

An initial sketch on Wali phonology (a Sudanese endangered language)

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Abstract

This paper aims to provide an initial sketch of the phonology of Wali language (the Wali consonant and vowel system). Interviews was the main tool of data collection where two wali males were the informants. The data were elicited using the SIL Comparative African Wordlist (SILCAWL) by Snider and Roberts (2006). The data were first recorded with 200 H4nPro Handy Recorder as audio files. Then the recordings were transcribed in IPA and analyzed. It is found that the consonant system of Wali is similar to that found in Hill Nubian languages. Wali has 19 consonants, they are divided into two major classes, obstruents and sonorants. In addition, the inventory of Wali vowels consists of 8 vowels /a, o, e, ɔ, ə, a, u, i/.

Keywords: Phonology, consonants, vowels

المستخلص

تهدف هذه الدراسة الوصفية إلى تقديم تصور أولي عن النظام الصوتي للغة، وإلى إحدى لغات جبال النوبة المهددة بالانقراض، بحيث ترتكز على الصوامت والصوائب. وعليه، اعتمدت الدراسة على بيانات أولية تم جمعها من متحدثين من الذكور للغة (والى) عن طريق عدد من المقابلات الشخصية. استخدمت قائمة الكلمات الأفريقية المقارنة التي أعدها شنايدر وروبرتسون في عام 2006م. تم تسجيل البيانات أولاً باستخدام مسجل صوت متخصص في العمل ميداني (nPro Hand4). ثم تم تفريغ التسجيلات باستخدام نظام الأبجدية الصوتية الدولية وتحليلها. توصل البحث إلى أن موقف لغة (الوالى) المجتمعى، ومدى تمديدها يتطلب إجراء المزيد من الدراسات العلمية. نسبة اختلاف آراء الباحثين بخصوص تصنيفها فمثى: من يصنفها بأنها لغة مهددة بالانقراض، ومنهم من يصنفها على أنها لغة حية- أضاف إلى ذلك مشابهة نظام الصوائب في لغة (الوالى) النظام الموجود في لغات جبال النوبة- يوجد في لغة الوالى 19 صائتاً وهي مقسمة لخمسين وهم: الأصوات المعوقة، والرنانة- يتكون نظام الصوائب من 8 فوئيم.

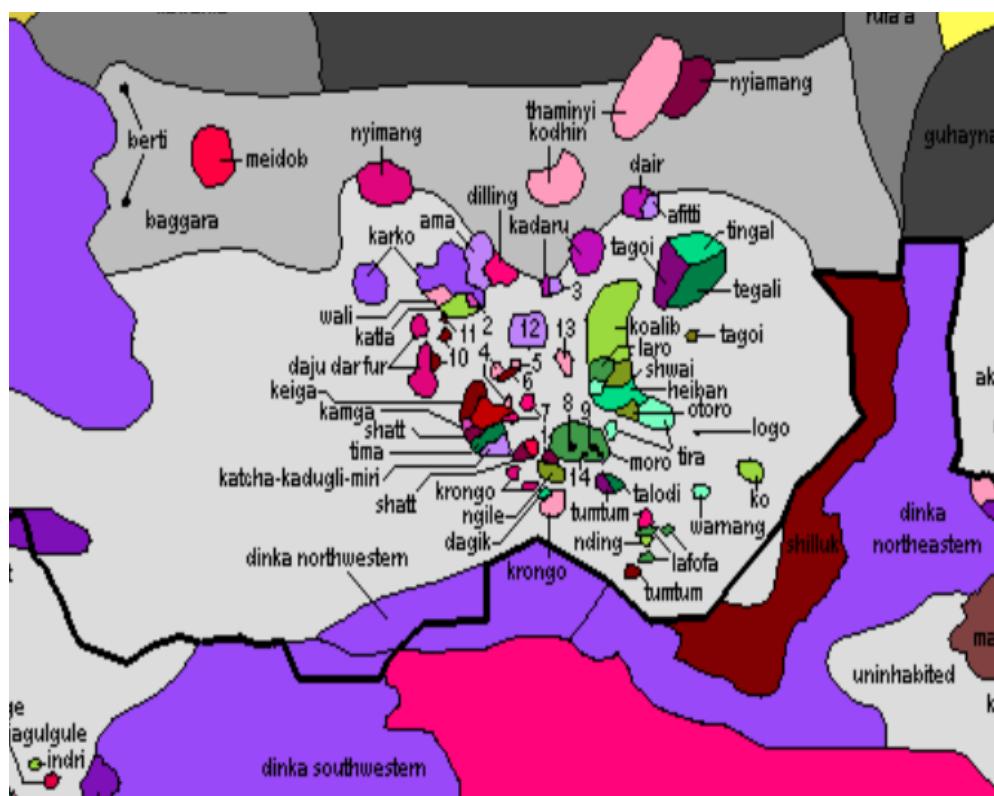
الكلمات المفتاحية: النظام الصوتي، الصوائب، الصوامت

1. Background information on Wali

In Sudan, including South Sudan until the cessation 2011, more than 120 languages and dialects belonging to three different language families, Niger-Congo, Nilo-Saharan, and Afroasiatic, are spoken. These languages are not evenly distributed, as most of them are spoken in the Nuba Mountains, in Darfur, in the Blue Nile region and in the Republic of South Sudan. A considerable number of the languages are highly endangered (Miller and Abu Manga 1992; Mugaddam 2006a; Mugaddam 2006b).

The term “Nuba Mountain languages” refers to the forty-plus languages natively spoken in this area, to the exclusion of regional varieties of Arabic. These languages can uncontroversially be assigned to ten linguistic (genetic) groups (Schadeberg and Blench 2013: 3). Hiban 10 languages, Talodi 8 languages, Lafafa 1 languages, Katla 2 languages, Rashad 2 languages, Nyimang 2 languages, Temein 2 languages, Daju 2 languages Nubian 7 languages, Kadu 6 languages.

Wali is a Nilo-Saharan Hill Nubian language, spoken in the northwestern Nuba Mountains (Krell, 2012,11).

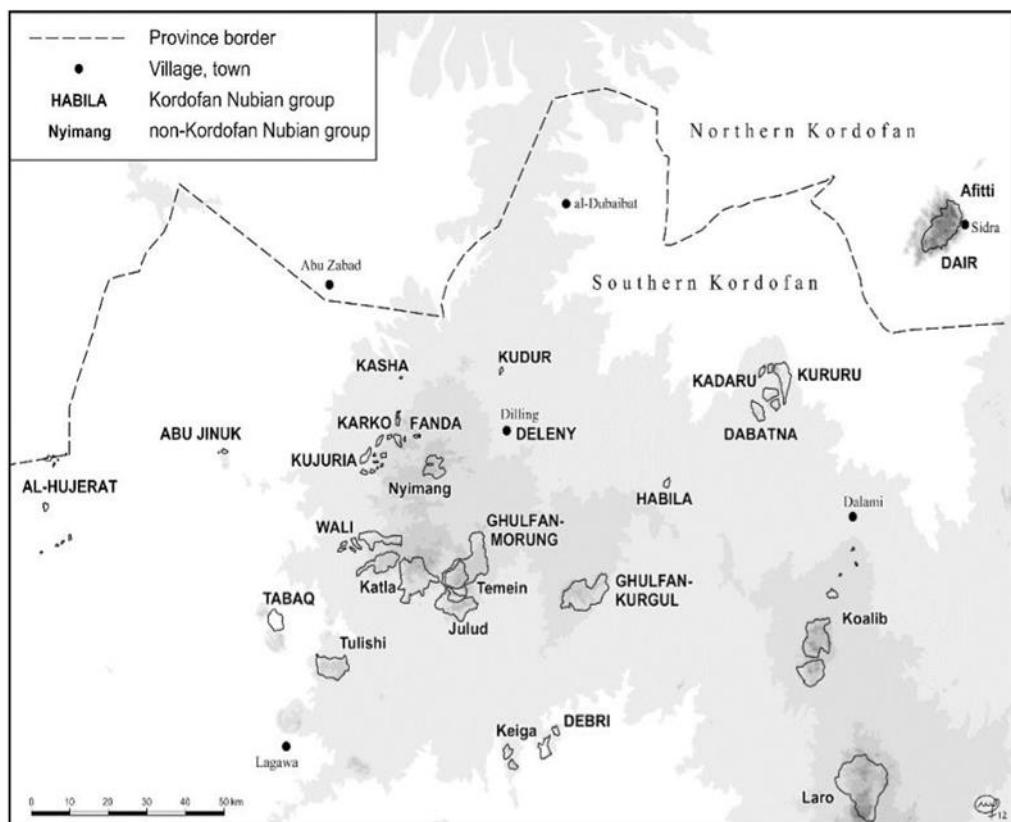


Map 1: Nuba Mountain languages

(Source: <https://www.muturzikin.com/cartesafrigue/26.htm>)

2.1. Location of the Wali

The Wali Hills (wáli) lie to the south of the KARKO Hills, 30 miles south-west of Dilling, and include the hill-villages of Wali Baboi or Boboi [...], Wali Kurum (or Kurun, Kuron), and Abu Seida (or Seidi) [...]. I have at present very little material on this dialect (walíri-je), which is recognized by its speakers and others as distinct from KARKO, etc.” (Stevenson 1956:115). Wali (also Walari, and Walarishe) is a language spoken in the northwestern Nuba Mountains, Wali Hills, south of Karko Hills. It was spoken by about 9,000 people (in 2007), and some monolinguals still existed (ELP n.d.). This information is based on the Ethnologue (Lewis 2009).



Map 2: Languages in the northern Nuba Mountains (Jakobi and Hamdan, to be published)

As for its genetic classification, Kordofan Nubian – along with Midob and Birgid of Darfur - represents the western branch of the Nubian language family, the eastern branch being formed by the Nubian languages of the Nile Valley, Nobiin, Kenzi and Dongolawi. According to Claude Rilly, ⁽¹⁾Nubian is genetically related to Nara in Eritrea, Ama (Nyima) in the Nuba Mountains, Tama of Darfur, and even to the extinct Meroitic language. All these

¹⁰ Rilly, C. (2010). *Le meroïtique et sa famille linguistique*.

languages are conceived of forming the northern subgroup of Eastern Sudanic which, in turn, is a primary branch of Nilo-Saharan" (Jakobi and Hamdan, to be published, p. 4)

2.2. Classification of Wali language

According to Bell (1995, 3) languages such as Masakin and Koalib in the Nuba Mountains belong to the Niger-Congo language family. A second group of languages belongs to the Nilo-Saharan language family. "Greenberg's (1963) inclusion of the four remaining language groups (Nubian, Nyimang, Temein and Daju) into Eastern Sudanic" (Schadeberg and Blench 2013, 14). Wali is an Eastern Sudanic Nubian language of the Nilo-Saharan family (see Figures 1 and 2).

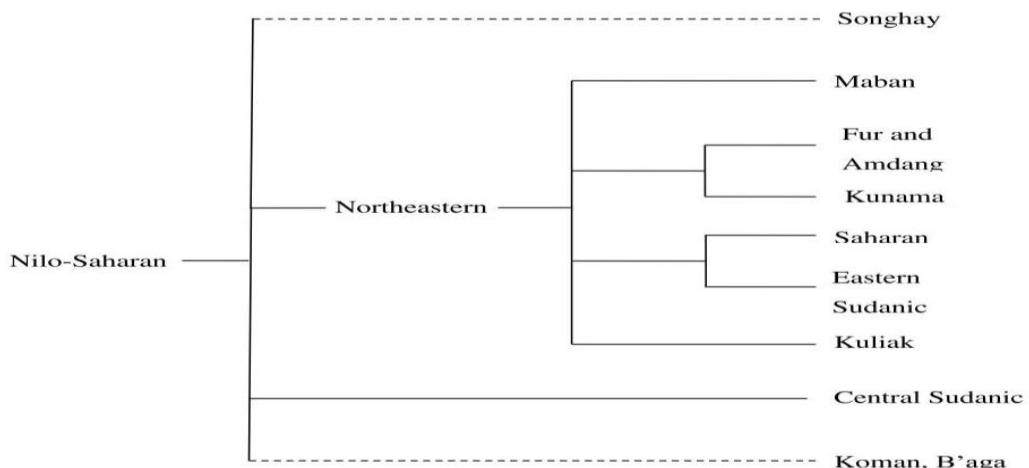


Figure 1: The Nilo-Saharan subclassification (Jakobi and Dimmendaal 2019, 4)

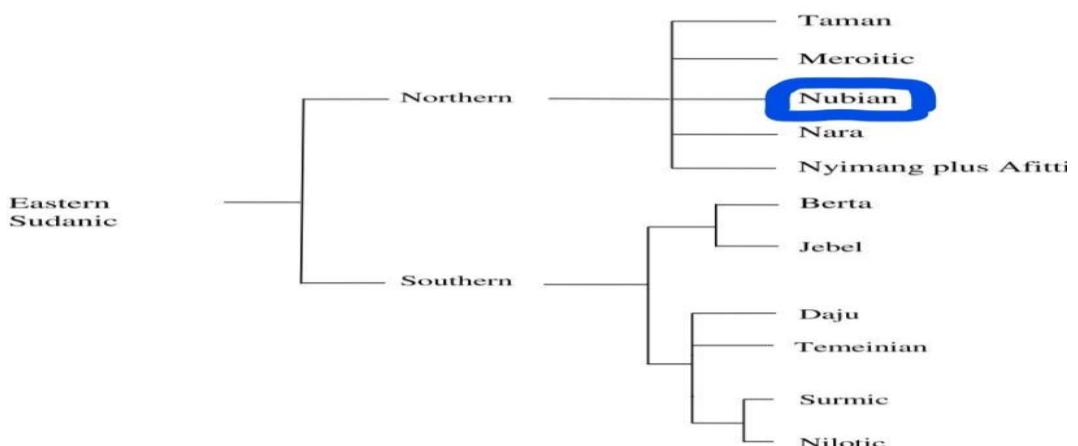


Figure 2: Eastern Sudanic languages (Jakobi and Dimmendaal 2019, 3)

The Ethnologue listing for Wali includes the following information: Wali [wll]: Alternative names: Walari, Walarishe. Classification: Nilo-Saharan, Eastern Sudanic, Northen, Nubian, Central, Hill, Unclassified Dialects: None listed. [...] They live in the Wali Hills, south of the Karko Hills. Wali is an SOV language (Krell 2012,6).

2.3. Wali Endangerment

Language endangerment is the most current and important issue in linguistic studies all over the world. With the fast development in communication media the world is witnessing, linguists are now convinced that about 90% of the world's languages are deemed to die in the next few centuries. Because of the important place languages as human heritage and important data in explanation of human history, funds have been raised to record and document these languages before they disappear without leaving a trace. The results of all the language surveys carried out at the Institute of African & Asian languages or elsewhere confirm the fact that the Sudanese local languages are drastically recessing and retreating before the rapid spread of Arabic." (Abu-Manga 2006:7). According to Schadeberg and Blench (2013, 3) about 1.7 million people live in the Nuba Mountain today, and we may assume that more than one million are more or less active speakers of one of the Nuba Mountains languages.

The Language Survey of the Sudan was launched in 1972 by the Institute of African and Asian Studies, University of Khartoum. The survey was designed to map patterns of language use in selected communities throughout the Sudan. Yusuf al-Khalifa Abu Bakr and Herman Bell travelled to Nuba Mountains in early 1976 to initiate fieldwork there. The Dilling team then conducted a survey of selected communities throughout the Nuba Mountains with field supervision provided by Muhammed Yusuf Sid Ahmad of the Institute of African and Asian Studies. The survey of the Wali - Julud region was conducted with great energy and skill by Bushra Ahamed Shaqi (Yusuf Sid Ahmed and Ahamed Shaqi 1978). A majority of the young children 70.7% have not yet been to school or Khalwa. Almost two thirds of these, i.e. 65.5%, declared Dilling (Wali), but not Arabic to be their mother tongue." (Bell 1995). "A random sample covered about 20% of the households in the villages of Wali and Julud. There were 166 persons interviewed, the great majority of these belonging to the ethnic groups of the Wali Nubians and the Julud. Only about 4 people out of every 5 in the sample claimed to speak some Arabic. More than two thirds of the people sampled spoke the Dilling Nubian language (Wali). Almost a third of the sample spoke Katla (Julud) (Bell 1995).

More recently, Krell (2012,4) describes a language survey conducted in January and February of 2007 among speakers of Ama, Karko, and Wali. These languages are spoken in villages of the northwest of the Nuba Mountains, Sudan. Wordlist and interview were utilized as method of obtaining data. The main goals of this research were to get an approximate number of languages that are spoken in the survey region, collect data on their ethnolinguistic identities, gauge the vitality of each of them, and to determine the relationships that exist between these languages. The research was conducted to help make decisions on the best ways to meet the needs of these speech communities for language development and literature. Krell (2012:17) concludes that "Wali is a vital language with

no indication of language shift. Karko and Wali show 29% linguistic similarity based on an evaluation of wordlists, obtained during this survey. This indicates that they should be considered linguistically as different languages with no inherent intelligibility. Because of this linguistic dissimilarity between Karko and Wali, it is unlikely for these speakers to be able to share literature without becoming bilingual. However, Karko and Wali speakers have a shared ethnolinguistic identity, and generally view themselves as speaking the same language (Ajang).

Abu-Manga (2006,8) shows in the following Table a classification of the most endangered languages in Sudan according to the degree of endangerment measured against number of speakers that are given in Ethnologue. Ethnologue (Lewis 2009) reported 9,000 speakers (2007) but Abu-Manga listed 487 speakers in the table below, which shows the lack of reliable data about Sudanese languages and the need for research. The population of Wali speakers was listed as 487 (1977 Voegelin and Voegelin, as reported in the Ethnologue), and Brenzinger (2007,200) listed Wali as a language with less than 500 speakers and as a 'severely endangered language'.

Table 1: Severely endangered languages (with less than 1,000 speakers) in Sudan (source: Abu-Manga 2006, 8)

Language	Number of speakers	Family
Aja	200 (1993)	Nilo-Saharan
Aka	300 (1989)	NS
Borugu	494	Niger-Kordofanian
Gula	200 (2000)	NS
El-Hugeirat	200 (2000)	NS
Indiri	7000	NK
Kelo	200	NS
Lafofa	600 (2000)	NK
Mangayat	400	NK
Moda	600	NS
Molo	100	NS
Nding	400	NK
Njalgulgule	900	NS
Wali	487	NS

Endangered Languages Project (ELP n.d.) classifies the Wali language as threatened (20 percent certain, based on the evidence available)" (according to information from Ethnologue (Lewis, 2009).

According to Glottolog 4.8 (n.d.), Wali is "shifting" according to the AES (Agglomerated Endangerment Status) classification, which measures how endangered a language is. A 'shifting' language is in a worse condition than a 'threatened' one. The next steps on the scale are 'moribound', 'nearly extinct' and 'extinct'. On the other hand, as

mentioned before, Krell (2012,17) estimated the Wali language to be “a vital language with no indication of language shift”. It thus seems that the sociolinguistic situation and level of endangerment of the Wali language need further research.

3. Methodology

In this study, the data were elicited using the SIL Comparative African Wordlist (SILCAWL) by Snider and Roberts (2006), prepared with sentences and phrases in Arabic by the researcher. The data were first recorded with 200 H4nPro Handy Recorder as audio files during two months of elicitation with my informants in 2022. Then the recordings were transcribed in IPA and analyzed. This method was used to collect data through interviews with my informants with lists of nouns translated to Wali.

The interviews were conducted at the informants’ homes in Al-Samrab, Khartoum. The homes were sufficiently quiet for doing recordings. All interviews were recorded. At first, I started with recording the data, then the transcriptions were done, after that I did the analysis. The Wali informants were the following two men:

The main informant: was born in 1970. Place of birth: Wali village. Ethnicity: Wali. Parents: Native speakers of Wali. Language skills: Wali speaker since birth, and Arabic second language speaker. Wali language use: He speaks Wali with his family, I witnessed this. Profession: soldier. Education: Bahri high school in 1992.

The second informant: was born in 1990. Ethnicity: Wali. Place of birth: Wali village. Parents: Native speakers of Wali. Language skills: Mother language: Wali, second language: Arabic. Wali language use: He speaks Wali with his family, as he told me. Profession: worker. Education: University of Al-Quran Alkarim in Khartoum. I only collected a limited number of words from this informant.

The data was collected in Khartoum and not in the Nuba Mountains due to the unstable security situation. That would have caused difficulties, risks and high costs of travel and thus made research in the Nuba Mountains impossible.

4. Data analysis and discussion

This section presents the results reached at on the segmental phonology of Wali language. It starts with consonants, then vowels.

4.1. Wali consonants

The Wali consonant system consists of seven places of articulation: bilabial, labiodental, alveolar, post alveolar, palatal, velar and pharyngeal. With regard to the manner of articulation, Wali consonants have two classes: the class of obstruents which is characterized by the presence of voiceless plosives, voiced plosives, voiced fricatives and voiceless fricatives, and secondly the class of sonorants which includes nasals, liquids and glides.

Table 2: Consonant inventory of Wali

	Bilabial	Labio-dental	Alveolar	Post-alveolar	Palatal	Velar	Pharyngeal
Plosives	p b		t d			k g	
Fricatives		F	S	ʃ ʒ		X	ħ
Nasals	m		N			ŋ	
Approximants			l r				
Glides	w				j		

Wali has 19 consonants phonemes (see table 20). They are divided into two major classes, obstruents and sonorants. The obstruents include plosives and fricatives, while sonorants include nasals, liquid and glides. In Wali there are six stops /p, b, t, d, k and g/ and six fricatives /f, s, ʃ, ʒ, x and ħ/. Three nasals /m, n, and ŋ/, approximants /r/, /l/, and glides /w/ and /j/. The phonemes /x/ and /ħ/ are loan phonemes from Arabic.

Table 3: Near minimal pairs and similar environments of Wali consonant phonemes

Phoneme	Word pair	Gloss
/p/ /k/	pál kál	‘dog’ ‘fish’
/t/ /d/	tóró dó�	‘deaf’ ‘tongue’
/f/ /t/	fór dó�	‘muscle’ ‘tongue’
/k/ /ʃ/	kéł ʃéł	‘room’ ‘house’
/p/ /ʃ/	póó’ ʃóó’	‘hump of a cow’ ‘cow’s udder’
/m/ /n/	kómi kóni	‘mouse’ ‘rabbit’

/r/	kár	'barn'
/l/	kál	'fish'
/w/	wító`	'seed'
/k/	kító`	'door'
/ʒ/	ʒílì	'teeth'
/p/	pílì	'dogs'
/b/	bértau`	'handicapped'
/k/	kárto`	'kind of animal (in Arabic keikab)'
/t/	ándító`	'son'
/j/	ándíjó`	'uncle'
/t/	kókrtí`	'hen'
/ŋ/	kókrnji`	'hens'
/s/	sábi`	'decorative stick'
/i/	íknábí	'mean'
/h/	si`hérkó`	'wizard' (Arabic loan word)
/g/	sígéníkó`	'prison' (Arabic loan word)
/x/	xát	'string' (Arabic loan word)
/b/	bát?	'duck' (Arabic loan word)

Arabic has emphatic sounds, e.g., /s?/. Wali speakers pronounce the emphatic sounds the same way as mother-tongue Arabic speakers, e.g. s?álá 'prayer', bát? 'duck'.

4.2. Wali vowels

The phonemic inventory of Wali vowels consists of 8 vowels, as shown in the Table below:

Table 4: Vowel inventory of Wali

	Front	Central		Back
Close	I			U
Close-mid	E	Ө		o
Open-mid				ɔ
Open	a			ɑ

The Wali inventory of vowels is similar to the Karko inventory of vowels, which has the front vowels /i, e, ε, a/, the back vowels /ə, ɔ, o, u/ (Jakobi and Hamdan not published yet).

Table 5: (Near) Minimal pairs of Wali vowels

Phoneme	Minimal pairs	Gloss
/a/	kár	‘barn’
/u/	kür	‘shield’
/ɔ/	kɔ̄r	‘war’
/ɔ/	tɔ̄:	‘pumpkin bowl’
/i/	ti'	‘cow’
/o/	i'lo'	‘lazy’
/i/	i'li'	‘women’
/u/	ú:li'	‘chest’
/i/	i'li'	‘women’
/ɔ/	dɔ̄r	‘tongue’
/e/	dér	‘wool’
/ə/	bér	‘leather’
/a/	fɑ:’	‘drum’
/i/	fi:’	‘language’

5. Conclusion

This descriptive study aims at providing a sketch on Wali phonology; focusing on consonants and vowels (segmental phonology). The fact that it may be one of the Sudanese endangered languages encourages the researcher to make this study, however, the sociolinguistic situation and level of endangerment of the Wali language need further research due to many different points of views, between those who see it as endangered language and others who see it as not endangered. Therefore, I hope that this paper encourages others to pursue further studies on Wali, especially in the following areas of research:

- 1/ deep phonological description
- 2/ description of morphophonemic alternations
- 3/ description of the inflection properties of nouns, such as the case marking on nouns.

References

- Abu-Manga, A. (2006). *Linguistic Diversity and Language Endangerment in Sudan*. Accessed on 4 August 2022 at: <https://ich.unesco.org/doc/src/00142-EN.pdf>
- Alshareef, W.M. (2018). Genitive constructions in Abu Jinuk. In Schneider-Blum, G., Hellwig, B. and Dimmendaal, G.J. (eds.), *Nuba Mountain Language Studies: New Insights*. Cologne: Rudiger Köppe Verlag.
- Bell, H. (1995). *The Nuba Mountains: Who Spoke What in 1976?* A Communication presented to the Third Conference on Language in Sudan (Language Situation in Sudan) at the Institute of African and Asian Studies, University of Khartoum, 3-5 December 1995. Accessed on 4 August 2022 at: <https://org.uib.no/smi/sa/tan/nuba.html>
- Brenzinger, M. (2007). *Language diversity endangered*. Berlin and New York: Mouton de Gruyter.
- Corbett, G.G. (2000). *Number*. Cambridge: Cambridge University Press.
- Dimmendaal, G.J. (2000). Number marking and noun categorization in Nilo-Saharan languages. *Anthropological Linguistics*. Vol. 42, No. 2 (Summer, 2000), 214-261.
- Dimmendaal, G.J. (2018). A typological perspective on the morphology of Nilo-Saharan languages. University of Cologne (February 2018), pp. 1-42. To appear in: *Oxford Research Encyclopedia of Linguistics*. Accessed on 9 July 2024 at: https://www.researchgate.net/publication/323446821_A_t typological perspective on the morphology of Nilo-Saharan languages
- ELP. (n.d.). Wali. Language metadata. Accessed on 4 August 2022 at: <https://www.endangeredlanguages.com/lang/3339>
- Glottolog 4.8. (n.d.). Spoken L1 Language: Wali (Sudan). Accessed on 14 October 2023 at: <https://glottolog.org/resource/languoid/id/wali1262>
- Greenberg, J.H. (1963). *The Languages of Africa*. Bloomington: Indiana University.
- Hyman, L.M. (2007). Tone: Is it different? Draft prepared for *The Handbook of Phonological Theory*, 2nd Ed., Blackwell (J. Goldsmith, J. Riggle & A. Yu, eds), pp 483-528. Accessed on 17 October 2023 at: https://escholarship.org/content/qt1sr5f98x/qt1sr5f98x_noSplash_949cccd3c6fbeeaa9391ad5d57bc1ea7f5.pdf?t=pdtkmp
- Jakobi, A. and Dimmendaal, G.J. (2019). Number marking in Karko and Nilo-Saharan. Accessed on 14 October 2023 at: <https://www.researchgate.net/publication/330426017-Number-marking-in-Karko-and-Nilo-Saharan>
- Jakobi, A. and Dimmendaal, G.J. (2022). Number marking in Karko and Nilo-Saharan. In Acquaviva, P. and Daniel, M. (eds.), *Handbook of Number in the World's Languages: A Comparative Handbook*. Berlin, Boston: de Gruyter Mouton, pp. 1-39. Accessed on 6 December 2023 at: https://www.academia.edu/38151452/Number_in_Karko_and_Nilo_Saharan
- Lewis, M.P. (2009). *Ethnologue: Languages of the World*, 16th Edition. SIL International.

- Maddieson, I. (2013). Tone. In Dryer, M.S. and Haspelmath, M. (eds.), *WALS Online* (v2020.3). Accessed on 17 October 2023 at: <https://wals.info/chapter/13>
- Miller, C. and Abu-Manga, A. (1992). *Language change and national integration: Rural migrants in Khartoum*. Khartoum: Khartoum University Press.
- Mugaddam, A.R.H. (2006a). Language maintenance and shift in Sudan: The case of ethnic migrant groups in Khartoum. *The International Journal of the Sociology of Language*, 181: 123-136.
- Mugaddam, A.R.H. (2006b). Language status and use in Dilling City, the Nuba Mountains. *Journal of Multilingual and Multilingual Development*, 27(4), 290-304.
- Quint, N. and Manfredi, S. (eds.) (2020). Special issue: Langues des Monts Nuba/Languages in the Nuba Mountains. *Faits de Langue: Journal of language diversity*, vol. 51, issue 1 (Nov 2020), 1-220. Accessed on 22 July 2024 at: https://brill.com/view/journals/fdl/51/1/fdl_51.issue-1.xml
- Schneider-Blum, G. and Hellwig, B. (2020). Property concepts in Tabaq: More than one road can lead to Rome. *Faits de Langues*, Volume 51, Issue 1, 63-78.
- Schneider-Blum, G., Hellwig, B. and Dimmendaal, G.J. (eds.). (2018). *Nuba Mountain Language Studies: New Insights*. Cologne: Rudiger Koppe Verlag.
- Snider, K. and Roberts, J. (2006). *SIL Comparative African Wordlist (SILCAWL)*. SIL International. Pp 1-49.
- Trask, R.L. (1999). *Language: The Basics*, 2nd edn. London: Routledge.
- Voegelin, C.F. and Voegelin, F.M. (1977). *Classification and index of the world's languages*. (Foundations of Linguistics series.) New York, Oxford, Amsterdam: Elsevier.
- Yusuf Sid Ahmed, M. and Ahamed Shaqi, B. (1978). *Language Survey of the Sudan*. Institute of African and Asian Studies, University of Khartoum.