Images of potential extended Arabic characters

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These scans are intended to accompany document L2/03–044 "Encoding Arabic extensions", and provide illustrations of some (not all) of the potential new characters mentioned in that discussion.

The images here are taken from:

> Chtatou, Mohamed: *Using Arabic script in writing the languages of the peoples of Muslim Africa*. Rabat: Institute of African Studies, 1992.

This monograph discussed a number of workshops held with the aim of establishing standardized Arabic-script orthographies for African languages. These workshops looked at existing, traditional practices as well as newly-suggested innovations.

The samples shown here include a variety of letters that are not represented in Unicode 4.0. Some of the more "interesting" letters are highlighted. Note that in many cases, several different writing conventions for the same language are mentioned. Even if some characters are eventually dropped during orthographic standardization/reform of these languages, the fact that they have been traditionally used by some writers means that they need to be taken into consideration, otherwise existing texts cannot be encoded.

TABLE I

COMPARATIVE TABLE OF ARABIC AND SONGHOY CHARACTERS

Similar characters in Arabic and Songhoy		Specific Arabic characters		Specific Songhoy characters	
Latin characters	Arabic characters	Latin characters	Arabic characters	Latin characters	Arabic characters
a	أ	θ	ٹ	p	ف
b	ب	ḥ	ح	ٮ	ٮ
t	ت	kh	خ	ny	ٮ

(19) cf. UNESCO/BREDA, Rapport général du séminaire atelier sur l'élaboration d'un système unifié de transcription du Songhoy en caractères arabes, du 14 au 19 mars 1987, Bamako, p.6.

Page 28: BEH skeleton with two dots vertically above right end; NOON or BEH skeleton (ambiguous, because chart shows linked initial form) with dot above and two dots below. Songhoy language.

j	ج	ẓ	ذ	ŋ	ḫ̈
d	د	ṣ	ص	g	ġ̈
r	ر	ḍ	ض		
z	ز	ṭ	ط		
s	س	ẓ̄	ظ		
š	ش	ل	ع		
f	ف	ʔ	غ		
k	ك	q	ق		
l	ل				
m	م				
n	ن				
h	هـ				
w	و				
y	ي				

Page 29: HAH with two dots above; AIN with two dots above. Songhoy language.

d	ط	ẓ	ز	ŋ	ثّ
f	ف	ء	ع	p	يـ
k	ك	Я	غ	y	يـ
l	ل	q	ق		
m	م				
n	ن				
w	و				
y	ي				

Fulfulde has adopted the same transcription rules as Songhoy (cf. Table I) except for the prenasalized consonants for which it devised new graphemes :

(17) nd   ذّ

     mb   بّ

     ng   غّ

     nj   جّ

As for the sound /y/ which does not exist in Songhoy, it was transcribed as /ـيـ/ and the implosive / ɓ / as / مّ /. Also the Arabic "tanwīn" or nunation " ˶ = ＿ " has been replaced in this transcription by the nasal / ن / at the end of the word.[21]

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(21) "When the three vowel marks are written double at the end of a word, e.g. ˶ , = and ＿ they represent the three case endings, nominative, accusative and genitive of a fully declined, indefinite noun or adjective. The second vowel is pronounced "n"! Thus we have كَلْبٌ *kalbun*, a dog (nom.), كَلْبًا *kalban*, a dog (acc.) and كَلْبٍ *kalbin* a dog (gen.). This process of doubling the final vowel is called تنوين *tanwin*, or, by orientalists, nunation, or "n'ing", from the Arabic name for the letter *n*. (cf. Cowan, (1958 : 6)).

Page 34: HAH with two dots above; FEH with two dots below; BEH with three dots in a horizontal line below; BEH with three dots pointing downward above right end; AIN with two dots above; MEEM with dot above. Fulfulde language.

3.2.2.2. Consonants

The 7 simple consonants that are proper to Pulaar have been transcribed in the following manner taking into consideration traditional transcriptions used for centuries by local scribes and religious scholars :

(24)   c   ش

       g   غ

       p   ﭦ

       ɓ   ﭒ

       yʼ   ﭺ

       ŋ   ف

Page 39: BEH with three dots above and one below right end; BEH with three dots pointing upwards below (right end?). Pulaar language.

3.3.1. Hausa

The consonants that do not exist in the Arabic language have been transcribed in Hausa as follows :

3.3.1.1. Simple consonants

(26)   b   ﭖ   bana   بَـنَا

       c   ﭒ   cocila   ﭼﻮﻴﻞ

voiceless palato-alveolar fricative

       ɗ   ط   ɗaki   طَاكِ house

       y   ﭖ   yaruwa   يَـﺮْﻋُـﻮَ parent

Page 42: BEH with three dots pointing upwards below and two horizontally above. Hausa language.

As for the labialized velar gʷ , it is transcribed by adding two dots to a normal *ghayn* /غ/ :

(28)   gʷ   غ̈   gʷaba   غَـﺎ

Page 43: AIN with three dots pointing downwards above. Hausa language.

TABLE IV

COMPARISON OF LETTERS PROPOSED BY MALI AND SENEGAL FOR PULAAR / FULFULDE

Latin characters	Proposed transcription		Examples		Gloss
	Mali	Senegal			
c	ﺕ	ﺵ	cakka	نَكُ ۔ شَكُ	necklace
g	غّ	غ	gerte	غَرْت غِرْت	ground-nut peanut
p	ﻴﺐ	ﺚ	paaka	يَاكَ ثَّاكَ	knife
ny	ﻴﻥ	ﺐَ	nyiiwa	نِـيـوَ	elephant
ɣ	ﺐﺒ	ﺝ	ɣiyal	يِـيِـيَـلْ جِيـيَـلْ	bone
ŋ	ﺥَ	ﻕ	ŋenyema	خَيْمَ قِيْمَ	earring
ɓ	مُ	ﺒِ	ɓoolde	مُولْد يِّولْد	club
nd	نَ	ﻧﺪ	ndaayri	تَ اِيْرِ نْدايْرِ	ñenuphar

Page 45: AIN with two dots above; FEH with two dots below; BEH with dot above and two dots below; BEH with three dots in horizontal line below; HAH with two dots above; MEEM with dot above; BEH with three dots above and one below; BEH with three dots pointing upwards below. Pulaar and Fulfulde, Mali/Senegal.

TABLE V

COMPARISON OF LETTERS PROPOSED BY MALI AND NIGER

FOR THE TRANSCRIPTION OF ZARMA / SONGHOY

Latin characters	Proposed transcription		Examples	Gloss	
	Mali	Niger			
c	ﺕ	ﺝ	ciiri	نَـيـرُ / چِـيـر	salt
g	ﻍَ	ﻍ	gaara	غَـارَ / غَـارَ	to sollicit
ny	ﻱﻧ	ﺕَ	nyaamoy	يَـامَى٘ / نَـامَى٘	
p	ﯾـ	بَ	paate	يَـات / يَـات	
ŋ	ﺡَ	ﻍَ	naari	خَـارِ / غَـارِ	rice
o	ﻉ	ﻉ	koyra	كَيـرَ	village

Page 47: AIN with two dots vertically above; BEH with dot above and two below; FEH with two dots below; HAH with two dots above; HAH with three dots pointing upwards below; BEH with three dots pointing upwards below; AIN with three dots pointing downwards above. Zarma and Songhoy, Mali/Niger.

TABLE VII

PULAAR / FULFULDE STANDARDIZED ARABIC ALPHABET

Similar characters in Arabic and Pulaar/Fulfulde	Specific characters to Pulaar/Fulfulde	Pulaar/Fulfulde prenasalized sounds	Pulaar/Fulfulde vowels
أ	ت	مب	○ ―
ب	يب	ند	―
ت	ث	نج	○ < د
ج	غ	نع	
د	نج		
ر	يب		
س	ڢ		
ط			
ف			
ك			
ل			
م			
ن			
ه			
و			
ي			
ق			

Page 50: BEH with three dots in horizontal line below; BEH with three dots above and one below; AIN with two dots above; BEH with dot above and two below right end; FEH with two dots below. Pulaar and Fulfulde.

(34)

ا without *hamza* for **a, e, i, o, u**

آ without *fatḥa* for **aa**

پ Pesian and Urdu symbol for **p** (instead of بٜ).

ب for **ɓ** (instead of ب)

ٽ for **c** (instead of ث)

ج fór **yʼ** (no change)

ط for **ɗ** (no change)

گ Persian and Urdu symbol for **g** (instead of غ)

ۼ for **ŋ** (instead of ڧ)

ـِ for the vowel **e**

Page 54: BEH with three dots pointing upwards below; BEH with inverted V below; BEH with V above; AIN with two dots above. Zarma, Songhoy, Pulaar, Fulfulde.

TABLE XI

Consonants and semi-vowels

Latin symbol	Arabic symbol							Comoro	Wolof	Songhoy	Kanuri	Soussou	Mandinka	Soninke	Hausa	Pular	Tamasheq	Arabic
a	ا							ا	ا	ا	ا	ا	ا	ا	ا	ا	ا	ا
b	ب							ب	ب	ب	ب	ب	ب	ب	ب	ب	ب	ب
p	ﭖ							ﭖ	ﭖ		ﭖ	ﭖ	ﭖ	ﭖ		ﭖ		
ɓ	ﺑ							ﺑ								ﺑ	ﺑ		
t	ت							ت	ت	ت	ت	ت	ت	ت	ت	ت	ت	ت
č	ث								ث	ث	ث		ث	ث	ث	ث	ث	
ṯ	ث													·				ث
j	ج							ج	ج	ج	ج		ج	ج	ج	ج	ج	ج
y	ج														ج	ج		
č	ج							ج										
ḥ	ح																	ح
kh	خ							خ	خ			خ	خ				خ	خ
d	د							د	د	د	د	د	د	د	د	د	د	د
ḍ	ض							ﻁ						·				
ḍ	ذ																	ذ
r	ر							ر	ر	ر	ر	ر	ر	ر	ر	ر	ر	ر
ṛ	ﺩ											ﺩ						
z	ز							ز		ز					ز	ز	ز	ز
ž	ژ																	
s	س							س	س	س		س	س	س	س	س	س	س
š	ش							ش	ش	ش				ش	ش	ش	ش	ش
ṣ	ص															ص	ص	ص
ḍ	ض															ض	ض	ض
ṭ	ط														ط	ط	ط	ط
ḍ	ظ															ظ	ظ	ظ
ʿ	ع																	ع
gh	غ							غ								غ	غ	غ
ŋ	ﻍ								غ	غ		غ		غ		غ		
f	ف							ف	ف	ف	ف	ف	ف	ف	ف	ف	ف	ف
β / v	ﭫ							ﭫ										
q	ق								ق								ق	ق
k	ك							ك	ك	ك	ك			ك	ك	ك	ك	ك
g	گ							گ	گ	گ	گ	گ	گ	گ	گ	گ	گ	گ
ƙ	ﻚ														گ			
l	ل							ل	ل	ل	ل	ل	ل	ل	ل	ل	ل	ل
m	م							م	م	م	م	م	م	م	م	م	م	م
n	ن							ن	ن	ن	ن	ن	ن	ن	ن	ن	ن	ن
ny	ﻨ							ﻨ	ﻨ	ﻨ			ﻨ	ﻨ		ﻨ		
h	ه							ه		ه	ه	ه	ه	ه	ه	ه	ه	ه
w	و							و	و	و	و	و	و	و	و	و	و	و
y	ي							ي	ي	ي	ي	ي	ي	ي	ي	ي	ي	ي

Page 58: Chart comparing characters used in several African languages.