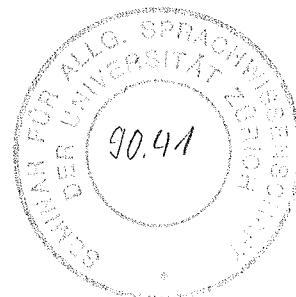


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The Niger-Congo Languages

A classification and description
of Africa's largest language family

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PREFACE

Why this book and how did it come about?

The work of J.H. Greenberg in the '50s culminating in his 1963 *Languages of Africa* largely set the classificatory framework within which most scholars have worked since. Both the external boundaries of his Niger-Kordofanian, here renamed Niger-Congo, and the internal groupings within that family, which he set up, have been generally accepted. The publication of *Current Trends in Linguistics, 7: Linguistics in Sub-Saharan Africa* in 1971 was based on the Greenberg classification and nothing published since has superseded it.

CTL7 was a state-of-the-art book which summarized what was known about the major families and subfamilies of the languages of Africa and also presented summaries of other language-related topics, such as the development of alphabets in Africa, the language policies of governments, language standardization, surrogate languages, etc. As Greenberg himself readily admitted, however, there were still many classificatory questions unresolved and many details that remained to be worked out. Research in the last 20 years has clarified some of these issues and suggests that certain aspects of the internal classification need to be revised.

The continuing West African Languages Congresses organized by the West African Linguistic Society every second year have given opportunity for face to face discussion among scholars who are working in African languages and who have a particular interest in classificatory questions. Flowing out of these congresses, the Niger-Congo working group provided stimulation and a forum for further interaction among those working on the languages of this family. In more recent years the annual colloquium on African languages at Leiden University has also served a similar purpose.

By the early '80s a consensus seemed to be forming that the time had come for an update to be made covering at least the languages within Greenberg's Niger-Kordofanian family. A group of those of us who were interested discussed the possibility of collaborating in a volume which would update the CTL7 volume in this respect, although it was never our intention to attempt to update the other parts of that very comprehensive volume. I agreed to contact scholars who might serve as contributors and prepare an outline that we could follow.

1 Niger-Congo Overview

Kay Williamson

1.1 CLASSIFICATION

1.1.1 EARLY CLASSIFICATIONS - TO KOELLE AND BLEEK

The language family which is today most commonly known as Niger-Congo was only gradually recognized as a unity. First the sheer linguistic complexity of Africa, and next the lack of data on many of the hundreds of languages, have hindered scholars in building up an accurate picture of the extent and subclassification of Niger-Congo and the other language families of the continent¹.

One of the earliest known classifications of languages of the world, Adelung and Vater's *Mithridates* (1812), which treats African languages in volume 3:1, distinguishes the Berber languages in the north, the Bushman and Hottentot languages in the south, and then groups all the remaining languages together under 'Central Africa'. Adelung compares short word lists, and thereby succeeds in grouping together some related languages: a Mandingo group, an Amina (Akan) group, and a Congo group which, however, he does not relate to other Bantu languages.

Balbi (1826) divided the languages of Africa into five geographical divisions: Nile Region, Atlas Region, Maritime Negro of Guinea and Senegambia, South African Region, Sudan and Interior Negro. Lichtenstein (1808) distinguished the South African languages which classified their nouns by prefixes from the Hottentot languages, and Prichard (1826) recognized the unity of the Kaffrarian (Bantu) Family, to

¹I am very grateful for corrections, comments and discussion by many colleagues, including Roger Blench, Raymond Boyd, Anneke Breedveld, Thomas Cook, Gerrit Dimmendaal, Carl Hoffmann, Lynell Marchese-Zogbo, Gudrun Miehe, Hans Mukarovsky, Tony Naden, Thilo Schadeberg, Klaus Schubert, and John Stewart.

which he assigned all the languages south of the Equator except Hottentot (Cole 1971:8).

The next major advance came with the work of Koelle and Bleek. Koelle's *Polyglotta Africana* (1854) attempts a careful classification of the languages involved. While a number of languages are left unclassified, the groups which he does set up correspond in a number of cases to modern groups:

North-West Atlantic = (West) Atlantic
 North-Western High Sudan/Mandenga = Mande
 North-Eastern High Sudan = Gur

Even where his overall grouping differs from modern ones, the subgroups are consistent genetic units: e.g., the three subgroups of his 'Upper-Guinea languages' correspond to modern Kru, Gbe, and Yoruboid respectively.

Koelle notes that his North-West Atlantic languages are distinguished "like those of South Africa, by prefixal changes, or an initial inflection." Bleek, who saw the *Polyglotta* before publication, was fully aware of the unity of "that great family which, with the exception of the Hottentot dialects, includes the whole of South Africa, and most of the tongues of Western Africa; certainly the Otsi, or Ashantee, the Bullom, and the Timneh of Sierra Leone" (Bleek 1856). He named this family Bântu (1858), and regarded it as consisting of South African and West African divisions (1862/69), thus corresponding in outline to Niger-Congo. He distinguished this Bantu family from the Gör family (including Fula, Wolof, and Ga, as well as 'Ukuafi' and Tumale, which is now classed as Kordofanian), which most scholars today would include in Niger-Congo. He considered Gör as "related to" (1856) or belonging to "the same class of languages as" (1862/69) Bantu, and named this class "the prefix-pronominal languages":

Their main distinctive feature is a concord of the pronouns and of every part of speech, in the formation of which pronouns are employed (e.g., adjectives and verbs) with the nouns to which they respectively refer, and the hereby caused distribution of the nouns into classes or genders (1862/69:2-3). [For more details see Hair 1965].

1.1.2 FROM MÜLLER TO MEINHOF

Bleek's name Bantu has been generally accepted, but restricted to his 'South African division'; it will be used below in this usual sense. His Gör grouping never found acceptance, while the connection between his 'South African' and 'West African' divisions has been a matter of controversy. Scholars who knew one particular area of West Africa well continued to regard West African languages as related to Bantu: thus Schön (1861) saw the Igbo V- and N- prefixes as "mere remnants of the old Bantu classifiers"; Christaller, who had met Bleek, no doubt to their mutual benefit, stated in a letter to Cust that "many proofs may be found of the relation of the Efik, Yoruba, Ashanti, and Temne, all Negro Languages, with the Bântu family" (Cust 1883); and Goldie (1890) regarded it as an "ascertained result" that "all African languages south of the Sahara, group themselves into two great families divided by the equator; that the southern ones are more closely connected than the northern ones; and that the two together form one great family."

But the major overall classifications of African languages for the rest of the 19th century and the early 20th century proceeded on different lines. This work is fully discussed in Köhler (1975), which is drawn on below. Many writers tended to classify languages by typological stages rather than genetic families as we understand them, and were strongly influenced by paleontological and biological models. Thus their whole orientation is remote from modern ideas and can easily be misinterpreted.

Friedrich Müller, in his ambitious classification (1876-88), tended to equate 'races' with language families. This led him to separate the 'Negro' and Bantu languages from each other, and both from 'Nuba-Fulah'; Cust (1883) adopted his classification. Lepsius (1880) took up Bleek's distinction between the 'prefix-pronominal' languages, of which Bantu in southern Africa was the purest type, and 'sex-denoting languages', of which the 'Hamitic' languages of northern Africa were representative. Between them lay a vast area of 'Mixed Negro languages' which showed nominal prefixes in some cases and 'Hamitic' relationship in others, suggesting to Lepsius "that these scattered languages are without exception a product of the great, partly hostile, partly peaceful, encounter between the original African [i.e., Bantu] and the intrusive Asiatic [i.e., Afro-Asiatic] languages" (p. xix, translation mine). He saw quite clearly, however, that languages of the Ewe (Gbe) type, which have monosyllabic roots and only traces of nominal prefixes, have been reduced from more complex forms and are not 'simple' or 'original' languages; he compares English, which has short roots and mere remnants of inflection, with poly-

syllabic and inflected Gothic, as a parallel case. Schleicher (1891), on the other hand, saw such languages (e.g., Temne) as languages which had not yet completely evolved to a full Bantu status, and called them 'Semi-Bantu'; Torrend (1891) used the same name but regarded them as languages which had partly lost original features still preserved in Bantu. Krause (1895) used the term 'Bantoid' for languages which represented a pre-Bantu stage of development.

Meinhof, like Müller and Lepsius, first saw the Bantu languages as the original type of noun class languages. He differed from Lepsius and followed Müller and Schleicher in regarding languages of the Ewe type as typical of a different original type of language which he named 'Sudanic'. He concluded that the 'Semi-Bantu' languages arose as a result of the influence of Bantu on genetically unrelated Sudanic languages (Meinhof 1905), and later that Bantu itself had arisen as the result of a classifying 'Hamitic' language, such as Fula, influencing Sudanic languages (Meinhof 1910). His enduring contribution was, however, not these theories but his successful application of the comparative method, first developed in relation to the historically documented Indo-European languages, to the study of the Bantu languages which lacked a written tradition, resulting in a reconstruction of proto-Bantu (1899, 1906, 1910).

Thus from Lepsius to Meinhof there was a widespread view that great numbers of African languages were 'mixed' in origin. These classifications, however, tended to obscure rather than elucidate the relationships which today seem obvious to most African linguists, for the following reasons:

- a) The concept of 'mixed language' and the mechanisms by which languages become 'mixed' were never satisfactorily explained.
- b) Widespread migrations were invoked to explain language relationships, whereas it is now generally accepted that prehistoric migrations can only be postulated *after* linguistic relationships have been independently established (Sapir 1916; Dyen 1956).
- c) Language families were prematurely associated with different 'races' and different cultural complexes; this in turn led certain scholars to accept some of the common nineteenth century racist assumptions about the superiority of certain 'races' to others and thus vitiated their linguistic conclusions.

1.1.3 WESTERMANN AND GREENBERG

Westermann devoted himself to elucidating the relationships of the 'Sudanic' languages; he first (1911) studied 'Eastern Sudanic' languages (now classified as Nilo-Saharan) and 'Western Sudanic' (now classified as Niger-Congo). He then undertook a more detailed study of 'Western Sudanic' and its relationship to Bantu (1927). He organized 'Western Sudanic' into six subfamilies: Kwa, Benue-Cross, Togo Remnant, Gur, West Atlantic, and Mandingo. He then set up a large number of proto-West Sudanic roots and compared them with the proto-Bantu reconstructions of Meinhof (1899) and Bourquin (1923).

This work has been extremely influential. Greenberg took it as a starting-point from which he defined his own distinctive views. Miehe (1985) has, however, pointed out that Greenberg overlooked the extent to which Westermann followed previous tradition in treating the Bantu languages as separate from Sudanic. According to his student Mukarovský (1976/77,1:27-28), he retained a "deeply rooted conviction of the basic divergence of the proper 'Sudanic' from the 'West African class languages' which he always thought to be kinds of crossbreeds", i.e., the result of Bantu influence on originally classless languages. On the other hand, he also held, at least in his later work, that "the Western Sudanic languages are genetically related to the Bantu languages" (1949:16).

Greenberg's own divergences from previous work were clearly and boldly stated. In a series of articles from 1949 to 1954, later published in book form (1955) and extensively revised in 1963a, he argued:

1. that Westermann's 'West Sudanic' and Bantu formed a single genetic family, which he named Niger-Congo and distinguished from a second family, named Nilo-Saharan, which included Westermann's 'Eastern Sudanic' languages;
2. that Niger-Congo consisted of the following subfamilies recognized by Westermann, listed and named as follows: West Atlantic, Mande (Mandingo), Gur or Voltaic, Kwa (expanded to include Togo Remnant), and Benue-Congo (Benue-Cross), plus a sixth one, Adamawa-Eastern, which had not previously been considered to belong to this family;
3. that Bantu constituted a subgroup of a subgroup of Benue-Congo, and not a subfamily co-ordinate with the others;
4. that Fula belonged to the West Atlantic languages, and specifically was closely related to Serer-Sin and Wolof;

5. in 1963a, that Kordofanian, which he had treated as a separate family in 1955, was co-ordinate with Niger-Congo as a whole, in consequence of which he named the larger family Niger-Kordofanian (or Congo-Kordofanian).

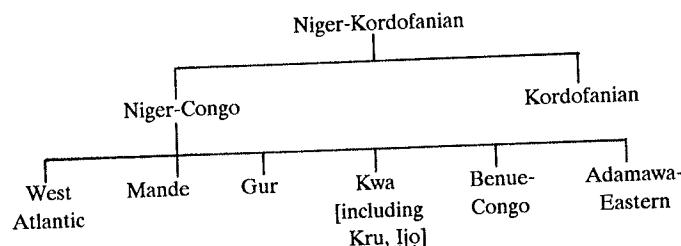


FIGURE 1.1 Greenberg's 1963a classification

Greenberg's method was:

a) to compare word lists of basic vocabulary of large numbers of languages and establish cognates in some even if not all of the languages of a particular grouping; this had been done informally by many earlier writers, but Greenberg raised its status by making it an explicit method named *mass comparison*;

b) to compare particular grammatical morphemes with similar forms and functions from one language to another and establish relationships between them. He regarded it as a mistake to compare general features of languages (e.g., that they possessed noun classes or grammatical gender) without making a detailed comparison of the actual morphemes by which these systems were realized.

Greenberg's work was initially greeted with scepticism and even hostility in some quarters, but his major conclusions have by now become the prevailing orthodoxy for most scholars. His conclusions have, however, been modified by more recent work in two major directions: external relationships and internal subgrouping, which we now discuss in turn.

1.1.4 NIGER-CONGO AND NILO-SAHARAN

In 1972 Gregersen proposed that Greenberg's Niger-Kordofanian and Nilo-Saharan be united into a larger phylum which he named Kongo-Saharan. He gave as evidence:

a) uncertainty in the classification of Songhay, which has on occasion been regarded as Mande (Delafosse and Caquot 1924), Gur (Westermann 1927), an isolated language group (Westermann and Bryan 1952; Greenberg 1955), and a branch of Nilo-Saharan (Greenberg 1963a);

b) resemblances in morphological elements, such as the pronouns and the T/K singular/plural opposition (Bryan 1959), which Gregersen identifies as the Niger-Congo *de/ga* gender (Bantu classes 5/6); and

c) lexical similarities, including some of those observed by Westermann (1911).

Mukarovsky (1966, 1976/77) reaches almost the opposite conclusion to Gregersen. He argues that Mande is genetically related to Songhay and that, since Greenberg excludes Songhay from Western Nigritic [Niger-Congo] Mande must also be excluded. He sets up a 'West Sahelian' family to accommodate the two of them, thus increasing rather than decreasing the number of language families.

Creissels (1981) likewise draws attention to both grammatical and lexical similarities between Songhay and Mande and, to a lesser extent, other Niger-Congo languages. While he thinks it premature to speculate on the exact nature of the relationship, he is clearly inclined towards some version of the Kongo-Saharan hypothesis, and very sensibly observes that the greater similarity between Mande and Songhay than between other Niger-Congo languages and Songhay could be due to contact.

Boyd (1978) finds many resemblances between Adamawa-Ubangi and Nilo-Saharan, to the extent that he claims that, working purely from Greenberg's comparative word lists, it is impossible to determine to which family an isolated language belongs.

Bender (1981:263), on the basis of evidence which is presented only in part, suspects "that we are on the verge of a realignment of African language phyla: Kongo-Saharan, including Niger-Kordofanian and Nilo-Saharan [Nilo-Saharan] as the major branches, with Songhay, Kadugli, and perhaps Omotic being members at some level: perhaps Mande-Songhay is a third major branch."

Thus, although Kongo-Saharan is not yet part of the received orthodoxy, many of those who have considered the question believe the relationship to be likely, even though full proof and the subclassification of the phylum remain to be worked out.

1.1.5 THE BRANCHES OF NIGER-CONGO

Greenberg's subfamilies of Niger-Congo were largely based upon those set up by Westermann. Four of these subfamilies, Mande, (West) Atlantic, Gur, and Adamawa-Eastern, have often been regarded as well-established subfamilies even though they may contain considerable internal diversity (e.g., Sapir 1971; Bendor-Samuel 1971).

The two remaining subfamilies, Kwa and Benue-Congo, have enjoyed no such consensus. First, it has been doubted whether Ijo, Kru and the Togo Remnant languages, which Greenberg placed with Kwa, really belong there; and secondly, it has been doubted whether Kwa and Benue-Congo form distinct subfamilies or a single one. We discuss these questions in turn.

Ijo was tentatively placed within Kwa by Westermann (1927), treated as a separate branch by Greenberg (1955), and reunited with Kwa by Greenberg (1963a). Williamson (1965:4) noted that Ijo was shown by lexicostatistic counts to be no closer to Greenberg's 'Kwa' than to his 'Benue-Congo'.

Vogler (1974) tries to show that the Kru languages are closer to Gur and Mande than to Kwa, and Marchese (1979:1-2) states: "It is highly probable that the Kru languages constitute an independent branch of the Niger-Kordofanian family, or, if they cannot be granted such a degree of autonomy, it seems that they should rather be related to certain non-Kwa languages" (translation mine).

The Togo Remnant languages are treated as a separate branch of Niger-Congo by Mukarovsky (1976/77), following Westermann. De Wolf (1971:180) believes, on the basis of a comparison of the class systems, that "Togo Remnant is definitely part of Benue-Congo." On the other hand, Heine (1968:301) ends his comparative study of the Togo Remnant languages by concluding that they are most closely related to the Guang languages and that, since Guang belongs to the Comoé group of Kwa, the Togo Remnant languages have 'special connections' with Kwa.

On the question of whether Kwa and Benue-Congo are distinct subfamilies, Greenberg himself stated: "Kwa and Benue-Congo are particularly close to each other and in fact legitimate doubts arise concerning the validity of the division between them" (1963a:39). This question was one of those taken up by the Benue-Congo Working Group, which met first at the 6th West African Languages Congress at Yaoundé in 1966, and continued to meet at subsequent Congresses of the West African

Linguistic Society and at the University of Leiden (Cook 1971). From the discussions at these meetings and the publications that emerged from related projects (De Wolf 1971; Williamson and Shimizu 1968; Williamson 1973), it gradually became more and more obvious that there were no solid criteria for regarding Benue-Congo as an entity distinct from Kwa.

First, it has not been demonstrated that there is any single lexical item which occurs in all the branches of Benue-Congo as postulated by Greenberg without also occurring in Kwa. Greenberg (1963a:32) suggests that *ana 'child' is a Benue-Congo innovation replacing proto-Niger-Congo *vi, but Williamson (1971:252) shows that *ana should be reconstructed *gwana in the light of Gerhardt's (1967-69) proto-Plateau reconstructions *gwan, *nwan, and that the root occurs outside 'Benue-Congo' in 'Kwa' languages such as Igbo ɲɟwa, Yoruba əmo; Mukarovsky (1976/77:2.125) reconstructs the same root as proto-Western Nigritic #-ghwyán- 'child'. Williamson (1971:253) suggests that *-dògù 'elephant' might be a Benue-Congo innovation, but Stewart (1976b:129) quotes what appear to be cognates in the Central Comoé (i.e., Kwa) languages.

Secondly, no innovation in the noun class system has been proposed which is common to all of Benue-Congo and is not found outside it. De Wolf (1971) has reconstructed a large number of noun classes and genders for proto-Benue-Congo, and compares them with those of Togo Remnant (see Heine 1968) and of Yala, representing Kwa. He concludes that "the class system of Kwa proper (as found in Yala) and even more that of TR are strikingly reminiscent of proto-Benue-Congo.... Our opinion is that Togo Remnant is definitely part of Benue-Congo and that all other languages of Greenberg's (1963a) Kwa subfamily do form a part of a higher unity of which Benue-Congo is the other part" (1971:180). He supports this conclusion by claiming that there are more cognate stems between Togo Remnant languages and Benue-Congo than between the rest of 'Kwa' and Benue-Congo.

De Wolf here draws attention to an important point, the existence of noun class systems in 'Kwa' languages, which tends to break down the old typological distinction: that Benue-Congo languages are, by and large, noun class languages, while Kwa languages have 'no true Noun Classes', only 'rudimentary' ones (Westermann and Bryan 1952:91). It has for long been known that certain Benue-Congo languages do not have noun classes (see Thomas 1925:136; Westermann 1927:83 on Efik), and recently increasing numbers of languages classified as Kwa have been shown to possess functioning noun-class systems: see Elugbe (1976) on Degema (Edoid group), Sterk (1977) on Gade (Nupoid group), Hérault (1982) on various

Ivory Coast languages, Bole-Richard (1983) on Ega. There is, therefore, no genetic basis so far for distinguishing between Kwa and Benue-Congo on the basis of noun-class systems.

Thirdly, another typological reason for distinguishing between Kwa and Benue-Congo, the predominance of CV roots in Kwa (Westermann and Bryan 1952:91), has been shown to be invalid as Edoid and Igboid monosyllabic roots can be proved to be reductions from longer ones (Elugbe and Williamson 1977).

Fourthly, work on reconstruction by Stewart (1973) leads him to postulate that there is a branch ancestral to both the Comoé group (part of Western Kwa) and to proto-Bantu at a lower level than proto-Niger-Congo. This branch is named 'Volta-Congo' by Stewart (1976a).

We see, then, that evidence has accumulated from a number of sources to show that the Kwa/Benue-Congo distinction, in the form proposed by Greenberg (1963a), is invalid.

1.1.6 BENNETT AND STERK'S CLASSIFICATION

In 1977 Bennett and Sterk published a proposed reclassification of Niger-Congo, based partly on lexicostatistics and partly on a study of lexical innovations. This classification differs from all previous ones in that it postulates far more branching within the family. We shall here discuss their branches in turn in the light of subsequent evaluation of their classification.

Initial three-way split

Instead of Greenberg's initial two-way split of Niger-Kordofanian into Niger-Congo and Kordofanian, Bennett and Sterk propose an initial three-way split of Niger-Kordofanian into Mande, Niger-Congo, and Kordofanian.

They argue that both Mande and Kordofanian show only a few striking lexical similarities with Niger-Congo. Kordofanian, however, has a noun class system which shows "typological similarity in overall arrangement (and some details) of concord systems" to Niger-Congo (1977:247), whereas Mande has no noun class system. By promoting Mande to the same level as Kordofanian, they express the equal lexical distance of the two branches and give more weight to the evidence of the noun class system of Kordofanian for showing its relationship to Niger-Congo.

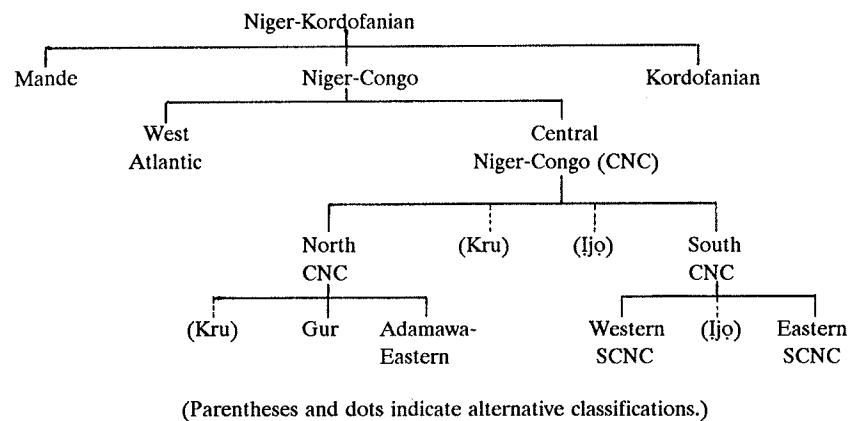


FIGURE 1.2 Bennett and Sterk's 1977 classification

Schadeberg (1981a:123-24) elegantly demonstrates that the resemblance of the Kordofanian noun class system to that of Niger-Congo is highly systematic and not merely typological, which would not constitute evidence for a genetic relationship.

The initial three-way split would account for the greater distance felt by almost all linguists between Mande and the rest of Niger-Congo than between the other branches of Niger-Congo. Mukarovsky has interpreted this to mean that Mande does not belong to Niger-Congo (1966, 1976/77), while Welmers (1971:119) interprets it to mean "that the Mande languages clearly represent the earliest offshoot from the parent Niger-Congo stock - not counting Kordofanian" (see also Greenberg (1963a:39, note 13)). The latter view is accepted here, with the proviso that we are not committed to a belief in simultaneous splitting of Kordofanian and Mande from the main stock; we believe that both are early but not necessarily simultaneous splits.

The split between (West) Atlantic and the rest

Bennett and Sterk postulate that the next split was between (West) Atlantic and the rest of Niger-Congo, which they call Central Niger-Congo (our Volta-Congo). This can be supported from their table of lexicostatistic percentages (1977:267). They regarded all percentages of less than 18 as non-significant, and represented them by blanks in the table. The three Atlantic languages included score blanks with *all* languages with which they are compared, both inside and outside Atlantic. No other branch of those included (Mande and Kordofanian are

excluded) scores blanks with *all* languages. The first conclusion is that Atlantic languages are less closely related to all the other subfamilies than the other subfamilies are related among themselves, and that therefore Bennett and Sterk are correct in postulating that the next split was between Atlantic and Volta-Congo (their Central Niger-Congo; cf. Greenberg 1963a:39, note 13).

The second conclusion is that the internal level of relationship within Atlantic is extremely low. Bennett and Sterk (1977:248) suggest that possibly "some language groups traditionally assigned to West Atlantic are in fact coordinate branches." Sapir's lexicostatistical count has percentages between the three major branches of West Atlantic which are practically all below 10, whereas within each major branch they are practically all above 10 (1971:47). It should be noted, however, that Sapir's judgment of cognates was very strict (1971, fn. 8), and that a count of look-alikes, such as is often used, might have yielded higher figures (Klaus Schubert pers. com.). Dalby (1965) has shown, in a demonstration accepted by all subsequent writers, that the group he calls the Mel languages form a more closely united genetic unity, but only Mukarovskiy (1976/77) has followed him in denying the unity at a higher level of Mel and the rest of Atlantic. Sapir (1971:46) regards the suggestion as 'premature' because "there is no available evidence that would draw Mel away from the non-Mel members of West Atlantic towards some of the other Niger-Congo languages."

The extremely low percentages within Atlantic suggest that Bennett and Sterk may well be correct in suggesting that Atlantic consists of several branches, each of which is coordinate with Volta-Congo. This is indeed supported by Wilson's count (this volume) showing 15% between Papel (Northern Atlantic) and Common Bantu and 8% between Papel-Bijago or Papel and Dagbani (Gur), both figures being higher than Papel-Bijago or Papel with any Southern Branch language. Mukarovskiy (1980) likewise finds that the Senegal group (Fula, Serer, Wolof) score somewhat higher percentages with Dogon and some of the Gur languages than with Diola, another Atlantic language. Thus a re-examination of Atlantic appears to be called for.

SCNC and NCNC

Bennett and Sterk divide their Central Niger-Congo (Volta-Congo) into a Southern branch (SCNC) and a Northern branch (NCNC). Their SCNC "includes most of Greenberg's Kwa and Benue-Congo, though Kru certainly, and perhaps some other languages, must be ex-

cluded from this group" (1977:248). Their NCNC is less closely-knit; it includes Gur and Adamawa-Ubangi (Adamawa-Eastern), and perhaps Kru. The evidence for the NCNC grouping is:

1. somewhat higher percentages between Gur and Adamawa-Ubangi, suggesting a continuum;
2. lexical and phonological innovations: *sō 'two' shared by Kru and parts of Adamawa-Ubangi; *du in Kru and Adamawa-Ubangi, *yu in Gur, as opposed to *to, possibly the same item with devoiced initial, in SCNC; and
3. the consistent suffixing rather than prefixing of noun class markers in these three branches.

Bennett and Sterk suggest that "a more conservative view would be to consider Kru, Gur, and Adamawa-Eastern to be co-ordinate branches of Central Niger-Congo." Their two proposals are thus as follows:

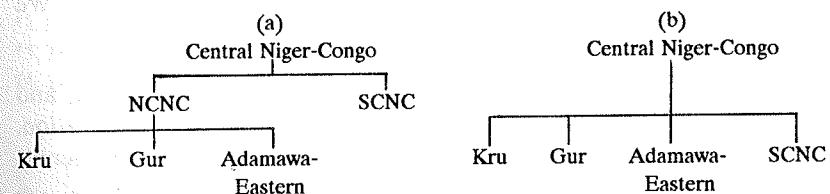


FIGURE 1.3 Bennett and Sterk's alternative proposals for Central Niger-Congo

We propose here a compromise; that Gur and Adamawa-Ubangi be grouped together, while Kru forms a separate branch: the reasons are as follows:

1. The lexicostatistic evidence, as re-organized by Schadeberg (1986), never shows Kru grouped with Gur and Adamawa-Ubangi, whereas these two are grouped together under the Branch Average method. A later more detailed lexicostatistic study (Bennett 1983) shows a continuum between Gur and Adamawa-Ubangi.
2. Boyd (pers. com.) finds it unlikely that sō 'two' is a reconstructable root for Adamawa-Ubangi; the proposed shared lexical innovation with Kru is therefore invalid. He also observes that any reconstruction of proto-Adamawa-Ubangi would have to contain two roots for

'head' to account for the languages with a voiceless and those with a voiced alveolar stop, since it is unlikely that a regular sound correspondence can be established between them. Thus neither of the innovations proposed by Bennett and Sterk appears to work.

3. On the other hand, Hoffmann (pers. com.) proposes that the consonant sequence *n-n in 'five' for both Adamawa-Ubangi and Gur is a common innovation which links them; other branches of Niger-Congo show *t-n.

4. The occurrence of suffixing in Kru, Gur and Adamawa-Ubangi is striking, but need not be the result of a single common innovation. 1.3.3 below will show that a change from prefixing to suffixing has to be postulated several times in Niger-Congo and does not constitute a single common innovation.

Thus there seems to be some evidence for grouping together Gur and Adamawa-Ubangi, which we will tentatively call 'North Volta-Congo', but not for adding Kru to the group. On the other hand, the figures strongly support Bennett and Sterk's separation of Kru from Kwa. We therefore place Kru as a separate branch of Volta-Congo.

Dogon, formerly included in Gur, is now excluded from it, and Calame-Griaule (1968:ix) reserves judgment on its classification. Unfortunately it is not included in Bennett and Sterk's study. We tentatively place it in Volta-Congo pending further investigation.

We now turn to SCNC. Bennett and Sterk argue against the division between Kwa and Benue-Congo along the lines given in 1.1.3 above. Whereas De Wolf (1971:180) combined them into one branch for which Hyman (pers. com.) suggested the name 'Benue-Kwa', Bennett and Sterk propose a more radical rearrangement. They divide SCNC into three branches:

a) Western SCNC, corresponding to Western Kwa (Greenberg 1963b:216);

b) Ijo, included within Kwa by Greenberg (1963a, b) after he had initially placed it in a separate subgroup (1955:12). They observe, however, that the position of Ijo is ambiguous, as obvious cognates are few, and suggest that it may be a branch of Central Niger-Congo (Volta-Congo), or even of Niger-Congo, rather than of SCNC. The alternative classifications they suggest for Ijo and for Kru are indicated on figure 1.2; and

c) Eastern SCNC, comprising groups c-g of Greenberg's (1963a) Kwa, which have commonly been grouped together as 'Eastern Kwa', plus all of Greenberg's Benue-Congo.

The Bennett-Sterk classification of Niger-Congo, especially of SCNC, has been extensively discussed by the Benue-Kwa Working Group (the Benue-Congo Working Group renamed as a consequence of the abandonment of the Kwa/Benue-Congo dichotomy). The discussion has culminated in a re-examination of Bennett and Sterk's lexicostatistic percentages. Schadeberg (1986) has converted their percentages into trees according to the Nearest Neighbor (NN), Furthest Neighbor (FN), and Branch Average (BA) methods. He then interprets the trees by accepting all nodes that are common to both the NN and FN trees (marked with an asterisk); and, with a somewhat lower level of confidence, those that are shared by the BA and either the FN or NN tree, and which are not strongly contradicted by the opposite tree. This yields nine primary branches, of which the largest is divided into nine subbranches:

*1. Fula	*5. Gur	9. (New) Benue-Congo	*9.5 Igboid
*2. Dyola	6. Adamawa-Ubangi	*9.1 Nupoid	*9.6 Jukunoid
*3. Temne	7. (New) Kwa	*9.2 Idomoid	9.7 Cross River
*4. Kru	*8. Ijo	*9.3 Yoruboid	9.8 Platoid
		*9.4 Edoid	9.9 Bantoid

The 18% cut-off point used by Bennett and Sterk does not permit the construction of the higher nodes of the tree. Consequently, the Atlantic languages (1-3), whose low internal cohesion has been discussed above, appear as separate branches; so does Kru (4). Adamawa-Ubangi (6) "has been marked as doubtful because it is only supported by the FN classification; in the BA classification Tula clusters with the Gur languages and creates a link between Gur and Adamawa-Ubangi" (Schadeberg 1986:74); this has already been taken care of by our tentative creation of a joint node for Gur (5) and Adamawa-Ubangi.

(New) Kwa (7) is Greenberg's Western Kwa and Bennett and Sterk's Western SCNC; Schadeberg states that it lacks internal unity in the NN classification presumably because a few figures have been inflated by areal contact. (New) Benue-Congo (9) is Bennett and Sterk's Eastern SCNC, i.e., the old Eastern Kwa plus Greenberg's Benue-Congo; it falls into three distinct branches in the FN classification because, according to Schadeberg, of "a few scattered cognation scores below 18%." The subbranches of (New) Benue-Congo will be discussed in the Benue-Congo Overview.

It is clear that Schadeberg's interpretation offers no support to Bennett and Sterk's SCNC (Tano-Congo in Stewart 1983a, b); this node has therefore been abandoned.

Finally, Ijo (8) forms a separate branch. It scores less than 18% with all languages except a few of its (New) Benue-Congo neighbors; these higher percentages are assumed to be due to borrowing. Ijo plus Defaka, a small language described by Jenewari (1983), comprise Ijoid, which we have tentatively treated as a branch of Atlantic-Congo because it seems to be outside Volta-Congo. Voeltz (1977:36) has even speculated that Ijo is a Mande language whose speakers have moved down the Niger; its SOV word order, lack of noun classes, suffixes, and a few lexical items such as *akalú* 'moon' all recall Mande.

1.1.7 NOMENCLATURE

The nomenclature used here is a systematization of usage, developing suggestions for conventions initially made by John Stewart which were discussed at the Leiden Colloquium, 1983. There is no intention to freeze prematurely a classification which is still likely to change as knowledge increases, but rather to provide principles which will assist in selecting the most appropriate names from alternatives that may be proposed.

The conventions for nomenclature are as follows:

1. Certain short, clear names which have been long in use and are unambiguous are retained, e.g., Mande, Kru, Gur.
2. Names of rivers or other major geographical features are used rather than political names, which have been avoided as far as possible.
3. All languages ancestral to Bantoid and thus to Bantu have been labelled X-Congo, e.g., Niger-Congo, Volta-Congo.
4. The 'X' of X-Congo has also been used when possible as the name of one of the major branches of the X-Congo family in question, e.g., Atlantic as a branch of Atlantic-Congo.
5. River names which have been used in the X-slot at higher levels are otherwise avoided.
6. When the *-oid* suffix is used, the relationship between the languages concerned should be not less than around 40% on a standard lexicon statistic list. We recognize that Bantoid is the one exception to this general rule.

costatistic list. We recognize that Bantoid is the one exception to this general rule.

7. Directional names are used only as modifiers.

8. Names are to be as short as possible.

9. When names have been romanized, diacritics are omitted, e.g., Edoid, Ijoid.

These conventions are applied to the labels in the proposed family tree (fig. 1.4) as follows:

1. *Niger-Congo*: The term was first used by Greenberg, who introduced it together with what is now Convention 2: "I have preferred to adopt a new name of a noncommittal geographic nature, Niger-Congo, from the two great rivers in whose basins these languages predominate" (1955:8). The term *Nigritic* (see Köhler 1975) or *Western Nigritic* (Mukarovsky 1976/77) is also in use, but to a more limited extent.

Niger-Congo is used here in place of *Niger-Kordofanian* for the whole family. If, as is now widely agreed to be the case, the Kordofanian branch did not split off earlier than the Mande branch, it falls within the Niger-Congo family as originally conceived, and the *raison d'être* of the term *Niger-Kordofanian* disappears. *Niger-Congo* has, moreover, never ceased to be widely used, informally at least, for the family as a whole. Schadeberg (pers. com.) adds that the Kordofanian languages will probably turn out to represent an even later branching, and that there are in any case objections to the term *Kordofanian* itself.

2. *Mande, Kru, Gur*: In line with Convention 1. Gur is preferred to Voltaic because Voltaic was until recently used as a political term.

3. *Atlantic-Congo*: This term is new, but is in line with Conventions 2 and 3 and hence easy to remember. It is equivalent to *Niger-Congo* in Bennett and Sterk's sense.

4. *Kordofanian*: Familiar and with a geographical reference, though not a strictly accurate one (see Schadeberg 1981a).

5. *Atlantic*: Equivalent to West Atlantic, this shortened form (see Convention 8) was first used (in French) by Doneux (1975) and taken up by Armstrong (1978). *North* and *South Atlantic* by Convention 7.

6. *Volta-Congo*: First used by Stewart (1976a), this term is in line with Conventions 2 and 3 and is equivalent to Bennett and Sterk's Central Niger-Congo. *North Volta-Congo* by Conventions 7 and 8.

7. *Ijoid*: In line with Conventions 6 and 9 and shorter than *Ijɔ-Defaka*.

8. *Kwa*: It is proposed to retain the familiar term *Kwa*, but redefine it so that it now refers only to Greenberg's Western *Kwa* (Bennett and Sterk's Western SCNC). The consequence of this is that the former Eastern *Kwa* languages are transferred to Benue-Congo. To avoid confusion, the reduced *Kwa* may be referred to as 'New *Kwa*' when necessary.

9. *Benue-Congo*: Similarly, it is proposed to retain the term *Benue-Congo*, but to redefine it so that it now includes the former Eastern *Kwa* (Bennett and Sterk's Eastern SCNC). Thus, languages such as Yoruba, Edo, Nupe, Idoma, and Igbo, which have for long been classified as *Kwa*, are now classified as Benue-Congo. To avoid confusion, the expanded *Benue-Congo* may be referred to as 'New Benue-Congo' when necessary.

10. *Adamawa-Ubangi*: Greenberg's original term was Adamawa-Eastern, which violates Convention 7. Samarin (1971) proposed Adamawa-Ubangian to avoid the many problems associated with Eastern, and the present term is a shorter version of this.

The preceding discussion of lexicostatistics and nomenclature explains the branching and labelling of fig 1.4, which summarizes the classification upon which this volume is based.

1.2 GENERAL PHONOLOGICAL CHARACTERISTICS OF NIGER-CONGO

This section briefly surveys features of Niger-Congo which are so widespread that it is likely they occurred in proto-Niger-Congo.

1.2.1 WORD STRUCTURE

Typically, roots originated as CVCV structures, still attested in, for example, Mande, Ijoid and Bantu, although they are reduced in many branches through phonological change.

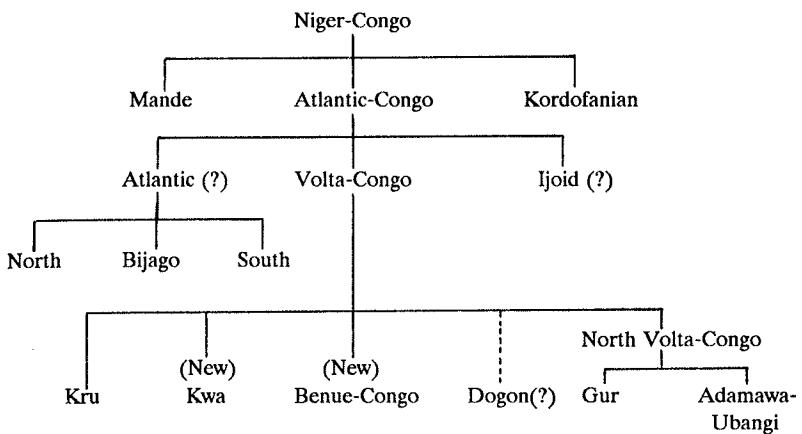


FIGURE 1.4 Proposed classification

Verbs are composed of a root which is often followed by one or more extensional suffixes, typically of -CV structure, some of which have been reconstructed to proto-Niger-Congo (Voeltz 1977).

Nouns are composed of a root which was originally preceded by a noun class prefix of (C)V- shape, either or both of which are often eroded by phonological change.

1.2.2 CONSONANTS

Stewart (1973, 1976a) has proposed that the consonant system of proto-Volta-Congo had a regular contrast between fortis and lenis consonants. This is supported by Elugbe's (1973) independent reconstruction of a fortis/lenis contrast in proto-Edoid and the synchronic attestation of systems of this type in some (New) *Kwa* languages, especially Ebrié; many later studies or reconstructions have demonstrated further fortis/lenis contrasts within Volta-Congo.

Stewart's currently reconstructed consonant system for proto-Volta-Congo (1983b and pers. com.) is as in figure 1.5: ('C = lenis consonant; the consonants in square brackets are allophones of oral voiced lenis consonants which occur before or after nasalized vowels).

	labial	alveolar	palatal	velar	labial-velar
stop					
fortis	p b	t d	c j	k g	kp gb
lenis	'p 'b	't 'd	'j	'k	'kp 'gb
[nasal]	[m]	[n]	[ɲ]		[ŋm]
approximant			l		
[nasalized approximant]			[l]		

FIGURE 1.5 Proto-Volta-Congo consonants
(Stewart 1983)

Mukarovsky (1976/77) also proposes a contrast between normal (fortis?) and marked (lenis?) for his proto-Western Nigritic (roughly equivalent to Atlantic-Congo), on the grounds that there are too many correspondences to be accounted for by a single set of consonants. Figure 1.6 shows Mukarovsky's system with his Ch interpreted as 'C, a lenis consonant.

	labial	alveolar	palatal	velar	labial(ized) velar
stop					
fortis	p b	t d	c j	k g	k ^w g ^w
lenis	'p 'b	't 'l		'k 'g	'k ^w 'g ^w
nasal	m	n		ŋ	ŋm
approximant	w		y		

FIGURE 1.6 Proto-Western Nigritic consonants
(Mukarovsky 1976/77)

There is a remarkable degree of similarity between these two reconstructions by scholars with quite different approaches. Both postulate the same five places of articulation (labial, alveolar, palatal, velar, labial(ized) velar), and series of fortis obstruents, lenis stops, and nasals, with no fricatives. The main differences are

- a) that Stewart regards the nasals as non-contrastive developments of the oral voiced lenis consonants in the environment of nasalized vowels, whereas Mukarovsky, who does not postulate nasalized vowels, treats them as phonemes;
- b) that Stewart postulates no central approximants (semivowels); and
- c) that Mukarovsky postulates no contrast between *l and **d.

Dwyer (fig. 2.5) also reconstructs for proto-Mande a consonant system with five places of articulation and, tentatively, a fortis/lenis contrast.

There is thus a strong possibility that the type of consonant system reconstructed by Stewart and Mukarovsky goes right back to proto-Niger-Congo.

1.2.3 VOWELS AND NASALITY

Niger-Congo vowel systems frequently display vowel harmony. Stewart (1967), using cine-radiology tracings from Ladefoged (1964:38), established that the phonetic basis for the two harmonizing sets of vowels was the position of the root of the tongue. Lindau (1975) showed that the size of the pharynx could be varied by movements of the larynx as well as of the root of the tongue, and proposed a feature EXPANDED to describe the differences between the two sets of vowels.

It is generally accepted that Stewart (1976a) is correct in postulating vowel harmony based on the feature [EXPANDED], i.e., [ATR], in proto-Volta-Congo. In the fullest form of this type of harmony, five [+Expanded] vowels /i, e, ə, o, u/ contrast with five [-Expanded] ones /ɪ, ɛ, ə, ɔ, ʊ/. Many languages show reductions from this fuller system (Williamson 1983). Stewart (1976a) observes, however, that this does not necessarily imply that proto-Volta-Congo had ten contrastive vowels; it is possible that the three vowels which proto-Bantu lacked (and these, in his present view, were (ə, e, o)) were initially developed as harmonizing variants of /a, ε, ɔ/ in words containing /i/ or /u/, and that the original system was therefore a seven-vowel one.

The number of original vowels in proto-Volta-Congo, and beyond that in proto-Atlantic-Congo and proto-Niger-Congo, can presumably be settled only by careful comparisons of regular sound correspondences in sets of contrasting cognates. Present-day systems which show ten contrasting vowels, or for which they can be reconstructed at a shallow level, will be of great importance here (see Elugbe 1973 and forthcoming; Armstrong 1985; Héault 1982).

Outside Volta-Congo, proto-(Northern) Atlantic (Doneux 1975:108-9) and proto-Ijoid have both been reconstructed with ten contrasting vowels; it is therefore likely that proto-Atlantic-Congo, and possibly that proto-Niger-Congo, had ten original contrasting vowels.

Stewart (1976a) further proposes that proto-Volta-Congo had a contrast between oral and nasalized vowels.² As already noted, he claims that nasals in Volta-Congo can be considered to originate under the influence of nasalized vowels. Le Saout (1973) documents languages which have phonological nasalized vowels plus complementary distribution between oral and nasal consonants before oral and nasalized vowels respectively. Bole-Richard (1984, 1985) lists languages of this type from most branches of Niger-Congo: Dan, Guro, Yaouré, Wan, Mwan, Gban, Toura (Mande); Bwamu (Gur); Nyabwa, We, Grebo (Kru); Gbe, Ebrié, Avikam, (Mande); Abouré, Mbatto (Nghwla), Abron (Kwa); and Yakoma (Ubangi).

Nasals may then be phonologized either through the loss of the oral/nasalized vowel contrast or through the loss of the oral consonant which is the source of the corresponding nasal. In all cases reported to date in Niger-Congo, /m/ is the first nasal consonant to become phonologized and /n/ the second; e.g., Ijó (Ijoid); Yoruba, Edo (New Benue-Congo). Niger-Congo thus invalidates two of Ferguson's (1963) assumptions about nasals: that all languages have at least one primary nasal consonant, and that if a language has only one primary nasal consonant it is /n/ (cf. Stewart 1976a).

Postulating original nasalized vowels rather than nasal consonants also helps to explain the apparent instability of nasal correspondences throughout Niger-Congo compared with, for example, Indo-European (cf. Bole-Richard (1985) who, however, postulates nasality as an originally suprasegmental feature).

Niger-Congo languages commonly have nasal-stop (NC) sequences or prenasalized stops (^NC). It has recently been proposed that such sequences develop from nasalized vowels in the syllable preceding the stop. Williamson (1987) suggests that in Ijó these are derived by a historical process of nasal epenthesis between the V and the stop:

(C)V'CV > (C)V'NCV.

This is attested as a synchronic process in the Mande language Busa (Wedekind 1972:16) and in the Benue-Congo language Jukun of Takum (Welmers 1968:11):

²'Nasalized' here means 'with air escaping through both mouth and nose', not 'becoming [+nasal] as the result of a phonological rule'.

[ápùpù]	-->	[ápùmpù]	'in the morning'
[syìpì]	-->	[simpì]	'seven'

Alternatively, Stewart (1985) suggests that NC in proto-Bantu originates by epenthesis of a stop between a nasal (the result of a preceding nasalized vowel on a lenis consonant) and a following oral vowel:

(C)V'CV > (C)VNV > (C)VNCV.

This is attested as a synchronic process in Jukun of Takum (Welmers 1968:8³):

/mà/	-->	[mbà]	'give birth to'
------	-----	-------	-----------------

contrasting with

/mànà/	-->	[mànà]	'salt'.
--------	-----	--------	---------

It is also reconstructed as a historical process in Central Southwestern Mande by Dwyer, who calls it:

... the expansion of nasal consonants into a sequence of a nasal consonant followed by a voiced stop ... when the vowel following the nasal consonant is non-nasal (1974:73).

Niger-Congo languages commonly show fewer nasalized than oral vowels. Kasem, with a ten-vowel harmony system, has seven nasalized vowels (Bendor-Samuel 1971:153). Williamson (1987) reconstructs /i, ì, ü, ë, õ, á/ definitely for proto-Ijó, with /é, ê, ð/ only tentative. Stewart, however, is currently (pers. com., November 1986) working on the assumption that proto-Volta-Congo had seven oral and seven nasalized vowels. The exact number of contrasting nasalized vowels in proto-Niger-Congo can only be determined by careful reconstructions.

³A question arises about the source of the /m/ before an *oral* vowel, as all initial nasals are being derived from consonants before a *nasalized* vowel. I propose that originally the first syllable was nasal, the second oral, and the development roughly as follows:

*bàtā	
*màtā	(Stewart's nasalization rule)
*màtā	(denasalization of V ₁ , perhaps influenced by the oral second syllable)
*màt	(final vowel loss)
*mbat	(stop epenthesis): proto-Jukunoid
[mbà]	(final C loss): Jukun

1.2.4 TONE

Proto-Niger-Congo is generally agreed to have been a tone language, since the majority of present-day Niger-Congo languages are tonal. It is further agreed that it was of the register or level tone type; many present-day languages do not have underlying contour or gliding tones, and in languages where glides do occur they can usually be analyzed as combinations of the level tones.

Figure 1.7 shows that languages with two or three contrastive levels are the most common; four-level systems are quite widely attested; five-level ones are rare (cf. Wedekind 1985). Systems which are not tonal, but rather pitch-accent or stress-accent systems, or even non-accentual, also occur. There is at present an increasing awareness that there is no sharp dividing line between tonal and non-tonal systems, but that accentual and tonal phenomena interact in often complex ways (see, for example, Faraclas 1984; Clements and Goldsmith 1984).

Abbreviations used in figure 1.7:

T top	L low	S stress
H high	VL very low	PA pitch accent
M mid		

Synchronic studies of tone systems have been supported by comparative-historical ones which show that the deletion of segments often does not involve the deletion of the tones associated with them. Such tones are instead left 'floating', and interact with the tones that remain associated with tone-bearing units; they are the most common cause of tone perturbations.

The phenomenon of downstep was first clearly recognized and analyzed in Niger-Congo languages. Today it is generally regarded as the result of a low(er) tone floating between two high(er) tones.

It is extremely common throughout Niger-Congo for 'depressor consonants', normally voiced fortis obstruents, to exert a lowering influence on tones.

It is most likely that proto-Niger-Congo had a system of two contrasting levels. Such a tonal system can easily develop either into a pitch-accent system, or into a more complex tonal system through, for example, the introduction of downstep; both possibilities are exemplified in

PA/S	H,L	H,M,L	T,H,M,L	T,H,M,L,VL	SOURCES
MANDE Maninka	Dyula Ligbi Mende	Mwan Ngain Guro Yakuba	Gban Tura	Dan-Santa	Halaoui et al. 1983; Braconier 1982; Kropp-Dakubu 1980 Schadeberg 1981a,b
KORDO- FANIAN ---	Tegem Ko Logol, Ngile Nding most others	---	---	---	
ATLANTIC	Sherbro	Basari		---	Doneux 1975
Fula	Temne	Bedik			Kropp-Dakubu 1977, 80 Ferry 1968
Sereer					
Wolof					
Dyola- Fogny					
IJJOID Nembe	Izon	---	---	---	
	Eastern Ijo				
KRU ---	---	Godié Klao	Nyabwa, Sème Wobé		Marchese 1979
DOGON ---	Dogon-Toro				Calame-Griaule 1968
GUR	Dagbani Konkomba Kusal	Basari Nafaara Kasem	Bwamu Baatonun		Kropp-Dakubu 1977; Bendor- Samuel 1971
ADAMAWA- UBANGI	Longuda Gbaya Mba?	Mumuye Duru Banda Zande	Dowayo Munzombo		Kropp-Dakubu 1977; Boyd, this volume
KWA ---	Abidji Ga, Akan Anyi Baule-Fali	Abbey, Ega Dangme Alladian Krobu Mbatto	Sele	---	Hérault 1982
BENUE- CONGO Swahili	Efik Igbo, Edo Tiv Ekpeye	Yoruba Yala-Ikom Jukun, Jiru Yukuben Kpan, Duka Bekwarra Kohumono Lamnsoq	Igede Kuteb Icen Limbum Mambila Kana	Ashuku	Kropp-Dakubu 1977, 80 Shimizu 1980 Kropp-Dakubu 1977, 80

FIGURE 1.7 Sample tone systems of Niger-Congo

Ijo (Williamson 1978, forthcoming). The systems which have more than two basic levels are likely to have developed them through the phonetic influence of depressor consonants or floating tones followed by the loss of the conditioning factor.

Tone forms part either of lexical items or of grammatical constructions. Roughly speaking, the languages which have more tone levels tend to use tone more for lexical contrasts and thus less for grammatical constructions.

1.3 GENERAL SYNTACTIC CHARACTERISTICS OF NIGER-CONGO

1.3.1 WORD ORDER

Hyman (1975) and Givón (1975, 1979) argue that proto-Niger-Congo was an SOV language; Ijo preserves in full and Mande in part the original SOV word order, while other languages preserve traces of an earlier SOV syntax.

Heine (1976, 1980) and Heine and Reh (1984) argue that proto-Niger-Congo was an SVO language and that SOV word order was an innovation arising from *nominal periphrasis*, i.e., the use of a tense-aspect-modal marker (here symbolized M) plus a nominalized verb (Vnom) in place of the verb.

Williamson (1986) argues that proto-Niger-Congo was a strict SOV serializing language. The initial V of a series developed into a modal marker (M), and a following V was then naturally nominalized to Vnom:

- (1) a) Intransitive: $S \ V_1 \ V_2 \rightarrow S \ M \ V_{\text{nom}}$
 b) Transitive: $S \ V_1 \ O \ V_2 \rightarrow S \ M \ O \ V_{\text{nom}}$

(where O is the object of the second verb).

Mande, as described by Heine and Reh, is at this stage.

In much of Niger-Congo, the verb was then copied immediately following the M:

- (2) a) Intransitive: $S \ M \ V_{\text{nom}} \rightarrow S \ M \ V \ V_{\text{nom}}$
 b) Transitive: $S \ M \ O \ V_{\text{nom}} \rightarrow S \ M \ V \ O \ V_{\text{nom}}$

It is then easy for the M to be reduced to a verb prefix (m-) or to be lost, and for the Vnom to become redundant. It may then be reanalyzed as a marker of an emphatic construction, and therefore deleted in non-emphatic constructions. This will result in straightforward SVO structures:

- (3) a) Intransitive: $S \ (m-) \ V \ V_{\text{nom}} \rightarrow S \ (m-) \ V$
 b) Transitive: $S \ (m-) \ V \ O \ V_{\text{nom}} \rightarrow S \ (m-) \ V \ O$

Each stage of this scenario can be exemplified from SOV Ijoid or SVO Igboid.

Dimmendaal (pers. com.) points out that while proto-Indo-European is assumed to have been an SOV language with case-marking, which allowed some variation in word order, case systems have not been reported in Niger-Congo. Thus the word order of proto-Niger-Congo may have been stricter than that of proto-Indo-European. He suggests, however, that the order may have been SVO alternating with SMOV, rather than strict SOV, as currently found in Kru, Senufo, Adamawa-Ubangi, and parts of Benue-Congo.

Marchese (1986) accepts that proto-Niger-Congo was SOV, but argues that proto-Kru had already developed into a basically SVO language with OV features retained only in embedded structures. She claims that the common order SMOV in Kru is an innovation derived from earlier (4):

- (4) $S \ V_1 \ [(O) \ V_2]_{\text{nom}}$

where the brackets enclose the complement of V_1 . Thus although the OV word order within the complement is a remnant of the original OV word order, the complement as a whole shows SVO word order in relation to V_1 . The development of V_1 to M, coupled with the loss of the *nom* marker on V_2 , creates a secondary OV word order as in (5):

- (5) $S \ M \ O \ V$.

This order is unstable, because it co-exists with SVO, and it tends to develop into

- (6) $S \ M \ V \ O$

through the process of exraciation, i.e., the moving of the object out of the 'verb brace' composed of M and V.

Marchese's case for Kru is very convincing and suggests that SMOV may also be interpreted as an innovation from SVO in Senufo, Adamawa-Ubangi, and Benue-Congo. This leads to the conclusion that proto-Volta-Congo had developed a basic SVO order, and that Dogon, which is strict SOV, is to be excluded from Volta-Congo.

On the other hand, the exbraciation theory does not explain the plethora of nominalized verb forms and 'cognate objects' which are so common in Benue-Congo languages and which are accounted for by the verb-copying hypothesis. Such nominalized verb forms are absent from SOV Ijo. Possibly, then, the development in Benue-Congo began as in Kru, but from SMOV proceeded in some languages as in (2)-(3) above.

1.3.2 SERIALIZATION

The scenario suggested above for the development of basic word order assumes the existence in proto-Niger-Congo of serial verb constructions: that is, surface constructions in which a number of VPs juxtaposed without conjunctions share a common surface subject and one or more common aspect/tense/polarity markers.

There appear to be three varieties of such constructions:

a) *Unmarked*, in which the first verb (in SVO languages) or the last verb (in SOV languages) is fully marked for aspect/tense/polarity, while the others occur as bare stems. This is the most striking type of serial construction, and has been intensively studied in (New) Kwa and (New) Benue-Congo languages, while it is sporadically attested in other branches.

b) *Consecutive*, in which the first verb is fully marked, while later ones bear a general marker showing that they are 'consecutive' to the first (Hyman 1971). This type is typical of Bantu, and is attested elsewhere.

c) *Concordial*, in which each verb refers back to the subject by means of a concord marker or pronoun. This has been called the 'Mande serial construction' (Wedekind 1972:33), but is also attested in, for example, the Atlantic language Diola-Fogny (Sapir 1965:105) and Benue-Congo Idomoid (Armstrong pers. com.). This type is called 'consecutive' by Van Leynseele (1975) and Marchese (1986:84-86), who discuss it in Anyi (Kwa) and Kru respectively. Thus the term 'consecutive' is ambiguous; standard terminology for discussion of serial and related constructions is sorely needed.

It seems likely that the concordial type was original. Even in non-serial sentences Niger-Congo languages very commonly use a subject concord marker recapitulating the subject: e.g., Edo: Amayo (1975); T.L. Cook (pers. com.) observes that Bantu, Platoid, and Cross River languages all show concord with the person and number of the subject, and that Efik has a subject concord pronoun with tones which vary for the first and subsequent verbs. Givón (1976) in fact suggested that the subject in Niger-Congo was originally a Topic which was recapitulated by a pronoun, and that the source of verb-subject agreement, in Niger-Congo as in other languages, was such a recapitulatory pronoun (*s*) which gradually became prefixed to the verb (*s-*). Ruud Hidden (pers. com.) notes that such prefixation is unlikely to develop in an SOV language, where the object in a transitive sentence intervenes between subject concord marker and verb:

- (7) S s V (intransitive)
- (8) S s O V (transitive)

and would be more likely to occur after a change to SVO, where the subject concord marker invariably immediately precedes the verb:

- (9) S s V > S s-V
- (10) S s V O > S s-V O

If this argument is correct, then proto-Niger-Congo used subject concord markers at the beginning of each VP in a serial construction, as in (11):

- (11) S s V s O V s V

This is the concordial type, as observed today in SOV Mande. After a change to SVO syntax, as suggested above, the subject concord marker could become prefixed to the verb and desemanticized or reinterpreted as a consecutive marker. Finally, complete loss of the marker would yield the unmarked type.

1.3.3 NOUN CLASSIFICATION

The best-known grammatical feature of the Niger-Congo languages is undoubtedly their system of noun classification which, in a well-preserved, reduced or purely vestigial form, can be traced in every branch of the family, and hence must be reconstructed for proto-Niger-Congo.

A system of noun classification probably always originates as semantically-based (cf. the embryonic systems documented in some Australian languages: Capell 1940; Dixon 1968). Partial semantic correlates of the various noun classes can be recognized in all the well-preserved Niger-Congo systems. The semantic-formal correlation is never complete, however, except in reduced systems which have reanalyzed and regularized the older, more complex systems. It is therefore logical to conclude that while the noun classification system arose on a semantic basis in pre-Niger-Congo, it had already become a grammaticalized, essentially formal system in proto-Niger-Congo.

The noun classes are marked by affixes on the noun and/or various elements in the sentence which concord with the noun: the verb, noun modifiers, and noun substitutes.

The fact that the noun class markers are prefixed in some branches and suffixed in others calls for explanation. Prost (1964:14) and Welmers (1973:209) have proposed that nouns in the proto-language had both prefixes and suffixes, and that the prefixes were lost in some languages and the suffixes in others. This explanation assumes an unusually high degree of redundancy in that all nouns would be doubly marked for the same category.

Greenberg (1977, 1978) suggested that the noun class markers originated as demonstratives which in the proto-language could either precede or follow the noun (Stage 0), as in Latin, and which gradually became reduced to definite articles in either position (Stage 1), as in the Romance languages. In Stage 2, the definite article became more widely used as what Greenberg calls a 'Stage II' or 'non-generic' article; here we shall call it a 'specific article', translating as 'a certain X' (cf. Bokamba's (1971) distinction between [specific] and [definite]). In Stage 3, the articles become mere markers of nominality attached to a noun in all circumstances except, frequently, in a few particular cases where definiteness or indefiniteness is predictable: typically, proper names, inalienable nouns, locatives, etc. As the markers lose their semantic feature [definite], or become phonologically eroded, they are often *renewed* or reinforced by new definite markers, based on the old demonstratives, articles or affixes, which are introduced either next to the eroded marker or at the opposite side of the noun from it. Thus an old prefix may be renewed by a new postposed article, or vice versa. The new articles are in their turn subject to the semantic and phonological weakening which had attacked the old ones.

Greenberg's stages are schematized in (12).

(12)	Stage O: Dem N	<i>or</i>	N Dem
	Stage 1: DA N	<i>or</i>	N DA
	Stage 2: SA N	<i>or</i>	N SA
	Stage 3: a- N	<i>or</i>	N-a

DA = Definite Article SA = Specific Article

a- = prefixed nominal marker -a = suffixed nominal marker

There are thus four possibilities for renewal, as in (10).

(13)	(a)	DA - (a-)	N	prefix renewed by prefix
	(b)	(a-)	N - DA	prefix renewed by suffix
	(c)	DA -	N(-a)	suffix renewed by prefix
	(d)		N(-a) - DA	suffix renewed by suffix

The four possibilities are exemplified in (14).

(14)	(a)	mo-konzi	'a chief'	Dzamba (Bantu): Bokamba 1971:217-8.
	(b)	o-mo-konzi	'the chief'	Diola (Atlantic): Greenberg 1977:99.
	(c)	fu-nak	'day'	Gurma (Gur): Greenberg 1977:98.
	(d)	fu-nak-əf	'the day'	Godié (Kru): Marchese forthcoming
	(c)	niti-ba	'men'	
	(d)	ba niti-ba	'the men'	
	(c)	ml-ε	'animal'	
	(d)	ml-ε-ε	'the animal'	

Greenberg's explanation avoids the redundancy of the double-affix one, but does not explain the fluctuating position of the demonstrative/article except by an appeal to free word order. But if we are right in postulating SOV word order for proto-Niger-Congo, we expect that modifiers, including demonstratives, would, in the proto-language, consistently precede the noun and therefore yield prefixes. There is, in fact, considerable evidence that prefixes are older than suffixes in Niger-Congo.

In Northern Atlantic, Doneux (1975:46ff.) reconstructs prefixes and suggests that as they weaken they are renewed by postposed demonstratives/articles, while initial consonant alternation often remains as the only trace of the original prefix. In Southern Atlantic, Childs (1983) shows that a change from prefixing to suffixing has taken place through a number of stages exemplified in different languages.

The first prerequisite for the change is the existence of a *binder* at the end of a NP. This term was introduced by Sapir:

One interesting feature common to many of the West Atlantic concord systems is the use of a dependent form, usually some type of determiner, to terminate the noun phrase... Such a device in a sense 'binds' up the phrase concord affix. Binders of this sort most commonly follow (in terminal position) relatives, adjectives and occasionally genitives. For example, Fula:

<u>depte-re</u>	<u>ranee-re</u>	<u>nde</u>	<u>njogii-mi</u>	<u>nde^{2e}e</u>
book	white	which	hold-I	this (recalling book)

'this white book which I am holding' (1971:71)

Similar elements are widely attested in Niger-Congo. Marchese (this volume) reports that a final SUB(ordinating particle) occurs at the end of relative clauses in Kru. Naden (this volume) reports that in Gur:

Articles . . . often appear finally in the phrase and may appear in addition to possessive or demonstrative modifiers; the final article may serve to mark the end of the relative construction . . . or there may be a special particle in this function . . .

As for New Benue-Congo, Armstrong (this volume) observes that relative clauses in Idoma "normally end with a demonstrative 'binder'. Analogous 'binders' occur in Tiv, where they may be concordial, in Akwéya, and in Yoruba."

Childs suggests that the binder provides the starting point for the shift from prefix to suffix:

For concord to be shown after the nouns, there must be something there to show it. It seems highly unlikely that a suffix would appear there *ex nihilo* or via a hop over the noun. This element is provided by binding (1983:26).

The second prerequisite for suffixing is *animate concord*; all animate nouns come to take their concord from the dominant animate gender, whatever the original class dictated by their noun prefix.

The process begins with a suffix, built on the binder, marking the animate plural and then spreading to other plural classes. As the prefixes suffer erosion, the suffixes take over the marking of the noun classes, and spread to singular classes as well. Finally, all prefixes are lost and the result is a purely suffixing language.

This scenario develops Greenberg's process of renewal in a very plausible way. Other suffixing systems within Niger-Congo may have arisen in a similar way.

Manessy (1965-66) shows that in most of the Gur languages the prefixes which have been reported co-existing with a functioning system of noun suffixes can be explained either as

- a) class-marking pronouns with a definite meaning, cliticized rather than prefixed except where the loss of the (older) suffixes has forced them to take over nominal class functions, as in the Gurma group (the reverse of the Southern Atlantic process);
- b) nouns meaning 'thing', 'place', etc., which have been compounded with a verb, the whole compound noun bearing a normal suffix, as in the Senufo group.

In the Eastern Grusi (Tem) group, however, there are languages which show genuine prefixes, in addition to suffixes, in a small number of common nouns which differ from one language to the next and fall into some of the widely-attested Niger-Congo genders. Manessy shows that these prefixes cannot all be explained as occurring on nouns borrowed from neighboring prefixing languages, and proposes that they originated from a process of nominalization of verbs by prefixation and suffixation. In the light of the Southern Atlantic evidence, one might hypothesize that the prefixes are older; the suffixes were built on a binder; the prefixes have been eroded but have survived in a handful of common nouns (cf. the survival of the old Germanic *-en* plural in English *children*, *oxen*, *brethren*) in the Tem group, while they have totally lost out to the suffixes elsewhere in Gur.

Later stages of similar processes appear in other branches of Niger-Congo. Adamawa-Ubangi contains some groups which have a reduced gender system marked by suffixes on the nouns (Boyd, this volume). Ijoid is also chiefly suffixing, though it retains some traces of both functioning and non-functioning prefixes; it gives primacy to animacy and has reanalyzed its noun class system into a gender system (Jenewari, this volume). Kru has gone even further; it is exclusively suffixing, and shows a highly reduced system in which animacy plays a major role, while some

TYPE OF SYSTEM	TYPE OF AFFIXING				
	Prefixes only	Older prefixes, innovating suffixes	Suffixes only	Older suffixes, innovating prefixes	No affixes
A. Conservative noun class system	Kordofanian Atlantic (Bak, Tenda groups) Kwa (Ega, most 'Togo Remnant'*) Benue-Congo (Southern Bantoid)	Northern Atlantic Gur (E.Grusi group) Benue-Congo (Tiv, Kom, Kagoro)	Gur (most languages)	Gur (Gurma group)	---
B. Reduced noun class system	Kwa (Comoé, Gbe) Benue-Congo (Lower Cross)	Benue-Congo (Central Jukunoid)	Eastern Kru Adamawa (Bua group, Tula, Longuda)	---	---
C. System re-structured on basis of [animate]/[human]		Southern Atlantic	Western Kru (Grebo, Kuwaa) Mande (Bobo) Dogon	Benue-Congo (Mambila?)	---
D. System as in C, plus gender		Ijoid	Western Kru (Wobe, Nyabwa)	---	---
E. No noun class or gender system	Benue-Congo (Eleme) (Yoruba) (Igbo)	Benue-Congo (Jukun)	Mande (most languages) Adamawa (Mumuye) Ubangi (Gbaya)	Benue-Congo (Gokana)	

*'Togo Remnant' languages no longer form a unit in Stewart's classification (this volume).

FIGURE 1.8 Nominal affixes and their functions in Niger-Congo

languages have, like Ijoid, undergone a reanalysis which introduces a masculine/feminine distinction (Marchese, this volume and forthcoming). Dogon is exclusively suffixing and has entirely lost its noun class system; animacy is primary in that only human, relationship and agent nouns take an obligatory plural marker (Calame-Griaule 1968:xxviii). The Mande languages are likewise exclusively suffixing and have lost their noun class system; generally they have only a single pluralizing suffix, but Bobo has irregular, lexically-marked pluralization, with *-re/-ne*, *-ri/-ni* essentially for animate nouns, and stem vowel replacement, apparently resulting from an open-vowel suffix, for non-animates (Le Bris and Prost 1981).

When seen in relation to each other and to the situation attested in Southern Atlantic, all these systems appear to be results of similar processes operating on languages which have greatly reduced, restructured or lost their noun class systems before or during the change from prefixing to suffixing.

Figure 1.8 summarizes attested types of noun class system in relation to the various affixing possibilities.

The change from prefixing to suffixing cannot be seen as a single common innovation, for it cuts across the classification arrived at on lexical grounds. Only Kordofanian appears to be exclusively prefixing; (New) Kwa is normally prefixing, but Kposo and Kebu are suffixing (Heine 1968); Benue-Congo is normally prefixing, but De Wolf (1971:180) found suffixes in seven out of 47 languages, again cutting across the genetic classification. Thus the change from prefixing to suffixing must be seen as the result of general pressures, not a single common innovation.

1.3.4 NOUN PREFIXES OF PROTO-NIGER-CONGO

Considerable work has been done on reconstructing the noun class affixes of various branches or sub-branches of Niger-Congo. Figure 1.9 compares the results from a number of reconstructions of the better-preserved systems. The traditional numbering system of the Bantu languages has been used, except that the locative classes 16-18, which are a Bantu innovation, have been omitted. 'Pairing' shows whether the class is singular or plural, and if so what its corresponding plural or singular is, or if it is a single class (SC), that is, one which does not pair. As usual in recent work, Class 6A refers to the single class which contains liquids and mass nouns and which, outside Bantu, is normally distinct from Class 6, which is the plural of Class 5. Miehe (1985:358ff.) has recently shown that in many Benue-Congo languages the prefix for liquids (typically 'water' and 'blood') is distinct from that for mass nouns; tentatively, the latter has

Class Pairing	1 sg. of 2	2 pl. of 1	3 sg. of 4 pl. of 3	4 sg. of 13	5 sg. of 6 pl. of 5,14,15	6 egg, head, name, eye, tooth, breast, tongue, year	6A SC liquids: blood, wine, water	6B SC mass nouns: faeces
Content	humans							
*KORDOFANIAN (Schadeberg 1981a,b)	gu-	gi-	li?	ŋu-	ŋ-			
*Heiban	gu-	j-	li-	ŋu-	ŋ-			
*Talodi	b-	g-	j-	m-	ŋ-			
*Rashad	w-	y-	y-	ŋ-	ŋ-			
ATLANTIC *Northern Atlantic (Doneux 1975)	a-ba-	i-Ci-(=8)	ɛ-de-	a-ga-	a-ma-			
GUR (Manessy 1975)	v-a	ba	-u, ŋu	i-, ŋi	di	a, ŋa	mu	mu
KWA (Heine 1968)	o-	ba-	o-	i-		N-	N-	
*Togo Remnant	ú-	ba-	ú-	í-	li-	a-	ma-	a-
*BENUE-CONGO (De Wolf 1971)	mù-	gú-	mì-	gí-	ʃ-	dí-	mà-	gá-
*Bantu	mù-	ù, á-	á-	bà-			mà-	gá-
(Meeussen 1967)								

Class Pairing Content	7 sg. of 8	8 pl. of 7 neck, thorn	9 sg. of 10	10 pl. of 9,11 animals	11 sg. of 10	12 sg. of 13	13 pl. of 3,12
ATLANTIC *Northern Atlantic	a-ka-(=13)	i-Ci-(=4)	ʃ-j/n-	a-ña-	u-du-		a-ka- (-7)
GUR *Oti-Volta	---					ka	si
KWA *Togo Remnant	ki-	bi-				ka-	ti-
*BENUE-CONGO *Bantu	ki-	bi-	ʃ-	ʃ-	lu-	ka-	ti-
	kì-	kí-	bì-	bí-	ñ-	jì-	tù-
Class Pairing Content	14 sg. of 6,4/10		14 SC abstracts, verbal nouns	15 sg. of 6,4/10 ear, leg, arm, knee	15 SC infinitive		19
ATLANTIC *Northern Atlantic	u-bu-						V-pV-
GUR *Oti-Volta	-b		bu	ku			fu?
KWA *Togo Remnant			bu-	ku-			
*BENUE-CONGO *Bantu	bu-		bu-	ku-	ku-		
	bù-	bú-	bù-	kù-	kú-	pì-	pí-

FIGURE 1.9 Noun class affixes of Niger-Congo

been here separated as '6B', although it is not yet clear if this distinction operates outside Benue-Congo.

The initial nasal in the Bantu prefixes for Classes 1, 3, 4, 6, 9 and 10 has been considered a Bantu innovation (Greenberg 1963a:35; Williamson 1971:251), but Miehe (1985) has amassed widespread evidence for nasal prefixes, often in a reduced form as syllabic or homorganic nasals, occurring outside Bantu. She regards these as old, frozen prefixes to which new prefixes have often added: thus in proto-Plateau 4 she analyses *ùntɔŋ* 'ashes' as *ù-N-tɔŋ* (1985:223).

A possible alternative is that if proto-Niger-Congo did indeed have nasalized vowels, these vowels occurred in prefixes as well as stems. The form above would then be reconstructed as *ù-tɔŋ*; a rule of nasal epenthesis (cf. 1.2.3 above) would create *ùntɔŋ* from which *ntɔŋ* could easily develop; alternatively, denasalization would yield *utɔŋ*. Southern Bantoid languages attest conditioned alternations between i- and N- for class 9 and 10 prefixes (Hyman 1980), suggesting class 9 *i- and class 10 *i-.

In Classes 1, 3, and 6, the Kordofanian labial-to-velar correspondences (Schadeberg, this volume), supported by the Oti-Volta (Gur) alternants, as pointed out by A. Naden (pers. com.), strongly suggest that proto-Niger-Congo had labial-velar consonants here and perhaps also in 4 and 6A. A possible path for the Bantu reflexes is sketched in (15).

(15)	class	1	3	4	6	6A
weakening:		*g ^w ù-	*g ^w ú-	*g ^w i-	*g ^w á-	*ŋmá-/ŋwá-
nasalization:		wù-	wú-	wí-	wá-	má-
denasalization:		mù-	mú-	mí-	má-	má-

In other branches, delabialization would yield the velar reflexes, deletion of the (weakened) initial consonant would yield the V- reflexes, and various combinations of nasalization and denasalization rules, conditioned by the vowels and the stem-initial consonants, could account for the various other attested reflexes.

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