were still Christians. So strong did the linkage become that eventually one of the Beni Kanz leaders succeeded to the throne of Makouria itself, apparently as a result of the rule of matrilineal succession which prevailed at medieval Nubia.[9] According to tradition this accession to the throne took place in 1323 (Adams 1977:529). Fifty years later, however, it appears that the Beni Kanz had lost their control at Dongola and had returned to their more usual base of operations in the far north (Hasan 1967*a*:118–120).

Fernea evidently believes that during the brief period of their sovereignty large numbers of Beni Kanz came to Dongola to share in the spoils, that they contracted marriages with local women there, and that after their expulsion these women were carried by their husbands back to northern Nubia, where they taught their own Dongolawi dialect to their offspring. He correctly points out that throughout the Islamic world children are taught to speak exclusively by their mothers, so that a migration of females alone could be sufficient to account for the transplantation of the Dongolawi dialect. If we are to imagine a complete linguistic change in northern Nubia originating from such small beginnings, however, I think it can only be because the returned Beni Kanz became a ruling elite in their home district. The dominance of their language over time would therefore be a reflection of their social and political dominance over their Nobiin subjects. Fernea makes the telling point that for a considerable time the relationship between the Beni Kanz/Kenuz and their Nobiin neighbors was that of slavers and enslaved, a relationship that was justified initially because the Kenuz were Moslems whereas the Nobiin were Christians. Under those circumstances there would surely have been an advantage in exhanging Nobiin for Kenzi identity.

Fernea's hypothesis was greeted with a certain skepticism when it was first presented, perhaps because it is so far removed from the tradition of mechanistic and deterministic explanation which is now firmly established in anthropology. It is nevertheless the only suggestion thus far offered which places the arrival of Dongolawi speakers in northern Nubia within a linguistically acceptable time frame—that is, not much more than 500 years ago—and which is consistent with the complete lack of evidence for ethnic or cultural diversity in the north at an earlier date. The author goes on to cite additional cultural evidence which he sees as supporting his position. I have no further space to discuss his arguments here, but I hope to see them more fully explored in subsequent research.

[9]This event is historically attested by several contemporary authors (see Hasan 1967*a*:121).

3 Linguistic Aspects of Greater Nubian History

ROBIN THELWALL

My aim in this paper is to present a classification of the Nubian language group based primarily on the comparison of basic lexicon. This comparison is used as a starting point for proposing hypotheses on the earlier geographical location of Nubian-speaking peoples and their possible movements. It also serves as a check on other hypotheses on the origin and movements of the Nubian languages.

The initial brief background to comparative linguistic study in Africa is intended for nonlinguists who need to bear in mind the extent and limitations of the generalizations being made. The detailed presentation of internal Nubian language relations then given is followed by a consideration of possible external links. The final summary of historical arguments is based on the above.

The fact that the classification rests almost entirely on the lexicostatistics of basic vocabulary should not mislead readers into assuming that I accept this as a method for subclassification. The justification for its presentation and its use in hypothesis forming is that we do not yet have sufficient comparative data for other reliable subclassifications. The method used is systematic and methodologically more or less transparent. The strengths and weaknesses of the method are discussed at relevant points in the article. Those who would dismiss this method out of hand would make a better contribution by collecting sufficient new data to refute the conclusions and/or the method in this African context.

Background to the Classification of Sudan Languages

The systematic description of Sudan (and African) languages began in the nineteenth century as a natural extension of the Indo-European comparative movement. Two major factors conditioned the course of comparative African language studies: (1) the absence of ancient textual material in Africa (except for Egyptian, Ethiopian Semitic, and Nubian);

(2) the inaccessibility of the languages, which meant that the selection of languages to be described resulted from the random presence of particular African language speakers in Europe or of particular European scholars in Africa (for an insight into these matters, see Andrzejewski 1968).

The selectivity and the paucity of the data did not, however, deter linguists from proposing general classification schemes. Their schemes were conditioned by their views on the interrelationship between racial theory and genetic and typological linguistic features, and not until quite recently have scholars been able to disentangle these factors, in terms of both nomenclature and methodology. (McGaffey 1966 and Trigger 1978 present recent discussions of these matters.) Meinhof's (1912) and Westermann's (1911, 1927) classifications are prime examples of the early comparative work.

For eastern, southern, and western Africa the data base for comparative work and classification has expanded hugely, particularly since 1945. For the Eastern Bilad al-Sudan (from Chad to Ethiopia), however, both research and publication have been more sharply limited, except for Ethiopia, which since 1967 has been the subject of extensive and intensive investigation as shown by Bender et al. (1976), Bender (1976), and numerous articles. For the Sudan in particular, there is the large manuscript collection of R. C. Stevenson, many of whose grammatical data are included in Tucker and Bryan's (1966) comprehensive volume. Of approximately 100 languages spoken primarily in the Sudan, however, not more than twenty have published grammars and dictionaries. For the other eighty or more languages varying and lesser amounts of vocabulary and grammatical information have been published. In addition, the number of active linguists is still small when compared with the number of workers elsewhere in Africa, though it is a good sign that a number of Sudanese now have completed or are completing linguistics training.

The Current Situation in Sudan Language Classification

The three proposed classifications of Sudan languages in existence are based on significantly more data than are Meinhof's and Westermann's: Greenberg (1963); Tucker and Bryan (1966), the latter of which forms the basis of this geographical area for Dalby's (1977) "referential" classification; and Bender (1976). Greenberg provides a comprehensive hypothesis of the hierarchical relationships from individual language groups up to the major family (or phylum) level. Dalby presents "a revised classification of African languages, based on *known* levels of historical relationship" (my emphasis). The latter half of this statement refers to the reevaluation of Greenberg's hypotheses, possible because of the expansion of data available, and a comparative analysis, as well as an extensive argument about the methodology of language classification in Africa and elsewhere.

The question of whether Greenberg's classification is supportable on the evidence and methods he used has become less important than the stimulus it has provided for the collection of new data and the general reevaluation and refinement of genetic and typological classification methods. But it is certainly true that the uncritical acceptance by many nonlinguists of Greenberg's (or any other) classification, along with their use of it as supposedly solid collateral for the reconstruction of culture history, has been a dangerous spin-off. It is in this context that Dalby has argued cogently over several years for a "neutral" geographically based classification. Unfortunately, in the preliminary publication of his *Language Map of Africa* (1977), he has not really done this kind of classification; numerous traces of older racial-genetic-based classifications remain for which there is now no valid evidence, such as the tendentious retention of the term Para-Nilotic.

What is important is that nonlinguists should be aware of the controversies still surrounding much of African language classification. This is not to take an archconservative linguistic view toward Greenberg (as is not unknown among European Africanists), but rather to emphasize that controversy on the classification of African languages, fruitful and essential as it is for the advancement of the field, is primarily to be evaluated by linguists. Those from other disciplines who wish to join in the arguments must be prepared to evaluate critically the linguistic data and methodology instead of simply accepting the conclusions of any proposed classification. The same principle applies equally to linguists who actively participate in culture reconstruction and attempt to relate linguistic data to history.

Lexical Comparison

The major (and controversial) methodological addition in the field of comparative vocabulary analysis, which from the first has been the basis for Indo-European reconstruction both of protovocabulary and of the sound-change rules, has been lexicostatistics. Hymes (1960) gives the most balanced discussion of the method(s), and work by Gleason (1959),

Dyen (1965), Bender (1969, 1976), Henrici (1973), and Thelwall (1978) indicates both the growing usefulness of these methods and the critical reexamination of their validity and their limitations.

Lexicostatistics of "basic" vocabulary is also the basis of the much more controversial glottochronology. I will merely say here that where a relative chronology of linguistic relations can be established and can be correlated with an absolute or relative chronology derived by any other method and linked with the glottochronological scale (by the standard formula), then I see no reason for not using the glottochronological scale for dating the rest of that relative chronology, subject of course to counterevidence at any particular point without vitiating the whole scale. Discussion on this matter with specific reference to Nubian follows in the last section of this paper.

The issue of the incidence of chance similarity within basic vocabulary I take to have been examined by Bender (1969) and the probabilities to have been established. The issue of whether a specific pair of related lexical items are present in a pair of languages as the result of resistance to loss since the time of the protolanguage, or alternatively are present as a result of borrowing from one language to another, is ever present, and it can be even partly resolved only by checking sufficient comparative data. We are not yet in a position to attempt a thorough investigation of this problem for the Nilo-Saharan languages.

Current Models of Nilo-Saharan Relationships

As stated above, there are only three proposed groupings of Nilo-Saharan languages, those by Tucker and Bryan (1966), Greenberg (1963), and Bender (1976). In a sense, as Greenberg (1973) himself has pointed out, his classification and Tucker and Bryan's groupings are not in direct conflict since they start from different methodological bases, the one genetic and the other typological, and they coincide at the lowest level of relationships. Since it is genetic classifications which are *historical* classifications, the two explicitly genetic schemes of Greenberg and Bender are the ones that must be presented here, as background to understanding Nubian relationships.

Greenberg (1963): Nilo-Saharan

A. Songhai
B. Saharan

C. Maban
D. Fur
E. Chari-Nile
   1. Eastern Sudanic
   1.1 Nubian: (*a*) Nile Nubian, (*b*) Kordofanian Nubian, (*c*) Meidob, (*d*) Birked
   1.2 Murle (Beir), Larim, Didinga, Suri, Mekan, Murzu, Surma, Masongo
   1.3 Barea
   1.4 Ingessana (= Tabi)
   1.5 Nyima, Afitti
   1.6 Temein, Teis-um-Danab
   1.7 Merarit, Tama, Sungor
   1.8 Dagu of Darfur, Baygo, Sila, Dagu of Dar Dagu, West Kordofan, Njalgulgule, Shatt, Liguri
   1.9 Nilotic: Western (1) Burun, (2) Shilluk, Anuak, Acholi, Lango, Abur, Luo, Jur, Bor, (3) Dinka, Nuer; Eastern (1) Bari, Fajulu, Kakwa, Mondari, (2*a*) Jie, Dodeth, Karamojong, Teso, Topotha, Turkana, (2*b*) Maasai; Southern: Nandi, Suk, Tatoga
   1.10 Nyangiya, Teuso [IK]
   2. Central Sudanic
   2.1 Bongo-Baka, Morokodo, Beli, Gberi, Sara, Vale, Nduka, Tana, Horo, Bagirmi, Kuka, Kenga, Disa, Bubalia
   2.2 Kreish
   2.3 Binga, Yulu, Kara
   2.4 Moru, Avukaya, Logo, Keliko, Lugbara, Madi
   2.5 Mangbetu, Lombi, Popoi, Makere, Meje, Asua
   2.6 Mangbutu, Mamvu, Lese, Mvuba, Bfe
   2.7 Lendu
   3. Berta, Malkan, Sillok, Tornasi
   4. Kunama
F. Coman: Koma, Ganza, Uduk, Gule, Gumuz, Mao

Bender (1976 with his own modifications): Nilo-Sahelian

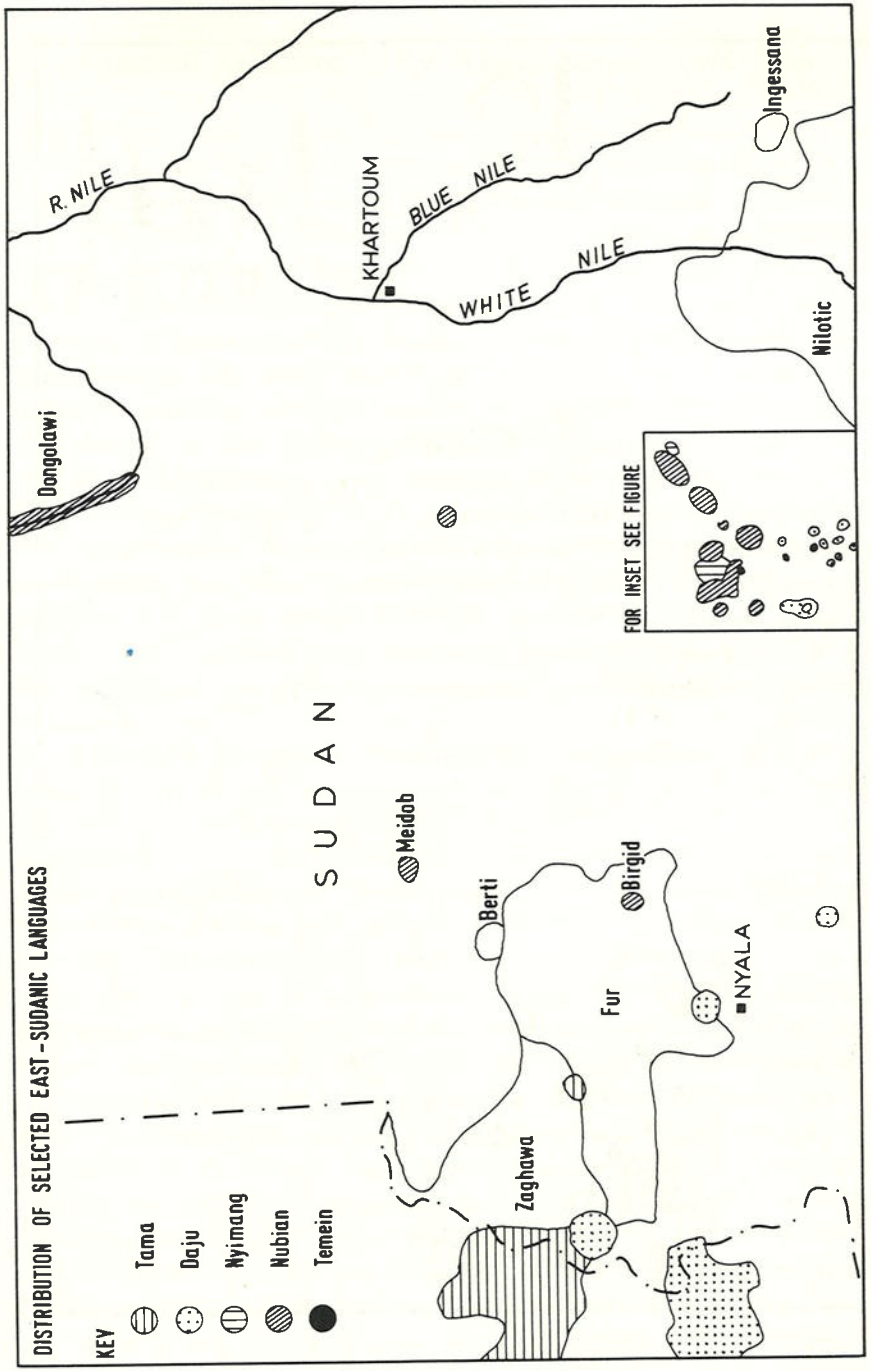
A. Songhai
B. Saharan
C. Maban
D. Fur
E. Eastern Sudanic (Greenberg's E 1.1–1.8)

F. Nilotic
G. Nyangiya, Teuso, Tepeth
H. Central Sudanic
I. Berta
J. Kunama
K. Koman
L. Gumuz

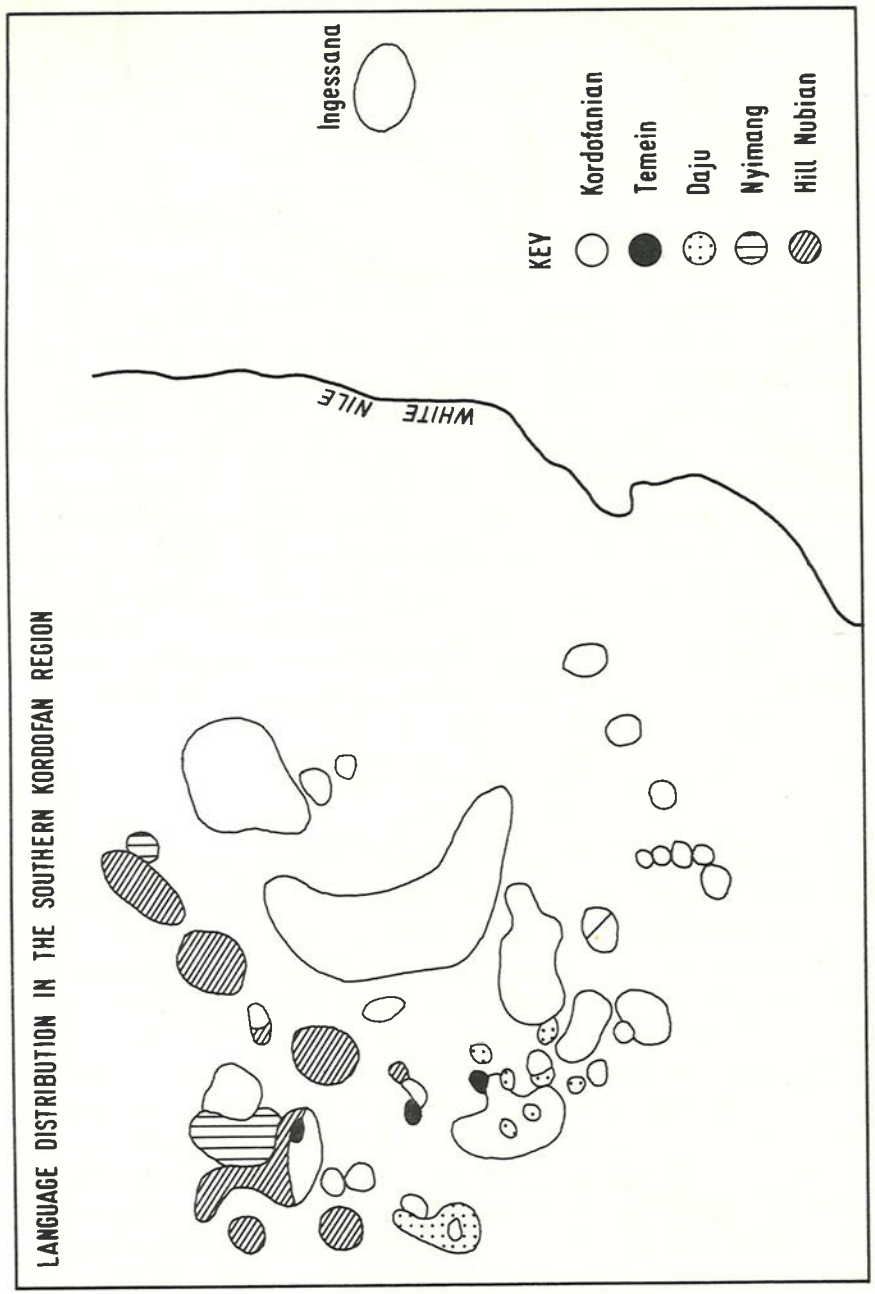
Bender, who has carried out the most extensive assembly and collation of existing and new data, emphasizes that his scheme is provisional, because of both the continuing expansion of the data base and the development of the comparative methodology. His scheme, nevertheless, represents a more critical reappraisal of Greenberg than Dalby's (1977). The weakness of the Chari-Nile hypothesis had been previously proposed by Goodman (1971) on the basis of Greenberg's own evidence, but this hypothesis now rests on Bender's new data and analysis. Also to be noted are the revisions in Eastern Sudanic. The internal situation in Nilotic can now be reevaluated as a result of extensive recent work, particularly by scholars from Cologne University, though Bender concurs with Greenberg in accepting a three-way split at the next level down.

The Nubian Group

The major impact of the introduction of the Arabic language and Islam to the eastern Sudan began with the fall of Christian Nubia in the period after A.D. 1000, and the expansion of the use of Arabic ever since has created a situation today in which not only are speakers of many Nilo-Saharan languages interpenetrated and even isolated by Arabic monolinguals, but they are also by and large bilingual with Arabic as at least a second, and increasingly a first, language. Thus it is often impossible, or at least very difficult, to estimate the previous distribution of Nilo-Saharan languages, particularly for the areas that at the present time are solely Arabic-speaking, or where the presence of non-Arabic speakers may be owing to recent migration. It is nevertheless surprising to observe how few of the Nilo-Saharan languages have either become extinct, or are on the verge of extinction, since 1920, the point from which the recorded information on the peoples and languages of the Sudan starts to achieve some sort of overall coverage (maps 8 and 9).



Map 8.



Map 9.

Internal Relations in the Nubian Language Group

The Nubian languages are, of course, important carry-overs from the pre-Arabic eras, and tracing their earlier history is an important part of our understanding of Sudanese history in the last millennium B.C. and the first millennium A.D. The most succinct summary of ideas about the history of the Nubian languages and possible migrations of Nubian-speaking peoples is given by Trigger (1966:19): "The principal debate concerning the history of the Nubian languages has been whether they spread to the Nile Valley from Kordofan and Darfur or moved in the opposite direction." Basically MacMichael (1922) and Arkell (1961) argue that the presence of Nubian-speaking groups in Kordofan and Darfur resulted from the incursions of Ethiopians or the Arabs and Islam on the Nile Nubians. Zyhlarz (1928), relying on an evaluation of the linguistic evidence available to him, argues for a Kordofan origin. Of the various modified forms of these hypothesis which have been proposed, the only pertinent one is Greenberg (1963). He supports Zyhlarz, arguing tentatively, on the basis of a glottochronological study, that any split between "Hill and Nile Nubian more recent than 2,500 years B.P. [before present] is incorrect."

Ultimately the choice among hypotheses depends on the establishment of a reliable subclassification of the Nubian languages. Although it has been known, at least since MacMichael (1922), that the Nubian language group comprised Nobiin (Mahas), Dongolawi-Kenuzi, Hill Nubian (South Kordofan), Birgid, and Meidob, and that the two Nile Nubian dialects were closer to each other than to any other member, it was only with the collection of new data on Birgid and Meidob and the systematic comparison of basic vocabulary across the whole group (Thelwall 1978) that a serious reappraisal of internal subgrouping could take place. The cognate counts of the 100-item list were submitted to cluster analyses, and tree diagrams based on five different methods were derived (Thelwall 1981). The trees yield the same derivation for the following relations: (1) Meidob is the most distant member of the group; (2) Kadaru and Debri are the closest-knit pair and, at 87 percent cognate, may be treated as dialects of one Hill (Kordofan) Nubian unit; and (3) Dongolawi-Kenuzi and Nobiin are closer to each other than either is to any other language. Crucial qualifications to this last statement are taken up below.

What is not consistent from the tree diagrams is the hierarchical relationship among Birgid, Kadaru, Debri, and Nile Nubian. The basic

anomaly is the difference in the percentages between Dongolawi as against Nobiin and Birgid, Kadaru and Debri. If we take only the highest figures for either Kadaru or Debri, excluding the other on the basis that two cognate counts for such closely related languages will distort the figures, we still get a mean or average of 53 between Dongolawi and Birgid-Debri as against 40.2 between Nobiin and Birgid-Kadaru. It is less for Nobiin:Birgid-Debri. This 13 percent difference is not plausibly explained as random differential retention of common core Nubian Lexicon.

One plausible hypothesis is that the percentages for Dongolawi with Birgid, Kadaru, and Debri more accurately represent retained common vocabulary and that the Dongolawi:Nobiin percentage is discordantly high because of borrowing by Dongolawi from Nobiin so early in the history of Nubian differentiation that loan status is not easily discernible. In support of this interpretation we may argue first that place-names of probably Nobiin origin exist in an area that is now either Arabicized or inhabited by Dongolawi speakers. Second, the political dominance of Nobiin as the administrative and religious language (the extant texts in "Old Nubian" are closer to Nobiin than to any other present-day Nubian language) shows that Nobiin had a prestige advantage which would explain continuing vocabulary interference from Nobiin through the medieval period, with a resulting higher proportion of Nobiin loans in present-day Dongolawi. A third argument is that in the first millennium A.D. Nobiin and Dongolawi would still have been sufficiently mutually intelligible for the selection of alternative lexicon on the basis of prestige to have been sociolinguistically easy and not to require special pleading. If we discount the Dongolawi high score with Nobiin, the pattern of percentages may be reasonably interpreted as a dialect chain with the low range in the 40 percents, representing more distant members, and the 50 percents, the nearer members in a chain or network.

Figure 1 presents a schematic version of present geographical distribution of the Nubian languages with the glottochronological dates inserted. The dates are not proposed deterministically but merely for hypothesis building and testing.

In summary, the lexicostatistical relations, with the overhigh Dongolawi:Nobiin figure attributed to contact influences, suggest that in the last millennium B.C. Nubian communities, presumably pastoralists in subsistence, spread out widely across the steppes between northern Darfur and the Nile. The possible position of Meidob in its own group

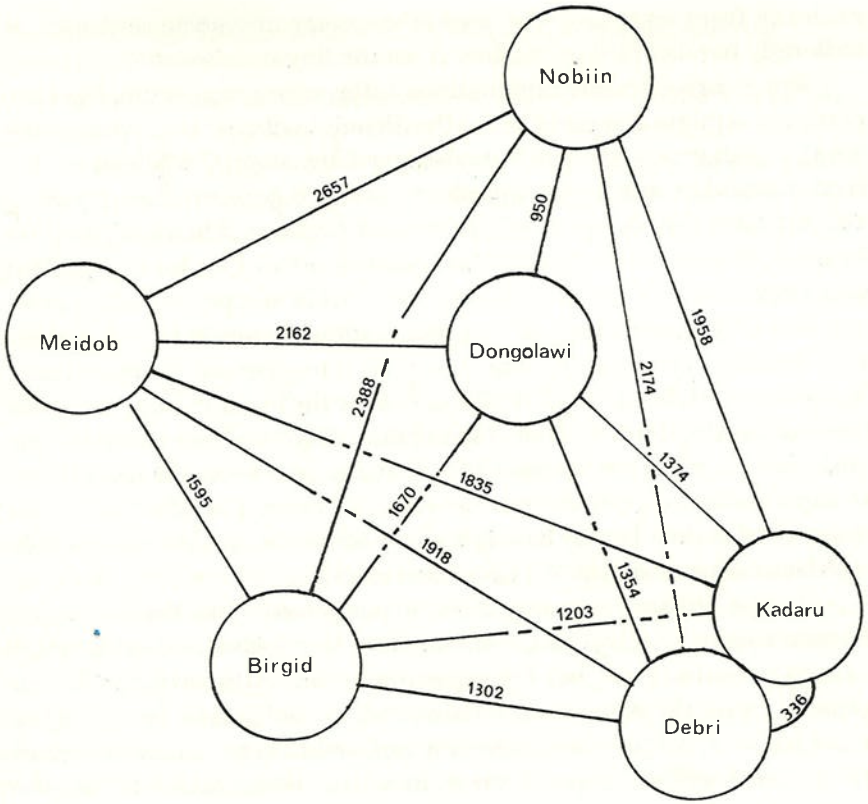


Fig. 1. Schematic representation of Nubian geographical positioning and glottochronological distance (in years B.P.).

coordinate with the group made up of the other four Nubian languages suggests that the movement was principally from Darfur eastward. The pre-Nobiin were the first Nubians to settle in the upper and lower Nubian Nile stretches, perhaps even in the latter part of the last millennium B.C. The pre-Dongolawi were a slightly later intrusion of nearby Nubians displacing the pre-Nobiin in Upper Nubia. If pre-Dongolawi were replacing the still very similar (at that time) pre-Nobiin, that would further enhance the movement of Nobiin vocabulary into Dongolawi and thus add to the appearance of special resemblance between the two which, it has been argued, was caused by the medieval prominence of Old Nubian. A recent examination of vocabulary evidence for Nubian contact with the Nile is given in Behrens (1981). W. Y. Adams (chap. 2, above) adduces

evidence from texts which indicates the history of Nubian settlement is strikingly parallel to that reached from the linguistic sources.

Some corroborating nonlinguistic information supporting this conclusion is a migration tradition of the Shaiqiya tribe, who are part of the greater Jaali group, presently Arabic-speaking, along the Nile upstream from Dongola and who are considered arabized Nubians. This tradition recounts that the Shaiqi came from western Sudan and first settled on the White Nile near Ed-Dueim, 120 kilometers south of Khartoum, and then at a later date moved north across the Bayuda steppe to their present position (Ali Osman, personal communication). It would be a very aberrant and thus believable tradition even for a present-day Nubian-speaking community, let alone an Arabic one, since the historical importance of the Nubian kingdoms and the desire to manufacture a respectable Islamic and Arabian pedigree combine to give many peoples in the central and western Sudan migration-from-the-east traditions. The Meidob, for instance, hedge their bets by having both a tradition linking them to the Nile Nubians and a tradition of Hilāli Arab origin.

We are left with one remaining major puzzle. The Kenuz speak a Nubian tongue barely distinguishable from Dongolawi, and yet they are located primarily in Upper Egypt north of Wadi Halfa, with the Nobiin situated along the Nile between them and the Dongolawi. According to some scholars, the presence of Nobiin sandwiched between two groups of Dongolawi speakers supposed the incursion of Nobiin, probably from the southwest. The lexical subclassification and the argumentation based on it above go strongly against this hypothesis and instead indicate that the presence of Dongolawi speech among the Kenuz is due to a northward movement of Dongolawi speakers, and a relatively recent movement at that, unless the lines of communication between the two remained exceptionally strong and constant. Fernea (1979) has argued cogently that "the language, belief system, tribal organisation and distinctive architecture among the Kenuz . . . [were] a legacy from the Dongola region." Supporting evidence from medieval sources such as Ibn Khaldun (Hasan 1967*a*: 127) tells us that as the Christian kingdoms of Nubia were collapsing, many Nubian women were given in marriage to Arabs. Kanz al-Dawla, who was of both Dongolawi and Arab descent and from whom the Kenuz take their name, after being made king of Dongola in the late fourteenth century, subsequently retired with his followers to estates near Aswan (Hasan 1967*a*:119). The collusion of historical and contemporary evidence would seem to resolve the puzzle (see also Adams on this point in chap. 2, above).

External Links with the Nubian Language Group

What was the earlier background of the proto-Nubians of the first millennium B.C.? Since Greenberg (1963) offers no details of subgrouping within Eastern Sudanic, except for Nilotic, comparisons were made with seventeen other languages belonging to six other Eastern Sudanic groups and Berta (Thelwall 1981:169–171). Two sets of comparisons are significant:

	Range	*Median*	*Average*
Nubian:Tama	19.6–24.7	22.1	22.2
:Nyimang	9.8–19.8	14.8	13.4
:Afitti	10.7–16.7	13.7	12.5

For Tama, the lowest figures are with the geographical outliers of the group, Meidob and Nobiin, and the highest figure is with Dongolawi. If the relationship with Tama was primarily the result of proto-Eastern Sudanic retentions combined possibly with variations owing to subsequent contact with Western Nubian groups, we would expect a cline falling from Darfur Nubian through Kordofan to Nile Nubian. The pattern given indicates instead that, at one stage of the development of Eastern Sudanic, Tama and Nubian formed a distinct subgroup. The present geographical position of Tama, centered on the Chad-Sudan border zone north of Geneina (see map 1), and its linguistic position separated from other Eastern Sudanic languages by at least Zaghawa and Fur indicate two things. First, they support the Darfur origin hypothesis for Nubian. The glottochronological figures range from 3,668 to 3,315 years ago, placing the Tama-Nubian breakup in the earlier second millennium B.C. Second, they raise the probability that Tama diverged from Nubian by a movement to the west, even if we allow for possible movement of Fur as well as of Zaghawa speakers into intervening areas. The figures and the derived tree diagrams strongly support Nubian-Tama as a distinct subgroup within Eastern Sudanic.

The relationship of the Nubian group with Nyimang-Afitti is more tenuous, and at these percentages the confidence level decreases. Given the geographical location near to Hill Nubian of the two languages, again we would expect the highest figures with these; however, the highs are rather with Dongolawi and Nobiin, farther away, a fact that strenthens

our confidence in the indications of the percentages. The location of Nyimang and Afitti puts their earlier homeland in or near Kordofan and suggests that the Tama-Nubian homeland should be somewhere nearby, perhaps between Darfur and Kordofan.

The remaining figures for Nubian relationships, which are all lower, merely support Bender's revised model for Nilo-Saharan with a number of coordinate branches going back a long way in time. Clearly lexicostatistics has little to offer in the way of deep-time subgrouping here. The next advances will come from detailed comparisons and reconstructions; the examination of borrowing, particularly in culture vocabulary; and the development of hypotheses about environmental and culture-contact relations.

Acknowledgments

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Part II

Equatorial Africa