L2/05-053
2005-01-31

Preliminary proposal to encode the Vai script into the SMP of the UCS:
to be presented before the Unicode Technical Committee at UTC 102

Script: Vai
Status: Working Draft
Date: 31 January 2005

Authors: Charles L. Riley, José R. Rivera, Tombekai V. Sherman, and Jason Glavy

ISO/IEC JTC 1/SC 2/WG 2
PROPOSAL SUMMARY FORM TO ACCOMPANY SUBMISSIONS
FOR ADDITIONS TO THE REPERTOIRE OF ISO/IEC 10646[1]
Please fill all the sections A, B and C below.
Please read Principles and Procedures Document (P & P) from http://www.dkuug.dk/JTC1/SC2/WG2/docs/principles.html **for guidelines and details before filling this form.**
Please ensure you are using the latest Form from http://www.dkuug.dk/JTC1/SC2/WG2/docs/summaryform.html**.**
See also http://www.dkuug.dk/JTC1/SC2/WG2/docs/roadmaps.html **for latest *Roadmaps*.**

A. Administrative

1. **Title: Preliminary proposal to encode the Vai script into the SMP of the UCS**
2. Requester's name: Charles L. Riley, José R. Rivera, Tombekai V. Sherman, and Jason Glavy
3. Requester type (Member body/Liaison/Individual contribution): Individual contribution
4. Submission date: 07 February 2005
5. Requester's reference (if applicable): _____
6. Choose one of the following:
This is a complete proposal: _____
or, More information will be provided later: X

B. Technical - General

1. Choose one of the following:
   a. This proposal is for a new script (set of characters): X
      Proposed name of script: Vai
   b. The proposal is for addition of character(s) to an existing block: _____
      Name of the existing block: _____
2. Number of characters in proposal: 223
3. Proposed category (select one from below - see section 2.2 of P&P document):
A-Contemporary X B.1-Specialized (small collection) _____ B.2-Specialized (large collection) _____
C-Major extinct _____ D-Attested extinct _____ E-Minor extinct _____
F-Archaic Hieroglyphic or Ideographic _____ G-Obscure or questionable usage symbols _____
4. Proposed Level of Implementation (1, 2 or 3) (see Annex K in P&P document): Level 1
   Is a rationale provided for the choice? No
      If Yes, reference: _____
5. Is a repertoire including character names provided? Yes
   a. If YES, are the names in accordance with the "character naming guidelines" in Annex L of P&P document? Yes
   b. Are the character shapes attached in a legible form suitable for review? Yes
6. Who will provide the appropriate computerized font (ordered preference: True Type, or PostScript format) for publishing the standard? To Be Determined
   If available now, identify source(s) for the font (include address, e-mail, ftp-site, etc.) and indicate the tools used: _____
7. References:
   a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided? Yes
   b. Are published examples of use (such as samples from newspapers, magazines, or other sources) of proposed characters attached? Yes
8. Special encoding issues:
   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. Additional Information:
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 http://www.unicode.org/Public/UNIDATA/UCD.html and associated Unicode Technical Reports for information needed for consideration by the Unicode Technical Committee for inclusion in the Unicode Standard.

[1] Form number: N2652-F (Original 1994-10-14; Revised 1995-01, 1995-04, 1996-04, 1996-08, 1999-03, 2001-05, 2001-09, 2003-11)

C. Technical - Justification

1. Has this proposal for addition of character(s) been submitted before? No

   If YES explain _____

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

   If YES, with whom? Svend E. Holsoe, John V. Singler, Tombekai V. Sherman, Mohamed B. Nyei, and others listed in the Acknowledgements

   If YES, available relevant documents: N/A

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

   Reference: Mafundikwa 2004, Christin 2002, Ethnologue.com

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

   Reference: Mafundikwa 2004, Christin 2002, Scribner and Cole 1981, Ethnologue.com

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

   If YES, where? Reference: Mafundikwa 2004, Christin 2002, Scribner and Cole 1981, Ethnologue.com, Tombekai V. Sherman

6. After giving due considerations to the principles in the P&P document must the proposed characters be entirely in the BMP? No

   If YES, is a rationale provided? _____

   If YES, reference: _____

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

8. Can any of the proposed characters be considered a presentation form of an existing character or character sequence? No

   If YES, is a rationale for its inclusion provided? _____

   If YES, reference: _____

9. Can any of the proposed characters be encoded using a composed character sequence of either existing characters or other proposed characters? No

   If YES, is a rationale for its inclusion provided? _____

   If YES, reference: _____

10. Can any of the proposed character(s) be considered to be similar (in appearance or function) to an existing character? No

    If YES, is a rationale for its inclusion provided? _____

    If YES, reference: _____

11. Does the proposal include use of combining characters and/or use of composite sequences? No

    If YES, is a rationale for such use provided? _____

    If YES, reference: _____

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

    If YES, reference: _____

12. Does the proposal contain characters with any special properties such as control function or similar semantics? No

    If YES, describe in detail (include attachment if necessary) _____

13. Does the proposal contain any Ideographic compatibility character(s)? No

    If YES, is the equivalent corresponding unified ideographic character(s) identified? _____

    If YES, reference: _____

Origins of the Vai Script

Since Momolu Duwalu Bukele devised the Vai syllabary in the early 1800s, the Vai of Liberia and Sierra Leone have made extensive use of the script (Mafundikwa 2004). Though then an agrarian society, the Vai built an educational infrastructure that enabled the script to flourish and guaranteed its use, indeed, its dissemination amongst the Vai (Mafundikwa 2004).

Keeping written records helped Vai traders of the 19th century flourish in comparison to their Liberian competitors (Mafundikwa 2004). Negotiations could be handled via messengers, trade in valuable commodities was facilitated with a written record, and slaving, then illegal with British enforcers patrolling the coasts, continued – the 'coded' messages in Vai thwarting British intervention (Mafundikwa 2004)

The Vai syllabary is the oldest of the Mande (indigenous scripts of Liberia, Sierra Leone, and Mali) syllabaries.

Document Archives

Numerous sources exist documenting the use of the Vai script. Among these are the works of Sigismund W. Koelle, a German philologist and one of the first Europeans to document the script, and the works and personal papers of Momolu Massaquoi, Counsel General of Liberia in Hamburg.

In addition to these, there are the writings of the Vai including the numerous publications of the Institute of Liberian Languages, the Book of Rora/Ndole, folktales published in George Washington Ellis's Negro Culture in West Africa, the archives at Indiana University's Liberian Collections Project, and two manuscripts at the Harvard Houghton Manuscript Collection. Others are held in private hands.

Current Usage

Presently, Vai is spoken by over 100,000 people in northwestern Liberia and Sierra Leone (Ethnologue.com, Mafundikwa 2004). The script remains in use today, particularly amongst Vai traders (Christin 2002); the literary corpus of Vai texts is growing and includes those sources cited above as well as a translation of the Qur'an and a recent translation of the New Testament into Vai.

Supplementing these sources, Silvia Scribner and Michael Cole's The Psychology of Literacy provides photographic documentation of the daily use of Vai in Vai country.

Digital Use

Although no national encoding standard exists, various fonts do, including those created by Jason Glavy which cover the full range of characters in David Dalby's charts, that created by David Drevlow of Lutheran Bible Translators for their publication of a Vai New Testament, and that developed by SIL.

	1180	1181	1182	1183
0	11800	11810	11820	11830
1	11801	11811	11821	11831
2	11802	11812	11822	11832
3	11803	11813	11823	11833
4	11804	11814	11824	11834
5	11805	11815	11825	11835
6	11806	11816	11826	11836
7	11807	11817	11827	11837
8	11808	11818	11828	11838
9	11809	11819	11829	11839
A	1180A	1181A	1182A	1183A
B	1180B	1181B	1182B	1183B
C	1180C	1181C	1182C	1183C
D	1180D	1181D	1182D	1183D
E	1180E	1181E	1182E	1183E
F	1180F	1181F	1182F	1183F

11800		VAI LETTER A
11801		VAI LETTER EH
11802		VAI LETTER E
11803		VAI LETTER I
11804		VAI LETTER OR
11805		VAI LETTER O
11806		VAI LETTER U
11807		VAI SYLLABLE BA
11808		VAI SYLLABLE BEH
11809		VAI SYLLABLE BE
1180A		VAI SYLLABLE BI
1180B		VAI SYLLABLE BOR
1180C		VAI SYLLABLE BO
1180D		VAI SYLLABLE BU
1180E		VAI SYLLABLE BHA
1180F		VAI SYLLABLE BHEH
11810		VAI SYLLABLE BHE
11811		VAI SYLLABLE BHI
11812		VAI SYLLABLE BHOR
11813		VAI SYLLABLE BHO
11814		VAI SYLLABLE BHU
11815		VAI SYLLABLE CA
11816		VAI SYLLABLE CEH
11817		VAI SYLLABLE CE
11818		VAI SYLLABLE CI
11819		VAI SYLLABLE COR
1181A		VAI SYLLABLE CO
1181B		VAI SYLLABLE CU
1181C		VAI SYLLABLE DA
1181D		VAI SYLLABLE DEH
1181E		VAI SYLLABLE DE
1181F		VAI SYLLABLE DI
11820		VAI SYLLABLE DOR
11821		VAI SYLLABLE DO
11822		VAI SYLLABLE DU
11823		VAI SYLLABLE DHA
11824		VAI SYLLABLE DHEH
11825		VAI SYLLABLE DHE
11826		VAI SYLLABLE DHI
11827		VAI SYLLABLE DHOR
11828		VAI SYLLABLE DHO
11829		VAI SYLLABLE DHU
1182A		VAI SYLLABLE FA
1182B		VAI SYLLABLE FEH
1182C		VAI SYLLABLE FE
1182D		VAI SYLLABLE FI
1182E		VAI SYLLABLE FOR
1182F		VAI SYLLABLE FO
11830		VAI SYLLABLE FU
11831		VAI SYLLABLE GA
11832		VAI SYLLABLE GEH
11833		VAI SYLLABLE GE
11834		VAI SYLLABLE GI
11835		VAI SYLLABLE GOR
11836		VAI SYLLABLE GO
11837		VAI SYLLABLE GU
11838		VAI SYLLABLE GEHN
11839		VAI SYLLABLE GBA
1183A		VAI SYLLABLE GBEH
1183B		VAI SYLLABLE GBE
1183C		VAI SYLLABLE GBI
1183D		VAI SYLLABLE GBOR
1183E		VAI SYLLABLE GBO
1183F		VAI SYLLABLE GBU

	1184	1185	1186	1187
0	*11840*	11850	11860	11870
1	11841	11851	11861	11871
2	11842	11852	11862	11872
3	11843	11853	11863	11873
4	11844	11854	11864	11874
5	11845	11855	11865	11875
6	11846	11856	11866	11876
7	11847	11857	11867	11877
8	11848	11858	11868	11878
9	11849	11859	11869	11879
A	1184A	1185A	*1186A*	1187A
B	1184B	1185B	1186B	1187B
C	1184C	1185C	1186C	1187C
D	1184D	1185D	1186D	1187D
E	1184E	1185E	1186E	1187E
F	1184F	1185F	1186F	1187F

11840		VAI SYLLABLE GBEHN
11841		VAI SYLLABLE GBON
11842		VAI SYLLABLE HA
11843		VAI SYLLABLE HEH
11844		VAI SYLLABLE HE
11845		VAI SYLLABLE HI
11846		VAI SYLLABLE HOR
11847		VAI SYLLABLE HO
11848		VAI SYLLABLE HU
11849		VAI SYLLABLE HAN
1184A		VAI SYLLABLE HEHN
1184B		VAI SYLLABLE HIN
1184C		VAI SYLLABLE HORN
1184D		VAI SYLLABLE HUN
1184E		VAI SYLLABLE JA
1184F		VAI SYLLABLE JEH
11850		VAI SYLLABLE JE
11851		VAI SYLLABLE JI
11852		VAI SYLLABLE JOR
11853		VAI SYLLABLE JO
11854		VAI SYLLABLE JU
11855		VAI SYLLABLE KA
11856		VAI SYLLABLE KEH
11857		VAI SYLLABLE KE
11858		VAI SYLLABLE KI
11859		VAI SYLLABLE KOR
1185A		VAI SYLLABLE KO
1185B		VAI SYLLABLE KU
1185C		VAI SYLLABLE KPA
1185D		VAI SYLLABLE KPEH
1185E		VAI SYLLABLE KPE
1185F		VAI SYLLABLE KPI
11860		VAI SYLLABLE KPOR
11861		VAI SYLLABLE KPO
11862		VAI SYLLABLE KPU
11863		VAI SYLLABLE KPAN
11864		VAI SYLLABLE KPEHN
11865		VAI SYLLABLE LA
11866		VAI SYLLABLE LEH
11867		VAI SYLLABLE LE
11868		VAI SYLLABLE LI
11869		VAI SYLLABLE LOR
1186A		VAI SYLLABLE LO
1186B		VAI SYLLABLE LU
1186C		VAI SYLLABLE MA
1186D		VAI SYLLABLE MEH
1186E		VAI SYLLABLE ME
1186F		VAI SYLLABLE MI
11870		VAI SYLLABLE MOR
11871		VAI SYLLABLE MO
11872		VAI SYLLABLE MU
11873		VAI SYLLABLE MBHA
11874		VAI SYLLABLE MBHEH
11875		VAI SYLLABLE MBHE
11876		VAI SYLLABLE MBHI
11877		VAI SYLLABLE MBHOR
11878		VAI SYLLABLE MBHO
11879		VAI SYLLABLE MBHU
1187A		VAI SYLLABLE MGBA
1187B		VAI SYLLABLE MGBEH
1187C		VAI SYLLABLE MGBE
1187D		VAI SYLLABLE MGBOR
1187E		VAI SYLLABLE MGBO
1187F		VAI SYLLABLE NA

	1188	1189	118A	118B
0	11880	11890	118A0	118B0
1	11881	11891	118A1	118B1
2	11882	11892	118A2	118B2
3	11883	11893	118A3	118B3
4	11884	11894	118A4	118B4
5	11885	11895	118A5	118B5
6	11886	11896	118A6	118B6
7	11887	11897	118A7	118B7
8	11888	11898	118A8	118B8
9	11889	11899	118A9	118B9
A	1188A	1189A	118AA	118BA
B	1188B	1189B	118AB	118BB
C	1188C	1189C	118AC	118BC
D	1188D	1189D	118AD	118BD
E	1188E	1189E	118AE	118BE
F	1188F	1189F	118AF	118BF

11880	𛄀	VAI SYLLABLE NEH
11881	𛄁	VAI SYLLABLE NE
11882	𛄂	VAI SYLLABLE NI
11883	𛄃	VAI SYLLABLE NOR
11884	𛄄	VAI SYLLABLE NO
11885	𛄅	VAI SYLLABLE NU
11886	𛄆	VAI SYLLABLE NDA
11887	𛄇	VAI SYLLABLE NDEH
11888	𛄈	VAI SYLLABLE NDE
11889	𛄉	VAI SYLLABLE NDI
1188A	𛄊	VAI SYLLABLE NDOR
1188B	𛄋	VAI SYLLABLE NDO
1188C	𛄌	VAI SYLLABLE NDU
1188D	𛄍	VAI SYLLABLE NYA
1188E	𛄎	VAI SYLLABLE NYEH
1188F	𛄏	VAI SYLLABLE NYI
11890	𛄐	VAI SYLLABLE NYOR
11891	𛄑	VAI SYLLABLE NYU
11892	𛄒	VAI SYLLABLE NJA
11893	𛄓	VAI SYLLABLE NJEH
11894	𛄔	VAI SYLLABLE NJE
11895	𛄕	VAI SYLLABLE NJI
11896	𛄖	VAI SYLLABLE NJOR
11897	𛄗	VAI SYLLABLE NJO
11898	𛄘	VAI SYLLABLE NJU
11899	𛄙	VAI SYLLABLE NNA
1189A	𛄚	VAI SYLLABLE NNEH
1189B	𛄛	VAI SYLLABLE NNOR
1189C	𛄜	VAI SYLLABLE NGA
1189D	𛄝	VAI SYLLABLE NGEH
1189E	𛄞	VAI SYLLABLE NGE
1189F	𛄟	VAI SYLLABLE NGI
118A0	𛄠	VAI SYLLABLE NGOR
118A1	𛄡	VAI SYLLABLE NGO
118A2	𛄢	VAI SYLLABLE NGU
118A3	𛄣	VAI SYLLABLE PA
118A4	𛄤	VAI SYLLABLE PEH
118A5	𛄥	VAI SYLLABLE PE
118A6	𛄦	VAI SYLLABLE PI
118A7	𛄧	VAI SYLLABLE POR
118A8	𛄨	VAI SYLLABLE PO
118A9	𛄩	VAI SYLLABLE PU
118AA	𛄪	VAI SYLLABLE RA
118AB	𛄫	VAI SYLLABLE REH
118AC	𛄬	VAI SYLLABLE RE
118AD	𛄭	VAI SYLLABLE RI
118AE	𛄮	VAI SYLLABLE ROR
118AF	𛄯	VAI SYLLABLE RO
118B0	𛄰	VAI SYLLABLE RU
118B1	𛄱	VAI SYLLABLE SA
118B2	𛄲	VAI SYLLABLE SEH
118B3	𛄳	VAI SYLLABLE SE
118B4	𛄴	VAI SYLLABLE SI
118B5	𛄵	VAI SYLLABLE SOR
118B6	𛄶	VAI SYLLABLE SO
118B7	𛄷	VAI SYLLABLE SU
118B8	𛄸	VAI SYLLABLE TA
118B9	𛄹	VAI SYLLABLE TEH
118BA	𛄺	VAI SYLLABLE TE
118BB	𛄻	VAI SYLLABLE TI
118BC	𛄼	VAI SYLLABLE TOR
118BD	𛄽	VAI SYLLABLE TO
118BE	𛄾	VAI SYLLABLE TU
118BF	𛄿	VAI SYLLABLE VA

	118C	118D	118E	118F
0	118C0	118D0		
1	118C1	118D1		
2	118C2	118D2		
3	118C3	118D3		
4	118C4	118D4		
5	118C5	118D5		
6	118C6	118D6		
7	118C7	118D7		
8	118C8	118D8		
9	118C9	118D9		
A	118CA	118DA		
B	118CB	118DB		
C	118CC	118DC		
D	118CD	118DD		
E	118CE	118DE		
F	118CF			

118C0	𖩠	VAI SYLLABLE VEH
118C1	𖩡	VAI SYLLABLE VE
118C2	𖩢	VAI SYLLABLE VI
118C3	𖩣	VAI SYLLABLE VOR
118C4	𖩤	VAI SYLLABLE VO
118C5	𖩥	VAI SYLLABLE VU
118C6	𖩦	VAI SYLLABLE WA
118C7	𖩧	VAI SYLLABLE WEH
118C8	𖩨	VAI SYLLABLE WE
118C9	𖩩	VAI SYLLABLE WI
118CA	𖩪	VAI SYLLABLE WOR
118CB	𖩫	VAI SYLLABLE WO
118CC	𖩬	VAI SYLLABLE WU
118CD	𖩭	VAI SYLLABLE WAN
118CE	𖩮	VAI SYLLABLE WEHN
118CF	𖩯	VAI SYLLABLE WIN
118D0	𖩰	VAI SYLLABLE YA
118D1	𖩱	VAI SYLLABLE YEH
118D2	𖩲	VAI SYLLABLE YE
118D3	𖩳	VAI SYLLABLE YI
118D4	𖩴	VAI SYLLABLE YOR
118D5	𖩵	VAI SYLLABLE YO
118D6	𖩶	VAI SYLLABLE YU
118D7	𖩷	VAI SYLLABLE ZA
118D8	𖩸	VAI SYLLABLE ZEH
118D9	𖩹	VAI SYLLABLE ZE
118DA	𖩺	VAI SYLLABLE ZI
118DB	𖩻	VAI SYLLABLE ZOR
118DC	𖩼	VAI SYLLABLE ZO
118DD	𖩽	VAI SYLLABLE ZU
118DE	𖩾	VAI SYLLABIC NASAL

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We offer our sincerest thanks to all those who have poured labouriously over manuscripts, labored strenously over details, and provided technical guidance and moral support throughout this project. Thank you Svend E. Holsoe, William Siegmann, Mohamed B. Nyei, John V. Singler, Verlon Stone, Konrad Tuchscherer, Lorna Priest, Peter Constable, Peter Martin, Rick McGowan, John Cowan, Muneera Spence, Saki Mafundikwa, Deborah Anderson, Michael Everson, David Drevlow, Peter Rogers, Jim Laesch, Karen Campbell, Ralph Austen, Robert Farris Thompson, Barbaro Martinez-Ruiz, Christopher L. Miller, Dorothy Woodson, Joseph Lauer, Richard Lammert, Daniel Becker, Britta Santamauro, Momolu Massaquoi, Hasso von Boehmer, and Rainer Hering.

And to those, without whom this adventure would never have been possible: Duwalu Bukele, August Curtis, Sigismund Koelle, David Dalby, August Klingenheben, Dietrich Westermann, William Welmers, Susan Scribner, Michael Cole, John Gay, George Washington Ellis, and Momolu Massaquoi, we offer our ever enduring gratitude!

Appendix

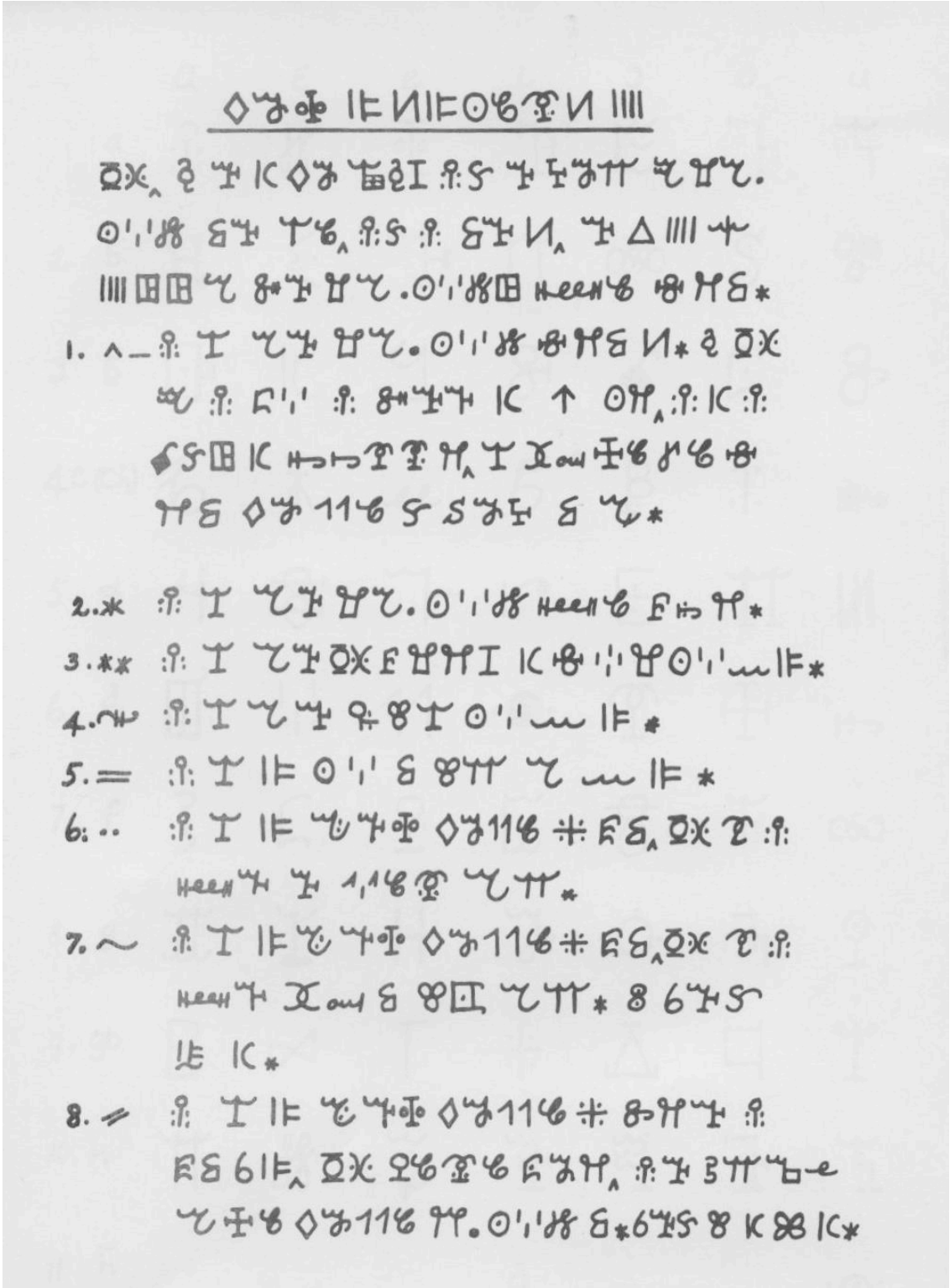

Figure 1: Excerpt from the Standard Vai Script

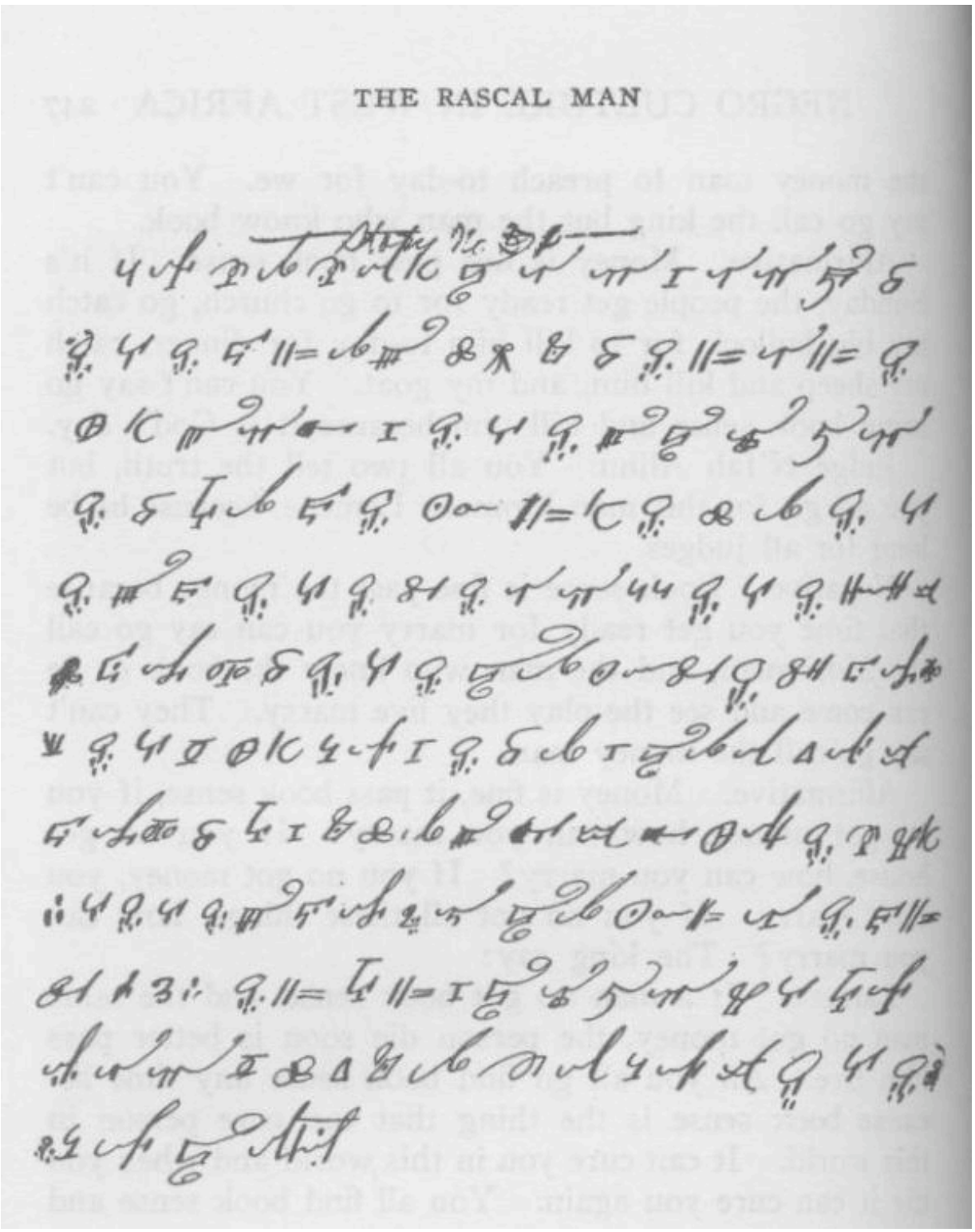

Figure 2: Excerpt from Ellis' Negro Culture in West Africa

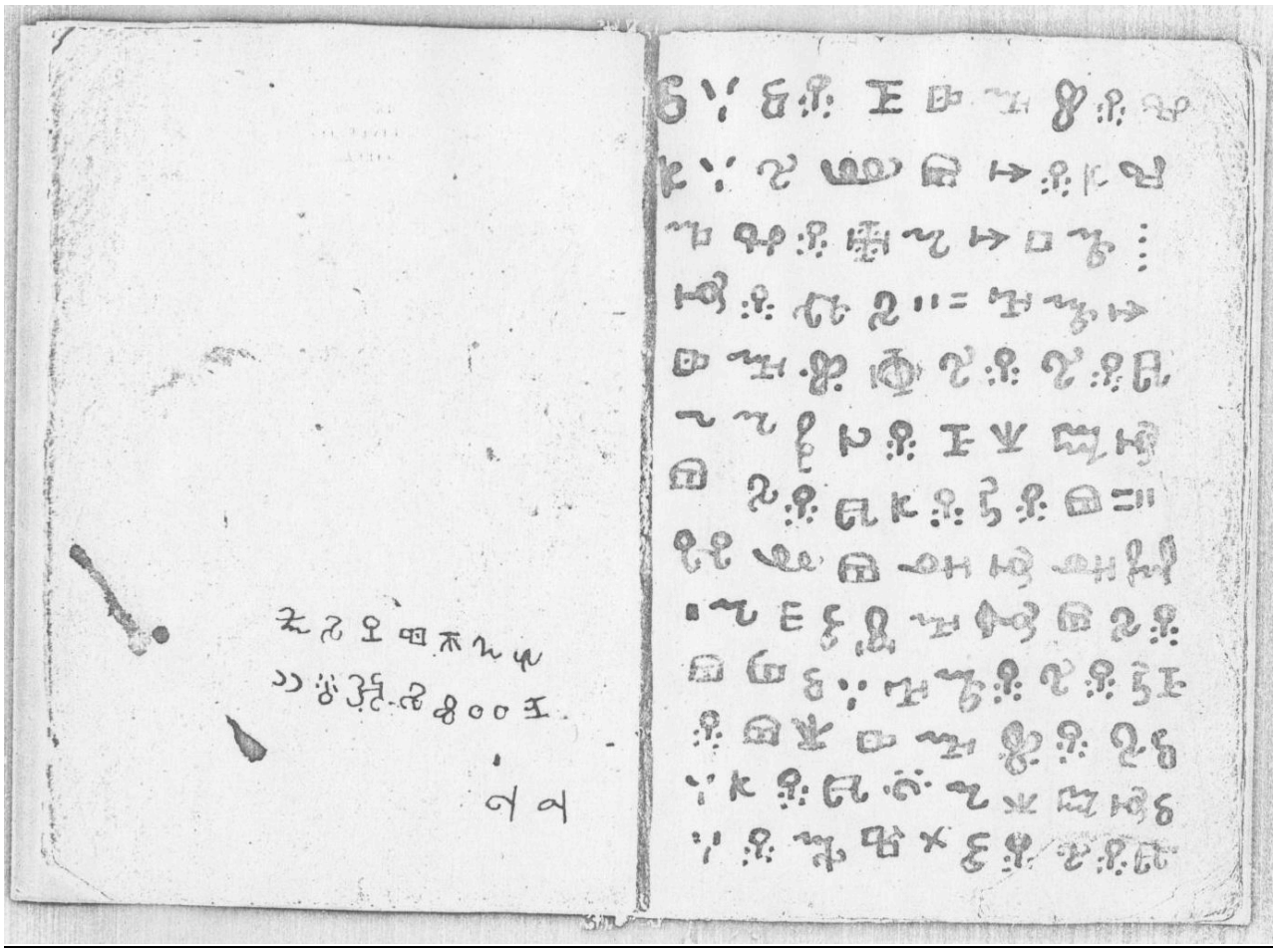

Figure 3: Excerpt from the Book of Rora/Ndole

Figure 4: Posted Sign, from Scribner and Cole's The Psychology of Literacy

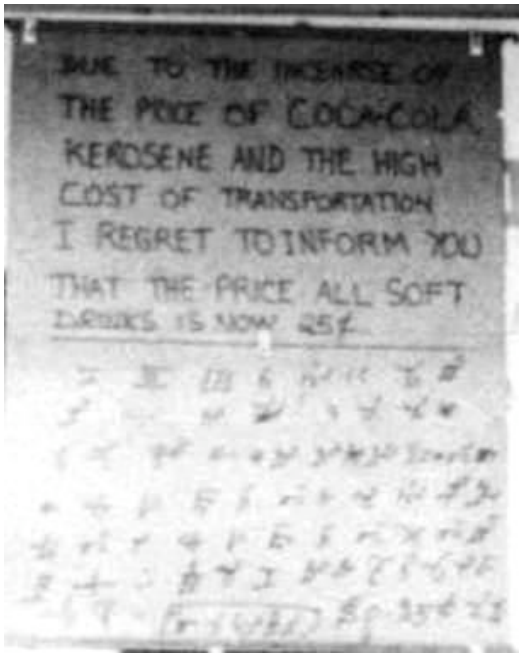

Figure 5: Shop notice, from Scribner and Cole's The Psychology of Literacy

A multiscript Muslim brotherhood banner at a Cape Mount County celebration. (Courtesy of Stephen Reder.)

Figure 6: Muslim Brotherhood banner, from Scribner and Cole's The Psychology of Literacy

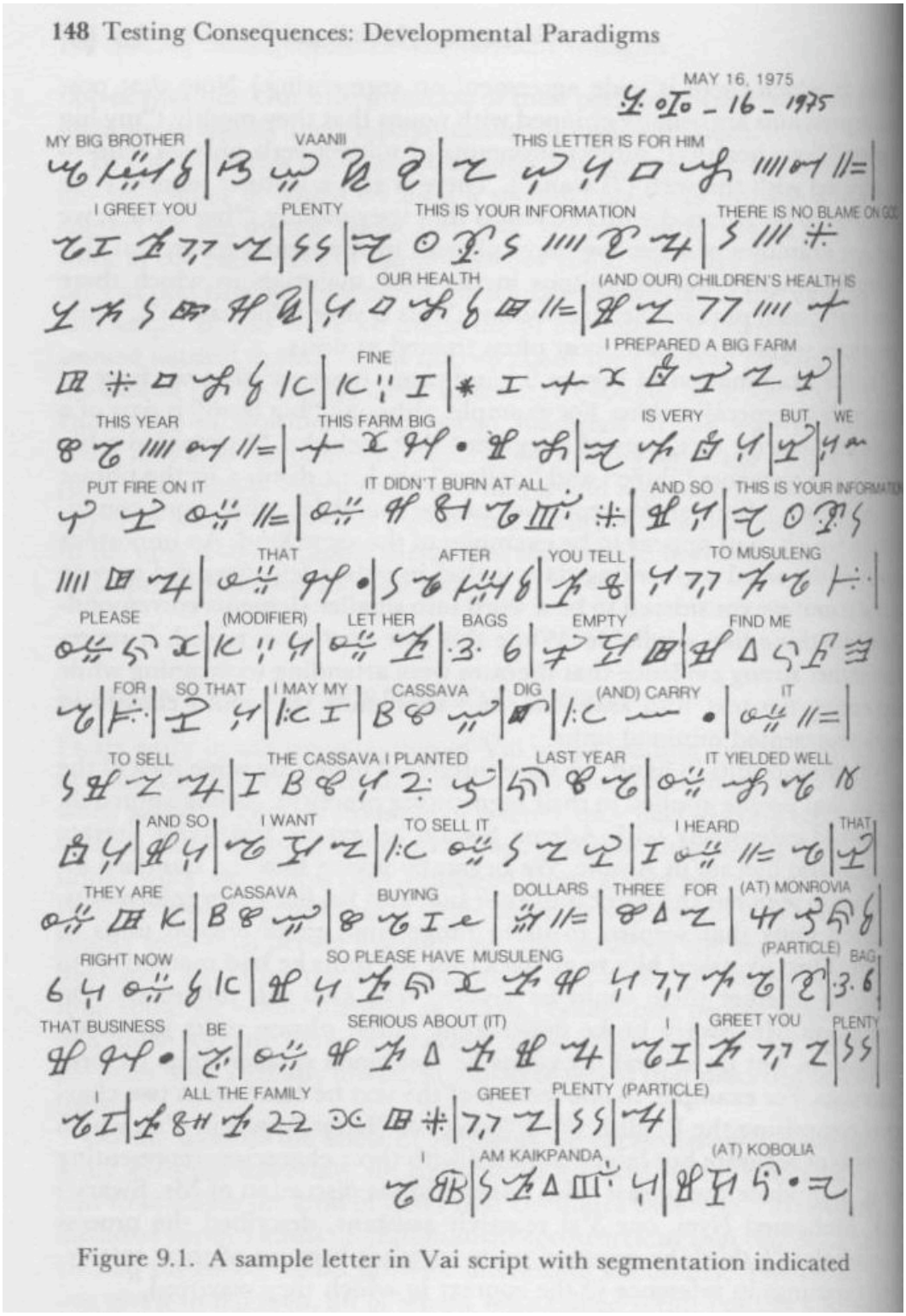

Figure 7: Vai letter with translation, from Scribner and Cole's <u>The Psychology of Literacy</u>

Bibliographic References

Christin, Ann-Marie. A History of Writing: From Hieroglyph to Multimedia. Paris: Flammarion-Père Castor, 2002.

Dalby, David. *A survey of the indigenous scripts of Liberia and Sierra Leone: Vai, Mende, Loma, Kpelle and Bassa*. African Language Studies 8 (1967): pp. 1-51.

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