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## **Substrate and Adstrate Influence on (Ki)Nubi: Evidence from Early Records**

### **Abstract**

(Ki)Nubi is an Arabic-lexifier creole, spoken in Kenya and Uganda. Its substrate includes a wide range of languages, of various genetic affiliations: Nilo-Saharan (Acholi, Avokaya, Baka, Bari, Belanda Bor, Bongo, Didinga, Dinka, Jur, Lendu, Lotuho, Lugbara, Luo, Ma'di, Mamvu, Moru, Nuer, Pãri, Shilluk), as well as Niger-Congo (Mundu and Zande). The adstrate languages, all Niger-Congo, are Bangala, Swahili and Luganda. The present paper looks at a number of selected features of (Ki)Nubi which can be attributed to substrate and adstrate influence and which are attested in the earliest extant records of the language: Wtterwulghe (1904), Cook (1905), Jenkins (1909), Meldon (1913), and Owen & Keane (1915). Since (Ki)Nubi is believed to have creolized by the end of the 19<sup>th</sup> century, the records examined provide insights into the earlier stages of the language. The issues covered are developments in the phonology, calques, and loanwords. The analysis of the phonology of early (Ki)Nubi focuses on instances of substitutions of consonants and vowels, the occurrence of variation, “imported” phonemes, and the repair strategies employed for syllable restructuring. The calques recorded in early (Ki)Nubi are shown to be indicative of the existence of areal features, cutting across genetic affiliations. Wherever possible, loanwords are traced to their source languages. Also examined is the possibility of multiple etymology in the case of lexical items attested in several of the substrate and/or adstrate languages.

*Keywords:* (Ki)Nubi, substrate, adstrate, phonology, calques, loanwords

### **Introduction**

(Ki)Nubi is a creole spoken in Kenya and Uganda. Its lexifier language is Sudanese Arabic. The substrate is represented by a large number of languages, belonging to two super-phylums: Nilo-Saharan and Niger-Congo (Owens 1985, Wellens 2003: 207, Nakao 2012: 132, Avram 2020). The former includes Eastern Sudanic languages, such as Bari—including its dialects Kakwa, Pojulu, and Mundari<sup>1</sup>—and Lotuho (eastern Nilotic), Acholi, Belanda Bor, Dinka, Jur, Nuer, Pãri, Shilluk (Western Nilotic), Didinga

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1 Sometimes considered to be separate languages (see e.g. Wellens 2003: 207).

(Surmic), and Central Sudanic languages, such as Avokaya, Baka, Bongo, Kreish, Lendu, Lugbara, Ma'di, Mamvu, Moru. The Niger-Congo super-phylum is represented by e.g. Zande, in particular, and Mundu. As for the adstrate languages, these are all Niger-Congo (Bantu): Bangala, Luganda, Lunyoro, and Swahili.

The present paper analyzes the substrate and adstrate influence on (Ki)Nubi as reflected in Wtterwulghe (1904), Cook (1905), Jenkins (1909), Meldon (1913), and Owen & Keane (1915), the earliest known records of the language<sup>2</sup>. The issues covered are developments in the phonology, calques, and loanwords.

All examples are reproduced in the orthography or system of transcription used in the sources. Arabic forms are transliterated. The following abbreviations are used: C = Cook; J = Jenkins; M = Meldon; O & K = Owen & Keane; W = Wtterwulghe.

The paper is structured as follows. Section 1 focuses on the phonology. Section 2 is concerned with calques and loanwords. The findings are summarized in section 3.

## 1. Phonology

### 1.1. Sources on the substrate and adstrate languages

For the phonologies of the relevant Nilo-Saharan languages the sources are as follows (with the indication of the specific language): Acholi—Carollo (1991), Acholi Language Manual (2009); Avokaya—Kilpatrick (2004); Baka—Parker (1985), Persson (2004); Bari—Spagnolo (1933), Owen (2008); Belanda Bor—Asan & al. (2014); Bongo—Kilpatrick (1985), Persson (2004); Dinka—Duerksen (2004); Kakwa—Onziga & Gilley (2012); Lotuho—Coates (1985), Duerksen (2004); Lugbara—Barr (1965); Luo—Gilley (2004); Ma'di—Kilpatrick (1985), Blackings & Fabb (2003); Moru—Kilpatrick (2004); Nuer—Huffman (1929), Duerksen (2004); Pãri—Simeoni (1978); Shilluk—Westermann (1912).

For the phonologies of the relevant Niger-Congo languages I have relied on the following works: Mundu—Bilau (2004); Zande—Colombaroli (1895a), Bilal (2004); Lunyoro—Maddox (1902); Luganda—Wellens (2003); Swahili—Wellens (2003), Luffin (2005).

### 1.2. Consonants

A number of consonant phonemes found in Arabic, but absent from the phonological inventories of the substrate and adstrate languages, are either substituted or deleted.

All pharyngeal consonants of Arabic are either replaced or lost (Owens 1991, Avram 2015: 184, 2017b, 2020: 327), as shown in (1a-b) and (1c) respectively:

- (1)
  - a. *hāġa* 'thing' > *haja* (C 1905)
  - b. *liġib* 'to play' > *lib* (J 1909: 63)

2 Wtterwulghe (1904) is analyzed in Luffin (2004: 379–387) and by Avram (2017a). For a detailed analysis of Jenkins (1909) the reader is referred to Kaye & Tosco (1993). Avram (2015) analyzes Owen & Keane (1915). For comments on the recently discovered manuscript of Cook (1905) see Nakao (2016).

- c. *ḥarāmī* ‘thief’ > *aram* (C 1905)

All pharyngealized consonants are replaced by their “plain” counterparts (Avram 2020: 327-328):

- (2)
- a. *ṭawīl* ‘long’ > *towīl* (C 1905)
  - b. *marīḏ* ‘ill’ > *marīd* (M 1913: 109)
  - c. *ḥiṣba* ‘measles’ > *hisiba* (O & K 1915: 29)
  - d. *ẓulum* ‘to anger’ > *zulm* (C 1905)

The early (Ki)Nubi reflexes of the Arabic voiceless velar fricative \*x and of its voiced counterpart are \*ɣ are consistently spelled with <k> in Cook (1905), indicative of the substitutions \*x, \*ɣ > k. On the other hand, the spellings with <kh> and respectively <gh> in Wtterwulghe (1904), Jenkins (1908), Meldon (1913), and Owen & Keane (1915) suggest that both velar fricatives still occur. Consider the examples below:

- (3) *ḥidma* > *kidima* (C 1905) vs. *chédma* (W 1904: 18), *khidma* (J 1909: 76), *khidmah* (M 1913: 232), *khidma* (O & K 1915: 13) ‘work’
- (4)
- a. *ṣuḡl* > *shokolo* ‘thing’ (C 1905) vs. *choghl* (W 1904: 14)
  - b. *ḡalaṭ* > *ghalat* (J 1909: 54), *ghalat* (M 1913: 143), *ghalat* (O & Keane 1915: 13) ‘mistake’

Several other consonants found in the etyma undergo substitution. Illustrated below are the most frequently occurring cases<sup>3</sup>.

A number of the substrate languages of Nubi do not have the voiceless alveolar fricative /s/. These include Acholi, Belanda Bor, Bongo, Dinka, Jur, Nuer, Pāri, and Shilluk. The voiceless palato-alveolar fricative /ʃ/ is absent from the inventory of consonant phonemes of an even larger number of languages: Acholi, Avokaya, Baka, Bari, Belanda Bor, Bongo, Dinka, Jur, Lotuho, Ma’di, Moru, Mundu, Nuer, Pāri, Shilluk, Zande. This accounts for the substitutions illustrated below and for the occurrence of alternative phonetic realizations. For instance, the reflex of both \*s (5a, b) and of the so-called “emphatic” \*ṣ (5c) may be [ʃ]:

- (5)
- a. *dussu* > *dushu* ‘hide’ (C 1905)
  - b. *istanna* > *ishtanna* ‘to wait’ (O & K 1915: 12)
  - c. *ruḥṣa* > *ruksha* ‘covenant’ (C 1905)

Free variation of [s] and [ʃ] is also attested:

- (6)
- a. *yābis* ‘dry’ > *abisi* ~ *abishi* ‘dry, shallow’ (C 1905)
  - b. *asʔal* ‘to ask’ > *asado* ~ *ashado* ‘to ask, beg, bother’ (C 1905)
  - c. *sid* > *sadd* ~ *shidū* ‘to shut’ (J 1909: 77)

Conversely the reflex of \*f is often [s], as in the following examples:

3 For other, less frequent cases, see Avram (2017b).

- (7)
- gašš* > *gesi* ‘grass’ (C 1905)
  - šabfān* > *saban* ‘to be satisfied’ (C 1905)
  - ħašm* > *khasma* ‘mouth’ (O & K 1915: 22)

However [ʃ] ~ [s] variation is also documented:

- (8)
- birīš* > *birish* ~ *birissi* ‘mat’ (J 1909: 52)
  - šabaka* > *shabaka* ~ *sabaka* ‘net’ (J 1909: 56)
  - Swahili *shamba* > *samba* (C 1905), *shambah* (M 1913: 164) ‘fields’

Note that [ʃ] ~ [s] variation is still common in modern (Ki)Nubi as well (Owens 1985: 237, Kaye & Tosco 1993: 294, Wellens 2003: 214).

Consider next the fate of etymological \*z and \*dʒ. Acholi, Bari, Bongo, Belanda Bor, Dinka, Jur, Lotuho, Nuer, Pāri, and Shilluk do not have /z/, but all have /dʒ/. Therefore, the reflex of \*z may be [dʒ]:

- (9)
- anzil* > *anjil* ‘to descend’ (C 1905)
  - zaʕlan* > *jalan* ‘angry’ (C 1905)

In several words [z] and [dʒ] are in free variation:

- (10)
- az-zōl* ‘DEF-man’ > *azol* ~ *ajol* ‘man’ (C 1905)
  - Swahili *meza* ‘table’ > *meja* ‘table’ (C 1905), *māizah* ‘table’ (M 1913: 208)

Free variation of [z] and [dʒ] is also attested in modern (Ki)Nubi (Owens 1985: 235, 237, Kaye & Tosco 1993: 294, Wellens 2003: 215) as well as in the closely related Juba Arabic (Avram 2020: 329).

The treatment of \*l and \*r is suggestive of adstratal influence<sup>4</sup>. In Luganda [l] and [r] are in complementary distribution, with [r] occurring after the front vowels /i/ and /e/, and [l] elsewhere (Wellens 2003: 214). Similarly, [l] and [r] are in complementary distribution in Lunyoro: [l] occurs between the vowels /a/ and /e/, /a/ and /i/, /o/ and /e/, /u/ and /e/, /u/ and /i/; there is [l] ~ [r] variation between /o/ and /o/; [r] occurs in all other phonological environments. Finally, in Swahili [l] and [r] are in free variation (Luffin 2005: 79). This explains substitutions such as the following:

- (11)
- al-ħimār* > *lokomal* ‘donkey’ (C 1905)
  - sukar* > *sukal* ‘sugar’ (C 1905)

Two consonants only occur in words of non-Arabic origin. One is the voiceless alveo-palatal affricate /tʃ/:

- (12) unknown source language > *chunyaga* ‘cheat’ (J 1909: 20)

The other borrowed consonant is the voiced palatal nasal /ɲ/, which is found in several loanwords (see also Avram 2020: 328):

4 Although there is some variation and/or confusion of [l] and [r] in some of the substrate languages as well (see Colombaroli 1895a: 391, Luffin 2005: 79).

(13)

- a. Lugbara *nyila* 'shoes' > *nyila* 'boot' (C 1905)
- b. Luganda *nye* > *nyeile* (J 1909: 30), *nyeleh* (M 1913, Animals) 'eland'
- c. Luganda *nyweza* 'to make firm, hold firmly' > *nyinvéza* 'to fix' (C 1905)
- d. unknown source language > *nyakam* 'to plunder' (C 1905), *nyakam* 'to rob' (J 1909: 71) *nyagam* 'to rob' (M 1913: 184)
- e. unknown source language > *nyingili* 'to bleed, to drip' (C 1905)
- f. unknown source language > *chunyaga* 'cheat' (J 1909: 20)

There is variation in the reflexes of geminate consonants in lexical items of Arabic origin (Kaye & Tosco 1993: 277, Avram 2015: 185). In the (Ki)Nubi forms listed in Cook (1905), geminate consonants consistently undergo degemination. However, geminate consonants occur sporadically in Wtterwulghe (1904) and Jenkins (1908) and are generally preserved in the forms recorded by Owen & Keane (1915) and Meldon (1913). Compare the reflexes of Arabic *kallam* 'to speak':

- (14) *kallam* > *kelemu* (C 1905) vs. *kallem* (W 1904: 19), *kellem* (J 1909: 80), *kallama* (M 1913: 200), *kellem* (O & K 1915: 9) 'to speak'

### 1.3. Vowels

A number of forms, most of them occurring in Cook (1905), attest to the substitution of etymological vowels as well. The occurrence of labial consonants in the etymon may trigger the substitution of [u] or, more rarely, [o] for the etymological vowel (Avram 2017b). As shown below, labial attraction can be either progressive (15a-c) or regressive (15d-e):

(15)

- a. *ʕāwiz* > *awuju* 'covet' (C 1905)
- b. *zarība* > *jeruba* 'fence; city, town' (C 1905)
- c. *fatrān* > *foteran* 'tired' (C 1905)
- d. *ramla* > *rumule* 'sand' (C 1905)
- e. *al-ibra* > *lubrah* 'needle' (M 1913: 149)

The substrate and the adstrate languages do not generally distinguish between short and long vowels. The reflexes of Arabic etyma containing long vowels consistently exhibit their short counterparts in Cook (1905) and Owen & Keane (1915), while etymological long vowels occur randomly in Wtterwulghe (1904) and J (1909), but on a regular basis in Meldon (1913):

(16)

- a. *tāni* > *tani* (C 1905), *tāni* (J 1909: 59), *tāni* (M 1913: 156), *tani* (O & K 1915: 8) 'other'
- b. *kabīr* > *kebyr*<sup>5</sup> (W 1904), *kabir* (C 1905), *kabīr* (J 1909: 14), *kebir* (M 1913: 24), *kabir* (O & K 1915: 2) 'big'

5 As noted by Luffin (2004: 380), "il semble que le y soit souvent utilisé pour rendre [ī]".

### 1.4 Syllable structure

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Unlike Arabic, in most of the substrate and adstrate languages there is a strong tendency towards CV syllables (see e.g. Wellens 2003: 221). Consequently, Arabic etyma undergo adjustment. Three repair strategies are employed for the resolution of illicit codas: epenthesis, consonant deletion, and paragoge.

Word-medial codas are frequently resolved via epenthesis. Several phonological processes determine the quality of the epenthetic vowel. For instance, it can be the effect of vowel copying, which is progressive in most cases (17a-d), or, less frequently, regressive (17e):

(17)

- a. *baḥšīš* > *bakasisi* ‘bribe’ (C 1905)
- b. *muṣrān* > *musuran* ‘bowels’ (C 1905)
- c. *ḥiṣba* > *hisiba* ‘measles’ (O & K 1915: 29)
- d. *ḥidma* > *khidima* ‘work’ (O & K 1915: 13)
- e. *irmī* > *erimi* ‘throw’ (J 1908: 87)

Labial attraction, progressive (18a-b) or regressive (18c-d), is also attested:

(18)

- a. *kabda* > *kabuda* ‘liver’ (C 1905)
- b. *waṣṭ* > *wushuto* ‘among’ (C 1905)
- c. *ʔarbaʕīn* > *arubayin* ‘forty’ (C 1905)
- d. *al-ḥarba* > *laruba* ‘spear’ (C 1905)

There is also variation, illustrated by the occurrence of competing forms. The epenthetic vowel in the variants below is [a], via progressive vowel copying, or [u] enforced by labial attraction:

(19) *arbuṭ* > *arabuto* ~ *aruvuto* ‘to bind, to tie’ (C 1905)

Finally, if neither vowel copying nor labial attraction applies, the default vowel [i] or [e] is inserted, as in (20a) and (20b-c) respectively:

(20)

- a. *aglib* > *agilubu* ‘turn’ (C 1905)
- b. *fatrān* > *foteran* ‘tired’ (C 1905)
- c. *ašrab* > *asherub* ‘drink’ (O & K 1915: 4)

Early (Ki)Nubi resorts to two strategies in the case of word-final codas. One such strategy is consonant deletion (see also Kaye & Tosco 1993: 291-292 on J 1909). Consider the following examples:

(21)

- a. *garīb* > *geri* ‘near’ (C 1905)
- b. *aswad* > *ashuwa* ‘black’ (C 1905)
- c. *kadrūk* > *gudrū* ‘pig’ (J 1909: 62)
- d. *rāgil* > *ragi* ‘man’ (Cook 1905)
- e. *munḥar* ‘nose’ > *monkha* ‘nostril (horse)’ (J 1909: 57)
- f. *marfaʕīn* > *morfeɪ* ‘hyena’ (J 1908: 43)

The other strategy is paragoge, with vowel copying:

(22)

- a. *ḥafīf* > *kefifi* ‘easy’ (C 1905)
- b. *zamīl* > *jomili* ‘friend’ (C 1905)
- c. *sudūr* > *shiduru* ‘breasts’ (C 1905)
- d. *birīš* > *birissi* ‘mat’ (J 1908: 52)

As in the case of epenthesis, [i] and [e] are the default paragogic vowels, as in (23a-b) and (23c) respectively:

(23)

- a. *wirk* > *uruki* ‘hip, thigh’ (C 1905)
- b. *le ḥadd* > *ladi* ‘until’ (O & K 1915: 1)
- c. *milḥ* > *mile* ‘salt’ (C 1905)

## 2. Calques and loanwords

### 2.1. Sources on the substrate and adstrate languages

The sources used consist mainly of lexicographic works: Acholi—Savage (1955), Carollo (1991); Bari—Owen (1908); Belanda Bor—Asan & al. (2015); Bongo—Moi & al. (2014); Dinka—Nebel (1979), Blench (2005); Jur—Pozzati & Panza (1993); Luganda—Murphy (1972), Sternfeld & Nickshere (2015); Lugbara—Barr (1965), Lugbara Dictionary (n.d.); Lunyoro—Maddox (1902); Nuer—Huffman (1929); Pāri—Simeoni (1978); Pojulu—Lokosang (2010); Shilluk—Westermann (1912), Kohnen (1994); Swahili—Rechenbach (1967), Ndalú & al. (2013); Zande—Colombaroli (1895b), De Angelis (2002).

The etymologies of selected (Ki)Nubi words are discussed in Nhial (1975), Pasch & Thelwall (1987), Kaye (1987), Abu-Manga (1991), Kaye (1991), Kaye & Tosco (1993), Nakao (2012, 2015, 2016).

Note that all the loanwords listed in 2.3 meet the following requirements: (i) they can be traced to a certain/plausible etymon; (ii) they are not recorded in Sudanese Arabic (Amery 1905, Hillelson 1925, Dickins 2007).

### 2.2. Calques

The influence of the substrate and adstrate languages on (Ki)Nubi is reflected in a number of calques (compounds and phrases). All of these can be traced to several languages.

Consider first the following examples:

- (24) *bete kidada* ‘egg’ (C 1905), *bede gidaada* ‘œuf’ (W 1904: 8), lit. ‘egg hen’: cf. Acholi *tong gweno* ‘egg’, lit. ‘egg hen’; Lugbara *a’ugbe* ‘egg’, lit. ‘hen egg’; Ma’di *à?ú élé* ‘egg’, lit. ‘hen egg’; Shilluk *toṅ gweno* ‘egg’, lit. ‘egg hen’.

- (25) *ida (bita latap)* ‘branch’ (C 1905), lit. ‘hand (+ POSS + tree)’: cf. Belanda Bor *ba’d yat* ‘branch’, lit. ‘arm tree’; Luo *bade yath* ‘branches of a tree’, lit. ‘arms tree’; Shilluk *bade yath* ‘branches of a tree’, lit. ‘arms tree’; Zande *be nguá* ‘branch’, lit. ‘arm tree’.
- (26) *jena el-shagrah* ‘fruit’ (M 1913: 3), lit. ‘child + DEF + tree’: cf. Dinka *manh ë tim* ‘fruit’, lit. ‘child of tree’; Luo *nyethin yath* ‘fruit’, lit. ‘child tree’; Pãri *nyi-yath* ‘fruit’, lit. ‘child tree’; Shilluk *nywole yath* ‘fruit of a tree’, lit. ‘child/offspring tree’.
- (27) *jina kalamoyo* ‘kid’ (C 1905), lit. ‘child goat’: cf. Acholi *latin dyel* ‘kid’, lit. ‘child goat’; Dinka *manh thòk* ‘kid’, lit. ‘child goat’; Luganda *omwana w’embuzi* ‘kid’, lit. ‘child goat’; Swahili *mwanambuzi* ‘kid’, lit. ‘child goat’.
- (28) *jina naja* ‘lamb’ (C 1905), ‘child sheep’: cf. Acholi *latin rɔmɔ* ‘lamb’, lit. ‘child sheep’; Dinka *manh amääl* ‘lamb’, lit. ‘child sheep’; Luganda *omwana gw’endiga* ‘lamb’, lit. ‘child sheep’; Swahili *mwanakondoo* ‘lamb’, lit. ‘child sheep’.
- (29) *jua bita ter* ‘nest’ (C 1905), lit. ‘house’ + POSS + ‘bird’: cf. Acholi *ot winyo* ‘lit. ‘house bird’; Bari *kadi-na-kwen*, lit. ‘house + POSS + bird’; Belanda Bor *kwɔt winy* ‘nest’, lit. ‘house bird’; Shilluk *wot winyo* ‘nest’, lit. ‘house bird’; Zande *doumô zirê* ‘nest’, lit. ‘house bird’.
- (30) *moya ena* ‘tear’ (C 1905), lit. ‘water eye’: cf. Acholi *pig-wañ* ‘tear’, lit. ‘water eye’; Belanda Bor *fi wañ* ‘tears’, lit. ‘water eyes’; Dinka *piu-e-nyin ~ piu nyin ~ piu nyin* ‘tear’, lit. ‘water eyes’; Luo *pi wɔŋ* ‘tear’, lit. ‘water eye’; Pãri *pii-nyin* ‘tear’, lit. ‘water eyes’; Shilluk *pi nyin* ‘tears’, lit. ‘water eyes’.
- (31) *shar el ain* ‘eye lashes’ (M 1913, Parts of the body), lit. ‘hair + DEF + eye’: cf. Acholi *yer wañ* ‘eye lashes’, lit. ‘hair eye’; Bari *kofir-ti-konyen* ‘eye-lashes’, lit. ‘hair + POSS + eyes’; Bongo *bïï komo* ‘eye lash’, lit. ‘hair eye’; Dinka *nhimnyin* ‘eye lashes’, lit. ‘hair eyes’; Luo *yei wɔŋ* ‘eye lash’, lit. ‘hair eye’; Ma’di *mī bî* ‘eyelash’, lit. ‘eye hair’; Shilluk *yei wañ* ‘tears’, lit. ‘hair eye’.

Compounds of the type illustrated above are typical of the Nilo-Saharan Sudanic substrate languages. Moreover, as shown, some of the early (Ki)Nubi forms have structurally similar or identical equivalents in the substrate or adstrate languages. Note, however, that forms structurally similar or identical to those in (28)–(30) are also recorded in pidgins or creoles with different substrate and adstrate languages (Avram 2003; Parkvall & Baker 2012). Therefore, it may be the case that for some speakers “struggling to communicate” in the multilingual contact situation such forms are “lexical innovations” (Parkvall & Baker 2012: 231–232), i.e. they are not necessarily calqued on models provided by substrate and/or adstrate languages<sup>6</sup>.

Consider next the examples below:

- (32) *kashm el beit ~ khasmah el beit* [‘door’] (M 1913: 73), lit. ‘mouth + DEF + house’: cf. Dinka *yöt thok* ‘door’, lit. ‘house mouth’; Lugbara *jotile* ‘door’, lit. ‘house mouth’; Luo *dhe wɔt ~ dho ot ~ dhot* ‘door’, lit. ‘mouth house’; Pãri *dhotho* ‘door’, lit. ‘mouth house’; Zande *ngouadoumô* ‘door’, lit. ‘mouth house’.
- (33) *raso jua* ‘roof’ (C 1905), lit. ‘head house’: cf. Acholi *wi-ot* ‘roof’, lit. ‘head house’; Bari *kwe na kadi* ‘roof’, lit. ‘head of house’; Bongo *dörüü* ‘roof’, lit. ‘head house’; Dinka *ghut-nom ~ qotnhom* ‘roof’, lit. ‘house head’; Lotuho *axou xaji* ‘roof’, lit. ‘head house’; Lugbara *jo-dri* ‘roof’, lit. ‘house head’; Luo *dho-ot* ‘roof’, lit. ‘head house’; Ma’di *ɖʒɔdri* ‘roof’, lit. ‘house head’;

6 See also Avram (2003: 37–35, 2019: 21).



Nuer *wic dwil* ‘roof’, lit. ‘head house’; Pāri *wi-otto* ‘roof’, lit. ‘head house’; Shilluk *wiy wot* ‘roof’, lit. ‘head house’; Zande *ri bambu* ‘roof’, lit. ‘head hut’

Since structurally similar or identical forms are found in Sudanese Arabic<sup>7</sup> these cannot necessarily be attributed to substrate influence on (Ki)Nubi. However, they may be illustrative of substrate reinforcement.

### 2.3. Loanwords

#### 2.3.1. Substrate languages

The overwhelming majority of the loanwords from the substrate languages can be traced to those belonging to the Nilo-Saharan phylum. Listed below are the five lexical borrowings from Bari:

(34)

- a. *gugu* ‘granary, treasury’ (C 1905), *gūgū* ‘granary’ (Jenkins 1908: 39) < Bari *gugu* ‘granary, common barn or storehouse, food store, silo’
- b. *korofai* ‘feuille d’arbre’ (W 1904: 13), *korufu* ‘leaf’ (C 1905), *karraffa* ‘leaf’ (J 1908: 48), *korāfah* ‘branch’ (M 1913: 28) < Bari *karofu* ~ *korópo* (*korófo*) ~ *koró’fo* ~ *кэрэпэ* ~ *koropo* ‘leaves’
- c. *sho-kungu* ‘dance’ (Cook 1905), *kungu* ‘dance’ (Meldon 1913: 54) < Bari *kungu* ‘type of dance’
- d. *kuruju* ‘cultivate’ (C 1905) < Bari *kurju* ‘cultivate, plant’
- e. *turuju* ‘chase away, divorce, drive away’ (C 1905), *tarajū* ‘expell’ (J 1908: 32), *torjū* ‘driving out’ (J 1908: 20) < Bari *turjō* ‘chase away’

Similarly, Lugbara has contributed five words:

(35)

- a. *adro* ‘ancestors; grandfather’ (C 1905) < Lugbara *adro* ‘ancestor’
- b. *jora* ‘bag’ (C 1905) < Lugbara *jurua* ‘bag’
- c. *nyila* ‘boot’ (C 1905) < Lugbara *nyila* ‘shoes’
- d. *nyororo* ‘chain’ (C 1905), *nyororo* ‘chain’ (M 1913: 37) < Lugbara *nyororo* ‘chain’
- e. *seri* ‘fence’ (C 1905) < Lugbara *seri* ‘type of plant used for fencing’

Four loanwords have been traced to Acholi:

(36)

- a. *aguragura* ‘horse’ (C 1905) < Acholi *agura gura* ‘horse’
- b. *banya* ‘debt’ (C 1905) < Acholi *banya* ‘debt’
- c. *la, or lo dwar* ‘hunter’ (C 1905) < Acholi *ladwar* ~ *lodwar* ‘hunter(s)’
- d. *lawoti* ‘neighbours’ (C 1905) < Acholi *lawoti* ‘fellow, friend’

Two loanwords are of Dinka origin:

<sup>7</sup> As well as in Chadian and Nigerian Arabic (see Owens 1996; Avram 2019, 2020).

(37)

- a. *alat* ‘cotton’ (C 1905) < Dinka *alath* ‘cotton plant’
- b. *lwar* ‘abscess’ (C 1905) < Dinka *luär* ‘pain of a swelling’

Finally, the following is a borrowing from Pări:

(38) *mukuta* ‘key’ (C 1905) < Pări *mukuta* ‘key’

The only two loanwords traced to the Niger-Congo component of the substrate are from Zande:

(39)

- a. *kwata* ‘wrestle’ (C 1905) < Zande *kpátá* ‘fight, blow’
- b. *yulu* ‘nuit’ (W 1904: 9) < Zande *yúro* ~ *youróú* ~ *yölö* ‘night’

### 2.3.2. Adstrate languages

Among the adstrate languages, Swahili is by far the most important contributor to the vocabulary of early (Ki)Nubi. Consider the following list of loanwords from Swahili:

(40)

- a. *bakuli* ‘basin’ (C 1905) < Swahili *bakuli* ‘basin, deep dish, tureen’
- b. *dirisa* ‘window’ (C 1905) < Swahili *dirisha* ‘window’
- c. *durbîn* ‘field glasses’ (M 1913: 94) < Swahili *darabini* ~ *darbini* ~ *durbini* ‘binoculars’
- d. *gari* ‘cart’ (C 1905), *gāri* ‘locomotive’ (J 1908: 50), *gari* ‘train’ (J 1908: 88) < Swahili *gari* ‘vehicle, wagon, car’
- e. *kibanda* ‘shed’ (J 1908: 76) < Swahili *kibanda* ‘(diminutive of *banda*) shed’
- f. *kikombe* ‘cup’ (C 1905) < Swahili *kikombe* ‘cup (mug, goblet, etc.)’
- g. *anas bita kolokon* ‘prisoners’ [‘lit. the people in chains’], *kolokon bita bagara* ‘yoke’ [lit. ‘chain of cow’] (C 1905) < Swahili *korokoni* ‘jail’, semantic shift ‘prison > yoke’
- h. *korongo* ‘roan’ (M 1913, Animals) < Swahili *korongo* ‘roan antelope’
- i. *koti* ‘coat’ (C 1905) < Swahili *koti* ‘coat’
- j. *matofali* ‘brick’ (C 1905) < Swahili *matofali* ‘PL-*tofali* ‘brick’
- k. *mbisi* ‘cook’ (C 1905) < Swahili *mpishi* ‘cook’
- l. *mburuzi* ‘flute’, *emburuzi* ‘trumpet’ (C 1905) < Swahili *maburuji* ‘plural of *buruji* ‘soldier who blows the bugle or the trumpet’; confusion with Swahili *buruji* ‘bugle’
- m. *meja* ‘table’ (C 1905), *māizah* ‘table’ (M 1913: 208) < Swahili *meza* ‘table’
- n. *samba* ‘fields’ (C 1905) ~ *shambah* ‘plantation’ (M 1913: 164) < Swahili *shamba* ‘(cultivated) field, plantation, garden’
- o. *waruga bit simu* ‘telegram’ (J 1908: 85), *simu* ‘telephone’ (J 1908: 86) < Swahili *simu* ‘telegram; telephone’

In addition to the loanwords above, Swahili served as an intermediary for several loanwords of ultimately Arabic origin:

(41)

- a. *barāzah* ‘verandah’ (M 1913: 221) < Swahili *baraza* ‘reception room, entrance hall, verandah’
- b. *bonduky* ‘fusil’ (W 1904: 13) < Swahili *bunduki* ‘gun, rifle’

- c. *dokhani* ‘fumée’ (W 1904: 13) < Swahili *dohani* ~ *dokhani*
- d. *fokiri* ‘think’ (C 1905), *fikiri* ‘think’ (J 1908: 87) < Swahili *fikiri* ‘think’
- e. *lakini* ‘pendant que’<sup>8</sup> (W 1904: 24) < Swahili *lakini* ‘but, however’
- f. *samaki* ‘poisson’ (W 1904: 8): < Swahili *samaki* ‘fish’
- g. *sufriyah* ‘cooking pot’ (M 1913, Clothing and equipment) < Swahili *sufuria* ‘(metal) cooking pot’

The following are borrowings from Luganda:

- (42)
- a. *kibri* ‘bois et forêt’ (W 1904: 10), *kibra* ‘forest’ (C 1905), *kibera* ‘thick forest’ (J 1908: 36), *kibrah* ‘forest’ (M 1913: 88) < Luganda *e-kibira*
  - b. *muwemba* ‘grain’ (C 1905) < Luganda *muwemba* ‘sorghum or millet used for making beer’
  - c. *nyele* (J 1909: 30), *nyeleh* (M 1913, Animals) ‘eland’ < Luganda *nyele*
  - d. *nyinveza* ‘fix’ (C 1905) < Luganda *nyweza* ‘make firm, hold firmly’

Finally, Bangala and Lunyoro have each contributed one word, in (43) and (44) respectively:

- (43) *karanga* ‘drought, summer’ (C 1905) < Bangala *kalanga* ‘dry season’  
 (44) *birangwa* ‘bean’ (C 1905) < Lunyoro *birangwa* ‘beans’

### 2.3.3. Multiple etymologies

The origin of a number of loanwords cannot be determined since they can be traced to several source languages:

- (45)
- a. *banja* ‘debt, to owe’ (C 1905): Bari *bánjá* ‘debt’ Lugbara *banja* ‘loan. debt’; Luganda (*e*)*bbanja* ‘debt’, Lny *ibanja* ‘debt’;
  - b. *bongo* ‘cloth, calico’ (C 1905), *bongo* ‘cloth’ (M 1913: 42): Acholi *bongo* ‘cloth’; Bongo *bongo* ‘cloth; dress’; Lendu *bongo* ‘cloth’ Ma’di *ḥōngō* ‘cloth’; Zande *bongo* ‘cloth’
  - c. *danga* ‘bow’ (C 1905), *dangah* ‘bow’ (M 1913: 27): Bari *dang* ‘bow (for shooting)’; Dinka *dhanj* ‘bow’; Luo *danj* ‘arco di legno flessibile’
  - d. *fütukū* ‘leg (of beef, mutton, etc.)’ (J 1908: 49): Lugbara *putuku* ‘hoof of a cow’, Ma’di *putuku* ‘hoof’
  - e. *godogodo* ‘thin from illness’ (C 1905): Acholi, Avokaya, Baka, Bari, Lotuho, Moru, Zande *godogodo* ‘very weak, thin, sick(ly)’
  - f. *kiata* ‘patates douces’ (W 1904: 8), *kyata* ‘potatoes’ (C 1905), *khiaātā* ‘sweet potatoes’ (J 1908: 65): Acholi *kiyata*; Ma’d *kiata*;
  - g. *labolo* ‘banana’ (C 1905), *lobolo* ‘banana’ (J 1908: 12): < Acholi *labolo*, Ma’di *lābōlō* ‘banana’; cf. also Bari *rabolo* ‘banana’
  - h. *maburu* ‘boat’ (C 1905): Bari *mabu(u)r* ‘steamer’; Dinka *mabu(u)r* ‘steamer’
  - i. *mukungu* ‘headman’ (M 1913: 6) < Bari *mōkōngō* ‘sub-chief’; Lugbara *mukungu* ‘county chief’; Luganda *mukungu* ‘high-ranking chief, high-ranking official, dignitary’

8 This is presumably a translation error.

- j. *senene* ‘locust’ (C 1905): Luganda *ensenene* ‘grasshopper’; Lunyoro *nсенene* ‘an edible grasshopper’

Finally, note that the lexical borrowings presented include words hitherto believed not to be attested in (Ki)Nubi (Nakao 2012: 133–135). These are listed below<sup>9</sup>:

(46)

- a. *gugu* ‘granary’
- b. *labolo* ~ *lobolo* ‘banana’
- c. *mukungu* ‘chief’
- d. *putuku* ‘hoof’

#### 4. Conclusions

This paper has looked at a number of selected features of early (Ki)Nubi which can be attributed to substrate and/or adstrate influence. It has been shown that there is significant substratal and, to a lesser extent, adstratal influence on the phonology of early (Ki)Nubi, manifested in losses or substitutions of Arabic phonemes, variation in the phonetic realizations of several phonemes, the occurrence of “imported” phonemes /tʃ/ and /ɲ/, the loss of the length distinction in vowels, and syllable restructuring. The existence of calques which can be traced to several of the substrate and/or adstrate languages of (Ki)Nubi is illustrative of areal features, cutting across genetic affiliations. This is further evidence for what Owens (1996) calls “idiomatic structure”, which is the result of areal convergence. A total of 57 loanwords from the substrate and adstrate languages have been identified. There is already a Swahili lexical contribution (see also Nakao 2012, Avram 2017b), although not on a scale comparable to the situation in the modern Kenyan (Ki)Nubi (Luffin 2003–2004: 299–375; see also Luffin 2014: 314–315). The same holds for the Luganda loanwords which are more numerous in modern Ugandan (Ki)Nubi (Nakao 2012: 133–134). Finally, some loanwords attested in early (Ki)Nubi appear not to occur in the modern variety.

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<sup>9</sup> All of them are also recorded in Juba Arabic (Nakao 2012: 133–135).

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