

STRATEGIES OF SEMANTIC CHANGE IN LOAN WORDS IN THE NILOTIC LANGUAGES: DINKA, NUER, AND BARI

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Abstract

This descriptive and analytical study aims to examine the various strategies of semantic changes that take place in words borrowed into Dinka, Nuer, and Bari, members of the Western Nilotic group of the Nilo-Saharan languages (Greenberg 1970) spoken by a majority of the South Sudanese population. Data was collected from native speakers for both Dinka and Nuer, and from Awad's (2015) study for Bari. The loan words were then subjected to linguistic analysis to investigate the linguistic mechanisms of their adaptation into the semantic systems of these languages. It is shown that meaning change may result from different processes or strategies, such as generalization, specialization, or radical change in a word's meaning, while changes can also occur in the emotive content of words.

Keywords: borrowing, loan words, strategies, semantic changes, linguistic analysis

1. INTRODUCTION

Over the years, semantic change may be classified into various types. A widely accepted form of classification is the one proposed by Bloomfield (1933) and later supported by Stern (1965), Ullmann (1962), and Blank (1999). It involves semantic narrowing, semantic widening, metaphor, metonymy, synecdoche, hyperbole, meiosis, degeneration, and elevation. In all languages, lexical items, either native or foreign, are the most likely words to be subject to alterations in their meaning. Modifications to the meaning of native words or loanwords are referred to as semantic changes in the literature. These strategies are sometimes termed traditional forms of semantic change (Riemer 2010, Moghaddam and Moghaddam 2013, Hollmann 2018). In this study, we present data from Nilo-Saharan languages that exemplify zero semantic change as well as the three broad types of semantic change: broadening/expansion, narrowing, and shift (pejoration and amelioration). The meaning of each one of them is given here before we discuss them further with examples from Dinka, Nuer and Bari in Section 5. Zero semantic change refers to loan words that retain their original meanings from the source language (SL), that is, the language from which a word is borrowed. Semantic broadening/expansion is a process where the meaning of a word becomes more general or more inclusive than its historically earlier form. Semantic narrowing refers to a situation where a term acquires a narrower meaning. In other words, meaning becomes restricted. Semantic shift refers to a total shift in or reversal of meaning. Semantic shift can result in semantic pejoration, where a term acquires a negative association or

semantic amelioration, in which a term acquires a positive association or becomes more favorable.

2. BACKGROUND

Dinka, Nuer, and Bari are classified by Greenberg (1970) as Nilotic, Nilo-Saharan languages. The three languages are spoken by most of the South Sudanese population. Dinka is spoken mainly in the Bahr el Ghazal area (Northern and Western Bahr el Ghazal, and Jonglei States), and in the Upper Nile (Unity State) areas. Nuer is widely spoken in the Great Upper Nile area, mainly in the Unity and Upper Nile States in South Sudan, and Bari is spread across Equatoria (Central, Western, and Eastern Equatoria States). The contacts of the Dinka, the Nuer, and the Bari with Arabic date back to the Turco-Egyptian period (1820-1885), which opened the South to contact with Arabic by different means, as explained by Nyombe (1997). The formal use of English in southern Sudan was promoted by the British administration to replace Arabic. This policy was encouraged by Bishop Gwynne of the Church Missionary Society (1910) (Baraka 1984: 114). English became the official language of South Sudan after its secession from Sudan in 2011. As a result, many words were borrowed. In order to be used in the target languages, loan words are to be subjected to the linguistic systems of these languages. This study aims to analyze the strategies of semantic change or the adaptation of loan words in the Dinka, Nuer, and Bari languages.

3. METHODOLOGY

The following paragraphs provide a description of the methods used in data collection and data analysis.

3.1 Informants

For the loan words in Dinka, 104 loan words were collected in random order from eleven native Dinka speakers in Khartoum, while four other Dinka speakers, each one representing one of the four main dialects, checked the accuracy of the data. 143 loan words were randomly collected from a single speaker of Nuer from Fanjak Island (Zeraf Island, Jonglei State). Data from two other Nuer speakers served as a reference to enhance the accuracy of the observations. The Dinka and Nuer data was cross-checked by young Nuer and Dinka speakers. A documentary reference (Awad 2015) was the source of information on the Bari language, in addition to many interviews with the researcher, Mawahib Al Tayeb Mustafa Awad, for more information whenever it was needed. 88 loan words on Bari were obtained from Awad's (2015) study.

3.2 Methods and procedures of data collection

Interviews were the main tool for data collection. More than fifty interviews were conducted with several Dinka and Nuer informants. Of the eleven Dinka informants, 8 were male while 3 were female. The age range of the 11 male Dinka participants was 37-70 years old, while the female ones were 40, 57 and 60 years old. The other four Dinka informants were three males and one female, ranging in age between 32 and 68 years old. In addition, there were three Nuer informants: two males (aged 28 and 55) and one female (aged 36). The collection of the data took about nine months and was conducted in Khartoum State, Sudan. All interviews for the eleven Dinka and the main Nuer informant were audio recorded. Each informant was asked to say as many loan words as they could remember, then the words were rechecked by the other informants, including their pronunciation, meanings, whether the loan words have native equivalents in the Nuer and Dinka languages, and when they are used. The informants in some cases mentioned borrowed words when they were asked to say the native equivalents; this may indicate that loan words are deeply rooted in the languages into which they have been borrowed, and have been used by native speakers for long enough to become seen as native words.

The researcher used both Arabic and English in the interviews. Audio recording was used in the interviews as mentioned, in addition to some written notes taken by the researcher. Each word was repeated many times to capture its pronunciation and used in different sentences to see whether it remains as it is in its source language, i.e. whether loan words maintain the grammatical categories of their source languages or follow Dinka and Nuer rules. They were also asked to state the meaning of loan words in the Dinka and Nuer languages. The main task of the six (four Dinka and two Nuer) other informants was to enhance the accuracy of the data through the examination of the pronunciation of the loan words, their meanings, and their grammatical categories. They listened to the recordings of the main informants in order to give their viewpoints, and if they disagreed with any piece of information, we would consult other speakers. We did not come across such cases during data collection. As mentioned in 3.1, the data on loan words in Bari language was obtained from Awad's (2015) study.

4. DATA ANALYSIS AND DISCUSSION

Since borrowing is a consequence of cultural contact between two language communities, one can assume that the semantic fields to which the sampled loan words belong are important because they can shed light on the nature of the relationship between the source language communities (Arab, English, and neighboring communities) on the one hand, and the Dinka, Nuer, and Bari communities, on the other hand. Besides this, they can also give insights into the opportunities of cultural and material or physical contacts. The following sections summarize the distribution of loan words according to semantic fields in each of the three languages.

4.1 Semantic adaptation of loan words in Dinka

In the sample investigated, the primary sources of Arabic loan words are Sudanese Colloquial Arabic (SCA) and the Turco-Egyptian variety of Arabic. There are a few words of English origin borrowed and adapted, firstly by SCA and then by Dinka, e.g. *rādī* 'radio', *pólííth* 'policeman' and *tèlèpuùn* 'telephone'. Relating the three linguistic and sociolinguistic factors mentioned by Greenberg (1970: 43)¹ to Arabic loan words in Dinka, one can say that the source of borrowing would be oral, not written, due to the close contact between speakers of the two languages. There is no case of an "intermediary channel of diffusion", the first factor, except for two words. One is the SCA word *fanilla* 'undershirt', which becomes *panina*. The replacement of /l/ by /n/ is not expected since the phonological system of Dinka permits the medial occurrence of /l/. The second word is *bābūr*, 'steamer' in SCA, which becomes *mābūr*, encountered in the Agar dialect. The replacement of /b/ by /m/ is not justified. Thus, they might be borrowed indirectly through one of the neighboring languages. The third factor, "internal phonological change", is irrelevant to the present study, because the borrowing of Arabic words is relatively recent.

Most of the Arabic loan words are nouns, representing 81.7% (85/104) of the sample. 9.6% (10/104) are adjectives, 9.6% (11/104) are function words and 0.9% (1/104) is a verb. The highest proportion of borrowed words in administration are of Turco-Egyptian origin, since administration was first established during that era. The words relating to households and trade indicate close contacts between the Dinka and Arab communities. Tables 1-6 group Arabic loan words according to their semantic fields, presenting their meanings in both SCA and Dinka, and they also contain the native equivalent Dinka words, i.e., the original Dinka word for each loan word. The main source of information on the equivalent native words in Dinka is the "English to Dinka glossary" (Brisco 2006). The data were later (June 2022) cross-checked with a Dinka informant in Khartoum. According to Brisco (2006), Dinka uses both the Arabic and the Dinka words, or they use one of them. Generally, about 23 of the 104 loan words have no equivalent or native Dinka words, as checked with the informants.

Table 1: Loan words in the field of administration

Arabic words	Borrowings in Dinka ²	Native Dinka words	Glosses
<i>maʕmūr</i>	<i>maamuūr</i>	<i>mac, maandit</i>	paramount chief
<i>muʕfattish</i>	<i>māpādic</i>	-	inspector
<i>muʕdīr</i>	<i>mādiīr</i>	<i>aguir</i>	director/manager/boss
<i>maʕbāḥith</i>	<i>māpaath</i>	-	detective

¹ The three factors are: source of borrowing, intermediary channel of diffusion, and internal phonological change.

² The Dinka words in this paper are written in the Dinka orthography.

Arabic words	Borrowings in Dinka ²	Native Dinka words	Glosses
<i>boo'līs</i>	<i>póliíth</i>	-	police
<i>ta'marji</i>	<i>témérji</i>	<i>leel</i>	nurse
<i>ḥa'kīm</i>	<i>akiim</i>	<i>ran wal</i>	physician
<i>'jeesh³</i>	<i>deēc</i>	-	army
<i>gaḍiyya</i>	<i>gediá</i>	<i>luk</i>	case/affair
<i>si'jin</i>	<i>thíjin</i>	<i>aloc</i>	prison
<i>'gādi</i>	<i>gaādhi</i>	■	judge/magistrate
<i>'ḍābiṭ</i>	<i>dhāpiṭh</i>	<i>mac, maandit</i>	officer
<i>mu'ḥāfiz</i>	<i>múwapiṭh</i>	-	governor
<i>mu'ḥāmi</i>	<i>maāmi</i>	-	lawyer/advocate
<i>ḥi'rāsa</i>	<i>íraáthā</i>	<i>aloc</i>	prison
<i>ḥa'kūma</i>	<i>ákuúma</i>	■	government
<i>'maḥkama</i>	<i>maákamá</i>	<i>baai, pan pa muonyjang</i>	court/tribunal
<i>maḥ'būs</i>	<i>maābuūth</i>	■	prisoner
<i>'shāhid</i>	<i>cāāā't</i>	-	witness
<i>si'yāsi</i>	<i>thíyāth</i>	<i>anem</i>	political
<i>'mujrim</i>	<i>mājrim</i>	<i>kim</i>	criminal
<i>^aa'wāyid</i>	<i>āwaáthā</i>	<i>ajuer</i>	taxes
<i>kharī'jia</i>	<i>Kaārjiyā</i>	<i>tēmec</i>	abroad
<i>raʔīs/rayyis</i>	<i>rēeeth</i>	<i>bāny dit⁴</i>	boss/chief/leader
<i>^aalam</i>	<i>ālaām</i>	<i>beer</i>	flag
<i>ingi'līz</i>	<i>ṇāṇāliiṭh</i>	■	English people
<i>^aas'kari</i>	<i>ālaáthkri</i>	<i>apuruk</i>	military/ martial/soldier
<i>gha'rāma</i>	<i>Káráma</i> (<i>ram⁵</i>)	-	fine
<i>ba'lāgh</i>	<i>bálaak</i>	<i>wic luk</i>	official complaint/report of a fault or a problem

Loan words in the field of administration represent 26.9% of the data. While 17 out of the 29 loan words listed in Table 1 above have equivalent native Dinka words, the remaining 12 do not. Most of these words remain semantically as they are, except *thíyāth* (*siyāsi* in Arabic) 'politician', which is also used by Dinka to mean

³ It is pronounced *deesh* by some Sudanese people.

⁴ It is (N+Adj→chief great)

⁵ *ram*: spoiled derivation from Arabic *garama* (Brisco 2006: 80).

'government spy'. It is an example of semantic pejoration, as will be shown in 4.3.4.

Table 2: Loan words in the field of household utensils

Arabic words	Borrowings in Dinka	Native Dinka words	Glosses
'kooz	<i>koo̯c</i>	-	water mug
ʃa'hān	<i>thääān</i>	-	plate/dish/saucer
'ma ^a lga	<i>maālāgá</i>	-	spoon
kub'bāya	<i>kúbaaýà</i>	<i>biny</i>	cup
'jardāl	<i>jérdāl</i>	-	bucket
ʃan'dūg	<i>thunduug</i>	<i>akup</i>	box
doo'lāb	<i>doōlaāp</i>	-	cupboard
bar'mīl	<i>bermīl</i>	-	barrel
ʔara'beza	<i>tèrbeèc</i>	<i>agen</i>	table
ʃā'būn	<i>thaābuun</i>	-	soap
fa'hām	<i>Pāām</i>	<i>col</i>	charcoal
kib'rīt	<i>kíbrīit</i>	-	matches
ʃa'fīḥa	<i>thāpīyà</i>	-	piece of tin plate/large can

The Arabic loan words in the field of household utensils listed in Table 2 above represent 10.6% of the data and they remain semantically as they are. Only four of the Arabic loan words in the field of household utensils have equivalent words in the Dinka language. The Arabic word *kooz* has also gained political connotations. It is a noun for the members of the Islamic movement, the Muslim Brothers' Party, and the National Congress Party of the former government. It is also used as an adjective to insult people with unacceptable behavior. Dinka reserves this word for a 'water mug', showing semantic narrowing. While the Arabic word *ʃan'dūg* can mean 'box, trunk, case, chest, post office box, ballot box, informal credit association, saving club/fund', it is used in Dinka to mean 'box'. This is an example of semantic narrowing.

Table 3: Loan words in the fields of technology and food

Arabic words	Borrowings in Dinka	Native Dinka words	Glosses
'fās	<i>pāth</i>	<i>yep</i>	axe
'rādi	<i>raadi</i>	-	radio
sa ^a a	<i>thaa</i>	<i>akuen akol</i>	hour/clock/watch
ma'kana	<i>mākānā</i>	-	engine
ga'ṭar	<i>gātār</i>	<i>rian thilik</i>	train
tala'fūn	<i>telepūn</i>	-	telephone
^a ara'biyya	<i>ārābiyà</i>	-	car

Arabic words	Borrowings in Dinka	Native Dinka words	Glosses
<i>mus'ajjil</i>	<i>mūthājīl</i>	-	recorder
<i>bābūr</i>	<i>maabuūr</i>	-	steamer
<i>sha'riṭ</i>	<i>cārīt</i>	-	tape/ribbon/strip/wick (of kerosene lamp or stove)
<i>ʾa'māra</i>	<i>āmaāra</i>	-	building with more than one store
<i>ṭa'hūna</i>	<i>tāwūnā</i>	<i>tola</i>	grinding mill
<i>ṭay'yāra</i>	<i>mabuteer/tīyāār</i>	<i>riän nhial</i>	airplane
<i>kah'raba</i>	<i>kāraba</i>	<i>manyadok</i>	electricity
<i>ma'sūra</i>	<i>maāthuūr/maācuūr</i>	-	pipe/tube/tap
<i>mī'lih</i>	<i>mīlī</i>	<i>awai</i>	salt
<i>suk'kar</i>	<i>thūkār/thōkār</i>	<i>aṇou</i>	sugar
<i>jir'jīr</i>	<i>cīcīr</i>	-	criss
<i>'weka</i>	<i>weēka</i>	<i>goom</i>	dried okra
<i>'shāyi</i>	<i>caī</i>	-	tea

Arabic loan words in the field of technology (14.8%) remain as they are without any change in their meanings, except for the word *ma'sūra*, which means 'pipe/tube/tap' and 'somebody who raises false expectations'. It is used in Dinka to mean 'water pipe', which indicates semantic narrowing. Six out of the 15 words in the field of technology have equivalent words in the Dinka language.

Only two of the five words in the field of food have equivalent words in the Dinka language, and they all retain the meaning of their source language.

Table 4: Loan words in the field of trade

Arabic words	Borrowings in Dinka	Native Dinka Words	Glosses
<i>duk'kān</i>	<i>dukaān</i>	-	shop
<i>'tājir</i>	<i>taājīr</i>	<i>Atet</i>	trader
<i>jal'lābi</i>	<i>jelaāp</i>	<i>Juur</i>	Arab
<i>'sūg</i>	<i>thūk/cuūk</i>	<i>qoc, γῶc</i>	market
<i>ʾabid</i>	<i>ābīth</i>	<i>Alony</i>	slave
<i>ḥisābāt</i>	<i>īthaabaāt</i>	-	accounting
<i>'girish</i>	<i>gīrīc</i>	-	piaster
<i>'girsheen</i>	<i>gīrceēn</i>	-	two piasters
<i>ri'yāl</i>	<i>rīyāl</i>	-	ten piasters
<i>je'neeh</i>	<i>gēnē</i>	<i>Cok</i>	one pound
<i>'tārifa</i>	<i>taārīp</i>	-	tariff

Arabic words	Borrowings in Dinka	Native Dinka Words	Glosses
<i>ʔa'liif</i>	<i>àliip</i>	-	thousand
<i>da'hab</i>	<i>daab</i>	-	gold
<i>gi'zāza</i>	<i>gecaac</i>	<i>Amuc</i>	bottle

Arabic loan words in the field of trade represent 13.5% of the data. Only six of these words have equivalent words in the Dinka language.

One word has extended its meaning in Dinka: *jènè* (Ar. *jineeh*) 'pound', which also means 'hundred' in the Bor dialect. The word *abith* (Ar. *ʿabid*) 'slave', which also means 'market', represents semantic amelioration. The Arabic word *tārifa* used to mean 'half-piaster', when that currency was used, but now it stands for 'price of commodities or transport'. In Dinka, it means 'half-piaster', i.e., semantic narrowing. The Arabic word *ja'lābi* means 'northern Sudanese itinerant trader' (now a pejorative term for northern Sudanese of Arab origin) / 'rich man'. It means 'Arab' in Dinka, and the process of change here is semantic pejoration.

Table 5: Loan words in the field of clothing

Arabic words	Borrowings in Dinka	Native Dinka words	Glosses
<i>ja'lābiyya</i>	<i>jālaabiya</i>	-	traditional men's dress
<i>fa'nilla</i>	<i>pānina</i>	-	undershirt
<i>'rida</i>	<i>redi</i>	-	short
<i>ga'miṣ</i>	<i>gomiṣh</i>	<i>lubo kcu</i>	shirt
<i>'gāsh</i>	<i>gaac</i>	<i>akak</i>	belt
<i>mar'kūb</i>	<i>mākuub/mākuuk</i>	-	local shoes
<i>mī'lāya</i>	<i>mālaaya</i>	-	sheet (bed linen)
<i>ju'wāni</i>	<i>juwan</i>	-	inner

All loan words in the field of clothing (7.5%) remain semantically as they are, except *juwāni* (adjective), which, in Arabic, is used to describe something that is 'deep inside', but in Dinka it means 'underpants' (noun); this represents semantic narrowing. Six loan words have no native equivalents in Dinka.

Table 6: Loan words in the fields of literacy, religion, and everyday life

Arabic words	Borrowings in Dinka	Native Dinka words	Glosses
<i>'qalam</i>	<i>gālām</i>	-	pen
<i>'waraga</i>	<i>wāgāk</i>	<i>Akuthap</i>	paper
<i>na'zir</i>	<i>naajir</i>	-	school headmaster
<i>us'tāz</i>	<i>ūthaac</i>	<i>Bāny</i>	teacher

Arabic words	Borrowings in Dinka	Native Dinka words	Glosses
' <i>madrasa</i>	<i>mádráthá</i>	<i>pana abuun</i>	school
<i>mu^allim</i>	<i>maálím</i>	<i>Bány</i>	teacher
' <i>muslim</i>	<i>míthlím</i>	<i>pan abun</i>	Muslim
<i>ma'sṭhi</i>	<i>māthií</i>	-	Christian
' <i>ruḥḥal</i>	<i>máraám</i>	-	nomad
<i>maẓ'lūm</i>	<i>mādhluúm</i>	-	tyrannized
<i>mas'jūn</i>	<i>māthjuún</i>	-	prisoner
' <i>ẓulum</i>	<i>dhulúm</i>	-	injustice
' <i>lakhabṭa</i>	<i>lákbatá</i>	-	mess/muddle/ disorder/confusion
' <i>bādeen</i>	<i>badèn</i>	<i>na nhiäk</i>	later
' <i>lissa/lissa</i>	<i>lithá</i>	<i>akec guo</i>	not yet/still/early
' <i>lākin</i>	<i>lakín</i>	<i>Ēda</i>	yet/however/but
' <i>keef</i>	<i>kep</i>	<i>Tä</i>	how
<i>abd'dan</i>	<i>abadán</i>	<i>Acie</i>	never
<i>māleesh</i>	<i>máléth</i>	<i>dier</i>	sorry/never mind/ do not worry
' <i>hassa/hassī/ ḥassa/ ḥassi</i>	<i>háthá</i>	<i>Mane</i>	now
<i>kha'lāṣ</i>	<i>káláth</i>	-	enough, that's all
<i>ba'lāsh</i>	<i>pálác</i>	-	enough/leave it
' <i>yalla</i>	<i>yelá</i>	<i>Keyaa</i>	let's go/bye

Loan words in the field of literacy represent 5.6% of the data, in the field of religion 6.5%, and in the field of everyday life 21.4%. With the exception of one word, all words retain their meanings. The exception is the word *máraám* (Ar. *ruḥḥal*) 'nomad/Baggara Arab'. It is used by Dinka to mean 'killer', 'rapist', and 'thief', which represents semantic pejoration.⁶

Generally speaking, all words belonging to these three fields retain their meanings except the words identified in the rest of this paragraph. The word *ùthaác* (Ar. teacher/lawyer) is used by Dinka to mean 'teacher'. This is semantic

⁶ This reflects the Dinkas' grievous experience during the last war (1983-2005): the rebirth of the institution of slavery in the form of organized slave raids. Government-backed Misseriyya (Baggara) benefited from enslaving the local Dinka groups. They attacked Dinka, destroying many of the Dinka villages, killing many people, and capturing thousands of children and women. The captives were taken through the Kiir River to the Baggara villages to be distributed between the raiders as free labor. This resulted in the destruction of the infrastructure since the majority fled their homes and villages (for more than twenty years) to relatively secure areas. Great numbers had no options but to join the military forces of the SPLA to defend themselves (see Nashid 2014: 94-95).

narrowing. The Arabic word *kha'lās* means 'very, extremely, that's all, so much for that, (n) salvation/deliverance'. It means 'enough, that's all' in Dinka, i.e., semantic narrowing. About eight words have no native equivalents in Dinka, such as the two function words (*'keef* for 'how' and *abd'dan* for 'never').

To conclude, in Section 4.1 we saw that most of the Arabic loan words remain semantically as they are. Few of them have been semantically changed, but where they have, these changes can be described as semantic broadening/expansion, semantic narrowing, and semantic shift (semantic pejoration and semantic amelioration).

4.2 The semantic adaptation of loan words in the Nuer language

To start with, about 81.1% (116/143) of the loan words in the sample are borrowed from Arabic, 14.7% (21/143) are borrowed from English, and 4.2% (6/143) are words borrowed from other South Sudanese local languages. Moreover, 97.9% (140/143) of the loan words are nouns, 1.4% (2/143) are adjectives, and the remaining 0.7% (1/143) is a word borrowed from Dinka or Shilluk, which can be used as either a noun or an adjective. About 60.1% (86/143) of the loan words have equivalent words in the Nuer language.

Table 7: The distribution of loan words according to the source languages

Source language	Number of loan words	%	Number of native Nuer words	%
Arabic	116	81.1	70	81.4
English	21	14.7	14	16.3
South Sudanese local languages	6	4.2	2	2.3
Total	143	100	86 (60.1%)	100

There is no variation when the semantic fields of borrowing are considered. Nuer has borrowed words which are used in daily life more than in other fields, and this is the case for all languages. Eight out of nine of the religious words are borrowed from English, and one word from Shilluk, the remaining one, *mawlāna*, is borrowed from Arabic; it is used to mean 'honorable man'. This may be due to the spread of Christianity among the Nuer people. All words for tools, building and building materials, furniture, and toiletries are borrowed from Arabic. Most words used in the fields of literacy, administration and administrative posts, household utensils, food, and clothing are borrowed from Arabic. This is an indicator of the close contact between the Arabic and Nuer languages, which used to be informal and has extended over a long period of time. The contact of South Sudanese languages with the English language takes place through formal channels since it is the official language of the country, the language of education and administration. The words borrowed from the South Sudanese local languages are few and are used in daily

life, food, and religion. In Table 8, each semantic field is divided into two parts, the first one containing Arabic words, and the second containing English words, with the words borrowed from the neighboring languages written in italics.

Table 8: The distribution of loan words in the Nuer language according to semantic fields⁷

Semantic fields	Words in their source language spelling	Number	%
Literacy	<i>galam, galam raṣāṣ, waraga, sabura, ṭabashira, maṣṭara, jam^aa, imtiḥān, karras, barāyia, jadwal</i>	11	7.7
	<i>dictionary, book, timetable</i>	3	2.1
	Total	14	9.8
Toiletries	<i>ṣābūnat, ṣābūnat hammam, ṣābūnat gasīl, fursha, mājūn</i>	5	3.5
Furniture	<i>martaba, milāya, baṭāniyya, sitāra, sarīr, kursī, ṭarabayza, kīs^aafash, nāmusiyyia</i>	9	6.3
Administration and administrative posts	<i>gāḍi, jaysh, mufatish, qarāma, balaq, sijin, ḥakūma, mudīr</i>	8	5.6
	<i>Police</i>	1	0.7
	Total	9	6.3
Electrical equipment and machinery	<i>marwaḥa, kahraba, silik, baṭāriyyia, jihāz, sayf, ^aarabiyyia, wabūr, ṭayara, makwa, thurayyyia, masūra,</i>	12	8.4
	<i>lamp, telephone, radio, battery</i>	4	2.8
	Total	16	11.2
Building and building materials	<i>shubbāk, bāb, ^aamara, maktab, rākuba, kubri, ^aamūd</i>	7	4.9
Tools	<i>kūra, lbra, ṭuriyyia, ṣaṭūr, shabaka, murkab, ḥadīda, ṭabla, musmār, shākūsh, kīs</i>	11	7.7
Clothing	<i>baṭalon, gamīs, sirwāl, libās, shurāb, krafitta, gāsh, toob, sā^aa</i>	9	6.3
	<i>coat, curvet</i>	2	1.4
	Total	11	7.7
Household utensils	<i>shanta, ḥala, jarkana, ṭashit, ṣāj, barmīl, kharṭūsh, jardal, ṣafiḥa, kubāyia, koz mawyyia, kora, zamzamiyyia, ma^alaga</i>	14	9.8
	<i>bag</i>	1	0.7

⁷ The gloss for each word is captured in the tables that follow.

Semantic fields	Words in their source language spelling	Number	%
	Total	15	10.5
Food	miliḥ, shaṭṭa, mulāḥ, shayyia, zayt, ^a aragi, suksūka, arazona, baṣṭala, khudra, bārid	11	7.7
	sugar, <i>kenyi</i> , <i>atobob</i>	3	2.1
	Total	14	9.8
Daily life	gadūm, dahab, shōri ^a , ṣawra, duruj, dayn, buṭāga, ma ^a laysh, zurāra, ^a ayān, mule, susta	12	8.4
	sorry, elder, Sunday, Woman group, benzene, zinc, <i>pān</i> , <i>hōt</i> / <i>hot</i> , <i>warombay</i> , <i>jucok</i>	10	6.3
	Total	22	15.4
Religion	mawlāna	1	0.7
	alleluia, Bible, choir, deacon, pastor, Christian, Christ	7	4.9
	Total	8	5.6
Total		143	100

Table 9: Loan words in the field of administration and administrative posts

Words in the source language	Borrowings in Nuer	Native Nuer words	Glosses
<i>mu'fattish</i>	<i>mabitɔc</i> (sg) <i>mabitɔcni</i> (pl)	-	inspector
<i>mu'dir</i>	<i>madhiir</i> (sg) <i>madhiiri</i> (pl)	-	director/manager/boss
<i>boo'lis</i>	<i>bolith</i> (sg) <i>bolithni</i> (pl)	-	police
<i>'jeesh</i>	<i>dēc</i> (sg) <i>dēcni</i> (pl)	<i>rēm</i> (sg) <i>rēmni</i> (pl)	army
<i>si'jin</i>	<i>thijin</i> (sg) <i>thijini</i> (pl)	<i>duel yiegnā</i> (sg) <i>duēl yiegnā</i> (pl)	prison
<i>'gāḍi</i>	<i>gaadi</i> (sg) <i>gaadini</i> (pl)	-	judge/magistrate
<i>ḥa'kūma</i>	<i>kuume</i>	-	government
<i>gha'rāma</i>	<i>karam</i> (sg) <i>karamni</i> (pl)	-	fine

Words in the source language	Borrowings in Nuer	Native Nuer words	Glosses
<i>ba'lāgh</i>	<i>balak</i> (sg) <i>balakni</i> (pl)	<i>goony</i> (sg) <i>goonyni</i> (pl)	official complaint/report of a fault or a problem

The loan words shown in Table 9 above represent 6.3% (9/143); only three words have native Nuer equivalents, which all have the same meaning as their borrowed counterparts.

Table 10: Loan words in the field of household utensils

Words in the source language	Borrowings in Nuer	Native Nuer words	Glosses
<i>'kooz mawyya</i>	<i>koth piini</i> (sg) <i>kuoṯhni piini</i> (pl)	<i>yiöm piini</i> (sg) <i>yiömn̄i piini</i> (pl)	water mug
<i>'ma^alga</i>	<i>malga</i> (sg) <i>malani-malgaah</i> (pl)	<i>gʷek/gʷeh</i> / <i>tʷɔ</i> <i>/tʷɔrʷɔk</i> (sg) <i>tʷɔɔ tʷɔrʷɔk/guiik</i> <i>tʷɔrʷɔk</i> (pl)	spoon
<i>kub'bāya</i>	<i>kubay</i> (sg) <i>kubayni</i> (pl)	<i>yöm piini</i> (sg) <i>yoömn̄i piini</i> (pl)	cup
<i>'jardal</i>	<i>jɛrdɛl</i> (sg) <i>jɛrdɛl̄i</i> (pl)	-	bucket
<i>bar'ɪml</i>	<i>bärmil</i> (sg) <i>bärmil̄i-bärm̄il̄i</i> (pl)	<i>tunyjur</i> (sg) <i>tunyjuri/tuonyjuɔɔri</i> (pl)	viral
<i>ʃa'fɪha</i>	<i>thapiɛ</i> (sg) <i>thapiɛɛni</i> (pl)	-	piece of tin plate/large can
<i>zamzamiyya</i>	<i>dhämdhäm</i> (sg) <i>dhämdhämni</i> (pl)	-	water bottle
<i>kharṭūsh</i>	<i>kartuc</i> (sg) <i>kartucni</i> (pl)	-	water pipe
<i>ʃāj</i>	<i>thac</i> (sg) <i>thacni</i> (pl)	-	griddle
<i>ṭashit</i>	<i>thacit</i> (sg) <i>thacitni</i> (pl)	-	wash basin
<i>jarkana</i>	<i>jerkən</i> (sg) <i>jerkani</i> (pl)	-	plastic bottle
<i>ḥala</i>	<i>halɛ</i> (sg) <i>halɛni</i> (pl)	<i>dhaar thət</i> (sg) <i>dhaari thət</i> (pl)	cooking pot

Words in the source language	Borrowings in Nuer	Native Nuer words	Glosses
<i>kora</i>	<i>kööre</i> (sg) <i>kööreni</i> (pl)	<i>kur</i> / <i>kureë</i> (sg) <i>kurēni</i> / <i>kurī</i> (pl)	bowl
<i>shaṇṭa</i>	<i>canta</i> (sg) <i>cantani</i> (pl)	<i>yuch</i> / <i>yucək</i> (sg) <i>yuchni</i> / <i>yucəkni</i> (pl)	bag
<i>bag</i>	<i>bək</i> (sg) <i>bəkni</i> (pl)	<i>yucək bieyni</i> (sg) <i>yucəkni bieyni</i> (pl)	bag

All words listed in Table 10 above retain their meanings, except the word *kooz*, which is restricted to *kooz moyyia* (water mug). There are also two borrowed words for ‘bag’, which has an equivalent native word in Nuer, from both Arabic (*shaṇṭa*) and English. Only eight words have native equivalents in Nuer.

Table 11: Loan words in the field of food

Words in the source language	Borrowings in Nuer	Native Nuer words	Glosses
<i>mi'liḥ</i>	<i>mile</i> (sg) <i>milēni</i> - <i>Miele</i> (pl)	<i>kade</i> / <i>waaε</i>	salt
<i>shaṭṭa</i>	<i>ciεthe-ceitet</i> (sg) <i>ciεtheni</i> - <i>ceiteni</i> (pl)	<i>mithmith</i> / <i>kuthet</i> (sg) <i>mithmithni</i> / <i>kuthetni</i> (pl)	red pepper
<i>mulāḥ</i>	<i>mulaak</i> (sg) <i>mulaakni</i> (pl)	<i>möl</i> (sg) <i>moḷ</i> (pl)	Sudanese traditional food
<i>shayyia</i>	<i>cäye</i> (sg) <i>cäyēni</i> (pl)	<i>kēl</i> / <i>thiεm</i> <i>kēēl</i> / <i>thiεεm</i>	drilled meat
<i>Zayt</i>	<i>dhēt</i> (sg) <i>dhētni</i> (pl)	<i>liεeth</i> / <i>dēēni wal</i> (sg) <i>lith</i> / <i>dēēni wal</i> (pl)	oil
<i>baṣṭala</i>	<i>mathole</i> (sg) <i>mathaalī</i> (pl)	<i>jäl turuk</i> (sg) <i>jälī rēék</i> / <i>turuk</i> (pl)	onion
<i>khudra</i>	<i>kothro</i> (sg) <i>kothroni</i> (pl)	<i>nyanḡkuacjāḡ</i> / <i>nyanḡ</i> <i>pajāḡ</i> (sg) <i>nyanḡ pajāḡni</i> (pl)	foliage/verdant
<i>bārid</i>	<i>baarid</i> (sg) <i>baaridni</i> (pl)	<i>pi ti kōc</i>	cold drink
<i>sugar</i>	<i>thoker</i> (sg) <i>thokēeri</i> - <i>thokeri</i> (pl)	-	sugar
^a <i>aragi</i>	<i>argiy</i> (sg) <i>argiēyni</i> (pl)	<i>bilbil</i> (sg) <i>bilebieēlī</i> (pl)	local wine made of dates

Words in the source language	Borrowings in Nuer	Native Nuer words	Glosses
<i>suksūka</i>	<i>thukthuke</i> (sg) <i>thukthukeni</i> (pl)	<i>bilbil</i> (sg) <i>bielbieli</i> (pl)	kind of wine
<i>arazona</i>	<i>aradhona</i> (sg) <i>aradhonani</i> (pl)	-	a drink made from dates
<i>kenyi</i>	<i>kɛɛnyi</i>	-	a drink made from sesame
<i>atobob</i>	<i>thobob</i> (sg) <i>thoboobni</i> (pl)	-	a drink

The words in the field of food represent 9.8% (14/143) of the data. Except for four words, the remaining ten words have native equivalent Nuer words; in addition, all words retain their meanings.

Table 12: Loan words in the field of tools and building

Words in the source language	Borrowings in Nuer	Native Nuer words	Glosses
<i>Kūra</i>	<i>kure</i> (sg) <i>kureni</i> (pl)	<i>kur/kurë</i> (sg) <i>kurëni/kuri</i> (pl)	ball
<i>Ibra</i>	<i>libro</i> (sg) <i>libroni</i> (pl)	<i>ribkoɣ</i> (sg) <i>ribkoɣyni/ribkoɣni</i> (pl)	sewing needle
<i>ṭuriyyia</i>	<i>tōriy</i> (sg) <i>tōriyni</i> (pl)	<i>kɔcɔk</i> (sg) <i>kɔaccakni</i> (pl)	hoe/s
<i>ṣaṭūr</i>	<i>mathuur</i> (sg) <i>mathuuri-mathuori</i> (pl)	<i>gooyɛ</i> (sg) <i>gooyeni</i> (pl)	chopper/s
<i>shabaka</i>	<i>cambak</i> (sg) <i>cambakni</i> (pl)	<i>buɔy/ buɔyɛ</i> (sg) <i>buɔyni/ buayni</i> (pl)	fishing net/s
<i>ḥadīda</i>	<i>ladit</i> (sg) <i>laditni-ladietni</i> (pl)	<i>yiëëth</i> (sg) <i>yiëëthni/yɔw</i> (pl)	piece/s of iron/metal
<i>ṭabla</i>	<i>thabla</i> (sg) <i>thablani-thablaah</i> (pl)	-	door knobs/ lock
<i>musmār</i>	<i>muthmaār</i> (sg) <i>muthmaari-mathamiir</i> (pl)	-	nail
<i>shākūsh</i>	<i>cakuc</i> (sg) <i>cakucni</i> (pl)	<i>dey</i> (sg) <i>dëth</i> (pl)	hummer

Words in the source language	Borrowings in Nuer	Native Nuer words	Glosses
<i>kīś</i> ^a <i>afash</i>	<i>kith kuani</i> (sg) <i>kieethni kuakni</i> (pl)	<i>yuc̣oh</i> (sg) <i>yuc̣ohni</i> (pl)	luggage suitcase
<i>shubbāk</i>	<i>cumbak</i> (sg) <i>cumbakni</i> (pl)	<i>buoy/ buoye</i> (sg) <i>buayni/ buoyeni</i> (pl)	window
<i>bāb</i>	<i>bab</i> (sg) <i>babni- baabni</i> (pl)	<i>thiik</i> (sg) <i>thiekni</i> (pl)	door
^a <i>amara</i>	<i>lamaar</i> (sg) <i>lamaari-amari</i> (pl)	<i>tharay/yik</i> (sg) <i>tharayni/yikni</i> (pl)	building of more than one store
<i>Maktab</i>	<i>muktāb</i> (sg) <i>muktābni-muktaab</i> (pl)	<i>duel kuar</i> (sg) <i>duel kuari</i> (pl)	office
<i>rākuba</i>	<i>rakub</i> (sg) <i>rakubni-rakubni</i> (pl)	<i>gēw</i> (sg) <i>gēwni/gēw</i> (pl)	shelter/s
<i>Kubri</i>	<i>kubur</i> (sg) <i>kuburni</i> (pl)	<i>dīr/wīcdiēer</i> (sg) <i>wuoth/ dieer</i> (pl)	bridge

While 80% of the words in the field of tools have Nuer equivalents, all words in the field of building have them. There is no difference in meaning between the native and borrowed counterparts.

Table 13: Loan words in the field of clothing

Words in the source language	Words in Nuer	Native Nuer words	Glosses
<i>baṇṭa'lon</i>	<i>matalön /maalön</i>	-	trousers
<i>sīrwāl</i>	<i>thurual</i> (sg) <i>thurualni</i> (pl)	-	long underwear
<i>Libās</i>	<i>libāth</i> (sg) <i>libāthni</i> (pl)	-	short underwear
<i>ga'mīṣ</i>	<i>gamith</i> (sg) <i>gamithni</i> (pl)	-	shirt
<i>'gāsh</i>	<i>gac</i> (sg) <i>gacni</i> (pl)	<i>leak ledä</i> (sg) <i>laakni letni</i> (pl)	belt
<i>shurāb</i>	<i>curap</i> (sg) <i>curapni</i> (pl)	-	gloves
<i>krafitta</i>	<i>karpitē</i> (sg)	<i>lōth bieey</i> (sg)	cravat

Words in the source language	Words in Nuer	Native Nuer words	Glosses
	<i>Karpiṭeni</i> (pl)	<i>lööth bieeyni</i> (pl)	
<i>toob</i>	<i>tob</i> (sg) <i>tobni-tuobni</i> (pl)	<i>biy mi rieth/biy mi guol</i> (sg) <i>bieyni ti rieth</i> <i>bieyni ti guol</i> (pl)	Sudanese traditional women's dress
<i>sa^aa</i>	<i>thaak-thaah</i> (sg) <i>thaakni-thaahni</i> (pl)	<i>theem caṇ</i> (sg) <i>theemni caṇ</i> (pl)	hour/clock/watch

Words in the field of clothing represent 6.3% (9/143) of the data, and they all retain the original meaning from the source language, i.e., all the native and borrowed counterparts listed in Table 13 have identical meanings. Five words do not have Nuer equivalents.

Table 14: Loan words in the fields of literacy and religion

Words in the source language	Borrowings in Nuer	Native Nuer words	Glosses
<i>'qalam</i>	<i>galam</i> (sg) <i>galamni</i> (pl)	-	pen
<i>'waraga</i>	<i>waregak</i> (sg) <i>waregakni</i> (pl)	-	paper
<i>galam raşş</i>	<i>galam jiaath</i> (sg) <i>galamni jien</i> (pl)	-	pencil
<i>sabura</i>	<i>thubure</i> (sg) <i>thubureni</i> (pl)	-	blackboard
<i>ṭabashira</i>	<i>thabaciir</i> (sg) <i>thabaciiri</i> (pl)	-	chalk
<i>maştara</i>	<i>marthore</i> (sg) <i>marthoreni</i> (pl)	<i>keek</i> (sg) <i>keekni</i> (pl)	roller
<i>jam^aa</i>	<i>jame</i> (sg) <i>jameni</i> (pl)	-	university
<i>imtiḥān</i>	<i>yiömtiaān</i> (sg) <i>yiömtiaāni</i> (pl)	<i>hōon/thēm</i> (sg) <i>hōon/thēm</i> (pl)	examination
<i>karras</i>	<i>karath</i> (sg) <i>karathni</i> (pl)	-	exercise book
<i>barāyia</i>	<i>baraya</i> (sg) <i>barayani</i> (pl)	<i>ṇät/wiṭwiṭ</i> (sg) <i>ṇätni/wiṭwiṭni/wiṭ/wiṭni</i> (pl)	pencil sharpener

Words in the source language	Borrowings in Nuer	Native Nuer words	Glosses
<i>jadwal</i>	<i>jiduɔl</i> (sg) <i>jiduɔli</i> (pl)	<i>guir laätdä</i> (sg/pl)	timetable/ small river
<i>mulāna</i>	<i>muɔlan̩i</i> (sg) <i>muɔlanini-muɔlaneni</i> (pl)	-	judge or religious man
<i>alleluia</i>	<i>alleluia a liak te ke</i> <i>kuoth</i>	-	Alleluia
<i>Bible</i>	<i>baybol</i> (sg) <i>bayboli-baybolni</i> (pl)	-	Bible
<i>choir</i>	<i>Kuaay</i> (sg) <i>kaayni</i> (pl)	<i>ji puɔnyā kuoth</i> (sg) <i>ji puɔnyā kuoth</i> (pl)	choir
<i>deacon</i>	<i>dhiket</i> (sg) <i>dhiketni</i> (pl)	-	deacon
<i>pastor</i>	<i>pathtɔr</i> (sg) <i>pathtori</i> (pl)	<i>yien dɛet</i> (sg) <i>yieen dɛet</i> (pl)	pastor
<i>Christian</i>	<i>Kurcin</i> (adj-sg) <i>Kurcini</i> (adj-pl)	<i>raan yecu</i> (sg) <i>nɛɛ yecu</i> (pl)	Christian
<i>Christ</i>	<i>Keritho-kriho</i> (sg) <i>Kerthoni-krithoni</i> (pl)	<i>kuāar-yecu</i> (sg) <i>kuāār -yecuni</i> (pl)	Christ

There are 14 words relating to literacy, representing 9.8% of the data; 11 (7.7%) words are Arabic, and the remaining three (2.1%) are English ones. 50% (7/14) of them do not have equivalent native Nuer words. The nine religious words are borrowed from both Arabic (1 word, 0.7%) and English (7 words, 4.9%). They all retain their original meanings. Nine loan words in Table 14 above have no Nuer equivalents.

Table 15: Loan words in the field of electrical equipment and machinery

Words in the source language	Borrowings in Nuer	Native Nuer words	Glosses
<i>marwaḥa</i>	<i>maruɔɔr</i> (sg) <i>maruɔɔri</i> (pl)	-	fan
<i>kahraba</i>	<i>karabe</i> (sg) <i>karaben̩i</i> (pl)	-	electricity
<i>silik</i>	<i>thilik karabe</i> (sg) <i>thilikni karabe</i> (pl)	<i>wiin/liy</i> (sg) <i>liɛyni/liyni/wien̩i/wiini</i>	wire
<i>baṭāriyyia</i>	<i>batariy</i> (sg) <i>batariyni</i> (pl)	<i>tuany miit/lāl/ meer</i> (sg)	battery

Words in the source language	Borrowings in Nuer	Native Nuer words	Glosses
		<i>miitni/ lāli meerī (pl)</i>	
<i>jihāz</i>	<i>jaath (sg)</i> <i>jaathni (pl)</i>	<i>liiŋ (sg)</i> <i>liiŋni (pl)</i>	device
<i>sayf</i>	<i>thεεb-theeb (sg)</i> <i>thεεbni-theebni (pl)</i>	<i>mut mi thil toy (sg)</i> <i>mutni ni thil toy (pl)</i>	sword
^a <i>arabiyyia</i>	<i>arbiε</i>	<i>thrumbil⁸ (sg)</i> <i>thuorbiεeli (pl)</i>	car
<i>babūr/ wabūr</i>	<i>babuur-mabuur (sg)</i> <i>babuuri-mabuuri (pl)</i>	-	steamer or boat
<i>ṭayara</i>	<i>tayaar (sg)</i> <i>tayaari (pl)</i>	<i>riey nhial (sg)</i> <i>riath nhial (pl)</i>	airplane
<i>makwa</i>	<i>makuɔɔr (sg)</i> <i>makuɔɔri (pl)</i>	-	iron
<i>thurayyia</i>	<i>thureya-thurec (sg)</i> <i>thureyeni-thurecni (pl)</i>	<i>liiŋ jcam (sg)</i> <i>liiŋni jcam (pl)</i>	chandelier
<i>masūra</i>	<i>mathuur (sg)</i> <i>mathuuri-mathuori (pl)</i>	-	water pipe/ pipe/tube/tap
<i>lamba</i>	<i>lāmbɛr (sg)</i> <i>lāmbɛri (pl)</i>	<i>rith (sg)</i> <i>rithni/riethni (pl)</i>	lamp
<i>telephone</i>	<i>talɛpoon (sg)</i> <i>talɛpoonni (pl)</i>	<i>liiŋ jcam (sg)</i> <i>liiŋni jcam (pl)</i>	telephone
<i>radio</i>	<i>radiɛw (sg)</i> <i>radiɛwni (pl)</i>	<i>thom (sg)</i> <i>thomni/thuɔmni (pl)</i>	radio
<i>battery</i>	<i>batariy (sg)</i> <i>batariyni (pl)</i>	<i>tuany miiɬ/lāl/ meer (sg)</i> <i>miitni/ lāli meerī (pl)</i>	battery

The 15 (11.2%) borrowed words in the field of electrical equipment and machinery are Arabic (12 words, 4.8%) and English (4 words, 2.8%). Only five words do not have native Nuer words. There is no semantic change.

⁸ *Thrumbil* is borrowed from SCA, originally an English word, 'automobile', borrowed by SCA to become *turumbil*.

The loan words in the fields of furniture and toiletry shown in Table 16 below represent 6.3% (9 Arabic words) and 3.5% (5 English words) respectively. Six words do not have native Nuer equivalents, and all of them retain their original meanings.

Table 16: Loan words in the fields of furniture and toiletry

Words in the source language	Borrowings in Nuer	Native Nuer words	Glosses
<i>martaba</i>	<i>matäbe</i> (sg) <i>matäbeni</i> (pl)	-	mattress
<i>milāya</i>	<i>malya</i> (sg) <i>malayani</i> (pl)	-	sheet (bed linen)
<i>baṭāniyya</i>	<i>patan</i> <i>patani</i>	-	blanket
<i>sitāra</i>	<i>thitaar</i> (sg) <i>thitaarni</i> (pl)	<i>geel</i> <i>geeli</i>	curtain
<i>sarīr</i>	<i>thiriir</i> (sg) <i>thiriiri</i> (pl)	<i>dhaṇ</i> (sg) <i>dhaaṇni/ dhaani</i> (pl)	bed
<i>kursi</i>	<i>Kurthi</i> (sg) <i>Kuorṭhini-kurthieek</i> (pl)	<i>kōm nyurä</i> (sg) <i>kōmni nyurä</i> (pl)	chair
<i>ṭarabayza</i>	<i>tharbēt</i> (sg) <i>tharbetni</i> (pl)	<i>kōm kuakni</i> (sg) <i>kōamni kuakni</i> (pl)	table
<i>kīs^aafash</i>	<i>Kith biim</i> (sg) <i>Kieethni biim</i> (pl)	<i>bim</i> (sg) <i>bimni/biemni</i> (pl)	plastic bag
<i>nāmusiyyia</i>	<i>lok thuay-nomthiaya</i> (sg) <i>lok thuayni-bomthiyani</i> (pl)	<i>laṇ</i> <i>laṇni</i> (pl)	mosquito
<i>ṣābūnat</i>	<i>thabuny</i> (sg) <i>thabunyni</i> (pl)	-	soap
<i>ṣābūnat hammam</i>	<i>thabuny puokā</i> (sg) <i>thabunyni puokā</i> (pl)	-	bathing soap
<i>ṣābūnat gasīl</i>	<i>thabuny laḵ</i> (sg) <i>thabunyni laḵ</i> (pl)	-	washing soap
<i>fursha</i>	<i>purcā</i> (sg) <i>purcāni-purcaah</i> (pl)	<i>tuuth lec</i> (sg) <i>tuuthni lec</i> (pl)	brush
<i>ma^ajūn</i>	<i>majuun</i>	<i>wāī tuthā^ˀlec</i> (sg) <i>wal tuthā^ˀlec</i> (pl)	tooth paste

There are 22 words used in daily life shown in Table 17 below (15.4%). They are borrowed from Arabic (12 words, 8.4%), English (6 words, 4.2%), and local languages (4 words, 2.8%). Seven out of 22 words do not have native Nuer equivalents. There is no semantic change recorded.

Table 17: Loan words used in daily life

Words in the source language	Borrowings in Nuer	Native Nuer words	Glosses
<i>gadūm</i>	<i>gudum-gidum</i> (sg) <i>guduumni-gidumni</i> (pl)	<i>kalik</i> (sg) <i>kalikni/ kaliɛkni</i> (pl)	mouth
<i>dahab</i>	<i>daab</i> (sg) <i>daabni</i> (pl)	<i>biɛl/lāŋ</i> (sg) <i>biɛli/lāŋni</i> (pl)	gold
<i>shāri^a</i>	<i>caar</i> (sg) <i>carī-caarɛni</i> (pl)	<i>duɔɔp</i> (sg) <i>dup</i> (pl)	street
<i>ṣawra</i>	<i>thurɛ</i> (sg) <i>thurɛni</i> (pl)	-	picture
<i>duruj</i>	<i>dhuruc</i> (sg) <i>dhurucni</i> (pl)	-	desk
<i>dayn</i>	<i>dhən</i> (sg) <i>dhəni</i> (pl)	<i>ɲuəl</i> (sg) <i>ɲuəl</i> (pl)	debt
<i>buṭāga</i>	<i>patake</i>	-	ID card
<i>ma^alaysh</i>	<i>maalɛc-maaleth</i> (sg) <i>maalɛcni-maalethni</i> (pl)	<i>laŋ/ luc laŋ</i> (sg/pl)	sorry
<i>zurāra</i>	<i>dhuraar</i> (sg) <i>dhuraari</i> (pl)	-	button
<i>^aayān</i>	<i>ayian</i> (adj-sg) <i>ayani</i> (adj-pl)	<i>guan liawä</i> (sg) <i>ji liawni</i> (pl)	sick person
<i>susta</i>	<i>tuthä-thuthkä</i> (sg) <i>tuthäni-thuthkäni</i> (pl)	-	zipper
<i>mule</i>	<i>muul</i> (sg) <i>muol</i> (pl)	<i>kacik/muul</i> (sg) <i>kaciekni/muolli</i> (pl)	mule
<i>sorry</i>	<i>thöri</i>	<i>luclāŋ</i>	sorry
<i>elder</i>	<i>ɛlder</i> (adj-sg) <i>ɛlderī</i> (adj-pl)	<i>dieet/deldel</i> (sg) <i>dit / deldɛəl</i> (pl)	elder
<i>Sunday</i>	<i>thandey</i> (sg) <i>thandeyni</i> (pl)	<i>gat caŋ lɔŋā</i> (sg) <i>gaat caŋ lɔŋā</i> (pl)	Sunday
<i>woman group</i>	<i>wumɛn gurup</i> (sg) <i>wumɛn gurupni</i> (pl)	<i>buɔn mään</i> (sg) <i>bun/buaan mään</i> (pl)	woman group

Words in the source language	Borrowings in Nuer	Native Nuer words	Glosses
<i>benzene</i>	<i>bäny dhiim-</i> <i>bäny dhiin</i> (sg) <i>bäny dhiin</i> (pl)	<i>liεεth maac</i> (sg) <i>liθ maac</i> (pl)	benzene
<i>paan</i>	<i>pan</i> (sg/pl)	<i>dɔr/dεεh</i> (sg) <i>dɔar/dεk</i> (pl)	wildness/ desert
<i>hɔt /hot</i>	<i>hɔt</i> (sg) <i>hɔt- hɔtni</i> (pl)	<i>duel</i> (sg)/ <i>duēēl</i> (adj-sg) <i>duēl</i> (pl)/ <i>duēli</i> (adj-pl)	hut/house
<i>juɔɔk</i>	<i>juɔɔk</i> (sg) <i>juɔɔkni</i> (pl)	-	week of the month
<i>warombay</i>	<i>wärombaay</i> (sg) <i>wärombaayni</i> (pl)	-	The one with whom you married two daughters of the same family, i.e. he and you married two sisters

To sum up, most loanwords (83.9%) in the Nuer language retain the original meanings from the source language. The strategies for the few words that are semantically adapted are semantic narrowing and semantic broadening/expansion.

4.3 The semantic adaptation of loan words in the Bari language

There are 88 loanwords in Awad's (2015) study: 83 are from Arabic, and the remaining five are from English. The following paragraphs include their distribution according to semantic fields. The borrowed words are written as they occur in the Arabic language or the English language. They are written using letters of the Roman alphabet not IPA symbols. Nothing is mentioned in Awad's (2015) study and during interviews about equivalent native Bari words. She focused on the phonological and morphological levels of adaptation; therefore, there is no information included in the tables on Bari native equivalents. Thus, Tables 18-23 present semantic information.

Table 18: The distribution of loan words in Bari according to semantic fields

Semantic fields	Words ⁹ in the source language spelling	Number	%
Literacy	galam, waraga, jam ^a a, maktab	4	4.5
	school, book	2	2.3
	Total	6	6.8
Food	sukkar, ^a aṣīr, bun, baṣala, baṣṭa, tūm, shay, khudra, kisra, fūl, ṭaḥiniyya, lugma, ^a adas, weka, limūn, mangga, baṭāṭis, bamya, fāṣulyya, ṭamāṭima	20	22.7
Furniture	ṭarabayza, dulāb	2	2.3
Money	gurūsh, jineeh, riyāl,	3	3.4
Administration and administrative posts	gāḍi, mudīr, diktōr, dhabīṭ, jesh, mabāḥis, mabāḥith, wazāra, ḥakīm, ^a askari	10	12.5
Technology	maṭār, ṭayara, gaṭar, ^a arabiyyia, babūr, ṭayara	5	5.7
	mobile, generator	2	2.3
	Total	7	8.0
Building and building materials	shubbāk, baranda, ^a amāra, maktab, matbakh, dukān, shafakhana, isbitātya, kanīsa, mustashfa, ṭaḥūna, ^a iyāda, dukkan	13	14.8
Tools	masūra, ḥugna	2	2.3
Daily-life	ma ^a laysh, khalāṣ, lakhata, alif, maḥṭa, fagur, sūg, nāmusiyya, mūs, jāz, banzīn, shāhid lākin, kef, ba ^a deen	15	19.3
Clothing	jalābiyya, sā ^a a	2	2.3
Household utensils	ṣandūg, gizaza, ṣiniyya, jardal, jarkis, jak, ṣabāra	7	7.9
	bag	1	1.1
	Total	8	9.1
Total		88	100

As shown in Table 18, the most affected fields of borrowing in the Bari language are food, daily life, and building and building materials. The words are subjected to the Bari language system phonologically and morphologically while remaining semantically as they are. It should be noted that there are two kinds of *fūl* (beans):

⁹ The gloss for each word is captured in the tables that follow.

fūl Sudani ('Sudanese beans, peanuts') and *fūl Muşri* ('Egyptian beans, fava or broad beans'). Bari uses the second one: *pul misri*.

Table 19: Loan words in the field of food

Words in the source language	Words in Bari	Glosses
^a aşīr	asir	juice
bun	bun	coffee
başala	basala	onion
başta	basta	baklava
Tüm	tum	garlic
kisra	kisra	local Sudanese food (bread)
fūl	pul misri	beans
ṭaḥiniyya	tānia	food made from sesame and sugar
lugma	luguma	local Sudanese food (a.k.a. ^a asīda) / bite
khudra	kudura	foliage / verdant
shay	say	tea
sugar	sukkar	sugar
^a adas	adasan	lentil
weka	wekwatat	dried okra
limūn	lemuntat	lemon
mangga	mangati	mango
baṭāṭis	patatise	potato
bamya	bamiati	okra
fāşulyya	pasuliatat	string beans
ṭamāṭima	tamatimtat	tomato
Total		21 (22.7%)

All the 21 (22.7%) words listed in Table 19 above are Arabic words that retain their meaning, with the exception of only one word that has undergone a process of semantic narrowing: *fūl* (beans).

Table 20: Loan words in the fields of administration and administrative posts, technology, and literacy

Words in the source language	Words in Bari	Glosses
<i>gāḍi</i>	<i>gadi</i>	judge / magistrate
<i>mudīr</i>	<i>mudir</i>	manager
<i>diktor</i>	<i>diktuur</i>	physician
<i>ḥakīm</i>	<i>akiim</i>	physician

Words in the source language	Words in Bari	Glosses
<i>dhabit</i>	<i>dapit</i>	inspector
<i>^aaskari</i>	<i>askari</i>	soldier
<i>jesh</i>	<i>jes</i>	army
<i>mabāḥith</i>	<i>mabasa</i>	detective
<i>wazāra</i>	<i>wajara</i>	ministry
<i>maṭār</i>	<i>matara</i>	airport
<i>ṭayara</i>	<i>tiyara</i>	airplane
<i>gaṭar</i>	<i>gatar</i>	train
<i>^aarabiyya</i>	<i>araabya</i>	car
<i>mobile</i>	<i>mobaayil</i>	mobile
<i>generator</i>	<i>genarata</i>	generator
<i>galam</i>	<i>galam</i>	pen
<i>waraga</i>	<i>waraga</i>	piece of paper
<i>jama^a</i>	<i>jama</i>	university
<i>maktab</i>	<i>maktab</i>	office
<i>school</i>	<i>sukulu</i>	school
<i>book</i>	<i>buk</i>	book
Total		22 (23.9%)

Arabic loan words in the fields of administration and administrative posts (10 words, 12.5%), technology (5 words, 5.7%), and literacy (6 words, 6.3%) retain their meanings when they are used in Bari.

Table 21: Loan words in the field of household items, utensils, and clothing

Words in Arabic	Words in Bari	Glosses
<i>ṣandūg</i>	<i>sanduuk</i>	box
<i>gizaza</i>	<i>kedzada</i>	bottle
<i>ṣiniyya</i>	<i>sinia</i>	tray
<i>jardal</i>	<i>jerdal</i>	bucket
<i>jarkis</i>	<i>jerkis</i>	plastic bottle
<i>Jak</i>	<i>juk</i>	jug
<i>ṣabāra</i>	<i>sapara</i>	water container
<i>bag</i>	<i>beg</i>	bag
<i>jalābiyya</i>	<i>dölöpiya</i>	traditional men's dress
<i>sa^a</i>	<i>saa</i>	hour/clock/watch
Total		10 (11.4%)

There are eight (9.1%) borrowed words used in household items; seven of them are Arabic, and the remaining one is English. Only two Arabic words are borrowed in the field of clothing. All words retain their meanings.

Table 22: Loan words in the field of building

Words in Arabic	Words in Bari	Glosses
<i>shubbāk</i>	<i>subak</i>	window
<i>baranda</i>	<i>parnja</i>	hall
^a <i>amara</i>	<i>amaara</i>	building of more than one store
<i>maktab</i>	<i>maktabtat</i>	office
<i>matbakh</i>	<i>motbk</i>	kitchen
<i>dukkān</i>	<i>dukan</i>	store or shop
<i>shafakhana</i>	<i>sapakana</i>	clinic
<i>isbitātya</i>	<i>jibitali</i>	hospital
<i>mustashfa</i>	<i>musaspa</i>	hospital
<i>kanīsa</i>	<i>konisa</i>	church
^a <i>iyāda</i>	<i>iyada</i>	clinic
<i>ṭaḥūna</i>	<i>tauna</i>	grinding mill
<i>maḥṭa</i>	<i>maata</i>	station
Total		13 (14.8%)

Loan words used in building by Bari represent 14.8% (13 words). They do not undergo any kind of semantic change. Four Arabic words are borrowed for health clinic or hospital: *shafakhana*, *isbitātya*, *mustashfa* (hospital), and ^a*iyāda* (clinic). The two words *shafakhana*, and *isbitātya*, which both mean hospital, are borrowed by SCA from the Turkish language.

Table 23: Loan words of everyday life

Words in the source language	Words in Bari	Glosses
<i>ma^alaysh</i>	<i>males</i>	sorry
<i>khalāṣ</i>	<i>khalas</i>	enough, that's all
<i>lakhāṭa</i>	<i>lakbata</i>	mess/muddle/disorder/confusion
<i>alif</i>	<i>alip</i>	thousand
<i>fagur</i>	<i>faguro</i>	inflexible/rigid person
<i>sūg</i>	<i>soug</i>	market
<i>nāmusiyya</i>	<i>lomosia</i>	mosquito
<i>ḥugna</i>	<i>uguna</i>	injection
<i>mūs</i>	<i>mus</i>	shaver/razor
<i>jāz</i>	<i>jas</i>	gasoline
<i>banzīn</i>	<i>bonjin</i>	benzene
<i>shāhid</i>	<i>suut</i>	witness
<i>gurūsh</i>	<i>gurut</i>	money
<i>jineeh</i>	<i>jene</i>	one pound
<i>riyāl</i>	<i>rial</i>	piaster
<i>lākin</i>	<i>lekin</i>	yet/however/but

Words in the source language	Words in Bari	Glosses
<i>kef</i>	<i>kep</i>	how
<i>ba^adeen</i>	<i>baden</i>	later
Total		15 (19.3%)

All 15 Arabic loan words used in everyday life retain their meanings.

To sum up, with the exception of only one word that has undergone semantic narrowing, the remaining 87 words retain their meanings when used in Bari.

5. STRATEGIES OF SEMANTIC CHANGE IN THE DINKA, NUER AND BARI LANGUAGES

This section summarizes the strategies of Semantic changes in the three languages. It also summarizes the languages from which Dinka, Nuer and Bari have borrowed words in the next paragraph. The main source language of loan words in Dinka is Arabic, while there are borrowings from Arabic, English and South Sudanese languages in Nuer, and from Arabic and English in Bari. This does not indicate that Dinka borrows only from the Arabic language, excluding English and other South Sudanese or African languages, and the same goes for Bari. It could be a result of the data collection process, where the main informants were asked to mention loan words randomly, as far as they could remember. The study includes only the words provided by the informants, which were later rechecked by the additional informants. Then, later, after starting the analysis, the source languages of the loan words were identified. Most loan words tend to retain the original meanings from their source languages (SL), with no semantic change. The processes of semantic change detected in the data are: semantic narrowing, semantic broadening/expansion, and semantic shift (semantic pejoration and semantic amelioration). All processes of semantic change mentioned above are found in Dinka, only two (semantic narrowing and semantic broadening/expansion) in Nuer, and one in Bari (semantic narrowing). For Bari, only one word is semantically adapted, with four words in Nuer and 12 in Dinka.

The following paragraphs present the data from the three languages which exemplify strategies of semantic change.

5.1 Zero semantic change

Most loan words borrowed into Dinka, Nuer and Bari retain their original meaning. As Table 24 shows, the highest number of borrowed words which have retained their meaning in Nuer, Dinka and Bari, are from Arabic.

Table 24: The distribution of words with zero semantic change according to the source language

Source language	Borrowing language	Frequency	%
Arabic	Nuer	120	83.9
	Dinka	83	89.8
	Bari	83	94.3
English	Nuer	21	14.7
	Bari	5	5.7
Local languages	Nuer	6	4.2

5.2 Semantic broadening/expansion

There are borrowed words whose meaning becomes more general or more inclusive than their earlier form. Examples of words whose meaning range increased over time include *wargegak*, which means 'paper' in Arabic. It is used in Nuer to mean both 'paper' and 'Bible.' Dinka also extended the meanings of *wārgāk* to mean both 'paper' and 'book.' In Dinka, the meaning of *jènè* was extended to mean both 'pound' and 'hundred.'

There are two kinds of beans (*fūl*): *fūl Sudani* (Sudanese beans) and *fūl Muşri* (Egyptian beans). Bari uses *pul misri* (the second one) for both kinds.

5.3 Semantic narrowing

Semantic narrowing, which is already defined in the introduction, is also known as semantic restriction. This phenomenon is seen in the borrowed vocabulary of each of the three languages as discussed in the paragraphs that follow.

In Nuer, some of the loan words are restricted in their meaning: For example, *mulāh* means 'the gooey or sticky one,' *mi* means 'something,' *mi lääk rɔ* means something sticky, and *rɔ* is a pronoun which means 'it'. *jadwal* (jiduol) means 'timetable' in Nuer, and *kīs* means a plastic bag which is used to carry anything, but it is used by Nuer speakers to refer to one used to carry only luggage. In addition, it can be used as a compound word in the Nuer word *kith biim*, in which *biim* means 'luggage'.

Dinka also has borrowed words which are restricted in meaning. The Arabic word *kooz* is restricted in meaning in Dinka to mean a 'water mug', *şan'dūg* to mean a 'box', *ma'sūra* to mean a 'water pipe', *tārip* to mean a 'half-piastre', *juwāni* to mean 'underpants', *ùthaác* to mean 'a teacher', and *kha'lāş* to mean 'enough' and 'that's all'.

5.4 Semantic shift

Semantic shift, which could be interpreted as a total shift in meaning and sometimes a shift to the opposite meaning, is found in Dinka. In this process, a word may lose some aspect of its former meaning or take on a partially new, but related, meaning. In this section semantic pejoration and semantic amelioration are discussed as forms of semantic shift.

5.4.1 Semantic pejoration

Semantic deterioration, in which a term acquires a negative association or the meaning of the word becomes less favorable, is seen in a word such as *thíyàth* (*siyāsi* in Arabic) 'politician', is also used by Dinka to mean 'government spy'. The Arabic adjective *jal'lābi*, which is *jalap* in Dinka, means northern Sudanese itinerant trader. It is now a pejorative term for northern Sudanese of Arab origin or a rich man; in Dinka it means 'Arab'. The word *máraám* (*ruḥḥal* in Arabic) 'nomad/Baggara' is used by Dinka to mean a 'killer', 'rapist', and 'thief'.

5.4.2 Semantic amelioration

This form of semantic shift in which a term acquires a positive association or becomes more favorable is also found in Dinka. Semantic amelioration has also been termed as an improvement in the meaning of a word. An example of a word that has undergone amelioration is the adjective *ábìth* (*ʿabid* in Arabic), which means 'slave'. It also means 'market' in Dinka.

6. CONCLUSION

The examination of loan words in the Nilotic languages Dinka, Nuer, and Bari demonstrates that linguistic contact within the Nilotic group, as well as with non-Nilotic communities, has played a decisive role in shaping their lexicons. Borrowed items undergo semantic adaptations that reflect the communities' cultural practices, social structure, and communicative needs. In the process of narrowing, for example, words acquire more specific meanings, and in broadening, the word's meaning is expanded beyond its original scope. These semantic strategies reflect the speakers' agency in reshaping external material into forms that carry local meaning.

Generally, the study of loan words in Nilotic languages underscores the dynamic nature of meaning formation in the context of language contact. Understanding how these languages reinterpret meaning through semantic strategies may shed light on the broader mechanisms of language change and provides understanding of how language contact influences the lexicon of the affected languages.

REFERENCES

- Awad, Mawahib Al Tayeb Mustafa. 2015. "The lexical loan words in the Bari language." In Mohamed Ali Noufal (ed.) *Language and Identity in Africa in the Light of Current Variables*, vol. 2, 332-342. Institute of African Studies and Research, Cairo University.
- Baraka, Maher Zain. 1984. *Language in Education and Policy: A Sudanese Case*. PhD thesis (unpublished), University of Wales.

- Blank, Andreas. 1999. "Why do new meanings occur? A cognitive typology of the motivations for lexical Semantic change." In Andreas Blank and Peter Koch (eds.), *Historical Semantics and Cognition*, 61-90. Berlin/New York: Mouton de Gruyter.
- Bloomfield, Leonard. 1933. *Language*. New York: George Allen and Unwin Ltd.
- Brisco, Mike. 2006. English to Dinka glossary. Derived from SIL International's 2005 Draft *Dinka-English Dictionary*. 9 May 2006.
- Greenberg, Joseph H. 1970. *The Languages of Africa*. Bloomington: Indiana University Press.
- Hollmann, Willem B. 2018. "Semantic change." In Jonathan Culpeper, Francis Katamba, Paul Kerswill and Tony McEnery (eds.), *English Language: Description, Variation and Context*, 321-339. Basingstoke: Palgrave.
- Moghaddam, Azadeh S. and Farimah F. Moghaddam. 2013. A semantic change model for French loanwords in Persian. *Acta Linguistica Asiatica*, 3(2): 71-86.
- Nashid, Sawsan Abdel Aziz Mohammed. 2014. *The Sociolinguistic Situation of Northern Bahr el Ghazal State (South Sudan): A Case Study of Aweil Town*. PhD thesis (unpublished), University of Khartoum.
- Nyombe, Bureng G. V. 1997. "Survival or extinction: The fate of the local languages in the Southern Sudan." *International Journal of the Sociology of Language*, 125, 99-130.
- Riemer, Nick. 2010. *Introducing Semantics*. Cambridge: Cambridge University Press.
- Stern, Gustaf. 1965. *Meaning and Change of Meaning, with Special Reference to the English Language*. Bloomington: Indiana University Press.
- Ullmann, Stephen. 1962. *Semantics: An Introduction to the Science of Meaning*. Oxford: Blackwell.

APPENDICES

In this section, we list the IPA symbols and the corresponding graphemes (orthographic symbols) for each of the languages in a table. This will make it easy for readers to identify the sounds of the words used as examples in this paper.

Appendix 1: Vowels

Table 25: IPA symbols and corresponding graphemes for vowels

IPA symbols for vowels	Graphemes (Orthographic symbols)				
	Dinka	Nuer	Bari	Arabic (Latin)	Arabic (Arabic)
i	i	i:	i	i, ī/ii	كسرة
e	e	e	e	-	
o	o	o	o	-	
ɔ	ɔ	ɔ	ɔ	-	
a	a	a:	a	a, ā, aa	فتحة
u	u	u	u	u, ū, uu	ضمة
ɛ	ɛ	ɛ	-	-	
ë	ë	a	-	-	
ë	ë	ë	-	-	
ä	a	ɐ	-	-	
ö	-	ʌ	ö	-	
ï	ī	l	-	-	
ü	u	-	-	-	
ö	ö	-	-	-	
<u>e</u>	-	-	<u>e</u>	-	
<u>i</u>	-	-	<u>i</u>	-	
<u>o</u>	-	-	<u>o</u>	-	
<u>u</u>	-	-	<u>u</u>	-	

Appendix 2: Consonants

Table 26: IPA symbols and corresponding graphemes for consonants

IPA symbols for consonants	Graphemes (Orthographic symbols)				
	Dinka	Nuer	Bari	Arabic (Latin)	Arabic (Arabic Script)
-	-	-	-	a	أ
b	b	b	b	b	ب
p	p	p	p	-	-
m	m	m	m	m	م

IPA symbols for consonants	Graphemes (Orthographic symbols)				
	Dinka	Nuer	Bari	Arabic (Latin)	Arabic (Arabic Script)
w	w	w	w	w	و
t̪	th	th	th	-	-
ɗ	dh	dh	dh	-	-
nh	nh	nh	nh	-	-
t	t	t	t	t	ت
d	d	d	d	d	د
n	n	n	n	n	ن
l	l	l	l	l	ل
r	r	r	r	r	ر
c/ɕ	c	c	c	-	-
ʃ/ʈʂ	j	j	j	j	ج
ɲ	ny	ny	ny	-	-
y	y	y	y	y	ي
k	k	k	k	k	ك
g	g	g	g	g	ق (SCA)
ŋ	ng	ng	ng	-	-
ɣ	gh	gh	gh	gh	غ
x	-	-	-	kh	خ
ħ	-	-	-	ħ	ح
ʔ	-	-	-	‘	ء
s	-	-	s	s	س
z	-	-	-	z	ز
ʃ	-	-	-	sh	ش
ɖ	-	-	-	ɖ	ض
ʒ	-	-	-	ʒ	ظ
ʕ	-	-	-	ʕ	ع
f	-	-	-	f	ف
q	-	-	-	q	ق
h	-	-	-	h	ه
kʷ	-	-	kw	-	-
ŋʷ	-	-	ngw	-	-
-	-	-	-	dh	ذ
-	-	-	-	ʂ	ص
-	-	-	-	ʈ	ط
-	-	-	-	th	ث