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THE LINGUISTIC PREHISTORY OF NUBIA

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Gerrit J. Dimmendaal

Die sprachliche Vorgeschichte Nubiens
La préhistoire linguistique de la Nubie

Evidence from historical linguistics, philology, archaeology, and, more recently, genetics enables us to reconstruct part of the complex history of the area in southern Egypt and northern Sudan that has come to be known as Nubia. Whereas today Nubian languages and Arabic are dominant in these areas, interdisciplinary research points towards the presence of several other languages in the past, spoken by communities who interacted with each other to various extents over the past millennia, depending on such factors as climate change and technological development, but also on ever-changing sociopolitical constellations.

تتيح لنا الأدلة المستمدة من علم اللغة وعلم فقه اللغة وعلم الآثار وعلم الوراثة مؤخرًا إعادة بناء جزء من التاريخ المعقد للمنطقة الواقعة في جنوب مصر وشمال السودان والتي أصبحت تُعرف باسم النوبة. على الرغم من أن اللغات النوبية والعربية هي المهيمنة اليوم في هذه المناطق، يشير البحث متعدد التخصصات إلى وجود عدة لغات أخرى في الماضي، تحدثت بها المجتمعات التي، على مدى آلاف السنين الماضية، تفاعلت مع بعضها البعض بدرجات مختلفة، اعتمادًا على تغير المناخ، والتنمية التكنولوجية، والعوامل السياسية المتغيرة باستمرار.

The designation "Nubia" refers to two areas: Lower Nubia, the zone between present-day Aswan and Wadi Halfa, and Upper Nubia, the Nile Valley north of Dongola in Sudan, and extending as far south as Khartoum. Today Nubian (i.e., Nilo-Saharan) languages like Dongolawi, Kenuzi, and Nobiin, as well as the Semitic (i.e., Afroasiatic) language Arabic and the Northern Cushitic (i.e., Afroasiatic) language Beja are spoken in this border area between Egypt and Sudan. However, artifacts, ancient documents, evidence from historical-comparative studies, and toponymy point towards the presence of other languages in the past (Cooper 2020a, 2020b).

The term "Nubian" is used here in a linguistic rather than an areal sense for languages belonging to the Nubian family, which are part of the Nilo-Saharan phylum (on whose definition see further below). Nubian languages are spoken not only in the vicinity of the Nile but also west and southwest of the Nile Valley, more specifically in western Sudan and the Nuba Mountains in Sudan. Trying to understand the origins of the linguistic situation in Nubia as it manifests itself today is not possible by way of an approach restricted to the confines of this area. Instead a diachronic approach is called for, which aims at a synthesis of knowledge emerging from different disciplines, whose methods sometimes have to take into account more

global developments over a period of several millennia.

Language Stocks in Prehistoric Nubia

An ancient linguistic area during the Terminal Pleistocene

Archaeological evidence indicates that during the Late Pleistocene, between 20,000 BP and approximately 10,000 BP, regions east and west of the Nile and its tributaries were uninhabited by humans as a consequence of the arid conditions and insufficient water supplies. When precipitation started increasing after the last Ice Age came to an end, and monsoon rains reached the northern Sahara around 10,000 years ago, humans began to settle the newly emerging savannah areas surrounding the Nile region. The maps in Figure 1 show these dramatic changes that occurred within a few millennia.

The linguistic map of the area surrounding the Nile today, from its sources in the Great Lakes region to the Nile Delta, allows us to derive some historical conclusions about the typology of languages in this area in the distant past, most likely dating back to the Late Pleistocene, when human habitation on the African continent was restricted to higher elevations, such as the Ethiopian highlands and zones along major rivers such as the White Nile (and the Blue Nile; see Figure 5 map).

Typological research initiated in linguistics in the 1960s (first presented in a seminal contribution by Greenberg 1966) has shown that the position of the verb relative to the subject and object in a clause is an important analytical parameter, which also tends to manifest an areal (rather than mainly genetic) dimension. As shown on the map in Figure 2, there is a clear south-to-north distribution in northeastern Africa of a range of genetically unrelated languages putting the verb in first position (a universally less common constituent order), followed, rather than preceded, by the subject and object. This (former) areal type starts with the linguistic isolate Hadza in Tanzania in the south, with Egyptian as the northernmost representative of this (former) linguistic area (Dimmendaal 2020: 213). Whereas Greenberg (1963)

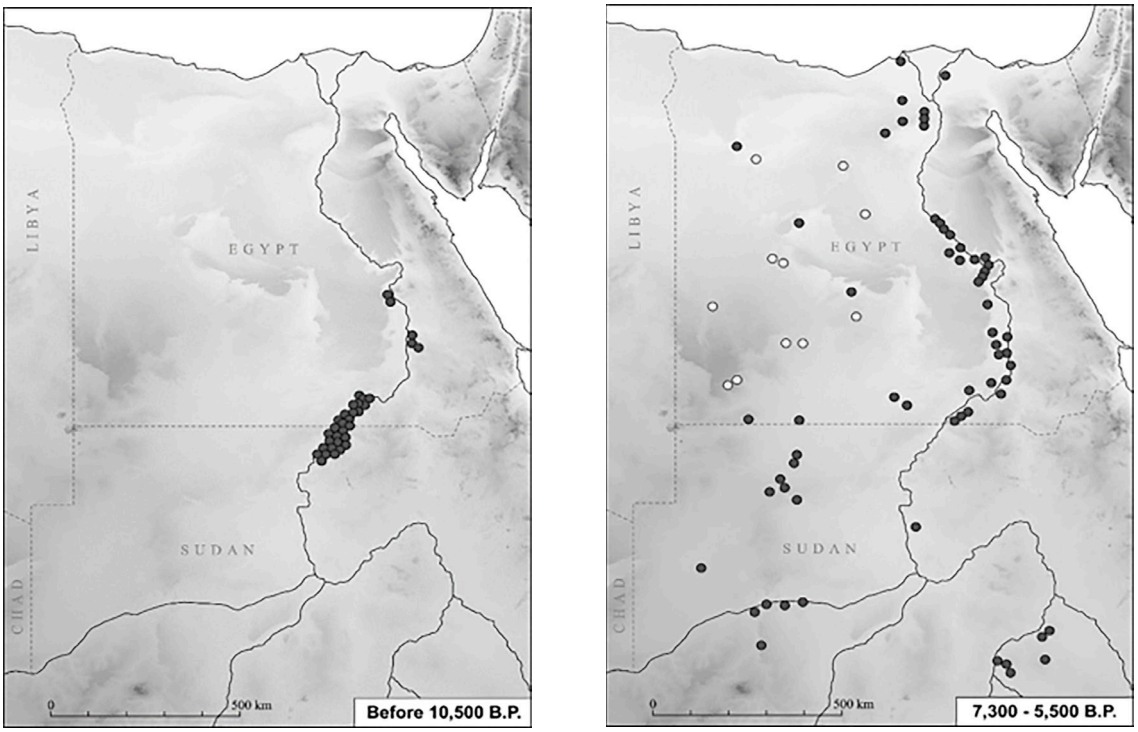

Figure 1. Maps showing the increase in human settlements in the Nile region after the last Ice Age.

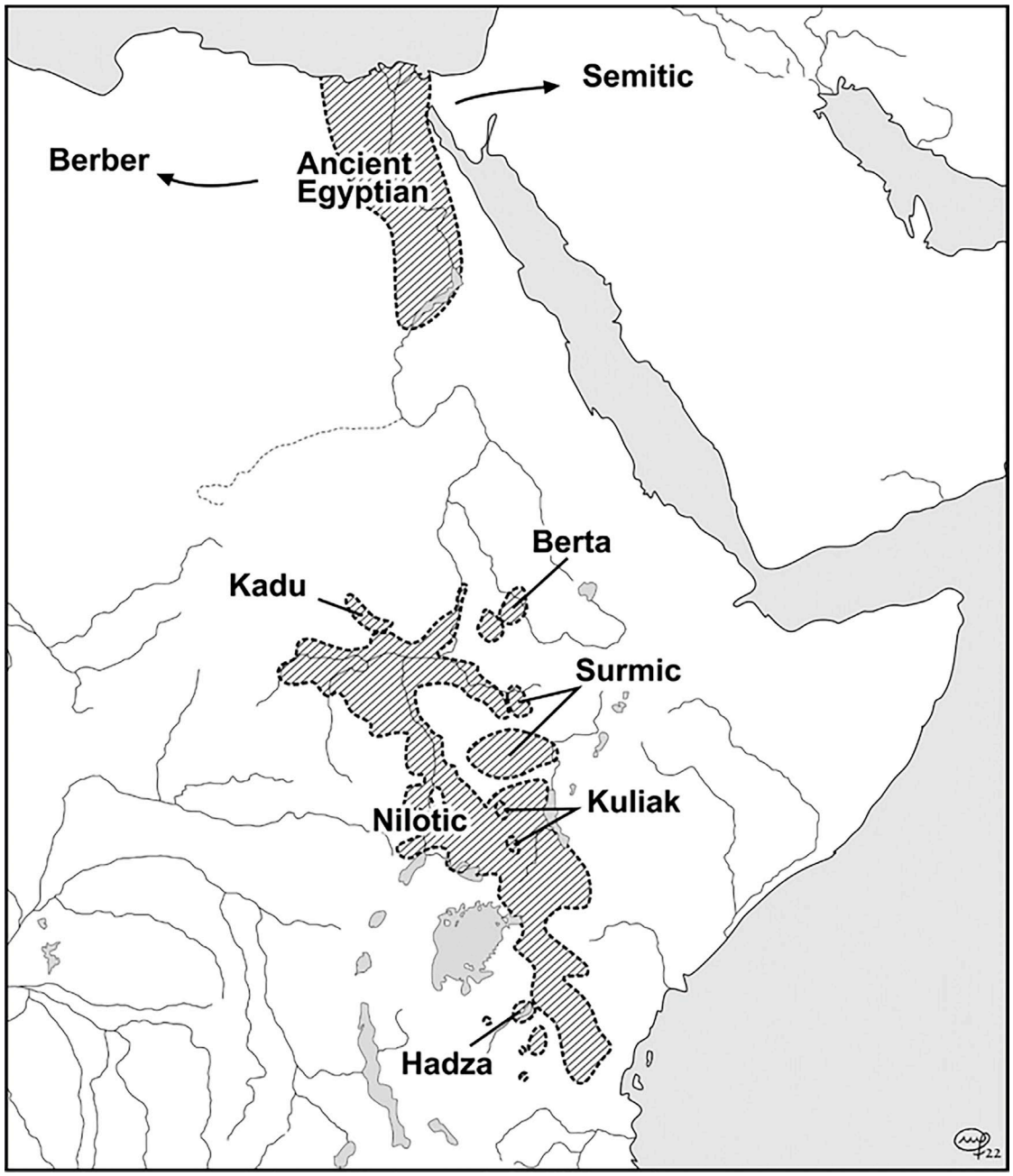

Figure 2. Map of northeast Africa showing an ancient north-to-south verb-initial diffusion zone, of which Egyptian is the northernmost representative.

classified Hadza as a member of his Khoisan family, specialists in these languages assume that the latter constitutes an areal grouping of languages with clicks consisting of at least three language families, Northern Khoisan (Kx'a), Central Khoisan (Khoe-Kwadi), and Southern Khoisan (Tuu), with Hadza and Sandawe constituting linguistic isolates (see Güldemann 2018: 94-107).

In Uganda, one last representative of the Kuliak family, Ik (Teuso), is still spoken today. Whereas the present author assumes that Kuliak is an early split-off from Nilo-Saharan (Dimmendaal 2020), authors such as Sands

(2009) classify this family as a genetically isolated group. In the Nuba Mountains in Sudan, another group of verb-initial languages, known as Kadu(gli), is spoken along the southern edge of the area. In his genetic classification of African languages Greenberg (1963) classified the Kadu (Tumtum) languages as "Kordofanian," i.e., as a branch of a language family he calls Congo-Kordofanian, referred to these days as Niger-Congo; other authors have argued that Kadu may be part of another phylum established by Greenberg (1963), Nilo-Saharan. However, the actual grammatical (or lexical) evidence for these genetic links is rather thin, and consequently the present author prefers to classify Kadu as another isolated language family (Dimmendaal 2011: 324-329).

The south-to-north distribution of verb-initial languages in northeastern Africa puts what is known about Egyptian (whose written documentation dates back about 5,000 years) and early Semitic (dating back 4,700 years) in a clear diachronic perspective. Apparently, these Afroasiatic branches were part of an ancient verb-initial contact zone along the White Nile (and possibly the Blue Nile; see fig. 5). Kossmann and Suchard 2018 have argued that Berber and Semitic constitute a subgroup within Afroasiatic. There is no evidence for a verb-initial structure in Proto-Berber, but the fact that modern Berber languages are closely related suggests they are the result of a fairly recent spreading, with early split-offs within Berber having disappeared with no traces of a former verb-initial syntax. This contact zone, stretching from the Great Lakes in East Africa towards the Mediterranean coast, did not necessarily involve long-distance networks; it may equally have come about as a result of local trading networks between adjacent communities speaking partly unrelated languages, and lasting over thousands of years during the Late Pleistocene, when human settlements were restricted to riverine systems and higher elevations.

Egyptian and Semitic are members of the Afroasiatic family, which furthermore includes Berber, Chadic, Cushitic, and Omotic, according to Greenberg (1963), who refers to Omotic as "Western Cushitic." Frajzyngier (1983) was the first author to argue that Proto-Chadic also had a verb-initial syntax, a position repeated and defended by Schuh (2003).

DNA research among speakers of Chadic languages today supports the hypothesis of a northeast African origin (Cerný et al. 2009; Dimmendaal 2019), although these speakers appear to bear a genetic component that is maximized in West Africans (Hollfelder et al. 2017). Modern Chadic languages are situated much further to the southwest of the Nile, but there is a natural explanation for this. The maps in Figure 1 show how the dramatic increase in precipitation around 10,000 BP allowed humans to move away from the Nile area and to explore new savannah-type ecological zones west of the Nile, which had been uninhabited for thousands of years during the Late Pleistocene. When desertification set in again around 5,000 BP, the Mega-Chad paleolake (of which present-day Lake Chad is a remnant) and its tributaries remained as an attractive alternative ecozone for various populations, most likely including the ancestral Chadic community.

As further shown in the map in Figure 2, there are also two closely related Nilo-Saharan groups situated in this (former) verb-initial contact zone, Nilotic and Surmic, as well as Berta; all three belong to the Southern branch of the Eastern Sudanic subgroup within Nilo-Saharan (Dimmendaal 2007a). Most of the languages spoken in this area, adjacent to the White Nile as well as the Blue Nile in Sudan and South Sudan, with extensions into Uganda, Kenya, Tanzania, and Ethiopia, are also verb-initial (with a cline into verb-second constituent order, the latter type also allowing for post-verbal subjects, as in verb-initial languages). The Nilotic and Surmic sub-branches constitute expansion zones of languages spoken by pastoralists migrating into these areas from the north (where their more distant relatives within Northeastern Nilo-Saharan are spoken).

A comparison of the maps in Figures 2 and 4 shows that this (former) verb-initial contact zone with a distinct south-to-north distribution is interrupted in the area between Egypt and

Sudan known as Nubia, where today typologically and genetically different verb-final languages are spoken. As further argued below, this constellation can be naturally explained by what is known about climate change and the migration of humans into this area during the early Holocene.

The Holocene and the Wadi Howar diaspora

When the last glacial age (the Late Pleistocene) came to an end in Europe around 12,000 BP, wetter periods set in in northeastern Africa. As a result, a new tributary of the Nile emerged around 10,000 BP, known as the Yellow Nile, or Wadi Howar. As shown by the dotted west-to-east line in the Figure 3 map, it originated in the Ennedi region of eastern Chad and entered the Nile between the Third and Fourth Cataracts, the area today associated with Nubia.

Archaeological evidence dating back to the beginning of the Holocene, around 7,000 BP, points toward the migration of northeast-African hunter-gatherers into this area, and from there westward along the Wadi Howar, where they built semi-permanent settlements. This migration disrupted the ancient contact zone of fishing and hunting communities speaking verb-initial languages.

Archaeologists associate these communities in the Wadi Howar area with the so-called "Wavy Line/Laqiya" (or "pre-Leiterband") pottery tradition. Archaeological evidence from the same area furthermore points towards eastward migrations of pastoralists from the western sources of the Wadi Howar along the same riverine system between 6,000 and 4,200 BP. Their communities are associated with the so-called Leiterband culture (see Becker 2011 for a survey of the relevant literature). As further argued by Becker, osteological and isotype analyses of

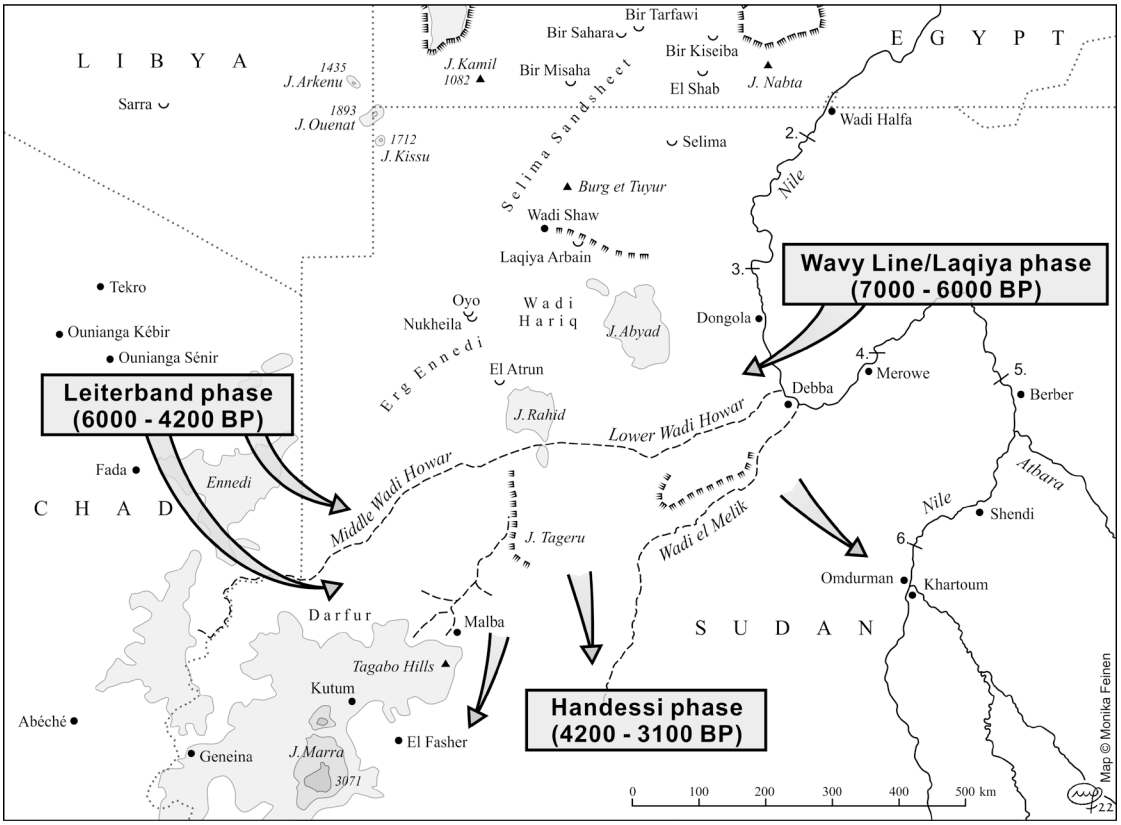

Figure 3. Map of archaeological evidence for migrations into and out of the Wadi Howar.

human remains and, for later periods, DNA analyses (which have also been compared with data from modern populations), show that these pastoral migrants were in close contact with the mainly sedentary hunter-gatherers, and that they intermixed to a considerable extent. Becker (2011: 206) points out that the results of these analyses were in complete agreement with Claude Rilly's (2004) proposed scenario for the spreading of Meroitic and its closest Eastern Sudanic relatives, Nubian, Tama(n), and Nara, and with Dimmendaal's so-called "Wadi Howar Diaspora" hypothesis for Eastern Sudanic as a whole (2007a, 2007b); moreover, alternative scenarios—such as that proposed by Blench (2006)—for the spreading of language families in (north)eastern and central Africa "... appear highly unlikely" (Becker 2011: 206).

Greenberg (1955) had already argued that a major group, which he called Eastern Sudanic, and including Nubian, Surmic, Nara, Gaahmg (Jebel), Nyima (Nyimang plus Afitti), Taman, Daju, and Nilotic, was part of the Macro-Sudanic family; this family also included Central Sudanic, Nara (also known by the derogatory name Barea), and Kunama. This language family was subsequently renamed Chari-Nile and integrated into Nilo-Saharan, which was established as a language family by Greenberg (1963) based on a range of grammatical morphemes as well as lexical forms probably stemming from a common ancestral language.

In his 1963 classification of African languages Greenberg argued, again on the basis of a judicious evaluation of grammatical and (to a lesser extent) lexical evidence, that the following groups (which he had assumed to constitute independent language families in his 1955 classification) are part of the Nilo-Saharan family: Songhay, Saharan, Maban, Mimi, Fur, Kuliak, and Temeinian. As shown on the map in Figure 4, a range of the more distantly related members of Nilo-Saharan are spoken along a west-to-east axis, namely the subgroups 1-9.

The Central African area most likely constituted the original homeland of the Nilo-Saharan language family. The highest degree of internal genetic diversity within Nilo-Saharan is found in this area west, southwest, and south of the Ennedi Mountains in Chad (see fig. 3), where distantly related genetic groupings such as Maban, Fur, Saharan, part of Eastern Sudanic, and Central Sudanic are situated. According to Dimmendaal et al. (2019), the Central Sudanic subgroup within Nilo-Saharan spread over what are today the Central African Republic, Chad, South Sudan, and the Democratic Republic of the Congo and, spilling over into Nigeria and Uganda, probably constitutes one of the two primary branches of Nilo-Saharan. (Dimmendaal et al. 2019 also present a discussion of different views on the subclassification of Nilo-Saharan following Greenberg's seminal contribution. Several scholars, including the present author, assume, for example, that Songhay, which is spoken mainly along the Niger River in West Africa, is not part of this phylum. For a more radical "dissection" of Greenberg's Nilo-Saharan hypothesis, see Güldemann 2018.) The remaining subgroups of Nilo-Saharan (see fig. 4) together form the other primary branch of Nilo-Saharan, referred to as Northeastern Nilo-Saharan in Dimmendaal et al. (2019). The Figure 4 map also shows a typologically significant split within Northeastern Nilo-Saharan: A verb-final (SOV, i.e., Subject-Object-Verb) constituent order in subgroups 1-9, and a smaller subgroup with a verb-initial or verb-second (V2) constituent order, all belonging to the southern branch of the Eastern Sudanic subgroup (subgroups 11-16).

As argued in Dimmendaal (2007a, 2007b) and Dimmendaal and Babiker (fc.), there are strong linguistic, genetic, and archaeological reasons for assuming that the pastoralists associated with the Leiterband Phase, who began migrating into the Wadi Howar area some 6,000 years ago, spoke Northeastern Nilo-Saharan languages, and that the hunter-gatherers associated with the Wavy Line or Laqiya phase, whom they met in their eastward migration, spoke Afroasiatic languages. Contrary to Central Sudanic languages, many Northeastern Nilo-Saharan languages, including the Nubian subgroup (indicated by number 6 in Figure 4), share a range of significant typological features that are also

attested in Afroasiatic branches like Cushitic and Omotic: a verb-final (SOV) constituent order in sentences; extensive case marking; dependent verb forms (so-called converbs) preceding the main verb; and the use of light verbs (such as "do," "say") following a complement (noun, adjective etc.) usually referred to as coverb, with which such light verbs form a predicate. These features are also found in Ethiopian Semitic languages, i.e., Afroasiatic languages, which adapted to or converged towards their distant Afroasiatic relatives Cushitic and Omotic over the past

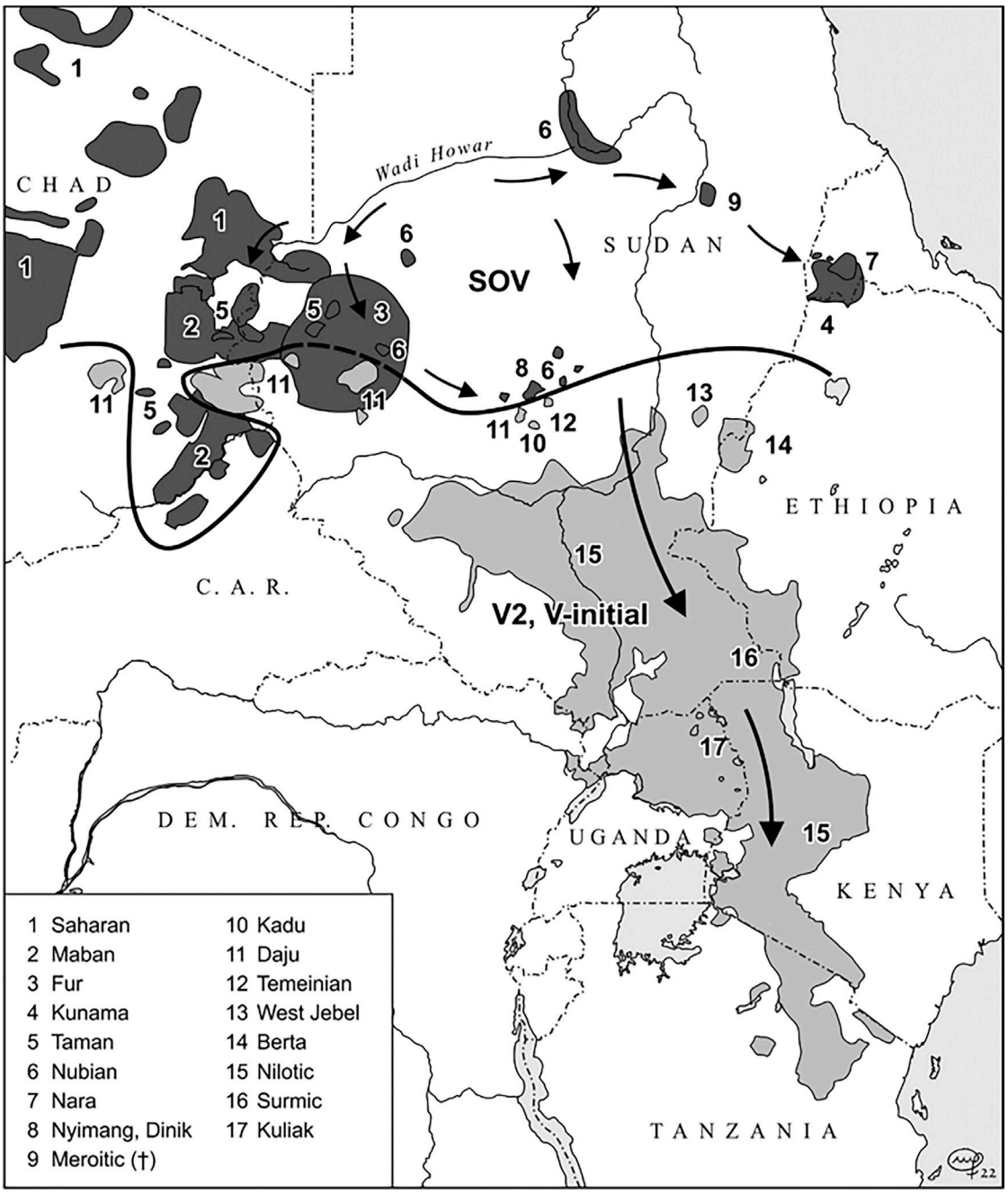

Figure 4. Map showing the typological split between Northeastern Nilo-Saharan groups and the link with their genetic classification.

2,500 years. Cushitic and Omotic, with their predominantly verb-final syntax, differ rather dramatically from the other Afroasiatic subgroups, Egyptian, Semitico-Berber, and Chadic, presumably as a result of geographical separation (the former located in the Ethiopian Highlands, the latter in the Nile region during the Late Pleistocene).

An example of the synchronic complexity of case marking in Northeastern Nilo-Saharan languages is presented by Jakobi and el-Guzuuli (2016) for the Nile Nubian language Andaandi (Dongolawi). The differential marking of objects with or without an accusative case marker in Nubian and other Northeastern Nilo-Saharan sub-branches depends on the presence of semantic features such as animacy, definiteness, and discourse prominence (Dimmendaal 2010). Jakobi and Ibrahim (2018: 103) present examples from the Kordofan Nubian language Tagle(naa) (abbreviations are listed at the end of this discussion):

1) íyé-lî	ōd-dū=gī	ʈúy-ín
shepherd-PL	goat-SG=ACC	milk-3
"The shepherds milk the goat."		
2) íyé-lî	ēg-ī=gī	ʈúy-é-n
shepherd-PL	goat-PL=ACC	milk-PLR-3
"The shepherds milk (the) goats."		

Converbs (i.e., dependent verbs preceding the sentence-final main verb) constitute another feature shared by Northeastern Nilo-Saharan languages (spread across an area from Ethiopia in the east all the way to the Nigerian border in the west) and by the Afroasiatic subgroups Cushitic and Omotic, and also replicated in Ethiopian Semitic languages as a result of contact with their distant relatives Cushitic and Omotic. Hetzron (1972: 99-100) gives the following example with a converb from the verb-final Ethiopian Semitic language Amharic:

3) bält-ó	hedá
eat-3M:SG:CNV	go.3M:SG:PST
"He ate and went."	

Dimmendaal (2008: 301) provides an example from the Omotic language Wolaitta in Ethiopia:

4) ʔi	maay-uwa
3MSG:NOM	cloth-M:ABS
meec'c'-ıdı	mıc'c'-iisi
wash-CNV	hang-3MSG:PFV
"After having washed the cloth, he hung it up."	

A typological restructuring similar to that in Ethiopian Semitic must have taken place much earlier in Northeastern Nilo-Saharan languages, whose speakers came into initial contact with Afroasiatic communities in the Wadi Howar area some 6,000 years ago. The typological similarities between most Northeastern Nilo-Saharan languages and Cushitic as well as Omotic (and Ethiopian Semitic) are rather striking, even today, more than 3,000 years after the Wadi Howar language contact area was dissolved as a result of dramatic climate changes. These similarities apply not only to constituent order but also to the other structural features listed above. For example, Nubian languages like Tagle(naa) in the Nuba Mountains of Sudan have converbs that function in the same way they do in the Omotic language Wolaitta in Ethiopia; Amha and Dimmendaal (2006) discuss this areal feature in Cushitic, Omotic, and Northeastern Nilo-Saharan in more detail.

Gulfan (2013) shows that in the Nubian language Tagle(naa) such converbs manifest fewer inflectional properties (for person, number, tense, aspect, mood) than the main verb, which occurs sentence-finally. From a semantic point of view, such converbs express sequential or simultaneous events as well as purpose, parallel to the systems found in Cushitic and Omotic (i.e., Afroasiatic) languages. As shown by the following two examples from Tagle(naa), these dependent verbs often make a formal distinction between constructions where the subject remains the same (SSC = same subject converb) and constructions where the subject of the dependent verb is different from the subject of the (final) main verb (DSC = different subject

converb); again, this feature is shared with a range of Ethiopian Afroasiatic languages.

5) Ahmed kɔyɛ-gɪ	kel-ɪ	kabili-n
Ahmed meat-ACC	eat-SSC	finish-PRS
"Ahmed eats (and) finishes the meat."		
6) Ahmed kɔyɛ-gɪ	kel-ndɛ	
Ahmed meat-ACC	eat-DSC	
Ali kal-jɪ	kel-un	
Ali porridge-ACC	eat-PRS	
"Ahmed eats meat and Ali eats porridge."		

The presence of an additional, universally rare morphological feature, namely singulative marking for nouns (as part of an extensive number-marking system) in most of these Northeastern Nilo-Saharan languages as well as in the Eastern Cushitic branch of Cushitic, points towards additional evidence for this areal contact in the Wadi Howar area, probably between 6,000 BP and 3,000 BP. Hayward (1998: 627) illustrates singulative marking in Afar (Qafar, an Eastern Cushitic language spoken in Eritrea, Ethiopia, and Djibouti), as exemplified in *ɖagor-ta* "hair (singular)," *ɖago(o)r* "hairs" (it should be noted that singulative number marking on nouns is also found in Semitic languages). But a similar system of singulative number marking occurs in most Northeastern Nilo-Saharan subgroups—for example, in Masalit (Chad): *anyiŋ-gi* "fly," *anyiŋ* "flies" (see Dimmendaal 2000 for a general survey, and Jakobi and Dimmendaal 2022 for an account of the complexity of number marking in Nilo-Saharan). Singulative number marking does not occur in the Omotic branch of Afroasiatic.

Singulative marking for nouns that refer to entities frequently occurring in larger groups or pairs is also found in Darfur Nubian and Kordofan Nubian (see Tucker and Bryan 1966: 319; Thelwall 1977; and Werner 1993), as shown in an example from Kadaru (Kordofan Nubian): *ƙɔnyʊl-tu* "egg," *ƙɔnyʊl* "eggs." Singulative marking was lost in Nile Nubian languages.

As demonstrated in example 7 below, the Nilo-Saharan language Tama (spoken in Chad and Sudan) manifests the typical verb-final syntax with case marking, converbs, and coverbs—all characteristic of most Northeastern Nilo-Saharan languages (Dimmendaal 2008: 287):

7) Khàmîs-ˡireŋ	dá!fá	nɛ́k
Khamis-ACC	pay	do
"Pay Khamis!"		

The origin of the striking typological similarities between these Nilo-Saharan languages, stretching from Chad in the west to Eritrea and Ethiopia in the east, and Afroasiatic languages in Ethiopia is naturally explained by the empirically well-established contact between their ancestral predecessors during the early Holocene in the Wadi Howar area.

The material culture of the hunter-gatherer and fisher communities in the Wadi Howar area belonged to the Wavy Line tradition, of which artifacts have been identified across the region where today Afroasiatic languages are spoken—that is, Northeastern and Northern Africa (Keding 1997; Jesse 2004). Language shift, and interference from the former tongues of these hunter-gatherers and fishers, who most likely spoke Afroasiatic languages very similar to modern Cushitic languages, affected the structure of the Nilo-Saharan tongues spoken by pastoralists, who were associated with the Leiterband tradition. The incorporation of minority groups into numerically dominant pastoral communities (rather than the reverse) can still be observed across Eastern Africa today (see, for example, Mous 2017).

As pointed out above, a number of Nilo-Saharan subgroups—namely Nilotic, Surmic, and Berta—deviate from the common verb-final sentence structure with its associated typological features. These mainly verb-initial languages (and also verb-second languages like Gaahmg, the only remaining West Jebel language) form a genetic subgroup, the southern branch of Eastern Sudanic Nilo-Saharan (see fig. 4). The presumed southward migrations of their ancestral communities (illustrated in Figure 3) can be associated, at least to some extent, with the Handessi Phase (4,200 – 3,100 BP) and most likely were

triggered by dramatic climate change in the Wadi Howar area. These southward migrations resulted in new contact areas with speakers of the ancient verb-initial contact zone inhabiting regions adjacent to the White Nile and its tributaries (see Dimmendaal 2005 and Dimmendaal and Babiker fc. for further details of the linguistic, archaeological, and genetic evidence for migration and contact).

Language Contact in Nubia during Pharaonic Times and Subsequent Eras

No Cushitic language is spoken today west of the Nile between the Third and Fourth cataracts, in the area adjacent to the former Wadi Howar. East of this area, one active language belonging to this Afroasiatic branch, namely Beja, remains. With three main dialect zones, Beja is a fairly uniform language and the only Northern Cushitic language still spoken. However, archaeological evidence points towards the presence of other Northern Cushitic languages in the distant past, i.e., the language of the Medjay, a nomadic people living in the Eastern Desert, whose language is attested on Egyptian inscriptions from the Middle Kingdom's occupation of Lower Nubia (Liszka 2011; Rilly 2019); and the language of the Blemmyes (possibly an older state of Beja: see Cooper 2020b), attested on a Napatan enthronement stela dated around 2600 BP (Christides 1980).

There is also historical evidence from personal names and topographical lists from the New Kingdom in the fourth millennium BP for the existence of a "Meroitic-like language" in historical Kush, with differentiated Afroasiatic languages in the Eastern Desert. The Meroitic language is assumed to have displaced a number of (other) Eastern Sudanic and Cushitic languages along the Nile (Cooper 2020a: 6; see also Cooper 2017a, 2017b, and 2020b for additional details on the linguistic prehistory of the area).

The identification of Meroitic as a Nilo-Saharan language, more specifically belonging to the Eastern Sudanic branch and probably most closely related to Nubian, was made by Rilly (2010). Evidence for this hypothesis was based on lexical as well as grammatical cognates (ibid.: 375-380, 381-399). This extinct language, whose scripts reflect the Egyptian cultural influences of the period, is also discussed in detail by Rilly (2016). Whereas Bender (1991) grouped Nubian with Taman, Nara, and Nyima (i.e., Nyimang and Afitti) within the Eastern Sudanic branch of Nilo-Saharan, Rilly (2010: 420-529) provides extensive lexical evidence for the close genetic affiliation of these groups with Meroitic.

Historical texts from Egypt's 18th Dynasty (i.e., dating back at least 3,500 years) also make reference to people south of the state by the name *Makha*, which appears to have been the self-designation for groups speaking what are now known as Nubian languages (Cabon et al. 2017: 314). The name *Nob* for these groups appears to be of later origin, possibly going back to Meroitic (Rilly 2008), and first appearing in documents around 2,300 BP, where it denoted "slaves" (Cabon et al. 2017: 177). The name *Nuba* was extended to other groups speaking a range of languages, many of which are not genetically related to Nubian, in an area that today is part of South Kordofan Province in Sudan.

Modern linguistic evidence for the broad geographic extension of the Nubian language family in the Nile Valley in the past is provided by onomastics, specifically place names preserved in literary records and loan words. Priese (1973), for example, identified in the Nile Valley, in the area between the Third and Fourth Cataracts, Nubian place names that occur in Egyptian texts dating back approximately 2,500 years (compare also Zibelius-Chen 2014 for further details). According to Rilly (2016), the entrance of Nubian speech communities from Western Sudan into the Nile Valley put an end to the Meroitic Kingdom. Moreover, Nile Nubian probably also replaced the related language pre-Nara (today spoken in Eritrea) in Lower Nubia. Rilly (2007: 285-288) furthermore points towards a "pre-Nile Nubian substrate" in Old Nubian and Nobiin that does not have cognates in the other Nubian languages, and which therefore most likely originated from other Eastern Sudanic languages in the area that have since become extinct. Cooper (2021)

also cites evidence for other Afroasiatic languages in Lower Nubia. For a variety of phonetic, lexical, and semantic reasons, Kossmann (2011) has criticized the claim that names of dogs on a stela of Intef II of the First Intermediate Period originated from a language in Lower Nubia belonging to the Berber branch of Afrasiatic.

Historical sources as discussed by authors cited above refer to Nubia's dynamic linguistic history, with displacements of people and languages. But there is one striking feature that appears to have gone unnoticed in the literature so far: the areal convergence between Nile Nubian languages and more distantly related tongues like Nara, the Northern Cushitic language Beja, and, to a lesser extent, the Kunama group (consisting of Kunama proper, Bitama, and Ilit). Several phonological and grammatical features point towards this historical process. Lexical borrowings between these languages have only been studied to a limited extent. In one of the few sources on this topic—(Blažek 2014)—it is concluded that, in Beja, borrowings from Nilo-Saharan languages like Nara, Nile Nubian languages, or Kunama appear to have been rather limited.

Morphosyntactically these languages were already fairly similar, as their ancestral languages were all part of the same convergence zone extending from Ethiopia across the former Wadi Howar towards the Ennedi Mountains in Chad, as discussed above. But Nile Nubian languages differ in significant ways from Darfur Nubian and Kordofan Nubian languages in a number of respects. There is, for example, the absence (loss) of glottalization (implosion) as a distinctive feature of consonants. There are also five vowels in Nile Nubian languages, rather than seven to ten vowels, with Advanced Tongue Root (ATR) vowel harmony, as are found in Kordofan Nubian and also in other Eastern Sudanic (Northeastern Nilo-Saharan) groups such as Taman, Nyima, Nilotic, Surmic, and Temeinian. Rilly (2016: 7) also surmises for Meroitic a sound system similar to that in Nile Nubian. Rilly (2010: 318-325), in fact, reconstructs such a system for Proto-Northern Eastern Sudanic. Bechhaus-Gerst (1984) reconstructed an eight-vowel system for Proto-Nubian, but it should be noted that Kordofan Nubian languages were still poorly known at the time this work was published. Also, Nile Nubian languages lost the widespread Northeastern Nilo-Saharan feature of singulative number marking with nouns, features still found in Darfur Nubian and Kordofan Nubian languages, as pointed out above. Such changes make Nile Nubian languages strikingly similar to these other languages in the area; compare Banti and Savà (2021) for Nara; Vanhove (2017) for the Northern Cushitic language Beja; and Tucker and Bryan (1966: 336-347) for Kunama.

Few Nile Nubian languages have been studied in detail (studies such as Abdel-Hafiz 1988 on Kunuz [Kenzi] constituting a rare exception), nor have related tongues like Nara or Kunama languages. Consequently, there is more to be discovered in terms of convergence in this contact area, for example with respect to the prosodic structure of these languages. Such adaptations commonly result from areal contact and corresponding patterns of multilingualism, a hypothesis that appears to receive supporting evidence from genetics. In their article on the genetics of East African populations, Dobon et al. (2015: 6) point out that "Nubians are the only Nilo-Saharan speaking group that does not cluster with groups of the same linguistic affiliation, but with Sudanese Afro-Asiatic speaking groups (Arabs and Beja) and Afro-Asiatic Ethiopians" (see also Sirak, Fernandes, Lipson, et al. 2021; for an informative perspective on the possibilities and limits of interdisciplinary research involving archaeology, linguistics, and genetics, see MacEachern 2012).

Centralization of states (associated with the conquest of Egypt by the Nubians during the 25th Dynasty) is known to have had a leveling effect on linguistic diversity, both genetically and typologically. This process can be observed across the Americas, West Africa, and Eurasia, because speakers of minority groups tend to learn the dominant *lingua franca* of the area (which in turn influences their own primary language). They shift towards the

dominant language either voluntarily or because they are forced to.

The milieu of Egyptian in pharaonic times points towards a different sociolinguistic situation. Whereas speakers of Egyptian and early representatives of the Nubian language family were in contact over a considerable period of time, linguistic evidence for this contact is restricted to technical vocabulary and trade-based words from Egyptian in the lexicons of Old Nubian (as well as Meroitic). According to Cooper (2020a: 10), "Much of this lexical material may be the product of Egyptian imperialism and 'colonial' administration in Nubia during the New Kingdom" (compare also the critical assessment of the Nubian lexicon in Late Egyptian by Takács 2013). There appears to be no evidence for grammatical convergence between these two languages, as they were diametrically opposed with respect to the position of the verb (verb-initial versus verb-final) and other relevant morphosyntactic features. This in turn suggests that bilingualism was uncommon among speakers of Egyptian. This does not exclude contacts on an individual basis, such as those, for example, between religious experts from the Egyptian state and its southern neighbors.

Modern Nubian Languages in a Historical Perspective

Until the late Middle Ages, the Nubian language area probably covered the Nile Valley south of Aswan as far upstream as the confluence of the Blue Nile and the White Nile, and possibly beyond (fig. 5). The area west of the middle Nile Valley across the savanna of Kordofan and Darfur (see fig. 3), where speakers of Nile Nubian languages probably originated, and the northern Nuba Mountains in Sudan were part of the former Nubian language area, as witnessed by their presence in these regions even today.

Starting with Rüppel (1829), a range of scholars have contributed to the synchronic and diachronic study of Nubian languages and their external links as a language family. The most recent and detailed survey of the literature on Nubian languages and their position within the Eastern Sudanic branch of Nilo-Saharan is found in Rilly (2010), while Jakobi (fc.) constitutes a detailed historical-comparative investigation of the Kordofan branch of Nubian.

Rilly's earlier publication (2007) and also (2010: 278 passim) provide phonological evidence for a subclassification of the Nubian language family into the two main branches listed below, based on phonological innovations:

1) Nile Nubian, which includes the medieval language Old Nubian, and further comprises Nobiin (self-designation Fadicca-Mahas, Old Nubian being its predecessor); Kenzi (Kunuz, Kenuzi, self-designation Mattoki); and Dongolawi (Dongolese, Dongola, self-designation Andaandi);

2) Western Nubian, comprising two branches:

2a) Darfur Nubian: Birgid; Midob (Meidob);
2b) Kordofan Nubian (Hill Nubian), consisting of the following locality names: Abu Jinuk, Kasha, Karko, Kujuria, Fanda, Wali, Kudur, Ghulfan-Morung, Ghulfan-Kurgul, Dair, Kururu, Kadaru, Dabatna and Debri, el-Hugeirat, Tabag, and Dilling.

Several Nubian languages are presently endangered as a result of the growing importance of (Egyptian and Sudanese) Arabic in day-to-day interaction. The construction of the Aswan Dam and subsequent displacement of speakers of Ken(u)zi have also dramatically affected the stability of this language (Rouchdy 1989).

Rilly (2010: 169) mentions that, during the seventeenth and eighteenth centuries, speakers of Kordofan Nubian languages fled

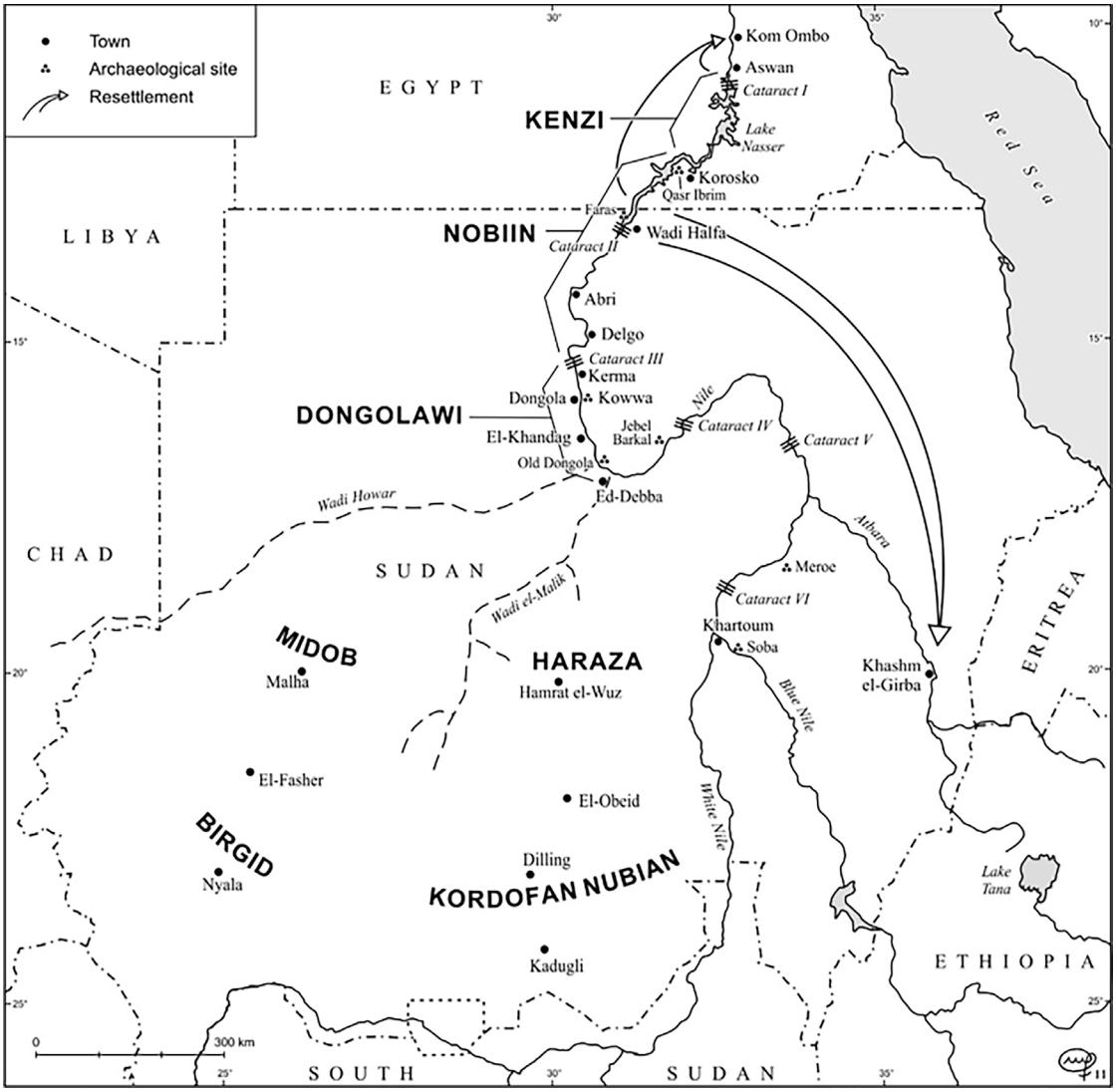

Figure 5. Map showing the current aerial spreading of Nubian languages.

from slave raids and settled in the Nuba Mountains. But it is important to keep in mind that the actual divergence between Kordofan Nubian languages must have started much earlier, as they are quite distinct lexically and grammatically. More generally, the hypothesis that the Nuba Mountains provided a refuge from slavery is questioned by Dimmendaal (2015: 54-63), as the Nuba Mountains did not provide any natural form of defense. One could only hide there, in caves, for short periods, since the fertile fields—where the refugees would necessarily have grown their food—were to be found in the lower regions of this plateau area. Furthermore, there do not appear to exist oral traditions about such recent migrations (with the exception of Daju of Lagowa). Additionally, no simplified contact languages developed; the development of such languages comprises a process observed when speakers of different tongues come into contact with each other and search for a common "emergency language" as a channel of communication. Most likely, then, speakers from the savannah areas joined Nubian communities that had already settled in the Nuba Mountains in the more distant past, as did so many other communities escaping the desertification in neighboring zones, probably over thousands of years. Other Nubian communities migrated towards the Nile area, where they developed contacts with speakers

of Afroasiatic languages like Egyptian or various Cushitic languages; speakers of Nilo-Saharan languages like Meroitic; and with the ancestral speech communities of Kunama and Nara, if not other Nilo-Saharan speech communities as well.

Abbreviations:

ABS	= absolutive
ACC	= accusative
CNV	= converb
DSC	= different subject converb
M	= masculine
NOM	= nominative
PFV	= perfective
PL	= plural
PLR	= pluractional
PRS	= present
PST	= past
SG	= singular
SSC	= same subject converb
3	= third person

Bibliographic Notes

A general overview of typological variation within Nilo-Saharan from a historical point of view is found in Dimmendaal, Ahland, Jakobi, and Kutsch Lojenga (2019). The same article also presents a brief summary of the most relevant literature on classificatory issues. Dimmendaal and Jakobi (2020) present an overview of variation between Nubian languages and other Eastern Sudanic languages. Van Gerven Oei (2021) gives a detailed overview of Old Nubian. For an extensive survey of the relevant literature on Nubian and its closest relatives within Nilo-Saharan, the reader is referred to Rilly (2008); the latter source is also a key publication on Nubian's closest relative, the extinct language Meroitic, and on lexical as well as grammatical cognates with forms in languages also belonging to the northern branch of Eastern Sudanic (Nara, Taman, and Nyima).

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Figure 1. Maps showing the increase in human settlements in the Nile region after the last Ice Age. (Produced by Monika Feinen, University of Cologne, based on Kuper and Kröpelin 2006.)

Figure 2. Map of northeast Africa showing an ancient north-to-south verb-initial diffusion zone, of which Egyptian is the northernmost representative. (Produced by Monika Feinen, University of Cologne.)

Figure 3. Map of archaeological evidence for migrations into and out of the Wadi Howar. (Produced by Monika Feinen, University of Cologne.)

Figure 4. Map showing the typological split between Northeastern Nilo-Saharan groups and the link with their genetic classification. (Produced by Monika Feinen, University of Cologne.)

Figure 5. Map showing the current aerial spreading of Nubian languages. (Produced by Monika Feinen, University of Cologne.)