

ARABIC LOANWORDS IN BAMANANKAN, A PHONOLOGICAL AND MORPHOLOGICAL ANALYSIS

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Mohamadou Hamine WANE

LSH, Université Gaston Berger de Saint-Louis, Sénégal

Mohamadou-hamine.wane@ugb.edu.sn

&

Souleymane BERTHE⁵⁷

LSH, Université Gaston Berger de Saint-Louis, Sénégal

berthesoul223@gmail.com

Abstract: This paper provides a descriptive analysis of Arabic loanwords in Bamanankan. Though genetically different, the integration of Arabic loanwords is due to cultural contact in the domain of religion and trade. Thus, the present study examines, from the viewpoint of Linguistic Borrowing Theory, the phonological and morphological adaptation of Arabic loanwords in Bamanankan. The descriptive analysis method used in this work enables to identify and categorize the Arabic loanwords in Bamanankan. This study highlights the rigid CV syllable structure of Bamanankan and the adaptation of specific phonemes from Arabic language to conform to the phonological system of Bamanankan. The paper seeks to answer how Arabic loanwords integrated Bamanankan, the changes of their phonological and morphological integration, and the degree to which the adaptation exhibits linguistic differences. The results showed that the integration of loanwords occurs both through adoption and adaptation processes. The rate of adaptation is higher than the rate of adoption. In fact, most of loanwords undergo alteration to fit the phonological and morphological system of Bamanankan.

Keywords: Arabic, Bamanankan, loanwords, morphological phonological.

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⁵⁷ Souleymane Berthé is a graduate student

Résumé : Cet article présente une analyse descriptive des emprunts du Bamanankan à l'arabe. Bien que génétiquement différente, l'intégration des emprunts à l'arabe se fait par le biais de contact culturels dans le domaine de la religion et du commerce. Ainsi, la présente étude examine, du point de vue de la théorie de l'emprunt linguistique, les changements phonologiques et morphologiques des emprunts à l'arabe. La méthode d'analyse descriptive appliquée de ce travail permet d'identifier et catégoriser les emprunts à l'arabe. Cette étude met en exergue la structure syllabique CV rigide du Bamanankan et l'adaptation de phonèmes spécifiques à l'arabe pour être conformes au système phonologique du Bamanankan. L'article vise à répondre la manière dont les emprunts à l'arabe ont intégré le Bamanankan, leurs changements phonologiques et morphologiques et à la mesure dans laquelle l'adaptation présente des différences linguistiques. Les résultats montrent que l'intégration des emprunts se produit par des processus d'adoption et d'adaptation. Le taux d'adaptation est plus élevé que le taux d'adoption. En effet, la plupart des emprunts subissent des changements pour s'adapter au système phonologique et morphologique du Bamanankan.

Mot clés: Arabe, Bamanankan emprunts, morphologique, phonologique.

Introduction

Scholars in every time have made a great contribution to the study of loanwords and language contact from different perspectives. This research focuses on the Arabic loanwords in Bamanankan, particularly the cultural borrowing, which comes from the religion and trade activity.

Islam has a long history in Mali, and thereby, it has had a lasting influence on Bambara people. As a consequence, many Arabic words integrated Bamanankan. Regardless of the exact number of Arabic loanwords in Bamanankan, they have increased its lexicon. The contact between the two Languages is such that Arabic entered the Bambara lexicon primarily via "learned orality" through marabouts (West African Islamic Religion Leaders) and Quranic instructions and secondarily via written transmission (Zappa 2011, 2009). This implies that most of



loanwords are related to the religion. In addition to religious vocabulary, there is also a sizable class of Arabic loanwords in Bamanankan related to trade and commerce.

Bamanankan (ISO 639-3 bam) is a language from the Mande group of the Niger-Congo languages family. It is widely spoken in Mali by more than 80 % of the population except in the North-East. It is also used as a lingua franca in many countries in West Africa: Ivory Coast, Senegal, Gambia, Guinea and Burkina Faso (Gordon 2005a). There are 4 Million L1 users in Mali and 10 Million L2 users in all countries (Vydrin 2020).

Many studies focus on a broad view linguistic borrowing but very limited work has addressed the phonological and morphological adaptation of loanwords. Bamanankan has a large stock of loanwords from Arabic though genetically distant. The influence of Arabic is due to cultural contact in the domain of religion and trade. Arabic is considered as a prestige language by the Bambara community. It is culturally and economically a dominant language. In this paper loanwords have been discussed from the viewpoint of Linguistic Borrowing Theory influenced by Haugen (1950). Borrowing implies integrating linguistic elements (lexical, phonological, morphological and syntactic) from a source language (SL) into a recipient language (RL). Moreover, this paper explains morphological constraints emphasizing the rigid CV syllable structure of Bamanankan.

The present study aims first, to explore the integration of Arabic loanwords in Bamanankan second, to analyze the phonological and morphological aspects of Arabic loanwords and last, to distinguish adoption and adaptation in the process of borrowing. The term "loanwords" has the same meaning as "borrowings" but differs from "codeswitching". Thus, loanwords and borrowing are used interchangeably in this research. Haugen (1950, p. 212) defines borrowing as "the attempt to reproduce in one language a pattern previously found in another language". Translating a borrowed term can also facilitate inter-lingual communication. In fact, borrowing is not a new phenomenon in the history of language contact (Alhussami 2020).

This study aims to address the following research questions:

- 1. How have loanwords integrated into Bamanankan lexicon?
- 2. What are the phonological and morphological adaptations of Arabic loanwords in Bamanankan?
- 3. To what degree does the adaptation of loanwords exhibit the difference between the phonological and morphological systems of Arabic and Bamanankan?

The study is organized as followed: the first section is an overview of prior research and a discussion of the existing gaps in the literature. The methodology employed in this paper is discussed in section 2. Section 3 presents and discusses the results.

1. Prior research

Linguistic borrowing is a clear evidence of language change, which means that languages change and grow continuously. The influence of one language on the other is a very common phenomenon. Borrowing occurs when two or more languages are in contact. Some of the major languages of the world like English, French and Arabic have influenced several other languages globally. Jafar and al. (2019:97) stated that:

Such influences took place as a result of cultural contact, such as: words borrowings, borrowings resistances, phonological interinfluencing of neighboring languages, phonological modification of borrowings, morphological borrowings and morphological resemblances."

Baldi (2005) provides an overview of the spread of Islam in Africa, which has caused the influence of Arabic on many African languages. This influence is so strong at the level of loanwords that they represent more than 30 % of the total lexicon in some vehicular languages such as: Bamanankan, Hausa, and Swahili. These borrowings, mainly nouns, were introduced directly or more frequently by other languages spoken by Islamic people.

The Islamization of the Bambara people reached its peak in the 19th century. The Islamization phenomenon accounts for the strong linguistic influence of Arabic words found in Bamanankan language. Bambara people, by adopting Islamic



religion found necessary to learn Arabic language so as to practice Islam. As a result, many Arabic words were borrowed.

"Many Arabic words have been borrowed into Bambara as a result of this longstanding influence of Islam in Mali, with some earlier sources estimating that at least twenty percent of the Bambara lexicon may be borrowed from Arabic" (Green et al. 2016:1).

Lagarde (1988) stated that the Bamanankan language borrowed many words and phrases from Arabic. The number of Arabic loanwords in the Bamanankan language is always a subject of debate among linguists. He claims that there are about 219 Arabic words and phrases in the Bamanankan language, while kanté (1974) reported that there are about 300 Arabic loanwords in the Bamanankan language. However, the 300 words and expressions Kante identified are words roots. He said that if we consider the derivation of these 300 words and expressions, we could come up with 700 Arabic borrowings in the Bamanankan language. As an example, he mentioned the root *kalan* from which there are more than ten derivations in the Bamanankan language.

In Durkin (2014), languages in contact borrow words from each other. However, the Source language (SL), most of the time, has more prestige than the Recipient language (RL). When a word is borrowed from one language to another, some sounds may be affected because the SL has sounds which do not match with the RL. Consequently, it is necessary to investigate and identify such changes of loanwords in Bamanankan.

Alhussami (2020:1) stated that generally the process of borrowing does not take place among speakers of the same dialect or language; it occurs among speakers of different languages and dialects. This can be clearly seen in the case of borrowing between Arabic, which belongs to the Semitic family, and Bamanankan, a Niger-Congo language.

Zapper (2011), cited in Green et al. 2016:30) discussed the ways in which Arabic borrowings have been adopted and oftentimes nativized into the Bamanankan lexicon. He pointed out that the phonological aspect of loanwords has

not yet been fully discussed. The majority of Arabic loanwords come from Islam (i.e. Classical Arabic).

Haspehmath (2003) stated that "a loanword in any language is adapted if it has phonological, morphological, syntactical orthographic properties that don't conform to the recipient language structure." Loanwords in Arabic and the phonological and morphological modifications incorporated into them has been an issue discussed by many Arabic philologists (Bueasa 2015).

However, there is to date no detailed phonological and morphological analysis of Arabic loanwords in Bamanankan. This paper addresses the integration of loanwords through the process adaptation and omission of specific phonemes from Arabic language (e.g., uvular, pharyngeal and emphatic phonemes) to conform to the phonological system of Bamanankan. Moreover, the study examines the rigid CV syllable structure, which affects Arabic loanwords resulting in consonant shift, vowel insertion and other morphological process. These aspects are underexplored in prior research.

2. Methodology and fieldwork

The methodology in the present study involves a mixed-method approach integrating both qualitative and quantitative data collection to provide a comprehensive analysis of Arabic loanwords in Bamanankan. The primary source data presented in this study is collected from our fieldwork through semi-structured questionnaires and interviews to identify and categorize phonological and morphological integration of loanwords.

Additionally, data were also gathered from previously published works in Green (2010), Green et al. (2016), Vydrin (2008), Dumestre (2003), and Seriba 2010. Supplementary elicitation sessions were conducted to cross-check information from informants and other sources. As for the data analysis, the descriptive method has been used. It enables to classify and analyse loanwords based on phonological and morphological integration, to examine our findings based on established theories and highlight the constraints and adaptation through the integration of loanwords.

3. Results and discussion



In Bamanankan, there are different ways in the process of borrowing words. First, the loanwords are used in their original form in the RL. They get adopted and remain as they are in the Source language. Second, the loanwords get adapted by undergoing phonological, morphological and semantic changes. Adoption refers to the process of borrowing words from the Source language, yet retaining the loanwords in its original form in the Received language. For example the loanword daradsa 'influence' from Arabic. However, adaptation is the process of undergoing certain phonological, morphological, syntactic and semantic alterations. For example the loanwords kitabu 'book' from Arabic kitab undergoes morphological change by adding a vowel. Bamanankan has a rigid CV syllable structure whereas Arabic has a consonant in coda position. As explained by Haspehmath (2003), the process of adaptation and integration of loanwords occurs when the phonological, morphological, syntactical properties do not conform to the RL.

3.1 Adopted Arabic loanwords in Bamanankan

In Bamanankan there are few loanwords from Arabic which undergo neither segmental alterations nor semantic modifications. The loanwords have fully integrated the RL and kept their source language sounds because the sound pattern does not conflict with the RL, i.e., all phonemes are represented as shown in table 1. The words are intact in the RL. All loanwords refer to religious practices exception to the loanword **daba** 'hoe'. Thus, they have fully integrated Bamanankan with neither phonological nor semantic modifications. Arabic and Bamanankan though distant have several phonemes in common which makes the adoption easy.

Table 1: Adopted Arabic loanwords

Bamanankan	Arabic	Gloss
karaba	karaba	Force
daraʤa	daraʤa	Influence
dʒuma	dʒuma	Friday prayer
dʒifa	dʒifa	Dead body
∫arija	∫arija	Islamic canonical law
suna	sunna	Muslim law based on the teachings and practices of the Prophet Mohammad and observed by orthodox Muslims
daba	daba	Hoe

3.2 Adapted Arabic loanwords in Bamanankan

Phonological modification is the alteration of the SL sounds when integrated the RL. Loanwords can undergo certain phonological modifications to integrate the RL. Loanwords also undergo the process of alteration, omission and addition to integrate Bamanankan.

In the table 2 the loanwords undergo only phonological alterations. The Arabic glottal fricative [s] and the pharyngeal fricative [h] are omitted in the loanwords because they do not exist as phonemes in Bamanankan. The following loanwords **abibata**, **abudulaji**, **abudu kadiri** and **ali** refer to names. There is the pattern VC or VCVCV. Bamanankan has no coda, words end with a vowel. This modification is due to the fact Bamanankan and Arabic have different sound system and syllable structure. For instance in Arabic vowels do not occur in word-initial position. To facilitate the integration of loanwords with the fricative [s] and the pharyngeal fricative [h], Bamanankan keeps the VC pattern by omitting the onset. Besides the glottal fricative [s] and the pharyngeal fricative [h] can lead to confusion because there is misperception for Bambara people who identify these two sounds as identical.



Table 2: Adapted Arabic loanwords

Bamanankan	Arabic	Gloss in English
abibata	ħabiba	Loved woman
abudulaji	۲abdu la:hi	Slave of Allah (God)
abudu kadiri	Sabdul qadr	Slave of Powerful God
ali	۲ali	The exalted
umura	γumra	The Small pilgrimage

The process of assimilation is very common in borrowing. There are different types of assimilation of borrowed words: phonetic, grammatical and lexical. The Arabic integrates Bamanankan through assimilation. The Noun phrase (definite marker +noun) are frozen in Bamanankan. For example the definite marker al 'the' and the word ima:m 'leader' become a single word in Bamanankan alimami 'the leader'. In the example araba 'Thursday' the definite marker al becomes ar in Arabic. It undergoes a regressive vowel harmony. In the Arabic loanword aladsi 'the pilgrim' from al hads, the fricative [ħ] is omitted as discussed above. Most of the loanwords describe a concept that is not native to Bambara traditional culture and religion.

Arabic syllable structure is predominantly CVC and CVVC in contrast to Bamanankan which has a rigid CV syllable structure "with coda consonants strictly prohibited" (Maiga 2001, cited in Betters 2010). The high back vowel [u] and the high front vowel [i] are mostly added to the coda to adapt Bamanankan phonological system. Thus, the CVC syllable structure in Arabic becomes CVCV in Bamanankan because the coda is strictly prohibited in Bamanankan's CV structure. For example the words tura:bu 'dust', kitabu 'book' and sababu 'cause' from tura:b, kitab and sabab in Arabic, undergo morphological modifications to integrate Bamanankan. There is a morphological constraint that Bamanankan is

subject to, which lead loanwords to accommodate. The constraint is that a syllable cannot end with a consonant. To overcome this constraint, a vowel is always added to loanwords in Bamanankan. The mid front vowel [ɛ] is sometimes added to the final consonant of the loanword as in **jati:mɛ** 'orphan' and **kuranɛ** 'Quran' from Arabic **jati:mɛ** and **kuranɛ**.

Arabic is not a tonal language however, it has predictable syllable and morphologically conditioned rules of stress placement and permits a variety of complex syllable types in different word positions. By complex syllables, we mean syllables other than those that match the canonical maximal CV syllable template of Bamanankan (e.g., CCV and CVC).

Consonant clusters in the coda and mid position are very common in Arabic. However, in Bamanankan they do not occur. Vowels are always inserted between consonants, CVCC becomes CVCVC. The vowel insertion is a copy of the vowel in the SL as in the loanword <code>farati</code> 'condition' from Arabic <code>fart</code>. The vowel [a] is duplicated to integrate Bamanankan phonology, as shown in this template CaCC becomes CaCaC. The copy of the vowel in the loanword is predictable. In the examples <code>kaluwa</code> 'religious retreat' and <code>bawulu</code> 'urine' from Arabic <code>halwa</code>? and <code>bawl</code>, there is no copy of the vowel but rather an assimilation due to the semi vowel [w] which is close to the back vowel [u]. Instead of having <code>kalawa</code> with the copy of the low front vowel [a], Bamanankan use the high back vowel to integrate the loanword in the phonological system as in <code>kaluwa</code>.

Consonant lengthening is very common in Arabic however, in the loanwords there is a single consonant as shown in <code>dsine</code> 'Jinn', <code>safa</code> 'row', <code>wakilu</code> 'mandatary' and <code>dsabaru</code> 'The Majesty' from Arabic <code>dsinn</code>, <code>saff</code>, <code>wakki:l</code> and <code>dsabar</code>. There is no vowel insertion in consonant lengthening.

Another area where loanwords are integrated into Bamanankan to accommodate its phonological patterns is consonant shifting. Speakers of the RL attempt the approximate sound when integrated a loanword. Here the SL and the RL phonological patterns do not conform. Foreign sounds can lead to sound change in the RL. The foreign sounds often are adapted to existing sounds in the borrowing language These Arabic uvular and pharyngeal phonemes $[\nu, \hbar, \varsigma]$ do not exist in



Bamanankan. The fricatives [ß ħ] shift to the velar [k] which is a close phoneme to Arabic uvular and pharyngeal sounds as in **kafara** 'forgiveness', **kiba:ru** 'news' and **kijama** 'Hereafter' from Arabic **safara**?, **ħiba:r** and **ħija:m**. In the loanword **hakili** 'intelligence' from the Arabic **saql**, the pharyngeal fricative [s] in Arabic got adapted in the loanword in Bamanankan through alternation of the sound. The pharyngeal fricative [s] becomes a glottal fricative [h]. The pharyngeal sound shifting to the glottal [h] is a very common phenomenon for languages which do not have pharyngeal phonemes.

Bamanankan does not contain emphatic phonemes [t s]. These sounds are adapted in the RL with their non-emphatic counterparts [t s]. The emphatic voiceless plosives [t] in Arabic words tawba, tabl and talib become non-emphatic voiceless plosive [t] as in the loanwords tu:bi 'repentance', tabale 'drum' and talibe 'student, learner'. The emphatic fricative [s] in the word salli got adapted in loanword as seli 'prayer'.

Arabic loanwords integrate Bamanankan through vowel lengthening. The semivowels [j w] are considered as approximants in Arabic and Bamanankan. These two phonemes are phonetically like vowels but phonologically like consonants. Though there are included in the consonants chart, they are considered as glides similar to vowels. Accordingly, a semi-vowel has the properties of a vowel. Phonetically the phonemes [j w] are respectively similar to the high front vowel [i] and the high back vowel [u]. The phonemes [j w] are also considered as diacritics in Arabic because they are used for vowel lengthening. The phoneme [j] is used to lengthen the phoneme [i], for example [ij] is realized as [i:]. The phoneme [w] is used to lengthen the phoneme [u] as in [uw] which is realized as [u:]. This phenomenon of vowel lengthening influenced the loanwords with the semi-vowel [j]. As a result, the short vowel in the SL becomes a long vowel in the RL as in the examples mali:ka or male:ke 'angel', nabi: 'Prophet' and si:ta:ne from Arabic malajka, nabij and fajta:n.

Other consonant adaption in loanwords is the uvular [q] in Arabic. Bamanankan has no uvular phonemes; the velar phoneme is used instead. The voiceless velar stop [k] is very often used to replace the voiceless uvular stop as in

the loanwords **tariku** 'history, biography', **kabaru** 'grave' and **kutuba** 'sermon' from Arabic **ta:riq**, **qabr** and **qutba**. The voiced velar stop [g] can also replace the uvular [q] in loanwords as in the examples **sugu** 'market' and **nagasa** from **su:q** and **nagasa** 'to ruin' in Arabic.

Omission is also a process of loanwords integration. The pharyngeal phonemes [ħ ʃ] and the glottal stop [ʔ] are omitted in mid-position or in coda consonant position. In the examples **waħtu** from Arabic, the loanword **watu** 'hour' integrated Bamanankan through omission. In final position the pharyngeal and the glottal stop are omitted as in **alla** 'Allah' and **thama** 'community' from Arabic **alla?** and **thama**.

There is a consonant alternation in the loanwords **bilaji** 'by Allah' and **walaji** 'by Allah' from the Arabic phrases wa la:?i and bila:?i which correspond respectively to the prepositions wa and bi followed by the word Allah. The glottal stop [?] is replaced by the palatal [j] because diphthongs do not exist in Bamanankan. With the omissiom of the glottal stop [?] the underlying forms of the loanword are walai and bilai.

Bamanankan has nasal vowels which are realized in the orthography with a vowel followed by the nasal [n]. Arabic does not contain nasal vowels. In the loanword $s\tilde{a}$ 'year' (san orthographically) from the Arabic sana?, there is a syllable reduction because the second syllable is unstressed. The semi-vowel [w] in sawm from Arabic becomes a phoneme [u], the latter assimilates the phoneme [a]. Thus, the loanword $s\tilde{u}$ 'fasting' is realized with a nasal vowel because of the nasal phoneme [m] in the SL.

Very few loanwords undergo both morphological and semantic changes to integrate Bamanankan lexicon. Both the loanwords **dgahili** 'slanderer' and fitinɛ 'oil lamp, 'to dispute' from Arabic **dga:?il** and **fitna?** undergo phonological modifications. The loanwords **dgahili** has a CVCVCV syllable structure in which the vowel final is added to the word in the SL **dga:?il** with the CVCVC syllable pattern. The Arabic word **fitna?** integrated Bamanankan with vowel insertion in the consonant cluster but also the omission of the glottal stop [?].



The loanwords **dyahili** and **fitine** undergo semantic alterations. The change of the meaning has a metaphorical sense. There is similarity or correlation between the word in the SL and the RL. The loanword **dyahili** is used in a sense of someone who slanders but 'ignorant' in Arabic. The loanword **fitine** from Arabic **fitna?** 'temptation means 'oil lamp or dispute' in Bamanankan.

Conclusion

In this study the phonological and morphological integration of Arabic loanwords in Bamanankan have been investigated. Bamanankan has been influenced by Arabic with large number of loanwords. This phenomenon of borrowing relies on the long period of contact between Arabs and Bambara people, but the rate of borrowing is particularly high in the religious domain. Knowledge of Arabic is required for Muslim scholars but also to acquire certain positions in Islam. Arabic loanwords in Bamanankan carry connotations of their religious significance to Bambara people and affect their lives. Besides, a few loanwords are related to cultural practices. Thus, most of the Arabic loanwords in Bamanankan can be characterized as loans for prestige.

Arabic loanwords in Bamanankan are mainly characterized by phonological and morphological alterations. This phenomenon naturally occurs because Bamanankan and Arabic have different phonological and morphological systems. They are genetically distant. Arabic is a Semitic language originated from the Middle East, but spread to Africa whereas Bamanankan is a Mande language from the Niger Congo phyla.

This analysis focuses largely on the phonological and morphological aspects on Arabic loanwords. Arabic Loanwords in Bamanankan get adopted yet keeping their original forms or adapted in this case the loanword undergoes phonological alterations. The rate of adaptation is higher than the rate of adoption. Arabic influence in Bamanankan is mainly lexical. It has enriched the vocabulary of Bamanankan from which Bambara people easily understand and learn Arabic.

This study has discussed phonological and morphological modifications of Arabic loanwords. However, further research could be investigated in order to provide more detailed analysis of loanwords in the semantic domain.

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