

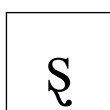
Universal Multiple-Octet Coded Character Set
International Organization for Standardization
Organisation Internationale de Normalisation
Международная организация по стандартизации

Doc Type: Working Group Document
Title: Proposal to add two Africanist phonetic characters to the UCS
Source: Michael Everson & Peter Constable
Status: Individual Contribution
Date: 2004-06-12

In L2/03-190R Peter Constable proposed a number of phonetic characters for addition to the UCS. Many were accepted by the UTC but two were deferred for further study; this document proposes them and provides additional evidence. It contains the proposal summary form.

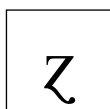
The letters in question are, or were, used to denote labio-alveolar fricatives, IPA [s^w] and [z^w]. These sounds are distinct from [ɣ] U+0282 LATIN SMALL LETTER S WITH HOOK and [z̥] U+0290 LATIN SMALL LETTER Z WITH RETROFLEX HOOK, both of which use a standard and productive IPA-sanctioned graph which indicates retroflexion. The “labial” graph for the two proposed characters probably derives from the tail of an italic z (as in this Times italic z), but to our knowledge it has not been used productively for other labialized consonants.

Our research does not indicate whether Doke devised these characters or not; ЮШИАНОВ 1937 uses both ɣ and z̥ as a pair of labio-alveolars; the 1949 IPA Handbook refers to ɣ and z̥ as Doke’s recommendations for labio-alveolars in Shona orthography. Doke’s 1967 treatment clearly distinguishes ɣ and z̥ as labio-alveolars for general Bantu and for Tsonga; Doke 1967 also shows ɣ and z̥ as retroflexes for Pai. However, Doke 1967 shows ɣ and z̥ for “alveolar labialized” consonants in Shona. Tucker 1971 gives these same two letters for the same sounds in discussing Doke’s *practical* orthography for Shona, noting that Doke’s recommendations for this orthography were “recommended and adopted” in 1931. Dalby 1998 cites Doke’s 1931 work: “He recommended a 33-letter [orthography] for Shona, with several characters not found on normal typewriters or in normal printing fonts. They were dropped in 1955, but it was only in 1967 that an adequate and generally acceptable orthography was introduced.” Tucker, referring to the orthographic change whereby ɣ and z̥ were represented by sv and zv respectively, would seem to be referring to what Doke published in 1967. It is our view that in phonetic representations, ɣ and z̥ are unambiguously labio-alveolars and ɣ and z̥ are retroflexes, and that the motivation for ɣ and z̥ in the older practical orthography for Shona is simply a reflection of the ease of handwriting those two glyphs as opposed to the ductus-unfriendly ɣ and z̥. In any case it is clear that there are four letters here which in linguistic context are distinguished regularly by a range of authors writing in different places at different times.



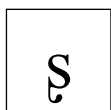
LATIN SMALL LETTER S WITH SWASH TAIL

- voiceless labio-alveolar fricative



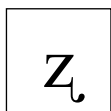
LATIN SMALL LETTER Z WITH SWASH TAIL

- voiced labio-alveolar fricative



0282 LATIN SMALL LETTER S WITH HOOK

- voiceless retroflex fricative



0290 LATIN SMALL LETTER Z WITH RETROFLEX HOOK

- voiced retroflex fricative

References

- Dalby, Andrew. 1998. *Dictionary of languages: the definitive dictionary of more than 400 languages*. London: Bloomsbury.
- Doke, Clement Martyn. 1967. *The southern Bantu languages*. London: International African Institute (Dawsons of Pall Mall).
- International Phonetic Association. 1949. *The principles of the International Phonetic Association*. Reprinted 1984. London: International Phonetic Association.
- Tucker, A. N. 1971. "Orthographic systems and conventions in Sub-Saharan Africa", in *Current trends in linguistics, vol. 7: Linguistics in Sub-Saharan Africa*. Ed. Thomas A. Sebeok. The Hague/Paris: Mouton.
- Юшманов, Н. В. 1937. "Фонетические параллели африканских и яфетических языков", in *Africana I: труды группы африканских языков*. Москва/Ленинград: Издательство Академии Наук СССР.

A. Administrative

1. Title

Proposal to add two Africanist phonetic characters to the UCS.

2. Requester's name

Michael Everson & Peter Constable.

3. Requester type (Member body/Liaison/Individual contribution)

Individual contribution.

4. Submission date

2004-06-12

5. Requester's reference (if applicable)

6. Choose one of the following:

6a. This is a complete proposal

Yes.

6b. More information will be provided later

No.

B. Technical – General

1. Choose one of the following:

1a. This proposal is for a new script (set of characters)

No.

Proposed name of script

1b. The proposal is for addition of character(s) to an existing block

Yes.

1b. Name of the existing block

Latin Extended-B.

2. Number of characters in proposal

2

3. Proposed category (see section II, Character Categories)

Category B.1.

4a. Proposed Level of Implementation (1, 2 or 3) (see clause 14, ISO/IEC 10646-1: 2000)

Level 1.

4b. Is a rationale provided for the choice?

Yes.

4c. If YES, reference

Spacing characters.

5a. Is a repertoire including character names provided?

Yes.

5b. If YES, are the names in accordance with the naming guidelines in Annex L of ISO/IEC 10646-1: 2000?

Yes.

5c. Are the character shapes attached in a legible form suitable for review?

Yes.

6a. Who will provide the appropriate computerized font (ordered preference: True Type, or PostScript format) for publishing the standard?

Michael Everson. TrueType.

6b. If available now, identify source(s) for the font (include address, e-mail, ftp-site, etc.) and indicate the tools used:

Michael Everson. Fontographer.

7a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided?

No.

7b. Are published examples of use (such as samples from newspapers, magazines, or other sources) of proposed characters attached?

Yes.

8. Does the proposal address other aspects of character data processing (if applicable) such as input, presentation, sorting, searching, indexing, transliteration etc. (if yes please enclose information)?

No.

9. Submitters are invited to provide any additional information about Properties of the proposed Character(s) or Script that will assist in correct understanding of and correct linguistic processing of the proposed character(s) or script. Examples of such properties are: Casing information, Numeric information, Currency information, Display behaviour information such as line breaks, widths etc., Combining behaviour, Spacing behaviour, Directional behaviour, Default Collation behaviour, relevance in Mark Up contexts, Compatibility equivalence and other Unicode normalization related information. See the Unicode standard at <http://www.unicode.org> for such information on other scripts. Also see Unicode Character Database <http://www.unicode.org/Public/UNIDATA/UnicodeCharacterDatabase.html> and associated Unicode Technical Reports for information needed for consideration by the Unicode Technical Committee for inclusion in the Unicode Standard.

The characters have the same properties as other Latin phonetic characters.

C. Technical – Justification

1. Has this proposal for addition of character(s) been submitted before? If YES, explain.

Yes. L2/03-190

2a. Has contact been made to members of the user community (for example: National Body, user groups of the script or characters, other experts, etc.)?

No.

2b. If YES, with whom?

2c. If YES, available relevant documents

3. Information on the user community for the proposed characters (for example: size, demographics, information technology use, or publishing use) is included?

Yes.

4a. The context of use for the proposed characters (type of use; common or rare)

Used in phonetic representation of Bantu languages by linguists.

4b. Reference

See examples below.

5a. Are the proposed characters in current use by the user community?

Marginally. IPA and practical orthographies are more generally used at the present time, though modern literature continues to reference them.

5b. If YES, where?

See examples below.

6a. After giving due considerations to the principles in Principles and Procedures document (a WG 2 standing document) must the proposed characters be entirely in the BMP?

Yes.

6b. If YES, is a rationale provided?

Yes.

6c. If YES, reference

Keep with other phonetic characters.

7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)?

Not necessarily.

8a. Can any of the proposed characters be considered a presentation form of an existing character or character sequence?

No.

8b. If YES, is a rationale for its inclusion provided?

8c. If YES, reference

9a. Can any of the proposed characters be encoded using a composed character sequence of either existing characters or other proposed characters?

No.

9b. If YES, is a rationale for its inclusion provided?

9c. If YES, reference

10a. Can any of the proposed character(s) be considered to be similar (in appearance or function) to an existing character?

Yes.

10b. If YES, is a rationale for its inclusion provided?

Yes.

10c. If YES, reference

See above.

11a. Does the proposal include use of combining characters and/or use of composite sequences (see clauses 4.12 and 4.14 in ISO/IEC 10646-1: 2000)?

No.

11b. If YES, is a rationale for such use provided?

11c. If YES, reference

12a. Is a list of composite sequences and their corresponding glyph images (graphic symbols) provided?

No.

12b. If YES, reference

13a. Does the proposal contain characters with any special properties such as control function or similar semantics?

No.

13b. If YES, describe in detail (include attachment if necessary)

14a. Does the proposal contain any Ideographic compatibility character(s)?

No.

14b. If YES, is the equivalent corresponding unified ideographic character(s) identified?

14c. If YES, reference

	1	2	3	4	5	6	6a	7	8	9
1	p		t						k	
2	b		d						g	
3	mb		nd						ŋg	
4	β			f						
5	m		n			ɲ			ŋ	
6		pf	ts		tʂ	tʃ				
7		bv	dz		dʒ	dʒ				
8						ɲdʒ				
9		f	s		ʂ	ʃ				
10		v	z		ʒ	ʒ				ɸ
11		mv	nz		nʒ					
12				r						
13	w	β						j		
14	pk		tkw						kw	
15	bg		dɣw						gw	
16	mŋ		ɲɣw			ɲŋ	ɲŋw		ɲw	
17			tskw			tʃk	tʃkw			
18			dʒɣw			dʒg	dʒɣw			
19			skw		ʂkw		ʃkw			
20			zɣw	ɣw	ʒɣw		ʒɣw			ɸw

Здесь 9 делений по месту образования (горизонталь): 1) губно-губные, 2) губно-зубные, 3) зубные, 4) десняные, 5) то же, с оттяжкой языка и продвижением нижней губы, 6) преднёбные, 7) нёбный, 8) занёбные, 9) «гортанное усиление» гласных и 20 делений по способу образования (вертикаль): смычные 1—5 и 14—16, аффрикаты 6—8 и 17—18, шельные 9—11 и 19—20, плавный (12) и полугласные (13); глухие 1, 6, 9, 14, 17, 19, остальные — звонкие; специфическими категориями являются полносовые 3, 8, 11, импозивные (4) и различные сложные звуки 14—20, причем горизонталь различает 6 («веляризованный» вид) и 6a (лабио-

Figure 1. Chart of Bantu consonants from Юшманов 1937 showing ʂ LATIN SMALL LETTER S WITH SWASH TAIL and ʒ LATIN SMALL LETTER Z WITH SWASH TAIL. The glyph for the former is rather crude, but the latter is very distinct and neither is related to the IPA retroflex graph. Column 5 here is “то же, с оттяжкой языка и продвижением нижней губы”, lit. ‘that is, with delay of the tongue and advancement of the lower lip’; the columns in all are (1) bilabial, (2) labio-dental, (3) dental, (4) alveolar, (5) labio-alveolar, (6) pre-palatal, (6a) [labialized (6)], (7) palatal, (8) post-palatal, and (9) lit. “guttural/laryngeal intensification”.

these occur as phonemes separate from non-palatalised ʃ , ʒ :
 ɖ , ʒ .

Advanced velar consonants, as in Russian : к , х . When, as in narrow transcription of Russian, separate letters are needed to denote ordinary g and advanced g , it is recommended that the form g be used for the ordinary sound and the form g (or preferably g) for the advanced one. (See, however, § 29 (i).)

Velarized ("dark") l : ɫ .

Other velarized consonants : t , d , s , z , etc. These symbols may also be used to denote the pharyngalised sounds (the Arabic "emphatic" consonants).

Ejective consonants (sounds pronounced with simultaneous or nearly simultaneous glottal stop) : p' , t' , k' , ts' , etc. See also § 30.

Voiced implosives, as in Sindhi and Bantu languages, ɓ , ɗ , etc. Labialized θ , ð or s , z : σ , g (§ z , of the orthography for Shona recommended by Professor Doke). One may, however, represent these sounds by digraphs such as sf , zv or sq , zq , in accordance with the principles enunciated in § 29 (see particularly § 29 (j)).

Labialized f , ʒ or ç , j : ɸ , ɹ (as hw and w before i , e , ɛ in the Twi language of the Gold Coast). See, however, § 29 (h).

Sound intermediate between d and l , but distinct from ɭ : ɮ .

Clicks : dental ɰ (Zulu c), lateral ɸ (Zulu x), retroflex ɮ (Zulu q), velar x .

r-coloured vowels (formed by retroflex tongue or otherwise) : ɣ , ɥ , a , ɹ , ɶ , etc. a is another way of writing frictionless ɶ when used as a vowel.

Combination of x and f (one variety of Swedish tj , kj , etc.) : ɧ .

Japanese syllabic nasal : ɲ .

The letter for the voiceless fricative corresponding to w is ɸ , but it is generally preferable to represent this sound by the digraph hw .

DIGRAPHS

29. In order to keep the number of letters in the phonetic alphabet within reasonable limits, the *Association Phonétique Internationale* recommends the occasional use of digraphs, i.e. sequences of two letters to represent single sounds. The following are the chief cases in which digraphs may be employed with advantage :

(a) To represent affricate consonants, e.g. pf , bv , ts , dz , tʃ , dʒ , tʂ , kx . If a language contains affricates as well as such sequences

Figure 2. Text from the IPA Handbook 1949 showing ɣ LATIN SMALL LETTER S WITH SWASH TAIL and ɹ LATIN SMALL LETTER Z WITH SWASH TAIL as examples taken from Doke's orthography. Here, the correct swash-tail glyphs are shown, though with reference to the standard Shona orthography of 1931 (compare Figures 7 and 8).

imperative of *-dla* (eat), and with the absolute pronouns *mina*, *zona*, &c. When prefixal *i-* takes the stress and is therefore called 'penultimate *i*'.

In Nguni (Z.) penultimate *i* occurs in imperative singulars of monosyllabic verbs, e.g. *-dla* > *idla* or *yidla*, *-sho* (say) < *isho* or *yisho*. In X. this becomes *-si-* in the participial mood, e.g. *ndisiva* (I hearing) < *va*.

In Sotho penultimate *e* occurs in certain tenses with monosyllabic verbs, e.g. in S.S. participial *kē-ē-tla* (I coming), imperative *ē-ja*, *ē-jang* (eat!).

In Shona penultimate *i* occurs: (i) with certain nouns of monosyllabic stem, e.g. *ishe* (cl. 1a, headman), *ingwe* (cl. 9, leopard), *ibge* (cl. 5, stone); (ii) with monosyllabic adjectives agreeing with cls. 5, 9, and 10, e.g. *ina* (four), *it̩sa* (new); (iii) with absolute pronouns of the 3rd person,¹ e.g. *ive* (cl. 1), *idzo* (cl. 10); and (iv) with the imperative (sing. and plur.) of monosyllabic verbs, e.g. *idya* (eat), pl. *idyai*.

C. THE CONSONANTS

The Consonantal Systems of the six main groups of Southern Bantu differ considerably in general complexion. Nguni has plain consonants and click consonants. Sotho has plain

PHONETIC CHART OF PLAIN CONSONANTS FOR SOUTHERN BANTU

	Bilabial	Denti-labial	Dental	Alveolar	Retroflex	Labio-alveolar	Prepalatal	Palatal	Prevelar	Velar	Glottal
EXPLOSIVE { rad. eject. asp. voic. }	p p' ph b		t' t̩h d	t t' t̩h d	t' t̩h d			c' ch ç		k k' kh g	
IMPLOSIVE . . .	ɸ			ɗ							
NASAL { contin. syll. }	m ṁ	(m)	ɱ ṁ	n ṅ	ɳ	(ɳ)	ɲ ɳ	(ɲ)		ŋ ṅ	
ROLLED { contin. syll. }				r r̩	ɽ						
FLAPPED voic.				ɹ							
LATERAL { contin. syll. }			ɻ	ɹ ɻ	ɻ						
FRICATIVE { med. unv. voic. lat. unv. voic. }	ɸ β	f v		s z ʃ ʒ		ɬ ɮ	ʃ ʒ		h	x y	h ɦ
AFFRICATE { med. rad. eject. asp. voic. lat. eject. asp. voic. }		pf ɸf' ɸfh bv ɸv		ts ts' t̩sh dz t̩'		tʃ dʒ	tʃ tʃ' tʃh dʒ			kx' kxh (kɻ')	kɻh
SEMI-VOWEL . . .	(w)	β̥						j		w	

¹ Pronouns of the 1st and 2nd persons in Shona have a static *i*; note *ive* > *naye*, but *isu* (we) > *nesu*.

Figure 3. Text from Doke 1967 showing ɬ LATIN SMALL LETTER S WITH SWASH TAIL and ɮ LATIN SMALL LETTER Z WITH SWASH TAIL. The text describes the general consonantal systems of Southern Bantu languages.

usage between the voiced and the unvoiced form; for instance **h** is used in Xhosa, Tswana, Tonga, Ronga, Chopi, Kgalagadi, Lozi, and Ndaui, while **ɦ** is used in Northern Sotho, Southern Sotho, Shona, Venda, Tswa, Pai, and Kutswe. In Zulu **h** and **x** are often interchangeable with different speakers or for emphasis. Northern Sotho and the Kutswe dialect of Sotho are unique in having an unvoiced prevelar fricative (**h̥**) in place of the velar

Two important types of fricatives which occur among the Southern Bantu are the labio-dentals and the laterals. Labio-alveolar fricatives (**ɬ** and **ɮ**), commonly called 'whistling fricatives', are pronounced with a flattening of the tongue and considerable lip-rounding. Generally the enunciation is accompanied with a degree of hissing, but in certain languages with certain speakers a whistling note is to be detected. In Southern Bantu these fricatives are confined to the Shona, Venda, and Tsonga groups. Outside these groups this feature does not seem to be found beyond the Sena and Nyungwe, bordering on the Shona to the north-east; though some of the compounds, such as **ɬf'** and **ɮʒ** (with variants) in Nyanja, and **ɬj** and **ɮj** in Nyanja, probably have their origin in the labio-alveolar fricatives. Lateral fricatives also have a definitely limited range in Bantu languages. In Southern Bantu they occur in Nguni, Sotho, and Tsonga, but are not found in Venda and Chopi. Unvoiced and voiced forms (**ɬ** and **ɦ**) occur in Nguni and Tsonga; in Sotho the unvoiced form is found, and unvoiced affricates (**ɬf'** and **ɦɦ**), but no voiced forms. Affricates unvoiced and unvoiced occur in Nguni, and the unvoiced affricate in Tsonga. Typically, Venda does not have this feature, but in the Western dialect of Kalanga both **ɬ** and **ɦ** are found and in Manyika palatalized forms, **ɬj** and **ɦj**, are found. It is noteworthy that the dialects of Kgalagadi and Lozi are without lateral fricatives, the latter having obviously been separated from contact with Central Bantu neighbours; the former might never have had

Affricates are certainly a feature of Southern Bantu; all the languages of both the groups concerned employ them. They are not typically a feature of Bantu as a whole, being probably absent from a large number of Bantu languages, and Meinhof did not postulate them for his Ur-Bantu reconstruction. Affricates are composite sounds resulting from a compounding of an explosive consonant and its homorganic fricative; this may be brought about by a slow release of the explosive. With true affricates the two elements are fully homorganic, and this is the case generally in Southern Bantu, where, in such forms as **ɬɬ**, **ɮɮ**, **dʒ**, the explosive element is not alveolar but of the same organic position as the fricative. In Tsonga, and Chopi, however, have labial affricates which are not fully homorganic, viz. **ɬp** and **ɮb**, in which the explosive is bilabial and the fricative denti-labial. Fully homorganic denti-labial affricates occur in Venda and Nguni. In the latter the affricate is only found in combination with the homorganic nasal, viz. **ɱɬf'** and **ɱɦɮv**, but in Venda it occurs without nasal, as in **ɱɬfhu:mə** (spear). Naturally the digraphs **ɬf** and **ɮv** are sufficient representations in a practical orthography. The unvoiced affricates in Shona are radical, but in the north-eastern Bantu groups they are ejective, and there aspirated forms often occur distinctly. In Nguni the effect of the homorganic nasal upon fricatives is to produce affricates; in current orthography **ns**, **mv**, **nz** represents **nts'**, **ɱɦɮv**, and **ndz** respectively. In Venda, on the other hand, nasals readily precede voiced fricatives without effecting change, viz. **mv**, **nz**, **nz**.

In the case of the labio-alveolar affricates, the common forms used are **ɬɬ** and **ɮɮ** with emphasis upon the alveolar in the explosive element. In the Tswa cluster of Tsonga and in most of the Manyika dialects of Shona, however, the lip-rounding is so extreme that the acoustic effect of the explosive element is far more that of a bilabial, and would be more correctly recorded as **ɬɬ** and **ɮɮ**. In fact in Northern Tswana, under the influence of Nyungwe and the Sena group, the affricates actually become **ɬɬ** and **ɮɮ**, heterorganic compounds.

¹ These might be termed heterorganic.

Figure 4. Text from Doke 1967 showing **ɬ** LATIN SMALL LETTER S WITH SWASH TAIL and **ɮ** LATIN SMALL LETTER Z WITH SWASH TAIL. The text describes the affricates themselves and their use with dental and labial stops.

APPENDIX VI

PAI TABLES

FOR information on this 'Eastern' type of Sotho, spoken mainly in the Pilgrim's Rest district of the Transvaal, I am indebted to notes supplied to me by Dr. D. Ziervogel, who has been conducting research in several little-known dialects of this area. Pai is still spoken by a few people, but it not likely to survive long.

VOWELS. Pai has five phonemes as in Nguni. In these tables only the five symbols i, e, a, o, and u are used, the variant forms of e and o not being indicated.

CONSONANTAL CHART

	Bilabial	Denti-labial	Alveolar	Retroflex	Pre-palatal	Velar	Glottal
EXPLOSIVE							
eject. . . .	p'		t'			k'	
asp.	ph		th			kh	
voic.	b			ɖ		g	
	mb		nd			ŋg	
NASAL	m		n		ɲ	ŋ	
ROLLED			r				
LATERAL			l				
FRICATIVE							
med. { unv. . . .	β	f	s	(z)	f	x	ɦ
voic.		[v]	ʃ				
lat. unv.			ʒ				
AFFRICATE							
med. { eject. . . .	pf'		ts'	tʂ' tʂh (ɳ)ɖz	tʃ'	kxh	
asp.			tsh		tʃh		
voic.					dʒ		
lat. eject. . . .						kɬ'	
SEMI-VOWEL	w				j	(w)	

Notes:

1. r and z are dialectal alternatives.
2. Palatalized forms of bilabials and alveolars occur as follows: pjh, bj, mj, βj, dj; note that dʒ and dʒ are alternatives.
3. v is of foreign origin.
4. It is noteworthy that a homorganic nasal may occur before aspirated explosives and affricates, e.g. mph, ntsh, ntʃh, and ŋkxh; the nasals in these cases are presumed to be syllabic.

CONCORD TABLES

	N.P.	A.C.	R.C.	E.C.	P.C.	S.C.	O.C.	Q.C.
1st pers. s. . . .	—	—	*	—	—	ki- ŋ-	ki-	ni-
pl.	—	—	*	—	—	fi-	fi-	hi-
2nd pers. s. . . .	—	—	*	—	—	u-	xu-	w-
pl.	—	—	*	—	—	ni- li-	ni- li-	ni- li-

* These forms have not been recorded.

Figure 6. Text from Doke 1967 showing ɣ LATIN SMALL LETTER S WITH HOOK and z LATIN SMALL LETTER Z WITH RETROFLEX HOOK. The text describes the consonantal system of the Pai language. Although the labio-alveolar consonants do not occur in Pai, and the retroflex consonants do not occur in other languages described, Doke distinguishes the different sounds with different characters in his article.

APPENDIX VIII

KALANGA TABLES

THIS western type of Shona was sufficiently different from the other clusters to preclude its participation in the Shona unification. In these tables the two principal dialects of the cluster, Kalanga and Lilima, are treated, there being a very close resemblance between them. Information is based on my own language survey of 1929, as in *A Comparative Study of Shona Phonetics* (1931); and on the publication by G. Fortune, S.J., *Ndevo Yeyombe Luvuvu* ('Communications from the School of African Studies', University of Cape Town, 1949), as well as from concord tables kindly supplied by him.

THE VOWELS are as for general Shona, the five phonemes **i, e, a, o, u**.

CONSONANTAL CHART

	Plain consonants							Velarized consonants	
	Bi-labial	Denti-labial	Dental	Alveolar labialized	Pre-palatal	Velar	Glottal	Plain	Plain
								Velarizatn.	S-V.
							Bilabial	Velar. S-V.	
EXPLOSIVE									
unv. . .	p		t			k		px	kw
asp. . .	[ph]		th					by	khw
voic. . .	b mb		d nd			g ɣg		mbɣ	gw ɣgw
NASAL									
contin. . .	m		n		ɲ	ŋ		mŋ	ɲw
syll. . .	ṁ		ṅ						
ROLLED LATERAL			(r) l						
FRICATIVE									
med. { unv. . .	β	v	s [ns]	ʃ ʒ	[j] [ʒ]	h fi			xw fiw
voic. . .			z						
lat. { unv. . .			ʃ						
voic. . .			h						
AFFRICATE									
unv. . .				tʃ	tʃ				
asp. . .				tʃh	tʃh				
voic. . .			dz	[dʒ]	[dʒ]				
SEMI-VOWEL					j	w			

() rarely used.

[] found in Lilima only.

Note: The dental pronunciation (in place of alveolar) is not indicated here (i.e. **t, n**, not **ʈ, ɳ**).

CONCORD TABLES

	N.P.	A.C.	R.C.	E.C.	P.C.	S.C.	O.C.	Q.F.
1st pers. s. . .	—	—	ndi-	—	—	ndi-	ndi-	ndo-
pl. . .	—	—	ti-	—	—	ti-	ti-	to-
2nd pers. s. . .	—	—	u-	—	—	u-	ku-	wo-
pl. . .	—	—	mu-	—	—	mu-	mu-	me-

Figure 7. Text from Doke 1967 showing **ʃ** LATIN SMALL LETTER S WITH HOOK and **ʒ** LATIN SMALL LETTER Z WITH SWASH TAIL. Note that in this chart Doke has *not* used the swash-tail glyph for the “alveolar labialized” sound (called by Doke “labio-alveolar” in Figures 3, 4, and 5 above); Tucker shows the same, but he is explicitly following Doke’s recommendation for a Shona practical orthography.

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6. But this relaxation of principle on the part of the Institute may perhaps be one of the causes why the Institute's letters *f* and *g* have never caught on, the digraphs *sh* and *zh* being more popular. Its case for *c* against *ch* may also have been weakened, though in Nyanja it has been fully justified in that one now writes *p, t, c,* and *k* for the unaspirated and *ph, th, ch,* and *kh* for the aspirated consonants.

(In the writing of the lateral fricatives */l/* and especially */ɫ/* there would seem to be no escape from digraph writing — unless one takes refuge in the Lepsius-Meinhof diacritics *ç* and *z* — and the South African solution *hl* and *dl* or *dhl* has more or less had to be accepted.)

The 'Africa' alphabet received an enormous fillip during the nineteen thirties by the publication of *Practical phonetics for students of African languages* by Westermann and Ward (1933) — one of the Institute's 'best sellers'. It soon spread through the missions in the Belgian Congo, although the then Governor, P. Rijckmans, was against phonetic characters, taking the 'practical' line that no character outside those found on a normal typewriter should be admitted. But the linguistic achievements of many devoted missionaries, both Roman Catholic and Protestant, backed in the postwar years by the scientific encouragement of the *Commission de linguistique africaine*, centered on Tervuren under the dedicated tutelage of Dr. (later Professor) A. E. Meeussen, and strongly supported from the University of Gent by Professor A. Burssens and his very popular linguistic journal *Kongo-Overzee*, resulted in the general acceptance of the 'Africa' system, even in some official circles.²⁴

In Portuguese Africa orthography was apparently left to the Missions. The authorities were interested in the spread of the Portuguese language, and the vernacular was tolerated in diglot publications only; this applied even to Bibles.

In Southern Africa the 'Africa' alphabet arrived on the scene in time for its application in the Shona field (Southern Rhodesia), when Professor Döke was invited to undertake a survey and recommend an alphabet.²⁵ The following phonetic letters were recommended and adopted:

b d v in addition to *b d v w*
f s z in addition to *s z sw zw*
g ng

Grammars, dictionaries, and schoolbooks at various levels were published, the Bible was reprinted, and the system lasted about thirty-three years.

²⁴ Dental */h/* and */h/* do not occur in Kungwa, their counterparts being either alveolar */h/* and */h/*, or else the postalveolar sounds for which *ch* and *j* are used.

²⁵ The Government recognized four languages for administration and education in those days: Swahili, Luba, Lingala, and Kongo. Swahili material came mostly from Tanganyika and was thus in the current Swahili orthography. The other languages were left to work out their own orthographies. Lingala tended towards the 'Africa' system; the Lingala Bible, for instance, uses the 'open' vowels *e* and *ɔ*.

²⁶ See *Report on the unification of the Shona dialects*, Govt. of S. Rhodesia, 1931; also Döke (1931).

This alphabet is in some respects an unhappy example of a phonetician's enthusiasm outrunning his realism.²⁴ The sounds represented by *ç* and *z* by Döke²⁵ could without ambiguity have been represented by the digraphs *sv* and *zv* (as was ultimately decided), whereas *v* represented a phoneme which needed to be distinguished from */s/* both */v/* and */w/*. Similarly the sounds */h/* and */ç/* needed to be distinguished from */s/* and */z/*.²⁶ On the other hand there was a certain amount of overlapping of */b/* with */β/*, and of */d/* with */dʒ/*, which could perhaps have afforded some justification for not distinguishing these phonemes orthographically.

The result, however, was that when the Shona alphabet came to be revised in 1954, ALL phonetic characters were thrown out and nothing was done to preserve certain vital phonetic distinctions.²⁷ Thus:

Changes already effected:

f and *g* were now represented by *sh* and *zh*;

Advantageous changes:

ç and *z* were now represented by *sv* and *zv*;

Disadvantageous changes:

v and *w* were now both represented by *v*;

h and *ç* were now both represented by *h*;

Doubtfully advantageous changes:

b and *β* were now both represented by *b*;

d and *dʒ* were now both represented by *d*;

on the other hand a gratuitous *h* was added to *c* to make *ch* (presumably to tie in with English spelling), a classic example of 'throwing the baby out with the bathwater' — but preserving the scum! (as one of my colleagues glumly remarked).

That this solution has proved too drastic is now tacitly admitted by the appearance in August 1967 of the Ministry of Education's latest circular²⁸ which, while still abjuring phonetic characters, compensates for the deficiencies of the 1954 system as follows:

b and *d* stand for the implosive sounds (*/b/*, */d/*);

bh and *dh* stand for the explosive sounds (*/bʰ/*, */dʰ/*); except in the combinations *mb, dp,*

nd, dz, dzv;

v stands for the 'voiced labiodental continuant pronounced without friction' (*/v/*);

²⁴ The present writer has little cause to be censorious of Döke, however, and has still to blush over the suggestions he put forward for Sotho at about the same time. See Tucker (1928 and 1929).

²⁵ Possibly inspired by Daniel Jones' pamphlet on Chindau. See Jones (1911).

²⁶ The phonetic characters were no more popular here than elsewhere in Africa, and were replaced almost universally by *sh* and *zh* at an early stage.

²⁷ See *A guide to standard Shona spelling*, Shona Language Committee, 1955.

²⁸ See *Standard Shona spelling*, Circular No. 47 of 1967, Ministry of Education, Salisbury, Rhodesia (typescript).

Figure 8. Text from Tucker 1971 showing *ç* LATIN SMALL LETTER S WITH HOOK and *z* LATIN SMALL LETTER Z WITH SWASH TAIL. Here again, the glyph shown for the former is that for the retroflex *s*, but as it is for a practical orthography it seems reasonable to suppose that the reason for this choice is simply that *ç* and *z* are much easier to write than either *ç* or *z*. In any case, the phonetic use made of the two pairs is distinct, even if the practical use of the letters is otherwise.