> .
to stand:	Sandawe <i>Le</i> (plural verb).	Auen (N) <i>tso</i> ; !Kung (N) <i>tsau</i> ; !O !Kung (N) <i>tsou</i> ; Hiechware (C) <i>t'e</i> ; Naron (C) <i>te</i> .
stick:	Sandawe <i>dzwa</i> .	Hiechware (C) <i>dzoa</i> .
tail:	Sandawe <i>tsoa</i> .	Hottentot (C) <i>tsoa</i> 'buttocks'; Hiechware (C) <i>tsau</i> ; Naron (C) <i>čau</i> .
try:	Sandawe //' <i>ue</i> .	Auen (N) //' <i>gaue</i> 'seek'.
valley:	Sandawe <i>Goba</i> .	Hottentot (C) ! <i>kxowi</i> ; Naron (C) ! <i>xubi</i> .
water:	Sandawe <i>ts'a</i> .	!O !Kung (N) <i>ča</i> 'rain'; !Kung (N) <i>ša, ča</i> 'rain'; Hiechware (C) <i>tsaa</i> ; Naron (C) <i>ča</i> .
well:	Sandawe //' <i>a</i> ).	Masarwa (S) //' <i>gana</i> 'water hole'; Batwa (S) //' <i>a</i> .
wish:	Sandawe <i>ge</i> .	Hiechware (C) <i>kaa</i> ; Korana Hottentot <i>ka</i> ; /Kam (S) <i>ka</i> .
wrong (noun):	Sandawe <i>tsoro</i> .	Hottentot (C) <i>soro</i> 'wrong (adjective)'.

### III. 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

## STUDIES IN AFRICAN LINGUISTIC CLASSIFICATION

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.<sup>7</sup>

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 *-çi* of the masculine plural pronouns may similarly be compared to the masculine noun plural *-çi* 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 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.

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<sup>7</sup> Our chief sources of information for the Hatsa language are: O. Dempwolff, *Zeitschrift für Kolonial-Sprache*, vol. 7, pp. 319-326, 1916-17 (the only word list); E. Obst, *Von Mkalama ins Land der Wakindega* (Mitteilungen der Geographisches Gesellschaft, Hamburg, 1912, especially pp. 29-45); and D. F. Bleek, *The Hadzapi or Watindega of Tanganyika Territory* (Africa, vol. 4, pp. 273-285, 1931).

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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 /Kam (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.

Some vocabulary resemblances can be found between Hatsa and the Khoisan languages, or between Hatsa and Sandawe. These are listed below. Although they are few in number, they represent a fair proportion of the meager vocabulary material available. 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.

### HATSA-SANDAWE-KHOISAN COMPARATIVE WORD LIST

to ache:	Hatsa- <i>kx'eweyaha</i> .	Khoisan-Auen, !O !Kung (N) <i>kwi</i> .
ashes:	Hatsa- <i>hots'owako</i> .	Khoisan-Hottentot (C) <i>tsao</i> ; Naron (C) <i>tu</i> ; Hiechware (C) <i>joaa</i> ; !Kung (N) <i>to</i> .
to be hungry:	Hatsa- <i>hats'eya</i> .	Sandawe- <i>ts'ou</i> 'hunger'. Khoisan-!Kung (N) <i>dxou</i> .
bow:	Hatsa- <i>kxoowako</i> .	Khoisan-Hottentot (C) <i>kxa</i> .
fat:	Hatsa- <i>hits'ape</i> .	(See 'fat' in Sandawe-Khoisan list above.)
guinea-fowl:	Hatsa- <i>ts'ako</i> .	Sandawe- <i>ts'anke</i> .
hair:	Hatsa- <i>hatepe</i> .	Sandawe- <i>ts'e</i> .
house:	Hatsa- <i>ets'akho</i> .	Sandawe- <i>tsakho</i> .
nose:	Hatsa- <i>intawe</i> .	(See 'nose' in Sandawe-Khoisan list above.)

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rain:	Hatsa- <i>atiya</i> .	(See 'rain' in Sandawe-Khoisan list above.)
to shoot:	Hatsa-// <i>axeta</i> .	Khoisan-Masarwa (S) //a:te.
tail:	Hatsa- <i>tsahowa</i> .	(See 'tail' in Sandawe-Khoisan list above.)
wind:	Hatsa- <i>ts'utxépi</i> .	Khoisan-Batwa (S) <i>šuvi, ču:se</i> .

The relationship of Hatsa to Sandawe and to the Khoisan languages is a fairly remote one. Its resemblance to Sandawe is no greater than to the Khoisan languages, in spite of its geographical nearness. Until more material is available, the click languages may be tentatively considered as having three branches: 1. Khoisan, 2. Sandawe, 3. Hatsa. An alternative would be to consider Hatsa as one branch over against Sandawe-Khoisan as the other. The present evidence favors the view set forth here.

The subgroups of Khoisan and their membership are sufficiently indicated in the accompanying map.

## SMALLER FAMILIES

### INDEX OF LANGUAGES

IN PREVIOUS ARTICLES of this series, the following independent language families have been described:

1. Niger-Congo
2. Songhai
3. Central Sudanic
4. Central Saharan
5. Eastern Sudanic
6. Afroasiatic (Hamito-Semitic)
7. Click

All of these, except Songhai, cover extensive areas. There still remain a number of languages and language groups which must be considered, on the basis of the available evidence, independent of the seven linguistic stocks just enumerated. These groupings will be discussed here in roughly geographical order, from west to east.

#### THE SMALLER LANGUAGE FAMILIES

##### 8. MABAN

Maba is the language of the dominant ethnic group of the kingdom of Wadai, east of Lake Chad. The language of the Mimi, another people of this area, as reported by Gaudefroy-Demombynes, is clearly, though somewhat distantly, related to Maba.<sup>1</sup> There are considerable vocabulary resemblances extending to the most fundamental items, such that no formal demonstration seems necessary.

##### 9. MIMI (OF NACHTIGAL)

The celebrated German explorer, G. Nachtigal, has given a brief account of the language of the Mimi, from which it is evident that we are dealing with a different language from that described by Gaudefroy-Demombynes and referred to in the previous section.<sup>2</sup> This discrepancy is still unresolved. The language of the Mimi, as reported by Nachtigal, shows a few vocabulary resemblances to

1 M. Gaudefroy-Demombynes, *Documents sur les langues de l'Oubangi-Chari* (Algiers, 1906).

2 J. Lukas and O. Völkers, *Nachtigal's Aufzeichnungen über die Sprache der Mimi in Wadai* (*Zeitschrift für Eingeborenen-Sprachen*, vol. 29, pp. 145-154, 1938).

## STUDIES IN AFRICAN LINGUISTIC CLASSIFICATION

Maba that may well be the result of borrowing, particularly in view of the close cultural contact and the superior political status of the Maba. Until further evidence is presented, the Mimi language, in Nachtigal's version, must be considered an independent family.

### 10. FUR

The Fur are the dominant population who have given their name to Darfur, the large region between Wadai on the west and Kordofan and the Nile on the east. Their language likewise does not show decisive resemblance to any other on the African continent and therefore must be classified as an independent stock.

### 11. TEMAINIAN

Among the extraordinarily diverse languages of the Nuba hills of Kordofan, two described by the MacDiarmids,<sup>3</sup> Temain and Teis-um-Danab, are clearly related to each other but unconnected with other language families on the basis of existing evidence. Since all that is at present available is a list of twenty words for each language, this conclusion is to be viewed as quite tentative.

### 12. KORDOFANIAN

This is a more extensive grouping than those treated in the previous sections. It includes all of the languages of Kordofan, an extensive area west of the upper Nile, except Nubian and Dagu (which have already been classified as East Sudanic), and the above-mentioned Temainian. The hitherto accepted classification has been that of Meinhof who quite mechanically divided them into those with noun prefixes, which he called pre-Hamitic and those without them, which he named in equally vague fashion, Sudanic. In doing so, he at times separated languages which were hardly more than dialect variants of the same form of speech. If we consider the total evidence of the languages, both grammatical and lexical, and avoid the blind use of a single criterion, it is clear that these languages fall into five groups, within each of which the resemblances are very close. After this preliminary step has been taken, the question of relationships among these five stocks can be approached. The five groups are as follows:<sup>4</sup>

1. Kawalib group (Kawalib, Heiban, Kanderma, Kawama, Tira, Lumon, Moro).
2. Tagele group (Tagele, Rashad, Tagoy, Tumale, Morib).

<sup>3</sup> P. A. and D. N. MacDiarmid, *The Languages of the Nuba Mountains* (Sudan Notes and Records, vol. 14, pp. 15-45, 1931).

<sup>4</sup> The list is not exhaustive. One language is chosen arbitrarily in each case to designate the groups. My group 1 corresponds to the MacDiarmids' 1, 2 to 2, 3 to 3 and 4 which are quite close, 4 to 5, and my 5 to their 8. The other groups distinguished by the MacDiarmids do not belong to the Kordofanian family.

### SMALLER FAMILIES

3. Talodi group (Talodi, Eliri, Lumun, Lafofa, El Amira).
4. Tumtum group (Tumtum, Miri, Kadugli).
5. Katla group (Katla, Tima).

I believe that there is sufficient evidence to warrant the conclusion that all of these five groups can be considered branches of a single Kordofanian family. Not only is there a fair measure of fundamental vocabulary resemblance among the groups, but there is also agreement in certain specific morphologic features. Two points are prominent in spite of the scant material. There is considerable resemblance among the groups in personal pronouns and in the paired noun prefixes, one in each class of nouns for the singular and one for the plural. (The mechanism here is quite like that of the Niger-Congo family, of which Bantu is the best-known representative in this respect.)

Of the pronouns, the first person and second person independent forms are in close agreement in a number of the groups.

First person: (1) Kawama *ɲi*; Kanderma *iɲiga*; Heiban *ɲi*. (2) Tegele *ɲi*; Tagoy *yi*; Tumale *ɲgi*. (3) Eliri *aɲi*.

Second person: (1) Kawama *ɲo*; Kanderma *iɲa*; Heiban *ɲa*. (2) Tegele *ɲo*; Tagoy *o-gin*; Tumale *ɲgo*. (3) Eliri *aɲo*; Talodi *ɲo*. (5) Tumtum *oo*.

The noun prefix classes likewise show a number of similarities which serve to link the groups.<sup>5</sup>

1. (2) Tegele *f/y*. (3) Eliri *p,b/y*, Talodi *b/-*, Lafofa *p,b/-*. (4) Tumtum *b/y*. (5) Katla *b/-*.

2. (2) Tegele *t/ɲ*. (3) Eliri *t/n*.

3. (1) Kawama *k/n*, Heiban *gu/ñ*. (2) Tumale *j/ɲ*. (3) Eliri *g/ɲ*.

4. (3) Talodi, Elira, Lafofa *k/-*. (5) Tima *g/-*.

5. (1) Kawama *k/l,d*, Heiban *ku/l*. (3) Talodi *k/l*.

6. (3) Lafofa *-/k* (4) Tumtum *-/k*

7. (1) Kanderma *d/r* (3) Talodi *d/r*

### 13. KOMAN

A number of related languages are found in the area east of the upper Nile. These include the various Koma ethnic groups, the Uduk, the inhabitants of Gule Mountain, and the Gumus. There is little to go on here but vocabulary resemblances which are, however, extensive in the limited material which is available. The unusual phonetic correspondence Gule, Uduk *f* = Koma *s*, *ʒ*; *č* (de-

<sup>5</sup> The numbers refer to the groups as listed above. The singular prefix precedes the stroke, the plural replacement follows it.

## STUDIES IN AFRICAN LINGUISTIC CLASSIFICATION

pending on dialect) places this relationship beyond doubt. Thus Uduk, Gule *fum* 'meat' = Koma *sum*, *šuma*, *čuma* while Uduk *fus*, Gule *fufun* 'nose' corresponds to Koma *šuš*, *čuč*.

### 14. BERTA

An extensive group of dialects in this same general area has generally been recognized as forming a unit under the name Berta. Included are Fazoglo and the languages of Sillok, Malkan, and Tornasi of the Anglo-Egyptian Sudan and the Berta of Ethiopia.

### 15. KUNAMA

As indicated in the article in this series devoted to the Eastern Sudanic languages, Kunama, which has usually been linked to the neighboring Barea in northwestern Ethiopia, must be considered, at least provisionally, as independent of the general Eastern Sudanic grouping and as forming a distinct language family.

### 16. NYANGIYA

Among the dialects of the Latuka of East Africa recorded by Driberg is one, Nyangiya, which, as Driberg himself saw, cannot be considered as Latuka or, indeed, as forming a part of any other language family of Africa. Nothing but limited vocabulary information is available for this language.

Allusion has been made in the article on Hamito-Semitic to the Bako group which is considered provisionally to belong to the West Cushitic branch of Afroasiatic (Hamito-Semitic).<sup>6</sup> More evidence is needed to decide the status of this group.

No evidence sufficient to prove the existence of a distinct Pygmy language has ever been adduced. On present indications, some Pygmies are Bantu-speakers while other speak languages of the Central Sudanic family.<sup>7</sup>

The extinct language of the Meroitic civilization, a cultural outpost of ancient Egypt which flourished during the classical period in the area of the confluence of the White and Blue Niles, was written in a hieroglyph alphabet. The phonetic values are known, but relatively little certain progress has been made in the interpretation of the inscriptions. The language does not appear to be related to any existing language of Africa.

6 Southwestern Journal of Anthropology, vol. 6, 1950, p. 55, fn. 10.

7 The most recent discussion of this problem by P. Schebesta (*The Pygmy Language, Zaire*, vol. 3, pp. 119-128, 1949) does not, to my mind, settle the question. Until we have a grammatical sketch and fundamental vocabulary we cannot be sure we have a separate Pygmy language. The words cited by Schebesta are in large part similar to those of the Central Sudanic speakers in the area.

# SMALLER FAMILIES

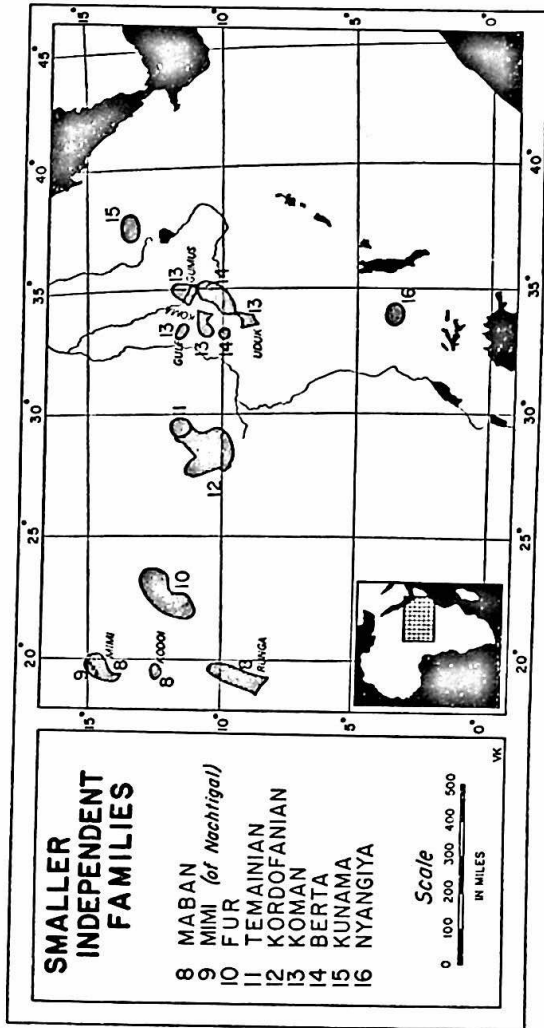


Fig. 1. Distribution of the smaller linguistic families in the Lake Chad-upper Nile region.

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The Malagasy language of Madagascar is, of course, Malayo-Polynesian and is not considered here.

It is entirely possible that somewhere in the vast and scattered literature of African linguistics I have overlooked a language which cannot be shown to be related to any other on the continent.

### THE MORE REMOTE RELATIONSHIPS

The question naturally arises as to the further possibilities of remoter relationships among the language families described in this series. I shall merely point here to a few phenomena which suggest such connections for some of the families at least. It should be realized that the relation among the various branches of the larger families is already a distant one and that a hypothesis, say, of affiliation between Central Sudanic and Eastern Sudanic is as venturesome as the suggestion of a connection between Indo-European and Ural-Altaiic.

The following facts are particularly suggestive of further relationships. In Hamito-Semitic the word for water is *\*ma*, while two terms of Semitic which can be traced back to Hamito-Semitic, *yam* 'sea' and *dam* 'blood', refer to liquids. This reminds us of the Niger-Congo affix *ma*, often appearing as suffixed *am*, which designates liquids. The Semitic suffix *-b*, found in the names of many animals, likewise reminds us of the *ba* class of Niger-Congo referring to large animals. Some of the Hamito-Semitic affixes for derived verbal species have points of contact with similar forms in other African languages. The causative *s* resembles formatives in Niger-Congo (Mossi, Bantu, and elsewhere), Hottentot *s* of the Click family, and, apparently, the *s* of Fur. The reflexive *t* of Hamito-Semitic resembles *t* of Kanuri in the Central Saharan group, and the passive *n* is suggestive of *-an* in Eastern Sudanic and of the *ŋ* reflexive of Fur. The very fact of the existence of noun affix classes for singular and plural in Niger-Congo and Kordofanian is indicative of possible further connections, since such formations are rare elsewhere in the world. The only other instances of which I am aware are the noun classes of the Kimberly languages of Australia and of some languages of the Caucasus. There are also some vocabulary resemblances among the various African language families.

Further investigation, particularly the reconstruction of parent forms within each language family, is necessary before these and other similarities can be adequately evaluated.

Some may consider the relatively large number of families, compared to previous analyses, an unwelcome result of the present investigation. The number is moderate when contrasted with the American Indian situation, or even that of

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Eurasia. That there should be sixteen language families in Africa is, I should think, not really surprising in view of the admitted antiquity of Africa as a place of human habitation. Previous investigations have shied away from admitting the existence of language families of small membership. No doubt large and equally balanced areas on a map and vast syntheses which include languages whose relationship cannot be demonstrated have a certain esthetic appeal, but I do not see that such considerations can play a part in scientific analysis. The results arrived at here for Africa are quite similar to those for North and South America and for Oceania in this respect, that vast areas are occupied by a small number of widely extended families while in other regions numbers of small isolated groups are found. The present results therefore tend to make Africa, in this respect, much more like other areas of the world than has previously appeared to be the case.

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This index is not intended to be exhaustive. Only those few Bantu languages are included which have previously been considered Semi-Bantu.

The meaning of the index figure or letter following each entry is in accordance with the following key:

1. Niger-Congo: *a.* West Atlantic; *b.* Mandingo; *c.* Senúfo; *d.* Mossi-Grunshi; *e.* Central Togo; *f.* Kwa; *g.* West Ivory Coast Lagoon; *h.* Central Ivory Coast Lagoon; *i.* East Ivory Coast Lagoon; *k.* Ijo; *l.* Central Branch; *m.* Adamawa; *n.* Bute; *o.* Eastern; *p.* Eregba.
2. Songhai.
3. Central Sudanic.
4. Central Saharan.
5. Eastern Sudanic: *a.* Southern Branch: (1) Nilotic; (2) Great Lakes; *b.* Nubian; *c.* Beir-Didinga; *d.* Barea; *e.* Tabi; *f.* Merarit; *g.* Dagú.
6. Afroasiatic: *a.* Ancient Egyptian; *b.* Semitic; *c.* Berber; *d.* Cushite; *e.* Chad.
7. Click: *a.* Khoisan; *b.* Sandawe; *c.* Hatsa.
8. Maban.
9. Mimi (of Nachtigal).
10. Fur.
11. Temainian.
12. Kordofanian: *a.* Kawalib; *b.* Tagele; *c.* Talodi; *d.* Tumtum; *e.* Katla.
13. Koman.
14. Berta.
15. Kunama.
16. Nyangiya.

STUDIES IN AFRICAN LINGUISTIC CLASSIFICATION

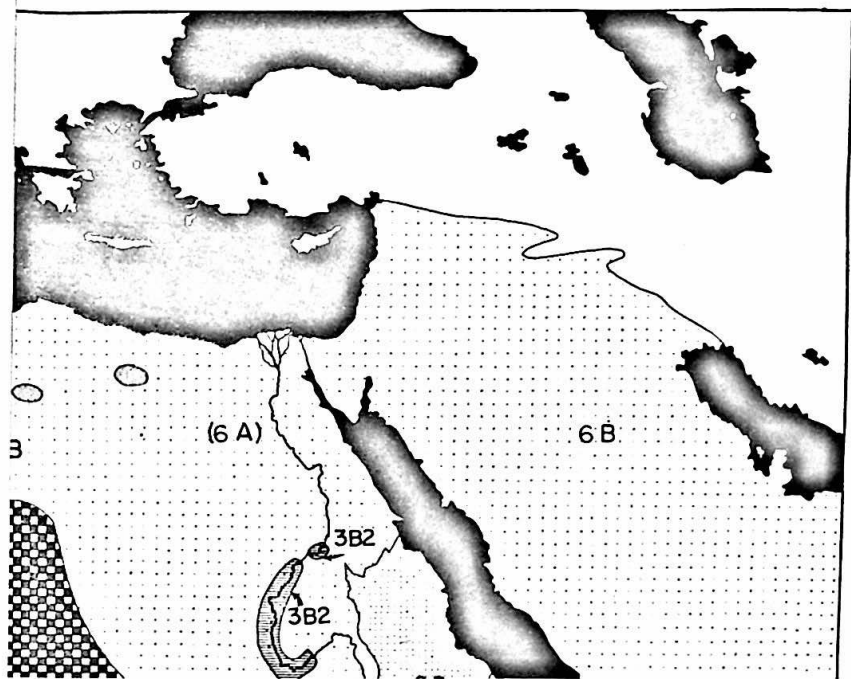
Abe 1 <i>h</i>	Banda 1 <i>o</i>	Bwaka 1 <i>o</i>
Abua 1 <i>l</i>	Bangba 1 <i>o</i>	Chamba 1 <i>m</i>
Abure 1 <i>f</i>	Bantu 1 <i>l</i>	Chara 6 <i>d</i>
Acholi 5 <i>a1</i>	Banyen 1 <i>l</i> (Bantu)	Chawai 1 <i>l</i>
Adele 1 <i>e</i>	Banyun 1 <i>a</i>	Chire 6 <i>e</i>
Afar 6 <i>d</i>	Barambo 1 <i>o</i>	Cobiana-Cassanga 1 <i>a</i>
Afo 1 <i>l</i>	Barea 5 <i>d</i>	Daba 6 <i>e</i>
Afudu 1 <i>l</i>	Bargu 1 <i>d</i>	Dagu 5 <i>g</i>
Agau 6 <i>d</i>	Bari 5 <i>a2</i>	Daka 1 <i>m</i>
Agni 1 <i>f</i>	Baron 6 <i>e</i>	Daza 4
Ahlō 1 <i>e</i>	Bassa 1 <i>l</i>	Didinga 5 <i>c</i>
Ajukru 1 <i>h</i>	Bata 6 <i>e</i>	Dinka 5 <i>a1</i>
Akpafu 1 <i>e</i>	Batu 1 <i>l</i>	Dormo 6 <i>e</i>
Alagiā 1 <i>g</i>	Bedauye 6 <i>d</i>	Durru 1 <i>m</i>
Alur 5 <i>a1</i>	Beir 5 <i>c</i>	Dyola 1 <i>a</i>
Amharic 6 <i>b</i>	Berber 5 <i>c</i>	Edo 1 <i>f</i>
Angas 6 <i>e</i>	Berta 14	Efe 3
Ankwe 6 <i>e</i>	Berti 4	Efik 1 <i>l</i>
Anyang 1 <i>l</i>	Biafada 1 <i>a</i>	Egyptian (ancient) 6 <i>a</i>
Anyimere 1 <i>e</i>	Bideyat 4	Ekoi 1 <i>l</i>
Arbore 6 <i>d</i>	Bijogo 1 <i>a</i>	El Amira 12 <i>c</i>
Argobba 6 <i>b</i>	Bilen 5 <i>d</i>	Eliri 12 <i>c</i>
Ari 1 <i>h</i>	Bitare 1 <i>l</i>	Eregba 1 <i>p</i>
Avatime 1 <i>e</i>	Bode 6 <i>e</i>	Ewe 1 <i>f</i>
Avikam 1 <i>g</i>	Boki 1 <i>l</i>	Fanti 1 <i>f</i>
Avokaya 3	Bolama 1 <i>a</i>	Fazoglo 14
Awiya 6 <i>d</i>	Bolewa 6 <i>e</i>	Fiomi 6 <i>d</i>
Bachama 6 <i>e</i>	Bongo 3	Fō 1 <i>f</i>
Baele 4	Boritsū 1 <i>l</i>	Fulani (Ful) 1 <i>a</i>
Baga 1 <i>a</i>	Bowili 1 <i>e</i>	Fur 1 <i>o</i>
Bagirimi 3	Bua 1 <i>m</i>	Gā 1 <i>f</i>
Baka 3	Buduma 6 <i>e</i>	Gaberi 6 <i>e</i>
Balante 1 <i>a</i>	Bullom 1 <i>a</i>	Galla 6 <i>d</i>
Balèse 3	Burum 1 <i>l</i>	Gauar 6 <i>e</i>
Bali 1 <i>l</i> (Bantu)	Burun 5 <i>a1</i>	Gbanziri 1 <i>o</i>
Bamum 1 <i>l</i> (Bantu)	Bushman 7 <i>a</i>	Gbaya 1 <i>o</i>
Bana 6 <i>e</i>	Bute 1 <i>n</i>	Gidder 6 <i>e</i>
Banana 6 <i>e</i>	Bviri 1 <i>o</i>	Gisiga 6 <i>e</i>

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| Golo 1 <i>o</i>           | Karbo 6 <i>e</i>     | Lumun 12 <i>c</i>                    |
| Grunshi 1 <i>d</i>        | Karekare 6 <i>e</i>  | Maba 8                               |
| Guang 1 <i>f</i>          | Katab 1 <i>l</i>     | Mackeri 6 <i>e</i> .                 |
| Gule 13                   | Katla 12 <i>e</i>    | Mada 1 <i>l</i>                      |
| Gulei 6 <i>e</i>          | Kawalib 12 <i>a</i>  | Madi 3                               |
| Gumus 13                  | Kawama 12 <i>a</i>   | Madyo 1 <i>o</i>                     |
| Gurage 6 <i>b</i>         | Kebu 1 <i>e</i>      | Malkan 14                            |
| Gure 1 <i>l</i>           | Khamir 6 <i>d</i>    | Mambila 1 <i>l</i>                   |
| Gurka 6 <i>e</i>          | Kilingira 1 <i>d</i> | Mandara 6 <i>e</i>                   |
| Gurma 1 <i>d</i>          | Kissi 1 <i>a</i>     | Mandingo 1 <i>b</i>                  |
| Gurmana 1 <i>l</i>        | Koke 1 <i>m</i>      | Mangbei 1 <i>m</i>                   |
| Gwa 1 <i>i</i>            | Kolbila 1 <i>m</i>   | Mangbetu 3                           |
| Gwandara 6 <i>e</i>       | Koma 13              | Manjia 1 <i>o</i>                    |
| Harari 6 <i>b</i>         | Konyagui 1 <i>a</i>  | Manyang 1 <i>l</i> (Bantu)           |
| Hatsa 7 <i>c</i>          | Koro 1 <i>l</i>      | Margi 6 <i>e</i>                     |
| Hausa 6 <i>e</i>          | Kotoko 6 <i>e</i>    | Masa 1 <i>m</i>                      |
| Heiban 12 <i>a</i>        | Kotopo 1 <i>m</i>    | Masai 5 <i>a2</i>                    |
| Hina 6 <i>e</i>           | Kredj 3              | Matakam 6 <i>e</i>                   |
| Hottentot 7 <i>a</i>      | Kru 1 <i>f</i>       | Mayogu 1 <i>o</i>                    |
| Ibo 1 <i>f</i>            | Kulung 6 <i>e</i>    | Mbarike 1 <i>l</i>                   |
| Ijo 1 <i>k</i>            | Kunama 15            | Mbugu 6 <i>d</i>                     |
| Iraku 6 <i>d</i>          | Kurama 1 <i>l</i>    | Mbulunge 6 <i>d</i>                  |
| Jaba 1 <i>l</i>           | Kuri 6 <i>e</i>      | Mbum 1 <i>m</i>                      |
| Jarawa 1 <i>l</i> (Bantu) | Kyama 1 <i>i</i>     | Mekyibo 1 <i>f</i>                   |
| Jen 1 <i>m</i>            | Kyentu 1 <i>l</i>    | Mende 1 <i>b</i>                     |
| Jukun 1 <i>l</i>          | Lafofa 12 <i>c</i>   | Merarit 5 <i>f</i>                   |
| Kadugli 12 <i>d</i>       | Lame 5 <i>e</i>      | Messo 1 <i>m</i>                     |
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| Kahugu 1 <i>l</i>         | Latuka 5 <i>a2</i>   | Mimi (of Nachtigal) 9                |
| Kam 1 <i>m</i>            | Lefana 1 <i>e</i>    | Miri 12 <i>d</i>                     |
| Kamuku 1 <i>l</i>         | Lendu 3              | Mober 6 <i>e</i>                     |
| Kanakuru 6 <i>e</i>       | Lipske 1 <i>e</i>    | Modgel 6 <i>e</i>                    |
| Kanderma 12 <i>a</i>      | Limba 1 <i>a</i>     | Momvu 3                              |
| Kanuri 4                  | Logba 1 <i>e</i>     | Mondunga 1 <i>o</i>                  |
| Kapsiki 6 <i>e</i>        | Logbara 3            | Monjombo 1 <i>o</i>                  |
| Kara 3                    | Logone 6 <i>e</i>    |                                      |

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Montoil 6c	Pape 1m	Tem 1d
Moro 12a	Piti 1l	Temain 11
Moru 3	Rashad 12b	Temne 1a
Mossi 1d	Reshe 1l	Tigrai 6b
Mubi 6e	Saho 6d	Tigre 6b
Mundu 1o	Sandawe 7b	Tima 12e
Munshi 1l	Sango 1o	Tira 12a
Musgu 6e	Sankotrofi 1e	Topotha 5a2
Musugoi 6e	Sara 3	Tornasi 14
Muturwa 6e	Sarwa 6e	Tuburi 6e
Nalu 1a	Semitic 6b	Tula 6e
Namshi 1m	Senufo 1c	Tumak 6e
Nandi 5a2	Sere 1o	Tumale 12b
Nangire 6e	Serer-Nono 1a	Tumtum 12d
Ndam 6e	Serer-Sin 1a	Turkana 5a2
Ndogo 1o	Shilluk 5a1	Twi 1f
Ndoro 1l	Sidamo 6d	Uduk 13
Ngamo 6e	Sillok 14	Vere 1m
Ngbandi 1o	Sokoro 6e	Waja 6e
Ngizim 6e	Somali 6d	Wassi 6d
Nidu 1l	Somrai 6e	Yakoma 1o
Nielim 1m	Songhai 2	Yala 1l
Nimbari 1m	Suga 1l	Yergum (1) 1l
Ninzam 1l	Suk 5a1	Yergum (2) 5e
Nubian 5b	Sura 6e	Yeskwa 1l
Nuer 5a1	Tabi 5e	Yoruba 1f
Nungu 1l	Tagele 12b	Yulu 3
Nupe 1f	Tagoy 12b	Yungur 1m
Nyamnyam 1m	Talodi 12c	Zaghawa 4
Nyangbo-Tafi 1e	Tangale 6e	Zande 1o
Nyangiya 16	Teda 4	
Nzakara 1o	Teis-um-danab 11	



ADDENDA AND CORRIGENDA

Page 4, line 13. The MacDiarmids are not unaware of Meinhof's classification and realize that their results require its emendation.

Page 12, line 8. Supply comma between Nidu and Bitare. Add Anyang.

Page 25. In legend accompanying map interchange Limba and Kissi and bracket Kissi with Bullom.

Page 39, line 13. For *Banyen* read *Banen*. Mlle Dugast informs me (by personal communication) of her agreement with my thesis that Banen is genuinely Bantu and not "Semi-Bantu" as has always been assumed.

Page 46, line 8. This treatment of the topic is superceded by that in the section devoted to the click languages.

