Niger-Congo, with a special focus on Benue-Congo

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Abstract

Niger-Congo is the largest referential language group in Africa. The extent to which it represents a true genealogical grouping is not established, though there is a large core set of members of the family that all specialists currently accept as related. These languages spread across Sub-Saharan Africa, and their most significant common feature from a comparative perspective is a distinctive type of noun class system. The largest subgroup of Niger-Congo is Benue-Congo, which includes the Bantu languages that dominate the southern part of the continent. From a typological perspective, Niger-Congo languages are quite varied, especially with respect to their degree of morphological elaboration. This is also true of Benue-Congo, with some of its languages having an isolating morphological character and others showing extensive agglutinating morphology. Future comparative work on the family would likely benefit from greater integration of the results of sociolinguistic investigations into models of its historical development.

Keywords: Niger-Congo, Benue-Congo, Bantu, comparative linguistics, typology, areal linguistics

Brief biographical statement

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1. What do we mean by Niger-Congo?¹

First proposed by Greenberg (1949), Niger-Congo has for decades been treated as one of the four major phyla of African languages.² The term, as presently used, however, is not without its difficulties. On the one hand, it is employed as a referential label for a group of over 1500 languages, putting it among the largest commonly-cited language groups in the world. On the other hand, the term is also intended to embody a hypothesis of genealogical relationship among the referential Niger-Congo languages that has not been proven.

Reference sources through recent decades, such as Williamson (1989b) and Williamson & Blench (2000), have tended to equate Niger-Congo in its referential and genealogical senses. More current presentations, such as Dimmendaal (2011: 85–92), clearly differentiate between the two, separating out a "core" Niger-Congo, comprising a set of languages groups where evidence of genealogical relationship is comparatively strong, from a second set where it is much weaker. Below, the intended sense of "Niger-Congo" will be made explicit where necessary. The distinction between referential and genealogical Niger-Congo is well illustrated through the comparison of the maps in Figure 1 and in Figure 2.³

The map in Figure 1 depicts a relatively uncontroversial genealogical core of Niger-Congo, alongside other African language families and isolates. The map in Figure 2 breaks down core Niger-Congo into commonly-cited subgroups. In addition to the subgroups in Figure 2, referential Niger-Congo would also include the following groups found in Figure 1, going from east to west: Mande, Dogon, Ijo/Defaka (more typically known under the label of Ijoid), and Ubangian, as well as some of the languages indicated as isolates, such as Bayot or Ega.

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² The label Niger-Kordofanian is also used for this group, following Greenberg (1963: 149) and reflecting a genealogical claim—not currently generally accepted (Williamson 1989b: 21)—that Kordofanian languages are a coordinate branch with the rest of Niger-Congo. Today, Niger-Congo dominates as the general term for the group, inclusive of Kordofanian languages believed to be part of the family.

³ The maps in Figure 1 and Figure 2 were produced by Monika Feinen, cartographer at the Institut für Afrikanistik, University of Cologne.



Figure 1: African languages families and isolates following recent proposals



Figure 2: Niger-Congo subgroups following recent proposals

There are a number of existing works providing overviews of Niger-Congo. The most thorough of these is the edited volume Bendor-Samuel (1989). Others include various chapters in Sebeok (1971), as well as Williamson & Blench (2000), Pulleyblank (2009), and Dimmendaal & Storch (2016). More general references on comparative African linguistics, such as Sands (2009) or Dimmendaal (2011: 318–324), also contain helpful overviews. While inevitably repeating some of the content found in these works, this chapter will also try to complement their coverage. A targeted and critical overview of work on language relationships will be given in Section 2. In Section 3, there will then be more detailed discussion of Benue-Congo, the subgroup of Niger-Congo of special focus here. Discussion of major typological and areal features of Niger-Congo languages will be given in Section 4. The chapter will conclude with a brief consideration of what a productive research agenda for comparative Niger-Congo linguistics in the twenty-first century might look like in Section 5.

2. Language relationships within Niger-Congo languages

2.1. The history of Niger-Congo classification

The widespread acceptance of a language family associated with the name Niger-Congo can be first attributed to Greenberg (1949), with Greenberg (1963) being more typically cited as a general reference. However, Greenberg's proposals are best understood as a refinement and extension of ideas developed by earlier scholars, in particular Westermann (1911, 1927) (see also Wallis (1978)). Greenberg's most important original contribution to Niger-Congo classification is almost certainly his explicit "demotion" of the Bantu languages to the status of a subgroup of Benue-Congo (see Section 3). Previously, Bantu languages had been treated as a separate language family due to their internal cohesion and the fact the comparatively large size of many

of them encouraged the availability of descriptive materials from an early stage (see Cole (1971) for relevant discussion).

Other sources adequately cover the history of Niger-Congo language classification (see, e.g., Greenberg (1981), Williamson (1971, 1989a,b), Dimmendaal & Storch (2016)).⁴ Olson (2006) should be singled out for its attention to the details of the evidence provided for many of the subgroups, clarifying, in particular, why a number must be considered unproven. Many of the early classifications are primarily of historiographic interest, though they occasionally contain insights which are of significance for contemporary scholarship. For instance, the early work of Johnston (1919) made use of the term Semi-Bantu to characterize languages with clear "Bantu" affinities but not showing the full range of characteristics that he accorded to Bantu languages (see, e.g., Johnston (1919: 18–20)). Among other possibilities, he discusses whether Semi-Bantu languages could have developed from a "fusion" of Bantu languages with other languages (Johnston 1919: 25), a view more concretely and explicitly adopted by the prominent Bantuist Malcolm Guthrie (1962: 19).

After the work of Greenberg, hypotheses such as these were often summarily rejected. Welmers (1973: 2–3), for instance, completely dismisses the ideas of Johnston (1919) on language mixing. While it is certainly the case that many of the specific ideas found in older works need to be immediately dismissed (with their more racist elements standing out in particular), one sometimes finds parallels between them and more recent scholarly trends. Johnston's idea of language creation via "fusion", for instance, clearly anticipates the notion of "mixed" languages, and, given that the development of a Bantu-Cushitic mixture as found in Ma'a/Mbugu is now amply documented (Mous 2003), we could just as well expect many (much harder to detect) mixed languages to have developed among grammatically and lexically similar

⁴ See also Doneux (2003) for a comprehensive overview of African language classification through 1970 and Lüpke & Storch (2013: 212–213) for a concise overview of classifications from the early nineteenth century through the early twentieth century.

Niger-Congo languages over the millennia, making a label like "Semi-Bantu" perhaps not as inappropriate as it might first appear.

2.2. Subgrouping within Niger-Congo

Previous overview presentations of Niger-Congo, such as Williamson (1989b), are strongly oriented towards tree-based subgrouping over other kinds of historical relationships, and this limits their value to the non-specialist, who is likely to be interested in issues of language contact and linguistic prehistory as well (see also Dalby (1971) and Heine (1980: 295–297)). Moreover, the evidentiary basis of the presented subgroupings is never entirely clear, and their discovery often relies on relatively coarse methods, e.g., lexicostatistics, as in Bennett & Sterk (1977) (see Schadeberg (1986) for further discussion of their methods). These issues are present in the whole-family tree-based classification given in Williamson & Blench (2000: 18), for instance. Unfortunately, due to a lack of more definitive classifications, the comprehensive nature of such trees means they are republished in other reference sources (see, e.g., Childs (2003: 25) and Schadeberg (2003b: 155)), and this process of "scholarly inertia" (Childs 2003: 47) makes such classifications appear more valid than the evidence warrants.

Accordingly, no specific tree-based classification of the Niger-Congo languages is included here. One can get a more accurate impression of the present state of our knowledge regarding the subgrouping of the family simply by inspecting a map like the one given in Figure 2, as long as a number of qualifications are made (see also Dimmendaal (2011: 85–92) for more detailed discussion). First, the implication in Figure 2 that Bantoid and Bantu are separate major subgroups of Niger-Congo is simply false. Bantu is universally viewed as a subgroup of Bantoid, and Bantoid is viewed as a subgroup of Benue-Congo. This "splitting" representation is due to the importance of Bantu in the context of comparative Niger-Congo studies. Second, while languages in the various subgroups in the map in Figure 2 are generally considered to belong to Niger-Congo, the genealogical unity of the subgroups themselves is not necessarily established. For example, on the one hand, one finds Kru, whose status as a subgroup is not controversial (Marchese 1989). On the other hand, there is Atlantic, whose status as a subgroup is far from clear (Childs 2003: 46–50).⁵ Moreover, as with classificatory trees, one should be wary of assuming that a subgroup is coherent merely because it has been repeatedly listed in the reference literature. Adamawa provides a good example here. It has been part of standard presentations for decades, even though Kleinewillinghöfer (1996: 26) states that its coherence had not yet been convincingly demonstrated, and, to the best of my knowledge, no work has established it since, either.

Other groups raise different problems. Kwa, for instance, is widely viewed as part of a larger complex with Benue-Congo, and it is neither clear where the border between Kwa and BenueCongo lies nor if Kwa itself is a coherent subgroup within this larger complex (see, e.g., Stewart (1989: 217–222), Williamson & Blench (2000: 17–18), and Kropp Dakubu (2012)). There are similar problems with respect to Gur (Bendor-Samuel 1971: 143, Naden 1989: 142–151), and links between Gur and Adamawa languages have also been proposed (Boyd 1989: 178–179, Elders 2006: 37–38, Kleinewillinghöfer 1996). ⁶ In the case of Kordofanian, while reasonable evidence for its inclusion within Niger-Congo has been presented, its membership has changed from when it was first proposed, and it is, again, not established if the Kordofanian languages are a coherent subgroup or represent distinct Niger-Congo lineages that independently entered the Nuba mountain refugium (see Schadeberg (1981a), Schadeberg (1989), Dimmendaal (2011: 90–91), Blench (2013)).

⁵ See Pozdniakov (2008) for discussion of the difficulties involved in conducting comparative work on Atlantic.

⁶ The extensive comparative work on the noun class systems of Gur languages reported on in Miehe & Winkelmann (2007) and Miehe et al. (2012) will hopefully add more clarity to the Gur picture in the coming years.

It otherwise seems premature to present any articulation of the Niger-Congo tree above the level of these subgroups. The documentary coverage of the family is also quite uneven, which also has an impact on our understanding of the comparative linguistics of the family. Benue-Congo and Kwa, for instance, are relatively well-documented, whereas most other groups need more attention. The groups just discussed are all, at present, uncontroversial members of genealogical or "core" Niger-Congo (see Section 1). Something should also briefly be said here about additional subgroups, shown in Figure 1, which have been treated as part of referential Niger-Congo. The most well-studied of these is Mande (see Dwyer (1989), Kastenholz (1991/1992)). Mande's status as a coherent group has been considered clear since at least Koelle (1854) (Dwyer 1998: 30). Dogon languages were poorly known until quite recently, and, as documentation has become more available, good evidence for their inclusion into Niger-Congo has not materialized. Moran & Prokić (2013) focus on the internal classification of Dogon but also discuss the history of its external classification. The group labelled Ijo/Defaka in Figure 1 consists of a small language cluster (Ijoid) along with the Defaka language (Jenewari 1989). A close relationship between Ijoid and Defaka is not yet entirely clear, and Connell et al. (2012) contains an up-to-date overview of the relevant issues. Mande and Ijoid languages will be briefly discussed again in Section 2.3 to clarify why their inclusion within genealogical Niger-Congo should be considered tenuous at present.

The status of Ubangian (or "Eastern" in older publications) as a valid subgroup is not completely clear. Samarin (1971: 224) suggests that it is "obvious", Boyd (1989: 178–192) is more equivocal, and Moñino (2010) indicates that the unity of the group is no longer obvious (see also Moñino (1988)). Greenberg (1963) proposed grouping Ubangian languages together with Adamawa languages, but good evidence for this has not materialized. Unlike Adamawa languages, which have been found to have good connections to other Niger-Congo languages,

evidence for Ubangian's inclusion with the rest of Niger-Congo has not been presented, which is why recent overview treatments, such as Dimmendaal (2011: 328), treat it as separate from Niger-Congo.

2.3. What proves relationships in Niger-Congo?

The immediately preceding discussion naturally leads to the question of what comparative evidence exists for Niger-Congo in the first place. Greenberg (1963: 1–5) famously attributed his classification to the use of so-called mass comparison where many languages are looked at in parallel. While this technique may be appropriate for hypothesis raising, there is general agreement that it cannot constitute proof of relationship (see, e.g., Newman (1995: 9) for a perspective that is sympathetic to Greenberg's work and Campbell & Poser (2008: 168–172) for one that is not).

The strongest evidence for a genealogical unit under the heading of Niger-Congo undoubtedly involves comparison of noun class systems among members of the family. Such a comparison, adapted from Schadeberg (1989: 72), as part of a justification for inclusion of Kordofanian in Niger-Congo, is given in Table 1.⁷ The table lists class markers, which are candidates for being cognates, from six reconstructed Niger-Congo groups. As indicated, Oti-Volta is a subgroup of Gur, and Ghana-Togo Mountain Languages (formerly referred to as Togo Remnant languages (Stewart 1989: 221, Blench 2009: 19)) are used to exemplify Kwa langages. The class numbering follows Bantuist conventions (see Katamba (2003), with the addition of Class 6a following Welmers (1973: 163)). Classes 3 and 4 form a singular/plural pairing, as do Classes 5 and 6. Each

⁷ The sources for the reconstructions are as follows: Kordofanian (Schadeberg 1989: 72) (see also Schadeberg (1981b: 123)), Atlantic (Doneux 1975: 114), Togo Remnant (Heine 1968: 187), Oti-Volta (Manessy 1975: 81), Benue-Congo (De Wolf 1971: 51–52), Bantu (Meeussen 1967: 97). Schadeberg (1989) also includes data from the Ubangian language Mba (Carrington 1949: 95), which is removed here due to Ubangian's questionable status within Niger-Congo (see Section 2.2). Some adjustments have been made based on consultation of original sources and secondary sources such as Dimmendaal (2011: 320).

class is associated with a characterization of its semantics or specific lexical elements reconstructed as belonging to that class (given in single quotes). The Proto-Bantu forms give two distinct series of noun class markers, one for the prefixes appearing on nouns themselves and another for a series of concord markers associated with third-person pronouns, following Meeussen (1967: 97).

					С	LASS				
	1		3	4		5	6		6a	
KORDOFANIAN	gu-	humans	gu-	<i>j</i> -	'tree'	li-	Nu-	'egg'	ŋ-	liquids
ATLANTIC	gu-	humans	gu-	Ci-	trees	de-	ga-	'head, name'	ma-	liquids
OTI–VOLTA (GUR)	- <i>U</i>	humans	-bv	-Ci	'tree'	-dı	- a	'egg, head'	-ma	liquids
GHANA–TOGO (KWA)	0-	humans	0-	i-	'firewood'	li-	а-	'egg, head, name'	<i>N</i> -	liquids
BENUE-CONGO	и-	humans	и-	(t)i-	'tree'	li-	а-	'egg, head, name'	ma-	liquids
BANTU noun	mu-	humans	mu-	mi-	'tree'	į-	ma-	'egg, name'	ma-	liquids
pronoun	ju-		gu-	gi-		di-	ga-		ga-	

Table 1: Possible cognate noun class markers in Niger-Congo following Schadeberg (1989: 72)

The presentation in Table 1 is strongly suggestive of a genealogical relationship among the relevant groups (see also Williamson (1989b: 38–39) and Kießling (2013: 46) for comparable and more extensive presentations). The form–function matching across classes, reconstruction of pairings of specific singular/plural classes, as well as lexically idiosyncratic groupings of words in certain classes (e.g., 'egg', 'head', and 'name' in Classes 5/6) are not mere typological resemblances.⁸ No general reconstruction of the noun class system of Proto–Niger-Congo has been developed (Grinevald & Seifart 2004: 256, Kießling 2013: 45), which is surprising given its importance in establishing relatedness among members of the family.

⁸ Hammarström (2013) argues that the data presented in Table 1 is not, in fact, sufficient to establish that Kordofanian is connected to the rest of Niger-Congo, even if it is suggestive of a relationship. This may be true of the other groups as well, but I am not aware of targeted studies.

As indicated in Table 1, in one group, Oti-Volta, noun class suffixes are reconstructed, when, elsewhere, noun class prefixes are reconstructed. Variation between prefixing and suffixing class markers is, in fact, relatively widespread within Niger-Congo and has received a fair amount of attention. It is generally attributed to patterns of morphological loss (e.g., of prefixes on the noun) with subsequent renewal via concordant elements following the noun that morphologize as suffixes (see, among others, Hoffmann (1967: 252–254), De Wolf (1971: 180–182), Welmers (1971b: 15), Greenberg (1977, 1978), Childs (1983), Williamson (1989b: 31–37), and Dimmendaal (2001: 378–381)).

One point that must be emphasized in the use of noun classes to establish family membership is the fact that there are languages that are uncontroversially considered to be Niger-Congo despite lacking synchronic noun class systems. This is especially the case for many Kwa languages. Lexical evidence has been proposed strongly linking Kwa languages without noun classes to nearby languages with noun classes (see, e.g., Bennett & Sterk (1977)), and there is also sometimes evidence of remnant noun class markers on lexical items in these languages making it reasonable to see these as Niger-Congo languages that once had noun class systems but lost them (see Section 4.2).

In a group such as Mande, however, one does not find noun class systems, and the points of lexical similarity to the rest of Niger-Congo are quite weak (Welmers 1971a: 131–132, Bennett & Sterk 1977: 247, Williamson 1989b: 37, Williamson & Blench 2000: 38–39), which is why its inclusion within Niger-Congo is seriously questioned. While Ijoid languages do have noun classes, they are very different in structure from the canonical Niger-Congo system, based on distinctions in animacy and sex (Jenewari 1989: 114–115), and, again, lexical linkages are not strong (Bennett & Sterk 1977: 251). Thus, it is not merely the lack of correspondences like those

in Table 1 that has resulted in controversy regarding the placement of groups like these within Niger-Congo, but also the lack of other strong evidence for their inclusion.

Next to noun class systems, verb extensions are the other major grammatical feature of Niger-Congo languages that has been proposed for family-level reconstruction. These are suffixes which create derived verb stems, often altering verbal argument structure in some way. The most extensive comparative study of these verb extensions is found in Voeltz (1977), and Hyman (2007) provides an up-to-date overview (see also Creissels (2014: 558–567)). A listing of some possibly cognate extensions in Bantu and Atlantic, alongside the Niger-Congo reconstructions of Voeltz (1977: 58–68) (adapted from Hyman (2007: 157)), is given in Table 2. The Proto-Bantu reconstructions (two of which are multimorphemic) are drawn from Schadeberg (2003a: 72) and the Proto-Atlantic ones from Doneux (1975: 106–107).

	PROTO-NIGER-CONGO	PROTO-BANTU	PROTO-ATLANTIC
APPLICATIVE	-de	-ıd	-ed
CAUSATIVE	-ci, -ti	-ic-i	-an
PASSIVE	-0	- <i>ıb-</i> σ	-V[+back]
RECIPROCAL	-na	-an	-ad
REVERSIVE	<i>-to</i>	-vd	-It

Table 2: Possible cognate verbal extensions in Niger-Congo following Hyman (2007: 157)

Since Bantu and Atlantic languages are at opposite geographic ends of Niger-Congo and do not otherwise show a close relationship, possible cognates in these two branches support a Niger-Congo level reconstruction. However, while the parallels between the verbal extensions in Proto-Bantu and Proto-Atlantic are suggestive of some genealogical connection, there are both formal and functional complications, as discussed in Hyman (2007). Moreover, they do not form a paradigm the way that noun class markers do. This makes their value for proving a genealogical relationship comparatively weak. Another possible source of evidence which could firmly establish Niger-Congo relationships would be, of course, detailed lexical reconstructions. At the Niger-Congo level, the only serious efforts in this regard appear to be due to Stewart (see, e.g., Stewart (2002, 2007)). This work focuses on comparison between Proto-Bantu and the Potou-Tano subgroup of Kwa, suggesting that this can serve as a foundation for Proto–Niger-Congo. However, as Mous (2007: 72) points out in an obituary, Stewart "regretted the fact that so few people joined him in the strict application of the comparative method to the reconstruction of West African languages."

Indeed, the level of "proof" available, in general, for the genealogical unity of Niger-Congo falls well short of the highest standards. Nevertheless, available comparisons and the intuitions of specialists, at least regarding so-called "core" Niger-Congo, should not be dismissed lightly, given their exposure to the relevant data. In this regard, the highly negative assessment of Niger-Congo found in Campbell & Poser (2008: 128–133) seems overly pessimistic.

3. Benue-Congo: Niger-Congo's largest subgroup

3.1. Delineating Benue-Congo and Bantu

Benue-Congo is the largest commonly-cited subgroup of Niger-Congo, and its members include the Bantu languages, which dominate the southern part of Subsaharan Africa. Non-Bantu Benue-Congo languages are found in a geographically contiguous region of southern Nigeria and adjacent parts of Cameroon, with Bantu languages spread out over a much larger region to the south and east of the rest of the group. Current reference sources place around two thirds of all Niger-Congo languages within Benue-Congo.

In terms of nomenclature and classification, Benue-Congo suffers from the same range of problems as Niger-Congo: Its status as a genealogical unit is not clear, convincing criteria for establishing which groups belong to it have not been presented, and its subgroups are not firmly established beyond comparatively low-level ones. Williamson (1989a), though now somewhat dated and limited in scope, remains the most extensive published general reference for the group. The most prominent effort at reconstruction is represented by De Wolf's (1971) work on noun class systems (see also Good (to appear)). Babaev (2008, 2010) is the most recent systematic attempt at Benue-Congo reconstruction, focusing on person marking. By virtue of their emphasis on family-wide reconstruction, these latter works are also useful for their collection of references on the family that are more up-to-date than some of the more standardly cited sources.

The problems in delineating a clear-cut set of Benue-Congo languages can be illustrated by consideration of two prominent classificatory concerns. The first is the division between Benue-Congo and Kwa. A number of language groups of Nigeria at the eastern border of Kwa and western border of Benue-Congo have been variously classified in one or the other subgroup. These include Yoruboid (Capo 1989), Igboid (Manfredi 1989), Edoid (Elugbe 1989), Nupoid (Blench 1989), and Idomoid (Armstrong 1989), all relatively shallow in genealogical terms.

While standard presentations have placed these groups in Benue-Congo for decades on the basis of proposals in Bennett & Sterk (1977), no particularly convincing corroborating evidence has subsequently emerged, leading instead to proposals to "return" them to Kwa (see, e.g, Blench (2015a: § 2.2)). Significant here is that these groups pattern typologically with the isolating languages that are uncontroversially treated as Kwa, rather than the agglutinative languages found in much of Benue-Congo (especially Bantu) (see, e.g., Williamson (1985), Hyman (2004), Good (2012) for relevant discussion). This has led scholars to use the label *Kwa* to cover both genealogical and typological notions (see, e.g., Aboh & Essegbey (2010: xi) for a recent non-genealogical use of "Kwa"), a source of potential confusion in the literature.

One encounters comparable issues with respect to the delineation of Bantu languages from the rest of Benue-Congo. Despite relatively intense study, it has not yet been possible to devise

criteria which distinguish a "Bantu" group from its nearest Bantoid relatives (Nurse & Philippson 2003: 5–7). The only proposal for a Bantu-specific innovation that gained serious consideration centered around the presence of nasal consonants in certain Bantu noun classes (Crabb 1965: 14) (see also Hyman (1980: 184) and Table 1). Voorhoeve (1980) discusses difficulties with this proposal arising from consideration of shared vocabulary alongside noun class innovations for certain Bantoid languages of the Cameroon Grassfields. More strikingly, Miehe (1991) suggests a much broader provenance for nasal noun classes, well outside of Bantu. Thus, somewhat ironically, even the most well-studied subgroup within Niger-Congo cannot be considered to be firmly established as a true genealogical entity.

3.2. Benue-Congo subgroups

As just discussed, the precise borders of Benue-Congo can fluctuate depending on the classification. In this section, the less controversial subgroups of Benue-Congo will be briefly introduced. The more difficult cases of subgroups whose classification has shifted between Kwa and Benue-Congo were listed in Section 3.1.

Bantu and its closest relatives comprise Bantoid, Benue-Congo's largest uncontroversial subgroup, which probably contains two thirds of all Benue-Congo languages. Of these, around 150–200 are non-Bantu Bantoid languages. These occupy a compact region on either side of the Nigeria–Cameroon border, though it should be said that, as with Bantu, precise boundaries for Bantoid have not been established. The other units of "core" Benue-Congo include Cross River, a group of sixty or so languages spoken in southeastern Nigeria (Faraclas 1989), as well as the groups Kainji, Plateau, and Jukunoid (Gerhardt 1989). These are spoken in scattered areas of central Nigeria (with some Jukunoid languages also found in Cameroon). Kainji is associated with around sixty languages, Plateau around seventy, and Jukunoid around twenty. These groups

have been classified together (see Gerhardt (1989: 359–360)), though referential classifications now treat them as separate from each other. The languages of the Kainji group are especially distinctive, and, as data on them becomes increasingly available, it seems likely that they will play an important role in coming to a better understanding of Proto–Benue-Congo (see McGill & Blench (2012), Blench & McGill (2014), Blench (2015b)). In addition to these major groups, there are a number of languages that are placed within Benue-Congo but of otherwise uncertain affiliation, for instance, Ukaan (Salffner & Sands 2012). If we exclude the Bantu languages, the most striking overall pattern of core Benue-Congo is the great language density of the region where they are spoken (see, e.g., Stallcup (1980: 44)) and the degree of grammatical diversity one finds even within languages belonging to a single subgroup.

The surprising extent of their grammatical diversity can be seen in, for instance, the study of Cross River noun classes found in Faraclas (1986), where he argues that the diversity of noun class systems within this single subgroup can stand in as a model for all of Benue-Congo. Gerhardt (1994) makes similar arguments for the Plateau group and Good et al. (2011) describe a remarkable degree of noun class system diversity in the small cluster of languages of the referential Yemne-Kimbi group. This is not to say that Benue-Congo languages do not share many typological similarities (see Section 4). Rather, the extent to which the range of variation found within the whole of Benue-Congo can also be found within its subgroups is striking.

Finally, it is worth noting that, due to the prominence of Bantu, the label Benue-Congo is variously used either in the "regular" way for a subgroup of Niger-Congo which includes the Bantu languages or to refer only to non-Bantu Benue-Congo languages. In particular, if a given source labels a language as belonging to "Benue-Congo", this will almost certainly mean "non-Bantu Benue-Congo". Similarly, "Bantoid" is often used to mean "non-Bantu Bantoid".

4. Niger-Congo language typology

4.1. The areality of major Niger-Congo features

Due to Niger-Congo's dominance of the African continent, there is considerable overlap between the typology of Niger-Congo languages and those of Africa in general. On the one hand, this means that continent-wide overviews such as Clements & Rialland (2008) and Creissels et al. (2008) can serve as a useful reference for Niger-Congo typology, and each covers the relevant issues in much more detail than is possible here. On the other hand, it also means that there are relatively few typological features that specifically distinguish Niger-Congo from other languages of the continent. In particular, since it spans a number of linguistic areas, diverse influences have hindered the maintenance of a unique typological profile for the family (see Dimmendaal (2001), Good (2017)).

The distribution of labial-velar consonants (e.g, *kp* and *gb*) illustrates these points relatively clearly. These consonants are exceptionally rare from a worldwide perspective, except in a region of Africa that has been termed the Macro-Sudan belt, running roughly east–west from the Atlantic Ocean to the Ethiopian highlands and bounded to the north by the Sahara and the south by the Central African rainforest (see Güldemann (2008)). Niger-Congo languages dominate this belt, and it is languages of this family where such consonants are most likely to be found (Maddieson 2013). At the same time, labial-velars are found in languages outside of Niger-Congo as well, such as in the Chadic (Afro-Asiatic) language Kotoko (Bouny 1977: 64) but are almost non-existent in Bantu languages except for those northern Bantu languages bordering the Macro-Sudan region (Güldemann 2008: 155–156). Thus, they are an "African" feature that is very much present in Niger-Congo, but which does not characterize the whole family.

The distribution of ATR, or cross-height, harmony in Niger-Congo shows a similar pattern. Languages in the Macro-Sudan region often exhibit vowel harmony where one set of high and mid vowels forms a harmony class against another set of high and mid vowels, specifically, /i u e o/ vs. /I $\sigma \epsilon$ o/ (Casali 2008). Bantu languages, by contrast, tend to show different, typologically unusual vowel harmony patterns (Clements & Rialland 2008: 49–54) (see also Hyman (1999)).

There is a comparable distributional pattern with respect to the presence of alternative OV word orders alongside the more typically African VO word order. SVO word order dominates Niger-Congo, either as the only frequent word order or as one of two common word orders, the other being S-(Aux)-O-V (Güldemann 2008: 159–163).⁹ For instance, in the Cross River (Benue-Congo) language Leggbó, SVO word order is most typical, but, in negative sentences, the word order shifts to SOV, as in (1) (Good 2007: 111–112).

- (1) a. Wàdum sé e-dzi lídzil.
 man DEF 3s-eat food
 "The man ate food."
 - b. Wàdum sé lídzil eè-dzi.
 man DEF food 3s.NEG-eat
 "The man didn't eat food."

As recognized in the influential work of Heine (1976: 39–42) (see also Heine (1975)), this type of word order split between languages is correlated with other features, with languages with relatively rigid VO word typically showing noun-genitive order and those exhibiting possible OV order showing genitive-noun order. Languages of this latter type are areally restricted to the western half of the Macro-Sudan belt, encompassing a number of Niger-Congo subgroups, in

⁹ A more recently documented phenomenon with similar distribution is the presence of portmanteau morphemes encoding subject person and number along with information on tense, mood, or aspect (Anderson 2016).

particular Atlantic, Kru, Kwa, and (following the pattern seen above) non-Bantu Benue-Congo, but not Bantu. This word order pattern is also characteristic of Mande languages, and it seems likely that its presence in core Niger-Congo is due to Mande influence of some kind, again presenting us with an "African" feature in which Niger-Congo participates, but is only partly implicated.

Even if many Niger-Congo characteristics can be classified as "areal", it is not the case that we can divide the family neatly into a handful of discrete areas. This is seen, for instance, in the results of the survey of African tone patterns in Wedekind (1985: 109). The survey reveals concentric patterns of tonal complexity where pockets of languages with five distinctive tone levels in Côte d'Ivoire, the southern Nigeria-Cameroon border, and southwestern Ethiopia are surrounded by regions with four distinctive levels, which are, in turn, all part of a large region, corresponding to much of the Macro-Sudan area, with three distinctive tone levels. This region is itself embedded in a two-tone area comprising the bulk of Subsaharan Africa. Thus, there are a number of "sub-areas" within the larger areas.

Noun class systems are the one Niger-Congo typological feature that most clearly escapes this areal patterning. While their genealogical implications get more attention (see Section 2.3), they also have distinctive typological properties. For instance, Niger-Congo noun class systems are cross-linguistically exceptional for not being based on a distinction between sexes (see Corbett (2013)). While non-sex-based systems are found elsewhere in the world, they are a minority type and, except for Niger-Congo, rare in Africa. Kießling (2013: 44–45) gives an overview of other major typological features of Niger-Congo noun class systems (see also Welmers (1973: 159–183) and Grinevald & Seifart (2004: 245–257)).

Another noteworthy typological feature of these systems is that, while classes may have specific associations with a given number (e.g., singular, plural, or mass), number does not typically exist as a significant morphological category. Rather, each class affix is "autonomous and mono-morphemic" (Welmers 1973: 159).¹⁰ This can be seen by consideration of the Proto-Bantu noun class system, as presented in Table 3 and adapted from Maho (1999: 51) and Katamba (2003: 114– 119). The labels for semantic categories associated with each class should be taken as only approximate (see Denny & Creider (1976, 1986), Moxley (1998), Maho (1999: 63–69), and Dingemanse (2006) for further discussion).

SINC	JULAR	PLUR	AL	SEMANTICS
1	mù-	2	βà-	humans
3	mù-	4	mì-	trees, plants
5	lì-	6	mà-	mixed/ Cl. 6 liquids
7	kì-	8	β ζ-	mixed
9	nì-	10	lì-nì-	animals, mixed
11	lù-			mixed
12	kà-	13	tù-	aug., dim., etc.
14	βù-			abstract
15	kù-			infinitive
16	pà-			location on
17	kù-			location at
18	mù-			location in
19	pì-			diminutive

 Table 3: Proto-Bantu noun classes

Various generalizations emerge from Table 3, supporting the claim that the noun classes are morphologically autonomous and number is not morphologically encoded. First, there is no consistent formal relationship between paired singular and plural class markers. Second, several of the classes have semantics where number simply does not appear to be a relevant notion (e.g., the locative classes). Third, while simplified presentations of Bantu noun classes imply that singular/plural pairings are relatively consistent, it is not uncommon for there to be lexically-conditioned variability in how a given singular noun forms its plural and vice versa (see, e.g., Maho (1999: 53) for discussion specific to Bantu and Good (2012: 316–319) and Lovegren

¹⁰ There are, however, cases where number has developed into an active morphological category (see, e.g., Schadeberg (2001) on Swahili).

(2013: 125–128) for relevant examples from a Bantoid language). Finally, we also see in the Bantu case how a single class, namely Class 6, simultaneously serves plural and mass encoding functions, again suggesting that a singular/plural opposition is not basic to the system.

The Niger-Congo noun class system, therefore, constitutes both a genealogical indicator of the family and a typological feature of many Niger-Congo languages. Reduction of the noun class system in many Niger-Congo languages means it is not a grammatical feature common across the family. However, extreme patterns of loss are associated with broader patterns of reduction centered around the "Kwa" area (see Section 4.2), meaning that, unlike other "Niger-Congo" features, this type of noun class system is not restricted to a specific region but, rather, is found generally except in a specific area. Most striking in this regard is that the most well-developed noun class systems within Niger-Congo are found in the "peripheral" groups of Bantu (see Table 3) and Atlantic (see, e.g., the descriptions of Fula noun class systems as found in Arnott (1970: 67–109) and Breedveld (1995: 295–460)), where mutual contact can not be a factor in their maintenance.

4.2. The typology of Benue-Congo languages

Given the geographic extent of the Benue-Congo group and the fact that it straddles major areal boundaries, the general comments about the typology of Niger-Congo languages discussed in Section 4 are largely applicable to Benue-Congo as well. Beyond this, the most striking feature of Benue-Congo language typology is almost certainly the diversity of the morphological systems found within the family, ranging from the isolating "Kwa" type, which encompasses many languages of the referential Kwa group as well as Benue-Congo languages spoken nearby to Kwa languages (see Section 2.2), to the agglutinating Bantu languages, with languages spoken in

between these groups showing profiles intermediate between the two (see Hyman (2004), Good (2012)).

This morphological diversity can be illustrated by comparison of an example like that in (2), from the "Kwa"-like Benue-Congo language Yoruba, with the example in (3), from the Bantu language Chichewa. The Yoruba example employs a serial verb structure to encode a benefactive construction and shows no morphological complexity in its words. In the Chichewa example, there are instances of affixation on both the nouns (e.g., the Class 7 chi- marker on the word chitsîru 'fool') and the verb, which contains a subject agreement prefix, a tense marker, an applicative extension, and the so-called "final vowel", an inflectional marker found throughout Bantu not associated with a clear-cut functional category (see Nurse (2008: 260-261)). The Yoruba example can be further compared with the example in (4), from the Kwa language Fon Gbe, which shows a morphosyntactically parallel construction (with an apparent vestigial prefix in the first vowel of the word àsán 'crab' (Good 2012: 305)). The example from the Bantoid language Naki in (5) illustrates the gradient nature of this typological divergence within Benue-Congo. Here, one finds words like $\hat{a}c\bar{o}m$ and $k\hat{a}m$, both of which exhibit prefixal morphology coding Class 7 (with the shapes a- and k- respectively). However, while verbs in this language show tonal morphology, their segmental morphology is quite limited. Subject agreement is not found for instance, though there are some prefixal elements that participate in tense-mood-aspect marking, one of which, with shape a, is seen on the verb $\dot{a}g\dot{e}$ in (5) and marks a kind of consecutivization. The noun nyam '10.animal' in this example has no segmental affix, but its tone pattern changes to code number. In its comparative lack of segmental morphology, Naki is more "Kwa"-like, but with respect to overt morphological coding of grammatical categories, it is more "Bantu"-like.

- (2) mo mú ìwé wá fún ẹ
 1s take book come give you
 "I brought you a book." (Yoruba [Benue-Congo]; Stahlke (1970: 63)
- (3) Chitsîru chi-na-gúl-ír-á atsíkána mphátso
 7.fool 7s-PST-buy-APPL-FV 2.girl 9.gift
 "The fool bought a gift for the girls." (Chichewa [Bantu]; Alsina & Mchombo (1993: 18)
- (4) K>kú s> às>n > ná Àsíbá.
 Koku take crab DEF give Asiba
 "Koku gave the crab to Asiba." (Fon Gbe [Kwa]; Lefebvre & Brousseau (2002: 466)
- (5) Acōm kâm dzē ágé-kū nyam fyá, Fìmákwāmá bú Fìkō.
 7.story 7.my stand.PRS go.CNS-catch 10.animal 10.two 19.Chameleon and 19.Hare
 "My story is about two animals, Chameleon and Hare." (Naki [Bantoid]; Good (2010: 43)

As seen, this morphological divergence within Benue-Congo affects both nominal and verbal morphology. It is also associated with a general reduction in word size in Kwa-type languages. A matter of open debate is whether the highly agglutinating morphological structures found in Bantu represent the conservative situation for Benue-Congo, with a language like Naki, as exemplified in (5), representing a partial reduction en route to the Kwa type, or whether Bantu became more morphologically complex at some stage with Proto–Benue-Congo being of a more intermediate type. Güldemann (2003: 184–185) suggests, for example, that the Bantu verbal prefixes may result from a relatively historically shallow grammaticalization process involving an

S-Aux-O-V structure of the sort discussed in Section 4.1 (see also Güldemann (2011) and Hyman (2011)). Given that Benue-Congo diversity is reflective of Niger-Congo diversity more broadly, this issue has clear implications for the family as a whole.

Overall, the most straightforward way of understanding Benue-Congo typology involves recognizing that its northwestern area is found within the Macro-Sudan region, and, thereby, participates in the various areal processes found in the Macro-Sudan and associated sub-regions, while the Bantu spread resulted in Benue-Congo languages being spoken well outside this area, with a resulting change in their historical trajectory. The Bantoid area, as well as northwestern Bantu, partly participated in the historical processes of the Macro-Sudan area, though not as extensively as, say, Yoruba (see also Nurse & Philippson (2003: 5)).

5. Advancing the comparative picture

The intertwining of early linguistic work on African languages with the larger imperialist enterprise led to a number of unfortunate distortions of the continent's linguistic picture (Irvine 2008). Given this, it is hardly surprising that much work in the latter half of the twentieth century emphasized a treatment of African language history based on the results of Indo-European scholarship (see, e.g., Welmers (1973: 1–19)) as a kind of corrective to earlier racist ideologies. At this point, however, the limitations of reductionist, tree-based approaches to the historical modeling of Niger-Congo linguistic development have become clear, and the most promising way forward almost certainly involves the integration social facts into our models of the family's history (see also Lüpke & Storch (2013: 208–223)).

In particular, comparative work has not paid enough attention to the pervasive multilingualism of Subsaharan African societies (see, e.g., Fardon & Furniss (1994: 4)). Multilingualism almost certainly has a crucial role to play in understanding well-known

comparative problems, such as the difficulty of finding a clear boundary between Bantu and Bantoid or Benue-Congo and Kwa (see Section 3.1) or even how, despite covering a vast stretch of territory, the Bantu languages behave more like a dialect continuum than a series of discrete languages (Schadeberg 2003b: 158) (see also Möhlig (1979, 1981)).

While multilingualism is most typically understood as a force for convergence, we must also consider its potential role in linguistic divergence. Within Niger-Congo societies, there is evidence that divergence may involve more socially active processes than implied either by the standard interpretations of the tree-based and wave-based models of language change, where divergence is understood to be largely the result of "drift" due to geographic expansion (Heggarty et al. 2010: 3830). African linguistic cultures are well documented as employing different kinds of manipulated language (see Storch (2011)), which are a likely source of many localized patterns of divergence. The fact that speakers in highly multilingual societies know many languages facilitates not only convergence but also deliberate divergence. Both processes require knowledge of the language being used as a model—either for purposes of emulation or distancing (see Schadeberg (1981c: 212) and Di Carlo & Good (2014: 243–246) for possible Niger-Congo examples of these latter processes).

If there is a general lesson from this survey, then, it is almost certainly that a bias towards presenting classificatory trees, as opposed to the nature of the evidence underlying each position in the tree, has hindered progress in comparative Niger-Congo linguistics. What has been lacking, in particular, are studies that develop a historical model of the evolution of Niger-Congo at various levels via the integration data from lexicon and grammar with what is also known about the sociohistorical context in which these languages have been spoken.

Glossing abbreviations

noun classes
person and number
applicative
consecutive
definite
inflectional final vowel
negative
present
past

References

- Aboh, Enoch O. & James Essegbey. 2010. Introduction. In Enoch O. Aboh & James Essegbey (eds.), *Topics in Kwa syntax*, xi–xv. Dordrecht: Springer.
- Alsina, Alex & Sam A. Mchombo. 1993. Object asymmetries and the Chichewa applicative construction. In Sam A. Mchombo (ed.), *Theoretical aspects of Bantu grammar*, 17–45. Stanford: CSLI.
- Anderson, Gregory D. S. 2016. STAMP morphs in the Macro-Sudan Belt. In Doris L. Payne, Sara Pacchiaro & Mokaya Bosire (eds.), *Diversity in African languages: Selected papers from the 46th Annual Conference on African Linguistics*, 513–538. Berlin: Language Science Press.
- Armstrong, Robert G. 1989. Idomoid. In John Bendor-Samuel (ed.), *The Niger-Congo languages: A classification and description of Africa's largest language family*, 323–358. Lanham, MD: University Press of America.
- Arnott, D. W. 1970. The nominal and verbal systems of Fula. Oxford: Oxford University Press.
- Babaev, Kirill V. 2008. Reconstructing Benue-Congo person marking I: Proto-Bantoid. *Journal of West African Languages* 35. 131–183.
- Babaev, Kirill V. 2010. Reconstructing Benue-Congo person marking II. Journal of Language Relationship/Voprosy iazykovogo rodstva 4. 1–45.
- Bendor-Samuel, John. 1971. Niger-Congo, Gur. In Thomas A. Sebeok (ed.), *Current trends in linguistics VII: Linguistics in Sub-Saharan Africa*, 141–178. The Hague: Mouton.
- Bendor-Samuel, John (ed.). 1989. The Niger-Congo languages: A classification and description of Africa's largest language family. Lanham, MD: University Press of America.
- Bennett, Patrick R. & Jan P. Sterk. 1977. South Central Niger-Congo: A reclassification. *Studies in African linguistics* 8. 241–273.
- Blench, Roger M. 1989. Nupoid. In John Bendor-Samuel (ed.), *The Niger-Congo languages: A classification and description of Africa's largest language family*, 305–322. Lanham, MD: University Press of America.
- Blench, Roger M. 2009. Do the Ghana-Togo Mountain languages constitute a genetic group? Journal of West African Languages 36. 19–35.
- Blench, Roger M. 2013. Splitting up Kordofanian. In Thilo C. Schadeberg & Roger M. Blench (eds.), Nuba Mountain language studies, 571–586. Köln: Rüdiger Köppe.
- Blench, Roger M. 2015a. The Bantoid Languages. In Oxford Handbooks Online: Linguistics. Oxford: Oxford University Press.
- Blench, Roger M. 2015b. Nominal affixing in the Kainji languages of northwestern and central Nigeria. Unpublished mansuscript.

https://www.academia.edu/9839234/Nominal_affixing_in_the_Kainji_languages_of_northwestern_and_central_Nigeria.

Blench, Roger M. & Stuart McGill. 2014. The Kainji languages of Northwestern and Central Nigeria. Unpublished mansuscript.

https://www.academia.edu/3357056/The Kainji Languages of Northwestern and Central Nigeria.

- Bouny, Paule. 1977. Inventaire phonetique d'un parler kotoko: Le mandagué de Mara. In Jean-Pierre Caprile (ed.), *Études phonologiques tschadiennes*, 59–78. Paris: SELAF.
- Boyd, Raymond. 1989. Adamawa-Ubangi. In John Bendor-Samuel (ed.), *The Niger-Congo languages: A classification and description of Africa's largest language family*, 178–215. Lanham, MD: University Press of America.

- Breedveld, J. O. 1995. Form and meaning in Fulfulde: A morphophonological study of Maasinankoore. Leiden: Research School CNWS.
- Campbell, Lyle & William J. Poser. 2008. Language classification: History and method. Cambridge: Cambridge University Press.

Capo, Hounkpati B. C. 1989. Defoid. In John Bendor-Samuel (ed.), *The Niger-Congo languages: A classification and description of Africa's largest language family*, 275–290. Lanham, MD: University Press of America.

Carrington, J. F. 1949. Esquisse de la langue Mba (Kimanga). Kongo-Overzee 15. 90-107.

Casali, Roderic F. 2008. ATR harmony in African languages. Language and Linguistics Compass 2. 496-549.

Childs, G. Tucker. 1983. Noun class affix renewal in Southern West Atlantic. In Jonathan D. Kaye, Hilda J. Koopman, Dominique Sportiche & André Dugas (eds.), *Current approaches to African linguistics, volume 2*, 17–29. Dordrecht: Foris.

Childs, G. Tucker. 2003. An introduction to African languages. Amsterdam: Benjamins.

- Clements, George N. & Annie Rialland. 2008. Africa as a phonological area. In Bernd Heine & Derek Nurse (eds.), *A linguistic geography of Africa*, 36–85. Cambridge: Cambridge University Press.
- Cole, Desmond T. 1971. The history of African linguistics to 1945. In Thomas A. Sebeok (ed.), Current trends in linguistics VII: Linguistics in Sub-Saharan Africa, 1–29. The Hague: Mouton.
- Connell, Bruce, William Bennett, Inoma Essien, Ebitare Obikudo, Akin Akinlabi & Ozo-mekuri Ndimele. 2012. Defaka and Ijo: A reassessment of the Ijoid relationship. In Matthias Brenzinger & Anne-Maria Fehn (eds.), *Proceedings of the 6th World Congress of African Linguistics (WOCAL 6)*, 145–153. Köln: Rüdiger Köppe.
- Corbett, Greville G. 2013. Sex-based and non-sex-based gender systems. In Matthew S. Dryer & Martin Haspelmath (eds.), *The World Atlas of Language Structures online*. Leipzig: Max Planck Institute for Evolutionary Anthropology. http://wals.info/chapter/31.

Crabb, David W. 1965. Ekoid Bantu languages of Ogoja. Cambridge: Cambridge University Press.

- Creissels, Denis. 2014. Niger-Congo. In Rochelle Lieber & Pavol Štekauer (eds.), *The Oxford handbook of derivational morphology*, 558–572. Oxford: Oxford University Press.
- Creissels, Denis, Gerrit J. Dimmendaal, Zygmunt Frajzyngier & Christa König. 2008. Africa as a morphosyntactic area. In Bernd Heine & Derek Nurse (eds.), *A linguistic geography of Africa*, 86–150. Cambridge: Cambridge University Press.
- Dalby, David. 1971. A referential approach to the classification of African languages. In Chin-Wu Kim & Herbert Stahlke (eds.), *Papers in African linguistics*, 17–31. Carbondale, IL and Edmonton, AB: Linguistic Research Inc.
- De Wolf, Paul P. 1971. The noun class system of Proto-Benue-Congo. The Hague: Mouton.
- Denny, J. Peter & Chet A. Creider. 1976. The semantics of noun classes in Proto-Bantu. Studies in African Linguistics 7. 1–30.
- Denny, J. Peter & Chet A. Creider. 1986. The semantics of noun classes in Proto-Bantu. In Colette G. Craig (ed.), *Noun classes and categorization*, 217–239. Amsterdam: Benjamins.
- Di Carlo, Pierpaolo & Jeff Good. 2014. What are we trying to preserve? Diversity, change, and ideology at the edge of the Cameroonian Grassfields. In Peter K. Austin & Julia Sallabank (eds.), *Endangered languages: Beliefs and ideologies in language documentation and revitalization*, 229–262. Oxford: Oxford University Press.
- Dimmendaal, Gerrit J. 2001. Areal diffusion versus genetic inheritance: An African perspective. In Alexandra Y. Aikhenvald & R. M. W. Dixon (eds.), Areal diffusion and genetic inheritance: Problems in comparative linguistics, 359–392. Oxford: Oxford University Press.
- Dimmendaal, Gerrit J. 2011. *Historical linguistics and the comparative study of African languages*. Amsterdam: Benjamins.
- Dimmendaal, Gerrit J. & Anne Storch. 2016. Niger-Congo: A brief state of the art. In Oxford Handbooks Online: Linguistics. Oxford: Oxford University Press.
- Dingemanse, Mark. 2006. The semantics of Bantu noun classification: A review and comparison of three approaches. Leiden: Leiden University masters thesis. http://hdl.handle.net/11858/00-001M-0000-0012-04CA-0.

Doneux, J. L. 1975. Hypothèses pour la comparative des langues atlantiques. Africana Linguistica 6. 41-129.

- Doneux, J. L. 2003. *Histoire de la linguistique africaine: Des précurseurs aux années 70.* Aix-en-Provence: Publications de l'Université de Provence.
- Dwyer, David J. 1989. Mande. In John Bendor-Samuel (ed.), *The Niger-Congo languages: A classification and description of Africa's largest language family*, 47–65. Lanham, MD: University Press of America.
- Dwyer, David J. 1998. The place of Mande in Niger-Congo. In Ian Maddieson & Thomas J. Hinnebusch (eds.), Language history and linguistic description in Africa, 27–36. Trenton, New Jersey: Africa World Press.
- Elders, Stefan. 2006. Issues in comparative Kebi-Benue (Adamawa). Africana Linguistica 12. 37-88.
- Elugbe, Ben Ohi. 1989. Edoid. In John Bendor-Samuel (ed.), *The Niger-Congo languages: A classification and description of Africa's largest language family*, 291–304. Lanham, MD: University Press of America.

- Faraclas, Nicholas G. 1986. Cross River as a model for the evolution of Benue-Congo nominal class/concord systems. *Studies in African Linguistics* 17. 39–54.
- Faraclas, Nicholas G. 1989. Cross River. In John Bendor-Samuel (ed.), *The Niger-Congo languages: A classification and description of Africa's largest language family*, 377–399. Lanham, MD: University Press of America.
- Fardon, Richard & Graham Furniss. 1994. Introduction: Frontiers and boundaries—African languages as political environment. In Richard Fardon & Graham Furniss (eds.), *African languages, development and the state*, 1–29. London: Routledge.
- Gerhardt, Ludwig. 1989. Kainji and Platoid. In John Bendor-Samuel (ed.), *The Niger-Congo languages: A classification and description of Africa's largest language family*, 359–376. Lanham, MD: University Press of America.
- Gerhardt, Ludwig. 1994. Western Plateau as a model for the development of Benue-Congo noun-class system. *Afrika* und Übersee 77. 161–177.
- Good, Jeff. 2007. When arguments become adjuncts: Split configurationality in Leggbó. In David W. Kaiser Jonathan E. Cihlar, Amy L. Franklin & Irene Kimbara (eds.), *Proceedings of the Chicago Linguistic Society 39-*1: Main session, 110–129. Chicago: Chicago Linguistic Society.
- Good, Jeff. 2010. Topic and focus fields in Naki. In Ines Fiedler & Anne Schwarz (eds.), *The expression of information structure: A documentation of its diversity across Africa*, 35–67. Amsterdam: Benjamins.
- Good, Jeff. 2012. How to become a "Kwa" noun. Morphology 22. 293–335.
- Good, Jeff. 2017. Niger-Congo languages. In Raymond Hickey (ed.), *The Cambridge handbook of areal linguistics*, 471–499. Cambridge: Cambridge University Press.
- Good, Jeff. to appear. Eastern Benue-Congo noun classes, with a focus on morphological behavior. In John R. Watters (ed.), *Proto-East-Benue-Congo* (Monographs on Comparative Niger-Congo). Berlin: Language Science Press.
- Good, Jeff, Jesse Lovegren, Jean Patrick Mve, Nganguep Carine Tchiemouo, Rebecca Voll & Pierpaolo Di Carlo. 2011. The languages of the Lower Fungom region of Cameroon: Grammatical overview. *Africana Linguistica* 17. 101–164.
- Greenberg, Joseph H. 1949. Studies in African linguistic classification: I. The Niger-Congo family. *Southwestern Journal of Anthropology* 5. 79–100.
- Greenberg, Joseph H. 1963. The languages of Africa. Bloomington, IN: Indiana University.
- Greenberg, Joseph H. 1977. Niger-Congo noun class markers: Prefixes, suffixes, both or neither. *Studies in African Linguistics* Supplement 7. 97–106.
- Greenberg, Joseph H. 1978. How does a language acquire gender markers? In Joseph H. Greenberg (ed.), Universals of human language, volume 3: Word structure, 47–82. Stanford: Stanford University Press.
- Greenberg, Joseph H. 1981. African linguistic classification. In Joseph Ki-Zerbo (ed.), *General history of Africa I:* Methodology and African prehistory, 292–308. Paris: UNESCO.
- Grinevald, Colette & Frank Seifart. 2004. Noun classes in African and Amazonian languages: Towards a comparison. *Linguistic Typology* 8. 243–285.
- Güldemann, Tom. 2003. Grammaticalization. In Derek Nurse & Gérard Philippson (eds.), *The Bantu languages*, 182–194. London: Routledge.
- Güldemann, Tom. 2008. The Macro-Sudan belt: Towards identifying a linguistic area in northern Sub-Saharan Africa. In Bernd Heine & Derek Nurse (eds.), *A linguistic geography of Africa*, 151–185. Cambridge: Cambridge University Press.
- Güldemann, Tom. 2011. Proto-Bantu and Proto-Niger-Congo: Macro-areal typology and linguistic reconstruction. In Osamu Hieda, Christa König & Hirosi Nakagawa (eds.), *Geographical typology and linguistic areas: With special reference to Africa*, 109–141. Amsterdam: Benjamins.
- Guthrie, Malcolm. 1962. Bantu origins: A tentative new hypothesis. Journal of African Languages 1. 9-21.
- Hammarström, Harald. 2013. Noun class parallels in Kordofanian and Niger-Congo: Evidence of genealogical inheritance? In Thilo C. Schadeberg & Roger M. Blench (eds.), *Nuba Mountain language studies*, 549–569. Köln: Rüdiger Köppe.
- Heggarty, Paul, Warren Maguire & April McMahon. 2010. Splits or waves? Trees or webs? How divergence measures and network analysis can unravel language histories. *Philosophical Transactions of the Royal Society B: Biological Sciences* 365. 3829–3843.
- Heine, Bernd. 1968. Die Verbreitung und Gliederung der Togorestsprachen. Berlin: Dietrich Reimer.
- Heine, Bernd. 1975. Language typology and convergence areas in Africa. Linguistics 144. 27-47.
- Heine, Bernd. 1976. A typology of African languages based on the order of meaningful elements. Berlin: Reimer.
- Heine, Bernd. 1980. Methods in comparative Bantu linguistics (the problem of Bantu linguistic classification). In Luc Bouquiaux (ed.), L'expansion bantoue: Actes du colloque international du CNRS, Viviers (France) 4–16 avril 1977. Volume II, 295–308. Paris: SELAF.

- Hoffmann, Carl. 1967. An outline of the Dakarkari noun class system and the relation between prefix and suffix noun class systems. In M. Gabriel Manessy (ed.), *La classification nominale dans les langues négro-africaines, Aix-en-Provence, 3–7 juillet 1967*, 237–254. Paris: CNRS.
- Hyman, Larry M. 1980. Reflections on the nasal classes in Bantu. In Larry M. Hyman (ed.), Noun classes in the Grassfields Bantu borderland, 179–210. Los Angeles: University of Southern California Department of Linguistics.
- Hyman, Larry M. 1999. The historical interpretation of vowel harmony in Bantu. In Jean-Marie Hombert & Larry M. Hyman (eds.), *Bantu historical linguistics: Theoretical and empirical perspectives*, 235–295. Stanford: CSLI.
- Hyman, Larry M. 2004. How to become a "Kwa" verb. Journal of West African Languages 30. 69-88.
- Hyman, Larry M. 2007. Niger-Congo verb extensions: Overview and discussion. In Doris L. Payne & Jaime Peña (eds.), *Selected proceedings of the 37th Annual Conference on African Linguistics*, 149–163. Somerville, MA: Cascadilla.
- Hyman, Larry M. 2011. The Macro-Sudan Belt and Niger-Congo reconstruction. *Language Dynamics and Change* 1. 3–49.
- Irvine, Judith T. 2008. Subjected words: African linguistics and the colonial encounter. *Language & Communication* 28. 323–343.
- Jenewari, Charles E. W. 1989. Ijoid. In John Bendor-Samuel (ed.), *The Niger-Congo languages: A classification and description of Africa's largest language family*, 105–118. Lanham, MD: University Press of America.
- Johnston, Sir Harry H. 1919. A comparative study of the Bantu and Semi-Bantu languages: Volume 1. Oxford: Clarendon.
- Kastenholz, Raimund. 1991/1992. Comparative Mande studies: State of the art. Sprache und Geschichte in Afrika 12/13. 107–158.
- Katamba, Francis X. 2003. Bantu nominal morphology. In Derek Nurse & Gérard Philippson (eds.), *The Bantu languages*, 103–120. London: Routledge.
- Kießling, Roland. 2013. On the origin of Niger-Congo nominal classification. In Ritsuko Kikusawa & Lawrence A. Reid (eds.), *Historical Linguistics 2011: Selected papers from the twentieth International Conference on Historical Linguistics, Osaka, 25–30 July 2011*, 43–65. Amsterdam: Benjamins.
- Kleinewillinghöfer, Ulrich. 1996. Relationship between Adamawa and Gur languages: The case of Waja and Tula. *Cahiers Voltaïques/Gur Papers* 1. 25–45.
- Koelle, Sigismund Wilhelm. 1854. Polyglotta Africana: Or a comparative vocabulary of nearly three hundred words and phrases, in more than one hundred distinct African languages. London: Church Missionary House. (Reprinted 1963 Akademische Druck- u. Verlagsanstalt, Graz, Austria.).
- Kropp Dakubu, M. E. 2012. Towards a phonology of Proto-Kwa: Onwards from Stewart's "Potou-Akanic-Bantu". Paper presented at the International Congress Towards Proto-Niger-Congo: Comparison and Reconstruction, September 18–21, Paris, France. http://llacan.vjf.cnrs.fr/fichiers/nigercongo/fichiers/Kropp_Dakubu-Proto-Kwa.pdf.
- Lefebvre, Claire & Anne-Marie Brousseau. 2002. A grammar of Fongbe. Berlin: Mouton.
- Lovegren, Jesse. 2013. Mungbam grammar. Buffalo, NY: University at Buffalo PhD dissertation.
- Lüpke, Friederike & Anne Storch. 2013. Repertoires and choices in African languages. Berlin: De Gruyter Mouton.
- Maddieson, Ian. 2013. Presence of uncommon consonants. In Matthew S. Dryer & Martin Haspelmath (eds.), *The World Atlas of Language Structures online*. Leipzig: Max Planck Institute for Evolutionary Anthropology. http://wals.info/chapter/19.
- Maho, Jouni. 1999. A comparative study of Bantu noun classes. Göteburg: Acta Universitatis Gothoburgensis.
- Manessy, M. Gabriel. 1975. Les langues Oti-Volta: Classification généalogique d'un groupe de langues voltaïques. Paris: SELAF.
- Manfredi, Victor. 1989. Igboid. In John Bendor-Samuel (ed.), *The Niger-Congo languages: A classification and description of Africa's largest language family*, 337–358. Lanham, MD: University Press of America.
- Marchese, Lynell. 1989. Kru. In John Bendor-Samuel (ed.), *The Niger-Congo languages: A classification and description of Africa's largest language family*, 119–139. Lanham, MD: University Press of America.
- McGill, Stuart & Roger M. Blench. 2012. Documentation, development, and ideology in the northwestern Kainji languages. In Peter K. Austin & Stuart McGill (eds.), *Language documentation and description, volume 11*, 90–135. London: SOAS.
- Meeussen, A. E. 1967. Bantu grammatical reconstructions. *Africana Linguistica* 3. 79–121.
- Miehe, Gudrun. 1991. Die Präfixnasale im Benue-Congo und Kwa: Versuch einer Widerlegung der Hypothese von der Nasalinnovation des Bantu. Berlin: Dietrich Reimer.
- Miehe, Gudrun, Brigitte Reineke & Kerstin Winkelmann (eds.). 2012. Noun class systems in Gur languages, volume 2: North Central Gur languages. Köln: Rüdiger Köppe.

- Miehe, Gudrun & Kerstin Winkelmann (eds.). 2007. Noun class systems in Gur languages, volume 1: Southwestern Gur languages (without Gurunsi). Köln: Rüdiger Köppe.
- Möhlig, Wilhelm J. G. 1979. The Bantu nucleus: Its conditional nature and its prehistorical significance. *Sprache und Geschichte in Afrika* 1. 109–141.
- Möhlig, Wilhelm J. G. 1981. Stratification in the history of the Bantu languages. *Sprache und Geschichte in Afrika* 3. 251–316.
- Moñino, Yves. 1988. Introduction: Cousines ou voisines? In Yves Moñino (ed.), *Lexique comparatif des langues oubanguiennes*, 1–22. Paris: Geuthner.
- Moñino, Yves. 2010. The position of Gbaya-Manza-Ngbaka group among the Niger-Congo languages. Paper presented at the workshop "Genealogical classification in Africa beyond Greenberg", Berlin, Humboldt University, February 21–22, 2010. https://www.iaaw.hu-berlin.de/de/afrika/linguistik-undsprachen/veranstaltungen/greenberg-workshop/the-position-of-gbaya-manza-ngbaka-group-among-the-nigercongo-languages.
- Moran, Steven & Jelena Prokić. 2013. Investigating the relatedness of the endangered Dogon languages. *Literary and Linguistic Computing* 28. 676–691.

Mous, Maarten. 2003. The making of a mixed language: The case of Ma'a/Mbugu. Amsterdam: Benjamins.

Mous, Maarten. 2007. John M. Stewart, 1926–2006. Journal of African Languages and Linguistics 28. 71–74.

- Moxley, Jeri L. 1998. Semantic structure of Swahili noun classes. In Ian Maddieson & Thomas J. Hinnebusch (eds.), Language history and linguistic description in Africa, 229–238. Trenton, NJ: Africa World Press.
- Naden, Tony. 1989. Gur. In John Bendor-Samuel (ed.), *The Niger-Congo languages: A classification and description of Africa's largest language family*, 141–168. Lanham, MD: University Press of America.
- Newman, Paul. 1995. On being right: Greenberg's African linguistic classification and the methodological principles which underlie it. Bloomington, Indiana: Institute for the Study of Nigerian Languages and Cultures, African Studies Program, Indiana University.
- Nurse, Derek. 2008. Tense and aspect in Bantu. Oxford: Oxford University Press.
- Nurse, Derek & Gérard Philippson. 2003. Introduction. In Derek Nurse & Gérard Philippson (eds.), *The Bantu languages*, 1–12. London: Routledge.
- Olson, Kenneth S. 2006. On Niger-Congo classification. In Howard I. Aronson, Donald L. Dyer, Victor A. Friedman, Daniela S. Hristova & Jerrold M. Sadock (eds.), *The Bill question: Contributions to the study of linguistics and languages in honor of Bill J. Darden on the occasion of his sixty-sixth birthday*, 153–190. Bloomington, IN: Slavica.
- Pozdniakov, Konstantin. 2008. Niveaux linguistiques et problèmes de reconstruction dans les langues atlantiques. Sprache und Geschichte in Afrika 19. 175–199.
- Pulleyblank, Douglas. 2009. Niger-Kordofanian languages. In Bernard Comrie (ed.), *The world's major languages (second edition)*, 864–865. Abingdon, UK: Routledge.
- Salffner, Sophie & Bonny Sands. 2012. *Why Ukaan is hard to classify*. Paper presented at the International Congress *Towards Proto-Niger-Congo: Comparison and Reconstruction*, September 18–21, Paris, France. http://llacan.vjf.cnrs.fr/fichiers/nigercongo/abstracts/salffner_sands.pdf.
- Samarin, William J. 1971. Adamawa-Eastern. In Thomas A. Sebeok (ed.), Current trends in linguistics VII: Linguistics in Sub-Saharan Africa, 213–244. The Hague: Mouton.
- Sands, Bonny. 2009. Africa's linguistic diversity. Language and Linguistics Compass 3. 559-580.
- Schadeberg, Thilo C. 1981a. The classification of the Kadugli language group. In Thilo C. Schadeberg & M. Lionel Bender (eds.), Nilo-Saharan: Proceedings of the First Nilo-Saharan Linguistics Colloquium, Leiden, September 8–10, 1980, 291–305. Dordrecht: Foris.
- Schadeberg, Thilo C. 1981b. Das Kordofanische. In Bernd Heine, Thilo C. Schadeberg & Ekkehard Wolff (eds.), *Die Sprachen Afrikas*, 117–128. Hamburg: Helmut Buske.
- Schadeberg, Thilo C. 1981c. Die Geschichte der Nominalklassen des Laru (Kordofanisch). In Herrmann Jungraithmayr (ed.), *Berliner afrikanistische Vorträge (xxi. Deutscher Orientalistentag, Berlin 24.–29. 1980)*. Berlin: Reimer.
- Schadeberg, Thilo C. 1986. The lexicostatistic base of Bennett & Sterk's reclassification of Niger-Congo with particular reference to the cohesion of Bantu. *Studies in African Linguistics* 17. 69–83.
- Schadeberg, Thilo C. 1989. Kordofanian. In John Bendor-Samuel (ed.), *The Niger-Congo languages: A classification and description of Africa's largest language family*, 66–80. Lanham, MD: University Press of America.

Schadeberg, Thilo C. 2001. Number in Swahili grammar. Afrikanistische Arbeitspapiere 68. 7–16.

- Schadeberg, Thilo C. 2003a. Derivation. In Derek Nurse & Gérard Philippson (eds.), *The Bantu languages*, 71–89. London: Routledge.
- Schadeberg, Thilo C. 2003b. Historical linguistics. In Derek Nurse & Gérard Philippson (eds.), *The Bantu languages*, 143–163. London: Routledge.

Sebeok, Thomas A. (ed.). 1971. Current trends in linguistics VII: Linguistics in Sub-Saharan Africa. The Hague: Mouton.

Stahlke, Herbert F. W. 1970. Serial verbs. Studies in African Linguistics 1. 60-99.

Stallcup, Kenneth. 1980. La géographie linguistique des Grassfields. In Larry M. Hyman & Jan Voorhoeve (eds.), L'expansion bantoue: Actes du colloque international du CNRS, Viviers (France) 4–16 avril 1977. Volume I: Les classes nominaux dans le bantou des Grassfields, 43–57. Paris: SELAF.

Stewart, John M. 1989. Kwa. In John Bendor-Samuel (ed.), *The Niger-Congo languages: A classification and description of Africa's largest language family*, 216–245. Lanham, MD: University Press of America.

Stewart, John M. 2002. The potential of Proto-Potou-Akanic-Bantu as a pilot Proto-Niger-Congo, and the reconstructions updated. *Journal of African Languages and Linguistics* 23. 197–224.

Stewart, John M. 2007. Consonant mutation in Proto-Potou-Akanic-Bantu and the Fula-type languages of Senegal and Guinea. In W. A. A. Wilson & Anne Storch (eds.), *Guinea languages of the Atlantic group: Description and internal classification*, 171–195. Frankfurt: Peter Lang.

Storch, Anne. 2011. Secret manipulations: Language and context in Africa. Oxford: Oxford University Press.

Voeltz, F. K. Erhard. 1977. Proto Niger-Congo verb extensions. Los Angeles: UCLA PhD dissertation.

Voorhoeve, Jan. 1980. Bantu et Bane. In Larry M. Hyman & Jan Voorhoeve (eds.), L'expansion bantoue: Actes du colloque international du CNRS, Viviers (France) 4–16 avril 1977. Volume I: Les classes nominaux dans le bantou des Grassfields, 59–75. Paris: SELAF.

Wallis, Barry M. 1978. *Diedrich Westermann's* Die westlichen Sudansprachen *and the classification of the languages of West Africa*. Evanston, IL: Northwestern University PhD dissertation.

- Wedekind, Klaus. 1985. Thoughts when drawing a map of tone languages. *Afrikanistische Arbeitspapiere* 1. 105–124.
- Welmers, William E. 1971a. Niger-Congo, Mande. In Thomas A. Sebeok (ed.), *Current trends in linguistics VII: Linguistics in Sub-Saharan Africa*, 113–140. The Hague: Mouton.
- Welmers, William E. 1971b. The typology of the Proto-Niger-Kordofanian noun class system. In Chin-Wu Kim & Herbert Stahlke (eds.), *Papers in African linguistics*, 1–16. Carbondale, IL and Edmonton, AB: Linguistic Research Inc.
- Welmers, William E. 1973. African language structures. Berkeley: University of California Press.
- Westermann, Diedrich. 1911. Die Sudansprachen: Eine sprachvergleichende Studie. Hamburg: L. Friedrichsen.
- Westermann, Diedrich. 1927. Die westlichen Sudansprachen und ihre Beziehungen zum Bantu. Berlin: Walter de Gruyter.
- Williamson, Kay. 1971. The Benue-Congo languages and I jo. . In Thomas A. Sebeok (ed.), *Current trends in linguistics VII: Linguistics in Sub-Saharan Africa*, 245–306. The Hague: Mouton.
- Williamson, Kay. 1985. How to become a Kwa language. In Adam Makkai & Alan K. Melby (eds.), *Linguistics and philosophy: Essays in honor of Rulon S. Wells*, 427–443. Amsterdam: Benjamins.
- Williamson, Kay. 1989a. Benue-Congo overview. In John Bendor-Samuel (ed.), *The Niger-Congo languages: A classification and description of Africa's largest language family*, 247–274. Lanham, MD: University Press of America.
- Williamson, Kay. 1989b. Niger-Congo overview. In John Bendor-Samuel (ed.), *The Niger-Congo lan- guages: A classification and description of Africa's largest language family*, 3–45. Lanham, MD: University Press of America.
- Williamson, Kay & Roger M. Blench. 2000. Niger-Congo. In Bernd Heine & Derek Nurse (eds.), *African languages: An introduction*, 11–42. Cambridge: Cambridge University Press.