

SOME THOUGHTS ON THE EARLY HISTORY
OF THE NILE-CONGO WATERSHED

by

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The early history of the Nile-Congo watershed region has remained largely unstudied. Yet lying at the juncture of two extremely different ecologies--the equatorial rain forest on the south and the savannah and steppe of the Middle Nile Basin to the north and northeast--it could be expected to provide the backdrop for a complex history of interaction between widely variant cultural and economic adaptations. We are initiating the discussion of this history by laying out the available linguistic evidence and, from that evidence, suggesting a few of the broad patterns of the spread of ideas and peoples through the Nile-Congo watershed over the span of the past 4000-5000 years.

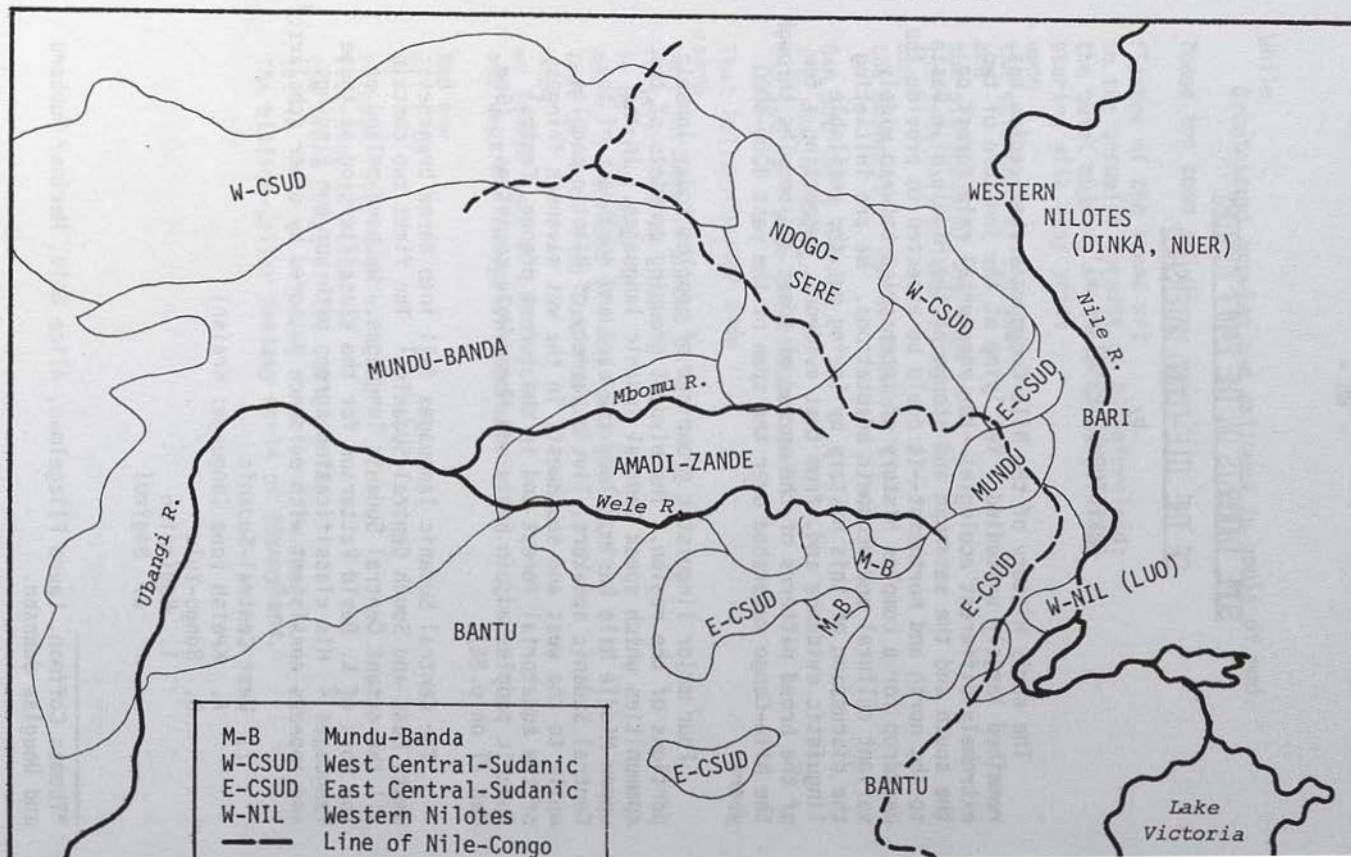
Four major linguistic groupings of peoples today inhabit portions of the region. The pivotal grouping consists of the communities which speak Central Sudanic languages. In the upper Middle Nile Basin, along the east and northeast of the Central Sudanic speakers, live a variety of Nilotic peoples, while to the west and southwest, in the wet savannah fringes of the equatorial forest and in the forest proper, Central Sudanic peoples adjoin Bantu and Mbomu-Wele societies. (See Map #1 on p.86)

The Central Sudanic languages fall into three branches: West, East and South Central-Sudanic.¹ The first two contain all the extant Central Sudanic languages. We have relied on the work of K. David Patterson for the classification of these languages.² His classification agrees with our own findings and appears consistent with evidence gathered by other scholars:³

- I. West Central-Sudanic
 - A. Kreish (one language: Kreish)
 - B. Bongo-Yulu
 - 1. Bagirmian
 - a. Bagirmi

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MAP # 1 - MODERN DISTRIBUTIONS OF LANGUAGE GROUPS



- b. Sara (numerous dialects)
- c. Kara
- 2. Bongo (Bongo, Baka, Beli, etc.)
- 3. Yulu

II. East Central-Sudanic

- A. Lendu (one language: Lendu)
- B. Mangbetu (Makere, Popoi, Lombi, etc.)
- C. Mamvu-Lese (Mamvu, Lese, Mangbutu, etc.)
- D. Moru-Madi (Moru, Madi, Lugbara, Logo, etc.)

The third subdivision, South Central-Sudanic, consisted of languages all now extinct, whose former existence is attested solely in loanwords found in Bantu languages and in Khoikhoi.⁴ The South languages cannot presently be attributed as a subgroup within either East or West Central-Sudanic branches. They may in fact form a separate branch of the language family coordinate with a branch consisting of the East and West Central Sudanic groupings combined. We have a single, albeit strong, piece of evidence favoring that solution. The South Central-Sudanic root for "cow" **-mbi* (corresponding to East and West Central-Sudanic **-bi*) retains the original Chari-Nile sense of the root,⁵ whereas the East and West branches share a semantic shift of the root from the meaning "cow" to the meaning "buffalo." The Central Sudanic languages, extant and extinct, may then have had the following primary relationships:

I. South Central-Sudanic

II. East/West Central-Sudanic

(existing languages; classified by K. David Patterson)

Let us, for now, take a more conservative view and see South Central-Sudanic as one among three co-equal or approximately co-equal branches of the family of the a) South Central-Sudanic; b) the East Central-Sudanic; and c) the West Central-Sudanic.

Linguistic geography places the proto-Central Sudanic location broadly in the upper Bahr-al-Ghazal watershed, to the west of the Nile and possibly as far south as northwestern Uganda. This location is obtained by working backward from more recent distributions of Central Sudanic languages.

Starting with West Central-Sudanic, the center of gravity of the distribution of the three languages of the Bagimian subgroup suggests that proto-Bagimian origins are best placed approximately in the areas north of the upper middle Shari reaches. Bagimian in

turn is one of three coordinate subgroups of languages within the Bongo-Yulu sub-branch of West Central Sudanic. The Bongo subgroup of dialects are all tightly clustered in central Bahr-al-Ghazal, while the Yulu language is spoken west of the Bongo group. Thus proto-Bongo-Yulu, by the center-of-gravity principle, is, in its turn, best placed intermediate between Bongo and the suggested proto-Bagirmian location, hence in the far western Bahr-al-Ghazal. Kreish, the remaining West Central-Sudanic language, which forms its own sub-branch coordinate with the whole Bongo-Yulu group, is spoken today in just that area. Thus, the emergence of the ancestral West Central-Sudanic languages must be placed there as well.

The location of the ancestral East Central-Sudanic language can be more simply argued. The present location of the East branch (which divides into four coordinate or approximately coordinate sub-branches) sets the proto-East Central-Sudanic homeland somewhere along an axis running from the Nile westward into the northeastern corner of the equatorial forest. Because of the reconstructed proto-East trait of cattle-keeping (to be discussed below), it is necessary to put the proto-East people at the eastern or northeastern extreme of this axis, in far northwest Uganda and adjoining parts of the Sudan, where the tsetse fly would not have been a prevalent factor.

The proposed locations for the proto-West and proto-East Central-Sudanic languages suggest an initial spreading out of Central Sudanic communities in a northwest/southeast belt along the middle Bahr-al-Ghazal region, as far south as the northern fringe of Uganda. The extension of some South Central-Sudanic people, about 2000 years ago, as far southward as parts of Zambia was, of course, a later development; but the problem remains of locating the ancestral South homeland. The direction of the spread of languages of the South branch suggests that the proto-South language adjoined the other early Central Sudanic languages on the south, and we can therefore suggest that the original span of Central Sudanic settlement may have reached as far even as central western Uganda, with the proto-East speakers at the middle, and the proto-South people at the southern extremity. (See Map #3 on p. 93)

Dating early Central Sudanic history rests, for now at least on shaky ground. Patterson suggests a glottochronology date of ca. 2500 B.C. for proto-Central-Sudanic speech.⁶ We felt unable to claim reliability for a date so obtained, but it seemed nevertheless probable that a date broadly in the third millenium B.C. would be close to the mark. The linguistic differences between the most distantly related Central Sudanic

languages, particularly the degree of vocabulary differences, are on approximately the same scale as those within the Nilotic and Southern Cushitic families. The ancestral languages of both these families are dated somewhat less tenuously to around about 4000 years ago or possibly to a few centuries earlier than that.⁷ Thus the dating of proto-Central-Sudanic can be put very roughly into the same time range.

Early Central Sudanic expansion and differentiation into three branches began then probably in the third millennium B. C., while the extension of Central Sudanic speech through the central and southern Bahr-al-Ghazal and into northwestern Uganda was complete by sometime in the second millennium. By 1000 B. C. or thereabouts, South Central-Sudanic populations began to spread through the areas between Lake Victoria and the Western Rift lakes and thence farther southward in the second half of the millennium.⁸ The expansion of West Central-Sudanic languages of the Bongo-Yulu group westward and north-westward toward Chad is a still later set of events. If we use Patterson's lexicostatistics as a guide to relative depths of linguistic relationship, we can argue that the events have taken place largely over the past 2000 years. The division between Bagirmi and the Sara dialects began to emerge only as late perhaps as 1000 A. D.⁹

Partial and tentative establishment of Central Sudanic sound-correspondences has allowed reconstruction of a number of words dealing with proto-Central-Sudanic subsistence and material culture.¹⁰ From this evidence the ancestral Central Sudanic society can be seen to have cultivated sorghum and possibly bulrush millet and to have herded cattle and goats. They certainly milked their cattle. From the comparative ethnographic evidence, however, it can be seen that they did not follow the practice of drinking their cow's blood and that they prohibited women from dealings with cattle.¹¹

By the beginning of the South Central-Sudanic expansions in the last millennium B. C., Central Sudanic subsistence knowledge had come to include sheep herding and the cultivation of eleusine, for the Moru-Madi (East Central-Sudanic) roots for sheep and eleusine both turn up further south in South Central-Sudanic loanwords in Bantu languages.¹² How much earlier keeping of sheep may have been among Central Sudanic peoples cannot presently be determined. Eleusine may have been part of the earlier Central Sudanic repertoire, but if so probably only among the East and South communities which lived at wetter, higher altitudes more suited to the crop. It is, however equally possible that the spread of eleusine,

a crop of Ethiopian origin, to the Nile Congo watershed came via the settlement of the Southern Cushitics in Kenya ca. 2000 B. C.;¹³ and that eleusine therefore would have reached Central Sudanic speaking regions only during the second millennium B. C. Bulrush millet would have been more particularly the crop of the early West Central-Sudanic communities which inhabited hotter, drier environments. In any case, the crop was apparently not carried southward by the South Central Sudanic settlers into central Africa, whereas eleusine was.¹⁴

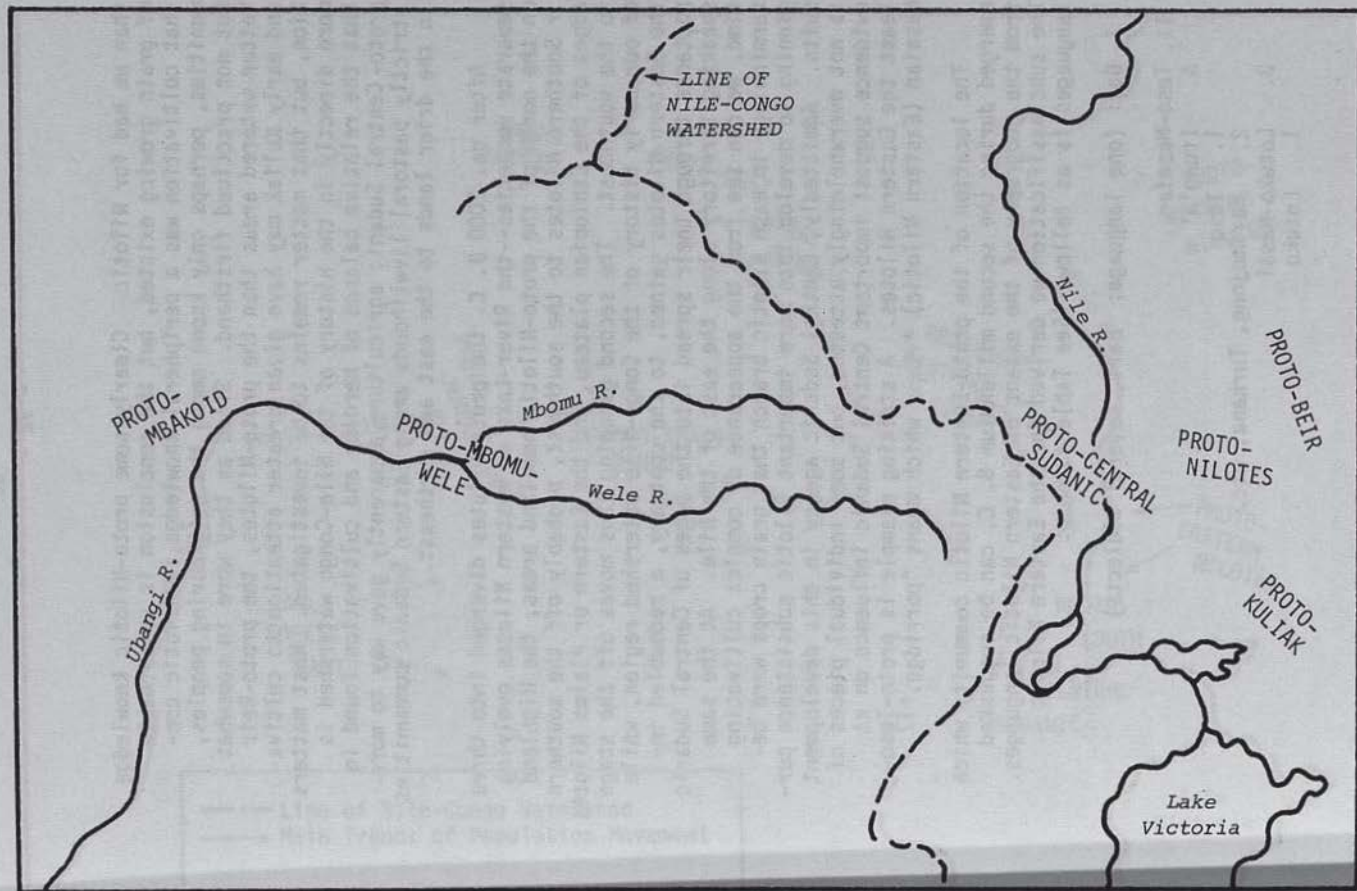
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II

During the same broad period in which the proto-Central-Sudanic language was spoken, roughly the third millennium B. C., the proto-Nilotic language was spoken by people living in the southeast corner of the modern Republic of Sudan.¹⁵ To the immediate south of the proto-Nilotes, in northeastern Uganda can be placed the early Kuliak society. (See Map #2 on p.91) The proto-Nilotes and the Kuliak, together with the proto-Beir located just east of the proto-Nilotes along the edges of the Ethiopian highlands, formed three sets of communities which had developed out of the original cluster of Eastern Sudanic settlers who had begun moving into the region perhaps as early as the fourth millennium B. C.¹⁶ All these groups were cattle-keepers and, possibly by the third millennium B.C., may have become grain cultivators like the proto-Central-Sudanic. But this latter possibility is much less clearly attested in the available evidence. The three Eastern Sudanic communities were distinctly different in their cattle-keeping habits from the Central Sudanic peoples. They bled their cattle as well as milked them, and unlike the Central Sudanic they did not prohibit women from contact with cattle.

Nilotic evidence especially suggests the practical unimportance of grain cultivation. A fairly complex proto-Nilotic livestock raising terminology can be reconstructed despite the ancientness of the proto-Nilotic period. Yet, even with a thoroughgoing knowledge of cultivating vocabulary for a majority of the modern Nilotic languages, we found ourselves able to suggest only two possible proto-Nilotic cultivation terms. A third possible term, for a specific grain species, although it occurs in only one of the three modern branches of Nilotic, seems also reconstructible because it appears as well in the more distantly related Kuliak and Beir languages. (See Table 1 on p.). In contrast, much more numerous and specific reconstructions of Central Sudanic cultivation terminology can be made from much sparser and more sporadic data

MAP # 2 - SUGGESTED LOCATIONS OF PEOPLES
NILE- CONGO WATERSHED, MID-THIRD MILLENNIUM B. C.



than we had for Nilotic. Clearly some proto-Nilotic knowledge of grain growing existed, but the conclusion is unavoidable that cultivation was a peripheral knowledge in Nilotic communities, perhaps only known among the neighboring peoples, but not practiced firsthand. Sited as they were in somewhat better watered areas than the proto-Nilotes, the proto-Beir and early Kuliak may have given greater attention to cultivation, but that matter remains to be investigated. What matters more directly in the history of the Nile-Congo watershed is that the relative balance of herding and cultivation found in proto-Central Sudanic agriculture apparently gave way to more strictly pastoral livelihoods among Eastern Sudanic communities in the drier lands to the east and northeast.

After ca. 2000 B. C. the proto-Nilotes diverged into three separate societies--the River-Lake or western Nilotes evolving on the north of the proto-Nilotic homeland areas, the Highland or Southern Nilotes to the southwest, probably off the southern edges of the Ethiopian plateau, and the Eastern or Plains Nilotes to the southeast. The second grouping thus moves off the stage of our early history of the Congo-Nile watershed region, while the Eastern Nilotes gained, to the contrary, a redoubled importance through their spread into the edges of Central Sudanic speaking territory along the east of the Nile. At the same time, we can see from the appearance of complex cultivating terminology in each Nilotic branch that grain crops were beginning to develop into more important Nilotic subsistence pursuits. Admittedly, Central Sudanic agency in this development is not overwhelmingly attested, but some individual pieces of evidence suggest important Central Sudanic influence on at least the Eastern Nilotes. A striking example is proto-Teso-Masaian (Eastern Nilotic) **-tapa* which means "porridge."¹⁷

The location of the proto-Eastern Nilotic community which emerged during the second millennium B. C. can be suggested from the geography of the extant of Eastern Nilotic languages. The subclassification we derived for the Eastern Nilotic languages is as follows (See Table #3 on p.

I. Bari (one language: Bari, several dialects)

II. Teso-Masaian

A. Itung'a

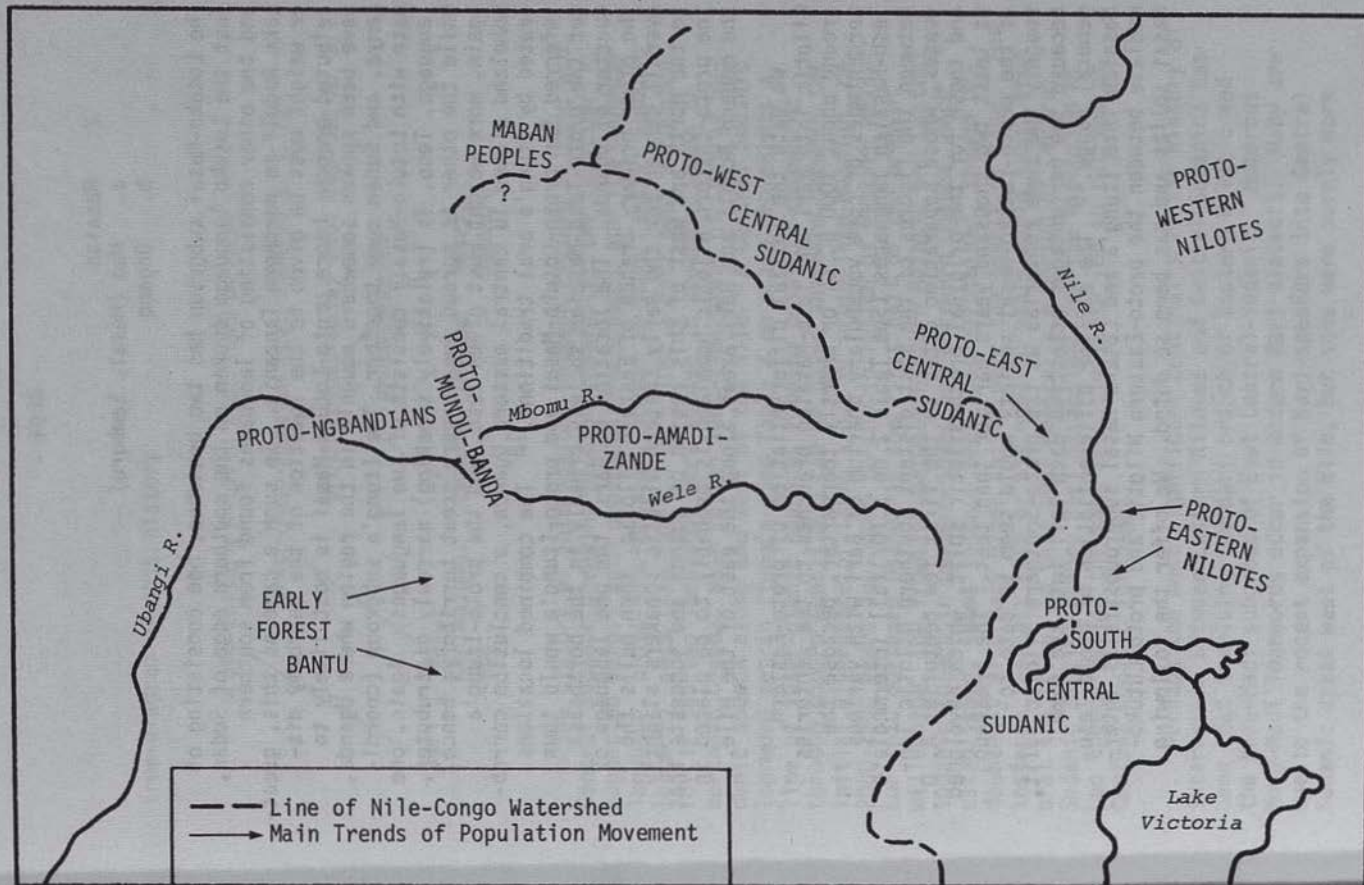
1. Teso

2. Karimojong, Turkana, etc.

B. Lotuko-Masai

1. Lotuko

MAP # 3 - SUGGESTED LOCATIONS OF PEOPLES,
NILE-CONGO WATERSHED, LATE SECOND MILLENNIUM B. C.

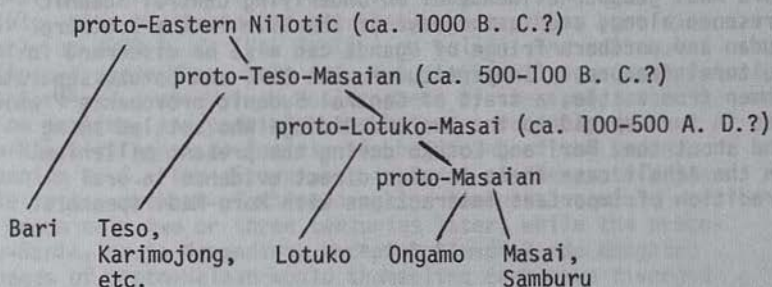


2. Masaian
 - a. Maa (Masai, Samburu)
 - b. Ongamo

The Lotuko-Masai subgroup has two branches, one consisting of just the Lotuko language spoken on the southern edge of Sudan, and the other consisting of languages found from southern Lake Rudolf to northern Tanzania. In such a case as this, greater weight must be given to the location of the narrowly distributed branch; hence proto-Lotuko-Masai is most likely to have been spoken somewhere roughly in the region where Uganda, Kenya, and Sudan come together. The Itung'a subgroup (coordinate with Lotuko-Masai) consists of two languages. Again, one language, Teso, is (relatively speaking) narrowly distributed, while the other is spread over a very great territory; hence, again, more weight must be given Teso, and the proto-Itung'a homeland placed in central eastern Uganda, a conclusion corroborated by Itung'a oral traditions.¹⁸ The combined locations inferred for proto-Lotuko-Masai and proto-Itung'a would thus set the proto-Teso-Masaian society broadly in the northeast quarter of Uganda. The location of Bari, the one language of the other primary branch of Eastern Nilotic, then pulls the overall center for the early Eastern Nilotic speakers slightly to the north and west of this region of Uganda and suggests that the proto-Eastern Nilotic homeland is probably to be placed in the modern Acholi and Bari areas along the east of the Nile.

We date the initial differentiation of proto-Eastern Nilotic into Bari and Teso-Masaian branches to the centuries around about 1000 B. C. or shortly thereafter, because the percentages of core vocabulary sharing of Bari with various Teso-Masaian languages (See Table 2 on p.107) fall intermediate between the figures of the most distant Southern Nilotic languages, whose separation dates to the first few centuries A. D., and those for the original proto-Nilotic split, which developed at least two thousand years earlier than that. The break-up of the proto-Lotuko-Masai society would seem to date to roughly the same centuries as the proto-Southern Nilotic split, because the percentages attesting each fall into the same general range.¹⁹ The earlier differentiation of proto-Teso-Masaian into Itung'a and Lotuko-Masai subgroups falls intermediate between the proto-Eastern Nilotic and proto-Lotuko-Masai splits and has been so dated. We offer the following

tree-diagram of this history:



The history of interactions between Eastern Nilotic and Central Sudanic speaking peoples reinforces the location suggested here. Both proto-Eastern Nilotic and its daughter language, proto-Teso-Masaian, appear to have Central Sudanic loanword sets (see Table 3 on p.108), a fact best accounted for if the two languages were spoken in southern Sudan or northern Uganda, near to the long-time areas of Central Sudanic speech along and west of the Nile. A Central Sudanic loanword set in Itung'a (See Table 4 on p.110) represents a line of inter-ethnic contacts running possibly somewhere through modern Acholi and can be dated anywhere between the initial divergence of Itung'a out of proto-Teso-Masaian, ca. 2000-2500 years ago, down to the intrusion of Western Nilotic Luo into northern Uganda in the first half of the present millennium. The frontier between Eastern Nilotic and Central Sudanic speech in southern Sudan and northern Uganda, once established, seems to have been long maintained, though undoubtedly with many minor shifts over the course of time. For instance the past five or six hundred years would seem, from oral tradition, to have been generally a period of Central Sudanic decline before Bari expansion; and the expansion of Luo speech during the same eras similarly led to retreat of Central Sudanic languages.

Perhaps the most significant continuity in the history of interaction between Eastern Nilotes and Central Sudanics has been that involving the Bari branch of Eastern Nilotic and the Moru-Madi subgroup of East Central-Sudanic. Numerous Moru-Madi loanwords occur in modern Bari dialects. Many are due to the recent expansion of Bari-speakers into Central Sudanic areas west of the Nile, but some were surely more

anciently adopted into Bari speech (See Table 5 on p.111). Also attesting recent interactions is a modest set of loans from a Bari dialect which turn up in the Madi language of the Moru-Madi group. Evidence of an underlying Central Sudanic presence along, and to the east of the Nile in the southern Sudan and northern fringe of Uganda can also be discerned in cultural features. In particular, the Bari and Lotuko separate women from cattle, a trait of Central Sudanic provenance²⁰ which has in turn spread to the Luo and Didinga who settled among and about the Bari and Lotuko during the present millenium. In the Acholi case there is also direct evidence in oral tradition of important interactions with Moru-Madi speakers.

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III

West and south of the Nile-Congo divide, however, entirely different directions of historical development occurred. The high rainfall environment of those regions proved unsuitable for cattle-keeping and from fair to poor for grain cultivation, but highly suitable for the West African planting agricultural complex. This adaptation spread along the Wele and Mbomu valleys and through the Congo basin with the spread of Niger-Congo peoples. Bantu settlers were important along the southern fringe of our area of historical interest, but central to our topic were peoples speaking Ubangian languages and more especially those of the Mbomu-Wele branch of Ubangian.

Ubangian is the name we have given Greenberg's eastern branch of his Adamawa-Eastern division of Niger-Congo.²² According to our tentative classification, the following relationships hold within Ubangian (See Table 6 on p.112):²³

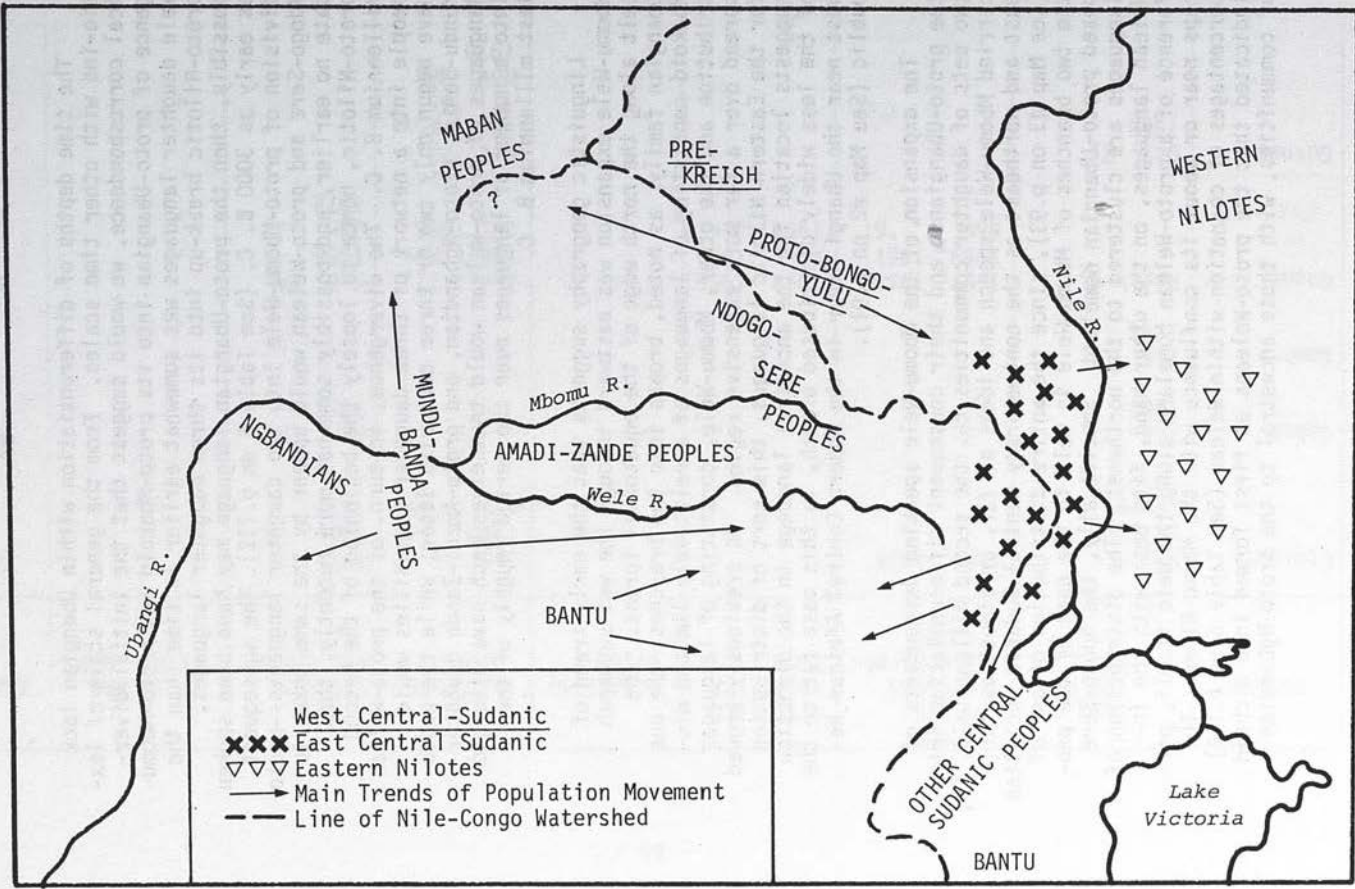
- I. Mbakoid (Mbaka, Gbeya, Manja)
- II. Mbomu-Wele
 - A. Ndogo-Sere (Ndogo, Bai, Bviri, Golo, Sere, Tagbo, Feroqe, Indri, Mangaya, Togoyo)
 - B. Welean
 1. Ngbandi (Ngbadi, Songo, Yakoma)
 2. Mundu-Banda
 - a. Banda
 - b. Munduan (Mundu, Bwaka, Monjombo, Gbanziri, Mayogo, Bangba)
 3. Amadi-Zande
 - a. Amadi
 - b. Zandean (Zande, Nzakara, Barambo, Pambia)

The time depths of differentiation within Ubangian lack tie-ins with other time scales. From the general scale of lexical correspondence, we would suggest that the initial divergence of proto-Ubangian into its proto-Mbakoid and proto-Mbomu-Wele daughter languages was somewhat earlier in time than the proto-Nilotic break-up into its three daughter languages; possibly, then the proto-Ubangian language may have been spoken as early as 3000 B. C. (See Table 6 on p.112). The subsequent division of proto-Mbomu-Wele into two daughter languages--proto-Ndogo-Sere and proto-Welean would appear by the same token to date no earlier, and possibly somewhat more recently, than proto-Nilotic, hence to loosely the beginning of the second millennium B. C. The divergence, in turn, of the proto-Welean people into a network of three daughter communities would have begun only two or three centuries later; while the proto-Mundu-Barda, proto-Ngbandian, and proto-Amadi-Zande daughter languages of proto-Welean would themselves each have diverged into a number of languages over the period roughly of the last millennium B. C.

Linguistic geography suggests that the early trend of Mbomu-Wele expansion was eastward through the wet savannah belt along the north edge of the equatorial forest. The Ubangian family, as noted, breaks into two branches, the one Mbakoid consisting of languages of a relatively limited distribution and the other, Mbomu-Wele, consisting of languages spread over a far more extensive region. As previously argued for the Eastern Nilotic languages, this sort of distribution suggests location for the ancestral language in the direction of the less widely distributed branch, in this case far to the west near the Ubangi River in the modern Central African Republic (See Map #2 on p.91).

The expansion of the Mbomu-Wele speaking descendants of the proto-Ubangians, and their consequent differentiation into two sets of daughter communities ca. the second millennium B. C., carried Mbomu-Wele speech and ideas as far, or almost as far, east and northeast as the contemporary Central Sudanic societies (See Map #3 on p.93), since the entire distribution of one of the two branches of Mbomu-Wele is well to the east of the proposed proto-Ubangian homeland. Specifically, the Ndogo-Sere languages are clustered to the northeast. The distribution of Welean languages, on the other hand, fits best with the inference of a proto-Welean homeland along the Wele itself, perhaps near or about its confluence with the Mbomu River. The percentages of cognation within Welean (See Table 6 on p.112) indicated that the proto-Weleans at first formed into a chain of communities, with those ancestral to the proto-Ngbandian

MAP # 4 - SUGGESTED LOCATIONS OF PEOPLES,
 NILE-CONGO WATERSHED, TOWARD END OF LAST MILLENNIUM B. C.



xxx West Central-Sudanic
 vvv Eastern Nilotes
 → Main Trends of Population Movement
 - - - Line of Nile-Congo Watershed

at the west, those giving rise to the proto-Mundu-Banda at the middle, and the predecessors of the proto-Amadi-Zande at the eastern extreme of the chain. (See Map #3 on p.93) The later expansions of various Munduan-speaking descendant communities of the proto-Weleans, since roughly 2000 years ago, then scattered Munduan societies out across the whole northern margin of the equatorial forest, from the Ubangi River in the west, where the Bwaka reside today, to the far upper sources of the Wele in the east, where the Mundu language is presently spoken. (See Map #4 on p.98). From their locations the early Mbomu-Wele peoples of the third and second millennia should be identified, it would appear, as the makers of the Uelian Neolithic, which has been given tentative archeological identifications.²⁴

It has been argued that the spread of Mbomu-Wele peoples intruded deeply into former Central Sudanic territories along the savannah fringes of the forest zone.²⁵ This view arose because of the peculiar hook-shaped distribution of extant Central Sudanic languages (See Map #1). In some recent cases Mbomu-Wele expansion has been at the expense of Central Sudanic speech; for instance, Ndogo speakers have absorbed former West Central-Sudanic communities over probably the past two millennia.²⁶ On its northern fringes the late spread of the Banda language may similarly have lapped over patches of former West-Central-Sudanic country. But on the whole this view is not borne out by our investigations. The early Central Sudanic expansions were largely shunted around the fringes of the wetter savannahs because of the Central Sudanic reliance on cattle and grains. West Central-Sudanic spread around the north of Mbomu-Wele territory, in any case, took place only over the last two thousand years, after the establishment of Mbomu-Wele languages through the wet savannah zone to the south. Thus the Zande expansions through the eastern end of the savannah belt during the last few centuries absorbed other Mbomu-Wele peoples, speakers of Munduan and Ndogo-Sere languages.

The southern hook of Central Sudanic languages, made up of the Mangbetu and Mamvu-Lese groups, should be seen not as a remnant of Central Sudanic distributions, but rather as a Central Sudanic intrusion into Niger-Congo speaking country. Bantu loanwords are especially noticeable in Mangbetu languages and dialects, while Mangbetu loanwords turn up in many of the Bantu languages of the far northeastern equatorial forest. But there is, in addition, loanword evidence of early Mangbetu interaction with Mbomu-Wele peoples belonging to the Amadi-Zande group.²⁷

What made possible the expansion of Central Sudanic communities into the forest environment was, we suspect, the coming of Niger-Congo peoples--the Bantu within the forest proper and the Mbomu-Wele along the wet savannah fringe of the forest--bringing with them the West African planting agriculture. Since this precondition was probably met as early as the second millennium B. C., the beginning of the counterspread of East Central-Sudanic groups into the far northeast forest may well date to the last millennium B. C. (See Map #4). In the course of this linguistic spread, early Mamvu-Lese and Mangbetu speakers not only took over the agricultural ideas suitable to the rainier environment, but they heavily acculturated to the Bantu and Mbomu-Wele peoples they absorbed into their societies. Like their Bantu and Mbomu-Wele neighbors, and unlike most other Central Sudanic peoples, they practiced circumcision. Their dwellings, unlike the round, conicle-roofed houses of other Central Sudanic groups, were rectangular with thatched gabled roofs, and usually laid out in villages consisting of a single street, exactly like those of the forest Bantu peoples and some of the nearby Mbomu-Wele societies.

While Mbomu-Wele peoples may largely have expanded into a country where prior Central Sudanic presence is not attested, it seems nevertheless probable that a fruitful interplay of agricultural ideas took place between the two sets of peoples. Mbomu-Wele settlement in the last two millennia B. C. was in regions suitable both to the planting agricultural tradition and to the seed agricultural tradition of the sudan belt. Among Mbomu-Wele communities before the coming of American crops, both the African yam, the old staple of the planting tradition, and eleusine and sorghum, the ancient African grain staples, were widely grown. So while cattle-keeping could not spread from the Central Sudanic peoples to the Mbomu-Wele because of the tsetse fly in the wet savannah belt, grain cultivation did spread as an adjunct to the planting tradition, and its possible immediate source could have been Central Sudanic communities to the north and east of the early Mbomu-Wele. Conversely, the widespread presence of yams among modern Central Sudanic groups would seem attributable in part to the Mbomu-Wele contacts and in part to interactions with Bantu communities of the north-eastern equatorial forest. The initial Central Sudanic adoption of the African yam may in fact date as early as 1000 B.C. We so conclude because the crop appears to have been among those known to the South Central-Sudanic peoples during their expansions of the last millennium B. C.²⁸

IV

From the beginning, then, of the third millenium B.C. and the shift to climatic conditions approximately those of today, the Nile-Congo watershed region has been the setting for encounter between peoples of sharply different African backgrounds. In the early stages of the spread of food-producing peoples, expansion followed the lines dictated by particular subsistence adaptations. Central Sudanic communities, with their dependence on cattle-herding and grain-growing, remained to the eastern and northeastern slopes of the watershed; whereas Mbomu-Wele peoples with a planting agricultural base began to scatter through the well-watered savannah and forest belt to the west and south, where cattle were excluded by disease. At the opposite extreme, in the drier regions to the east of the early Central Sudanic communities, the proto-Nilotes emphasized pastoralism to such an extent that they may only rarely, if at all, have engaged in cultivation themselves, even of the drought-resistant bulrush millet. Only from the time of Eastern Nilotic expansion into the edges of Central Sudanic country along the Nile, perhaps in the second millennium B.C., can grain cultivation be seen to attain an importance for the Nilotes approaching that of herding.

In later eras some planting crops, notably yams, spread to Central Sudanic peoples, while seed crops of the Middle Nile basin such as sorghum, and also eleusine were adopted by many Mbomu-Wele groups. A far more extreme agricultural shift must be credited to two sets of Central Sudanic immigrants: the very early Mamvu-Lese and Mangbetu, perhaps in the last millenium B.C., changed over to a completely planting tradition in the process of expanding westward into the equatorial forest and absorbing Bantu and Mbomu-Wele populations. In still more recent eras other crop complexes have been added to the indigenous ones--Indonesian crops probably in the first millenium A.D. and American crops in the present millenium--and among some Mbomu-Wele peoples such introductions have often become so important as to obscure the more ancient importance of the indigenous African cultigens. And so the last two thousand years of agricultural history in the Congo-Nile watershed deserves its own careful investigation, a task we could not undertake here.

Moreover, the peoples who participated in the history of the region differed in the beginning as much in their social and cultural ideas as in their subsistence practices. For example, Mbomu-Wele communities from the first probably had some at least rudimentary sort of hereditary leadership--chiefs or local headmen--similar to that reconstructible for the proto-Bantu,²⁹ while the ancient Central Sudanic and Nilotic societies had no such concept. The proto-Nilotes had formal age-set institutions, as another example, but the other two groupings of peoples did not; and Mbomu-Wele peoples in all probability

circumcized young males, and the Nilotes and Central Sudanic did not, although they did remove lower incisors and in some cases made use of other bodily markings as signs of passage through adolescence.³⁰

At this point in historical research, only a few surface manifestations of the fuller history of the impact of culture on culture stand forth. The adoption of circumcision among Mangbetu populations and some of the Mamvu-Lese societies, as has been noted, and the diffusion of the trait eastward to the modern Lendu provide an additional reflection of the movement of Central Sudanic settlers into the northeastern forest and their incorporation of counter-advancing Bantu, a set of developments beginning probably in the last millennium B. C. And Mangbetu kingship, whatever its immediate sources, was built on a leadership principle rooted not in the Central Sudanic past, but in the encounter of Central Sudanic with Mbomu-Wele and Bantu ideas. Similarly, the occurrence of age-sets among a few Moru-Madi peoples can be laid to the influence of nearby Eastern Nilotes during perhaps the last five to six centuries, even as the want of age-sets among certain Nilotes, such as the Kuku of the Bari cluster and a few Luo groups, along the western fringes of modern Nilotic speaking regions, shows the countervailing influence of Central Sudanic neighbors during those same centuries. Unraveling the complexity of culture history in the regions of the Nile-Congo watershed will be a difficult task, but one which promises surprisingly detailed knowledge of a still obscure area of the African past.

Footnotes

1. The South Central-Sudanic societies were referred to as MB/NG Central Sudanic in C. Ehret, "Patterns of Bantu and Central Sudanic Settlement in Central and Southern Africa, ca. 100 A. D. to ca 500 A. D.," *Transafrican Journal of History*, III (1973).
2. Patterson, K. David, "A Revised Classification of the Central Sudanic Languages," unpublished paper, Stanford University, 1969.
3. Cf. data and discussions in A. N. Tucker, *The Eastern Sudanic Languages* (London, 1940); and also J. H. Greenberg, *The Languages of Africa* (Bloomington, 1963), chapter V.

4. Ehret, "Patterns."
5. Cf. proto-Nilotic *-be "cattle" and examples cited in Greenberg, *Languages of Africa*, p. 143.
6. Patterson, *A Revised Classification*.
7. C. Ehret, *Southern Nilotic History: Linguistic Approaches to the Study of the Past* (Evanston: Northwestern University Press, 1971), p. 29, and *Ethiopians and East Africans: The Problem of Contacts* (Nairobi: East African Publishing House, 1974) chapter 1.
8. Ehret, "Patterns."
9. Patterson, "A Revised Classification."
10. C. Ehret, "Agricultural History in Central Africa ca. 1000 B. C. to ca. 500 A. D.," *Transafrican Journal of History*, IV (1974).
11. G. P. Murdock, *Africa, Its Peoples and Their Culture History*, (New York: Mc Graw-Hill, 1959), chapter 28; C. Ehret, "Sheep and Central Sudanic Peoples in Southern Africa," *Journal of African History*, IX (1968).
12. Ehret, "Patterns."
13. Ehret, *Ethiopians*, chapter 2.
14. Ehret, "Agricultural History."
15. Ehret, *Ethiopians*, chapter 5.
16. Ehret, *Ethiopians*, chapter 5 and 6.
17. Ehret, "Patterns."
18. Cf. J. B. Webster, et al., *The Teso During the Asonya* (Nairobi: East African Publishing House, 1973), and the summaries of tradition in P. H. and P. Gulliver, *The Central Nilo-Hamites* (London: International African Institute, 1953).
19. Ehret, *Southern Nilotic*, chapter 3.
20. See Note 11 above.

21. Cf. J. P. Crazzolara, *The Luo*, 3 vols. (Verona: Misione Africane, 1951-54).
22. J. H. Greenberg, *The Languages of Africa*, chapter II.
23. We have not subclassified the languages of the Ndogo-Sere, Ngbandi, Munduan, or Zandeian subgroups, nor the three languages of Mbakoid branch of Ubangian. Not accounted for here are Mba and Mondunga. (The first to proposed "Ubangian" was W. J. Samarin.)
24. F. L. van Noten, *The Uelien, a Culture with a Neolithic Aspect, Uele-Basin: an Archeological Study* (Tervuren, 1968).
25. Murdock, *Africa*, p. 231, and C. Wrigley, "Linguistic Clues to African History," *Journal of African History*, III (1962), p. 27.
26. An ethnographic reflection of this trend would be the loss of the ancient Mbomu-Wele trait of circumcision, lacking among Central Sudanic peoples absorbed into the Ndogo-Sere groups; there seem also to be Central Sudanic loanwords in Ndogo, among which can be cited *Ba* "house" (proto-Central Sudanic **ba* "residence, homestead") and *kiri* "charcoal" (proto-Central Sudanic *(k)ele).
27. Research work of M. Hubbard, in progress.
28. Ehret, "Patterns."
29. Proto-Bantu **-kɔmɔ* "chief"; cf. the views of J. Vansina, "Inner Africa," chapter 7 in *The Horizon History of Africa* (New York: American Heritage Publishing Company, 1971)/
30. Ehret, *Ethiopians*, chapter 5.

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NOTES TO TABLES

The following abbreviations occur in the tables :

pt	proto-
ENil	Eastern Nilotic
WNil	Western Nilotic
SNil	Southern Nilotic
Nil	Nilotic
CSud	Central Sudanic
E-CSud	East Central-Sudanic
W-CSud	West Central-Sudanic
S-CSud	South Central-Sudanic
MM	Moru-Madi
distrib	distributional criteria
phonol	phonological criteria
morphol	morphological criteria
deriv	derivation
mov.	movable
characV	characteristic vowel
pref.	prefix
suff.	suffix
C	consonant
V	vowel

TABLE I

Proto-Nilotic Agricultural Terms

Cultivation :

<u>W. Nilotic</u>	<u>E. Nilotic</u>	<u>S. Nilotic</u>	<u>Comments</u>
Nuer <i>daŋ</i> "weeding hoe"	ptENil * <i>den</i> "to harvest"	- - -	Probable PtNil verb stem with some such sense as "to cultivate" seems reconstructible
- - -	ptENil * <i>kIma</i> "sorghum"	ptKalenjin * <i>kIm-</i> "porridge"	Noun stem for a grain food seems reconstructible; possible problem is that ptENil * <i>ɾ</i> may not be proper correspondent to SNil * <i>ɪ</i>

<u>W. Nilotic</u>	<u>E. Nilotic</u>	<u>S. Nilotic</u>	<u>Comments</u>
ptWNil *rap "bulrush" "millet"	- - -	- - -	Rekurs as Kuliak *rap, ptBeir *laba, both "sorghum;" Beir *l corresponds re- gularly to Kuliak and Nilotic *r, hence probable ptNil *rap- "sorghum"
(Related, but non-cognate items)			
Luo *doy- "to weed"	ptENil *dɔ "to weed"	- - -	Luo term, for dis- tributional and phono- logical reasons, must be considered re- latively late loan from an ENil language
Luo *kuɛr "hoe"	ptENil *kor "to cultivate"	- - -	Not direct cognates, because of probable non-correspondence of ENil *o and Luo *ue in this case
Livestock-keeping:			
Nuer tak "steer"	ptENil *-takwo "heifer"	- - -	ptNil root, probably "immature cattle"
ptWNil *rol "sterile cow"	- - -	ptKalenjin *ro:n- "Heifer"	ptNil root, possibly "cow that has not yet born young"
Nuer be "bridewealth"	Cf ptMasaian *i:boo "herd?"	ptKalenjin *pe:i "cattle, kraal"	ptNil root "cattle, livestock"
Nuer buot, pl. buoŋi "goat;" Luo buɛ "steer"	ptMasaian *buɔa "bull"	- - -	ptNil root "male of domestic stock"

<u>W. Nilotic</u>	<u>E. Nilotic</u>	<u>S. Nilotic</u>	<u>Comments</u>
Nuer <i>kwet</i> "weaned calf"	Masai- <i>kuoo</i> "kid"	Elgon Kalenjin <i>*ku:yo:n</i> "kid"	ptNil root "kid"
Nuer <i>kwit</i> "immature ram"	- - -	ptKalenjin <i>*kwe:i</i> "he-goat"	ptNil root, probably "young he-goat"
Dinka <i>akal</i> "calf"	Turkana <i>ekali</i> "kid"	- - -	ptNil root, possibly "calf"

Additional livestock terms are noted in C. Ehret, Southern Nilotic History: Linguistic Approaches to the Study of the Past (Evanston, 1971), Appendix A.2.

TABLE 2

Bari				
36	Teso			
37	42	Lotuko		
32	39	45	Masai	

Notes: These figures are percentages of cognation in the 90-word list from C. Ehret, Southern Nilotic History, appendix A.1.

TABLE 3

Samples of Central Sudanic Loanwords in Early Nilotic

<u>PROTO-EASTERN NILOTIC</u>	<u>CENTRAL SUDANIC ATTESTATION</u>	<u>SOURCE</u>
*- <i>dɔ</i> "to weed"	ptCSud *- <i>dɔ</i>	CSud: distrib.
*- <i>lɛ</i> "milk"	ptMM * <i>lɛ</i>	?CSud: phonol (CV stem)
*- <i>tolu</i>	ptE-CSud "ax": ptMM *- <i>lo-</i> , Lendu <i>lo</i>	CSud: distrib; morphol (CSud mov.t pref.) (characV=o)
*- <i>buku</i> "shield"	E-CSud: Lendu <i>agbau</i> , Logo <i>agbou</i> ; S-CSud root seen in ptEasternBantu *- <i>gabo</i> , etc.	CSud: distrib; phonol (gb); morphol (CSud suff. -kV)
*- <i>tapeŋ</i> "guinea fowl"	ptMM *- <i>ope</i>	CSud: morphol (CSud mov.t pref.) (characV=a) (lack ENil -ŋ suff.)
*- <i>tarok-</i> "vulture"	Lugbara <i>roke, roko</i>	CSud: morphol (CSud mov.t pref.) (characV=a)
<u>PROTO-TESO-MASAIAN</u>		
*- <i>tapa</i> "porridge"	(see Ehret, "Patterns," Table 9 and others)	CSud: morphol (CSud mov.t pref.) (characV=a)
*- <i>moŋɔ</i> "steer"	ptCSud: Bagirmi <i>mang</i> , Sara <i>mangu</i> , "ox"; also Moru <i>mongu</i> "rhinoceros"	CSud: distrib; phonol (ng)
*- <i>kap-</i> "honeycomb"	ptE-CSud "honey": Lese <i>ɪfa</i> Moru <i>ɛpɛ</i> Logo <i>apa</i> etc.; S-CSud root "honeycomb" (see Ehret, "Patterns")	CSud: distrib; morphol (CSud mov.k pref.) (characV=a) S-CSud?: specific semantics

<u>PROTO-TESO- MASAIAN</u>	<u>CENTRAL SUDANIC ATTESTATION</u>	<u>SOURCE</u>
*- <i>tapar-</i> "pool"	ptCSud *- <i>pa-</i> "pool": (WCSud) Yulu Kara <i>fafa</i> ; (E-CSud) Avukaya <i>apapa</i> , Madi <i>apara</i> , etc.; S-CSud root in Ila-Tonga *- <i>topolo</i> "seasonal bog," Nyanja-Tumbuka *- <i>tavare</i> "pool"	CSud: distrib; morphol (CSud mov.t pref.) (characV=a) (suff. -rV). The addition of <i>t-</i> prefix occurs also in S-CSud forms of the root, as Ila-Tonga and Cewa borrowings show.
<u>PROTO-LOTUKO- MASAI</u>		
*- <i>po(po)</i> "flour"	E-CSud root in Lugbara <i>fōra</i> "pow- der," Mangbetu <i>ne-fufu</i> "flour", S-CSud (see Ehret, "Patterns")	CSud: distrib; phonol (f)

Notes: The Central Sudanic language or languages from which these loanwords come cannot be identified with any of the extant Central Sudanic subgroups of languages, because morphological innovations have been made in many items which are of Central Sudanic origin but are lacking in any modern reflexes of the roots. Note the high frequency of application of Central Sudanic movable *t-* in items of these sets. In three instances--"porridge," "honeycomb," and "pool"--semantic or morphological changes mirror those in the extinct South Central-Sudanic languages. The Central Sudanic communities who interacted with the early Eastern Nilotes may thus have spoken languages of the South branch.

TABLE 4

A Sample of Central Sudanic Loanwords in Itung'a

	<u>CENTRAL SUDANIC ATTESTATION</u>	<u>SOURCE</u>
*- <i>aluru</i> "quail"	MM: Lugbara <i>aluru</i> etc.	MM: morphol (MM suff. -a)
*- <i>aliru</i> "kind of spear"	ptE-CSud "spear": Lendu <i>li</i> ; Lugbara <i>oliri</i> "kind of spear"	E-CSud: distrib, MM: MM suff. -ru
*- <i>kileŋ</i> (knife)	MM: *I~ *le; S-CSud root in ptEastern Bantu *ele "knife"	CSud: distrib: morphol (lack ENil suff. -ŋ) (k-pref. probable Itung'a addition)
*- <i>koy-</i> "arrow"	MM *-ye; S-CSud root in ptEastern Bantu *-qui	CSud: distrib; morphol (original stem lack affixations)
Teso <i>epi</i> "beerstraw"	Lugbara <i>fifi</i>	MM: phonol (f)
Turkana <i>emanik</i> "bull"	Lugbara <i>mōniō</i> Madi dial. <i>mōniḡō</i>	MM: phonol (g) (ḡ); morphol (-ḡō = MM masculine suff.)

Notes: This loanword set is attributable to a Moru-Madi language, one presumably spoken in the first half of this millennium or somewhat earlier, in northern Uganda east of the Nile River. That language cannot therefore have been a descendant of the Central Sudanic language which left loanwords in early Eastern Sudanic 1000-2000 years earlier (See Table 3)

TABLE 5

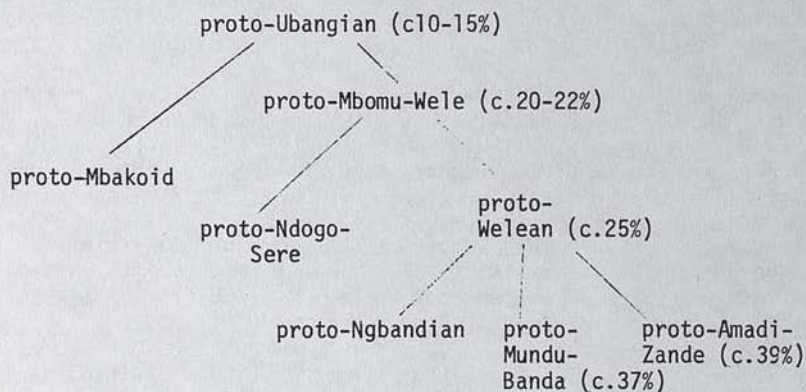
A Sample of Moru-Madi Loanwords in Bari

	CENTRAL SUDANIC ATTESTATION	SOURCE
<i>yaro</i> "hippopotamus"	MM * <i>aro</i> : Moru <i>aroa</i> , etc.	MM: phonol (epenthetic <i>y</i> required by Bari stem structure); morphol (CSud charactV=a)
<i>lubögu</i> "hyena"	MM: Lugbara <i>ubogu</i> , Moru <i>lubägu</i> , etc.	MM: distrib; morphol (CSud pref. <i>l-</i>)
<i>kömiru</i> "lion"	MM: Lugbara <i>kämi</i> , Keliko <i>kämiru</i> , etc.	MM: distrib; morphol (MM suff. <i>-ru</i>)
<i>kolo</i> "adze"	Lugbara <i>koloa</i> ; ptE-CSud root * <i>-lo</i> "ax"	E-CSud: distrib; deriv MM: specific morphol (addition <i>k-</i> , <i>o-</i> pref.)
<i>Kxdi</i> "well"	MM: Madi <i>idi</i> , Keliko <i>Kidi</i> , etc.	MM: distrib; morphol (CSud mov.k pref.)
<i>karet</i> , pl. <i>karesi</i> "heifer"	MM: Lugbara <i>kari</i> , etc.	MM: distrib; morphol (lack Bari suff.)
<i>kobilu</i> "sheep"	MM: Lugbara <i>käbilo</i> , Keliko <i>käbilito</i> , etc.; S-CSud root in Cewa * <i>-vila</i> "sheep," etc.	CSud: distrib. MM: specific morphol (addition of <i>kv</i> -pref.)
<i>yisi</i> "kid"	S-CSud "kid": root seen in Nyakyusa * <i>-kosi</i> "sheep," Malagasi <i>osi</i> "goat;" ultimately from root in Lugbara <i>-si</i> "to bear young"	CSud: distrib; deriv; phonol (epenthetic <i>y</i> as above in "hippopotamus". Not yet noted in modern MM so it may be a more ancient loanword.
<i>könyu</i> "sesame"	MM: Moru <i>Kanyu</i> , Madi <i>anyu</i> , etc.	MM: morphol (CSud mov.k pref.) (characV=o)
<i>yawa</i> "beer"	MM: Moru <i>wa</i> , Logo <i>owa</i> , etc; ptE-CSud root * <i>-wa</i>)	CSud: distrib; phonol (epenthetic <i>y</i> as above in "hippopotamus"); morphol (CSud charactV=a)

TABLE 6
Ubangian Relationships

Gbeya

67	Mbaka						
8	8	Ndogo					
15	16	20	Ngbandi				
13	18	24	26	Banda			
11	11	22	27	37	Bwaka	(Munduan)	
10	13	16	20	26	25	Zande	



Notes: The figures given are percentages of cognation in the Swadesh 100-word list. For Ndogo we were able to obtain only 80 of the 100 words.