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Variation in the Bugis/Makasarese script

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VARIATION IN THE BUGIS/MAKASARESE SCRIPT¹

'...there can be no writing of history
without a history of writing.'
Yuen Ren Chao (1961:69)

As is well known to those interested in the languages and literature of South Sulawesi, Indonesia, the Bugis and Makasarese living there have been using a specific script of their own for several centuries.

As to its structural, inner form, this Bugis/Makasarese script belongs to the Indian and Indian-derived scripts. As is characteristic of this type of script, it is made up of basic characters representing syllables each consisting of a consonant followed by the inherent vowel /a/ and diacritic marks representing vowels other than /a/ added to the basic character and replacing the inherent /a/. A significant aspect of the Bugis/Makasarese script is that it has no special basic characters for syllable-initial vowels other than /a/; the basic character for initial /a/ is used for the other initial vowels by adding the appropriate vowel marks. The script is defective or incomplete in that it does not express consonant gemination, syllable-final consonants (nasals, except some homorganic ones in Bugis, and glottal stop) and (Bugis) final vowel lengthening.

The outer form of this syllabic-phonemic script can most adequately be illustrated with its special font of printing types, in their characteristic, (distantly) Indian-derived order (see Table 1).

General works on the writing systems of the world seldom make mention of the Bugis and/or Makasarese script (or of Indonesian scripts in general, for that matter). Even those which aim at exhaustiveness pay but little attention to it, usually only including the characters in a table and giving a sample text (Diringer 1968:340, Figs. 18, 16, 10; Friedrich 1966:133-134,

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Table 1. Bugis/Makasarese script, printing types (the prenasalized characters are not used in Makasarese, and the sign for shwa (e) is used for final nasals in Makasarese).

ka	ㄥ	pa	ㄥ	ta	ㄥ	ca	ㄥ	ya	ㄥ	sa	ㄥ	i	•
ga	ㄥ	ba	ㄥ	da	ㄥ	ja	ㄥ	ra	ㄥ	a	ㄥ	u	•
nga	ㄥ	ma	ㄥ	na	ㄥ	nya	ㄥ	la	ㄥ	ha	ㄥ	é	•
ngka	ㄥ	mpa	ㄥ	nra	ㄥ	nca	ㄥ	wa	ㄥ			o	•
												e	•

Fig. 308; Jensen 1969:384-385, Fig. 387), and even so sometimes inaccurately (in Jensen's table <sa> and <ha> are interchanged). They present the printing types as shown in Table 1, but copied in handwriting. Damais, in his description of the Bugis script of 1948, presents printing types but uses those kept in the French national printing office (*Imprimerie Nationale de France*), which differ in some details from those in Table 1.

Hilgers-Hesse does not use printing types in her description of the Bugis and Makasarese script (1967) and apparently writes the characters, not conspicuously fluently, herself. She includes as illustration two brief passages from Bugis and Makasarese manuscripts kept in Leiden, in which some variation is visible.

Such variations in the form of the characters as displayed are occasionally pointed out (Damais 1948:377) but not discussed. In general, the few existing descriptions of the Bugis/Makasarese script give the impression of uniformity, and not inaccurately so. The uniformity largely prevailing nowadays in the use of the script may be attributed to two factors, printing and education.

Printing types of the Bugis characters, designed and cast in Rotterdam in the mid-nineteenth century, were used from that time onwards for printing in both the South Celebes capital, Makasar, and Amsterdam. They were also used as models for teaching the script in elementary schools, first in Makasar and environs, and then gradually in other areas of South Celebes. This process of standardization clearly influenced the later handwriting of the script. As a standard style of the script emerged, previously existing variations disappeared (though perhaps only from the official scene). Such variations, though, can still be gleaned from older manuscripts in public collections.

A study of such variations is of importance for two reasons apart from mere descriptive purposes. They may shed some light on the origin and development of the Bugis script, and on how the scripts of other languages – such as those of Bima, Sumbawa, Ende, and Wawonii – were derived from the Bugis.

To trace these developments, the way in which the standard printing font came into being will be looked into first. Then a number of older variations will be discussed. On this basis, finally, a theory will be presented of how

WTGI OR ALPHABET OF CELEBES.

WATER TREATMENT OF CELLULOSE.	
WATER	CELLULOSE
k	1
a	2
ng	3
kh	4
p	5
b	6
m	7
ph	8
t	9
d	10
n	11
ch	12
j	13
ra	14
ch	15
h	16
r	17
l	18
w	19
s	20
u	21
e	22
i	23
o	24

Specimen of Bugis writing.

[illegible]

Fig. 2. Bugis/Makasarese script. Crawford 1820 plate 17

the Bugis script may have developed to its present form. In view of limited space, the differences and additions found in other-language scripts derived from the Bugis, and the old Makasarese script and its variants will be discussed elsewhere.

1. The standard printing types

The Dutch theologian and Arabist B.F. Matthes initiated the efforts to develop printing types of the Bugis/Makasarese script in the Netherlands. He was commissioned by the Netherlands Bible Society to study the South Celebes languages, to compile grammars and dictionaries of them, and to translate the Bible. He arrived in Makasar in 1848 and stayed there initially for ten years.

Before that time the Bugis script and the shape of its characters had been made known to the West in print by three authors, T.S. Raffles (1817), J. Crawford (1820), and C.H. Thomsen (1832, 1833). These early illustrated samples had no influence on the developments in Makasar and the Netherlands, but did lead to the founding of Bugis printing types in Austria and France.

1.1 Raffles

In his epoch-making *The History of Java* (1817), Raffles includes a chart (1817: facing p. clxxxviii) showing among several different scripts the 'Ugi or Mengkasar Alphabet', in which he first lists the basic characters in one series, then the 'Vowel Signs', and at the bottom, two lines of 'The Ugi or Bugis Characters in Connection' (see Fig. 1).²

The list contains all basic characters except for the <ya>, and presents them in the traditional sequence as given above in Table 1, except for the <a> which follows the <ha>, at the end, rather than preceding it.

The sound value has been noted correctly below each character with the curious exception of <ra> and <wa>, which are explained as 'r' and 'w'.

In most cases the characters in the list show some deficiency in their shape, for instance the <ja> and <sa> are practically identical, the upper horizontal of the former being far too short. There are also some errors in

² The text presented by Raffles as a specimen of Bugis writing reads, with interlinear glosses:

waramparang	makkuawad	tu \	maéga	puang	ri aq \
goods	such-as		those	many	prince to-me ;
engka	to	séddi	bola \	engka-na	anekku séddi \
there-is	also	one	house	there-is-PIRF	child-my one
engka	utaro	waramparang	ngé	tu \	
there-is	I-keep	goods-the		those	

THE ALPHABET.

FORM	NAME	POWER
1	ka	like k.
2	ga	„ g, in go
3	gna	„ a nasal, expressed by gn.
4	n'kak	„ k.
5	pa	„ p.
6	ba	„ b.
7	ma	„ m.
8	m'pak	„ p.
9	ta	„ t.
10	da	„ d.
11	na	„ n.
12	n'rak	„ r.
13	cha	„ ch, as in Church; <i>Engl.</i>
14	ja	soft, between j & y, do.
15	nia	„ as in maniac
16	n'chak	„ ch.
17	a	„ a, in father
18	ra	„ r.
19	la	„ l.
20	wa	„ w, <i>English</i>
21	sa	„ s.
22	ha	„ h.
23	iya	„ a compound of 12 & 1

Fig. 3. Bugis script. Thomsen 1833:iv

the two lines of continuous script; for instance, the <ta> of *engkato* is practically identical to the <o>.

One character in the list, the <nca>, needs special attention. It is identical to the <nya>, except for two verticals on top of it, each with a brief curve at the top, the first going backwards and the second forwards. The small curve below the main one has its two ends upwards instead of downwards as in the standard <nca>, which also lacks the verticals. This same shape is also to be found in the Bima-Bugis script.

1.2 Crawford

A chart of 'Alphabets arranged according to the Dewanagari classification' in Crawford's *History of the Indian archipelago* (1820: plate 17) includes a one-line list of the 'Wugi or Alphabet of Celebes' and two lines of continuous writing as a 'Specimen of Bugis Writing' (see Fig. 2).³

The characters in the list are in the same sequence as in Raffles' except for the <ha>, which is inserted between the <nca> and <ra> here. The shapes of the characters are generally correct, though often rather clumsily written.

There are several errors, however, in the sound values indicated above the characters in the list. First, the inherent *a* is never shown; secondly, prenasalization is incorrectly indicated as aspiration (for instance 'kh' for 'ngka') or not at all (<nra> and <ra> are both explained as 'r'). The <ya> is also lacking here. The <nca> has the same unusual, though not incorrect, shape as in Raffles' list.

1.3 Thomsen

The Danish missionary of the London Missionary Society in Singapore, Thomsen (Noorduyn 1957) introduced both of his (anonymous⁴) publica-

³ The text presented by Crawford as a specimen of Bugis writing reads, with interlinear glosses:

na	ri	t[u]	poanaqi	\	aneqna	\	ia	to	si	sa
and in	that	have-child-he	child-his	he	also	again	certainly			
poanaqi		[u]waseng	\	na	ia	to	si	sa		
have-child-he	I-say		and	he	also	again	certainly			
poanaqi		anakkeng	\	ia	na	ri	tu	risuro	ri	Nabi
have-child-he	child-our		he	then	at	there	sent to	Prophet		
No	\	mawa	asu	ma	ni					
Noah	ring	dog	only	then-he						

⁴ It was already known in 1832 that it was Thomsen who was printing Bugis types in Singapore. In a letter published in *Nouveau Journal Asiatique* in that year, G. de Humboldt (i.e. the famous Wilhelm von Humboldt) discusses some characters of the Bugis and the Philippine scripts, referring to an earlier article on these subjects by E. Jacquet. In this letter, Von Humboldt reports to have learnt from a certain Mr Neumann, after the latter's return from a voyage to

tions containing Buginese texts in Bugis script (1832 and 1833) with an exactly identical description of the Bugis script, entitled 'The Alphabet' (see Figs. 3 and 4).

ḡḡḡḡḡḡ ḡḡḡḡ ḡḡḡ ḡḡḡḡ ḡḡḡḡ
 ḡḡḡḡ ḡḡḡḡḡ ḡḡḡḡḡ ḡḡḡḡḡ
 ḡḡḡḡ ḡḡḡ ḡḡḡḡ ḡḡḡ ḡḡḡ ḡḡḡ
 ḡḡḡḡ ḡḡḡḡḡ ḡḡḡḡ ḡḡḡḡḡ ḡḡḡ
 ḡḡḡ ḡḡḡḡḡḡ ḡḡḡḡḡ ḡḡḡ ḡḡḡ ḡḡḡ
 ḡḡḡḡḡ ḡḡḡḡḡḡḡḡ ḡḡ

1 ḡḡḡḡ ḡḡḡḡḡḡḡ ḡḡḡ ḡḡḡḡ ḡḡḡ
 ḡḡḡḡḡ ḡḡḡḡ ḡḡḡḡḡ ḡḡḡ ḡḡḡḡḡ
 ḡḡḡḡḡ ḡḡḡ ḡḡḡḡḡḡḡḡ ḡḡḡḡḡ
 ḡḡḡḡḡ ḡḡḡ ḡḡḡḡḡ ḡḡḡḡḡ ḡḡḡ
 ḡḡḡḡ ḡḡḡḡḡ ḡḡḡḡḡ ḡḡḡḡḡ ḡḡḡ
 ḡḡḡḡḡ ḡḡḡḡḡ ḡḡḡḡḡḡ ḡḡḡḡḡ ḡḡḡ
 ḡḡḡḡḡ ḡḡḡḡḡ ḡḡḡḡḡ ḡḡḡḡḡḡḡḡ
 ḡḡḡḡḡ ḡḡḡḡḡ ḡḡḡ ḡḡḡḡḡ ḡḡḡ

Fig. 4. Bugis text. Thomsen 1832:vii.

This description starts with a list in three columns, headed 'Form', 'Name', and 'Power', and containing the Bugis characters, their sound value including the inherent /a/, and the corresponding consonant in English or another explanation, respectively.

The sequence is again mainly the same as in Raffles' and Crawford's lists. The <a> has been inserted between <nca> and <ra> here, and the <ya> has been added at the end, after <ha>.

The characters have their usual shape except the <nca>. Although it has the two verticals on top as with Raffles and Crawford, the curves on top of

Canton, that Mr Thomsen, a Danish missionary in Singapore, had started printing an English-Bugis vocabulary in the indigenous characters, but had abandoned the project for lack of funds. Neumann had obtained the first sheet, containing some two hundred words, of this still unpublished vocabulary.

the verticals both point forwards and the little curve below the main one is lacking.

The indications of the sound value are correct except for the prenasalized syllables, which have a final 'k', and the <ya>, which is explained as 'iya' and as 'a compound of a and i', which is in fact only the case when an <i> vowel mark is added.

The characters in the explanation represent fairly those used in the texts in Bugis script which follow in both books. They give the general impression of being slightly flattened, while the <é> and <o> marks and the punctuation sign (three dots above each other: ۞) are practically vertical rather than oblique, as is also found in the 'palm leaf style' (see section 2.8 below). As a whole the style is pleasant and carefully executed (though writing errors are not lacking, such as in *essona*, the first word of the sixth line on p. 1 of the *Code*, where an <o> ۞ mark is erroneously written after the <e> ۞). There is a remarkable punctuation mark for closing a paragraph in the form of two Y-shapes, one inverted on top of the other, which is sometimes also found in manuscripts in South Celebes.

Thomsen's two publications are valuable as an early example of the style of Bugis script in the Malay Peninsula, outside of South Celebes.

1.4 Dulaurier

As was pointed out earlier (Noorduyn 1957:242), Thomsen's *Code* was reprinted in Paris by Edouard Dulaurier, professor of Malay in Paris, in 1845, in the sixth volume of the collection of pre-eighteenth-century maritime laws published by the expert in maritime law J.M. Pardessus, who had seen an announcement of the *Code* in the *Journal Asiatique* and had obtained a copy of it from Bengal in 1837 (Pardessus 1845:467-480, 377-379). At about the same time the text of the *Code* was reprinted anonymously and undated, probably by Dulaurier, now under the title *Chrestomathies océaniques. Textes en langue boughi I*, without translation or annotation.⁵ The printing types cast for Dulaurier were kept in the French national printing office (*Imprimerie Nationale de France*), where they were used again by Damais in his article of 1948 mentioned above.⁶

⁵ See Pelras 1975:256. A picture of the cover of this *Chrestomathies océaniques* is included in Pelras 1975:258.

⁶ Damais includes in his article a brief text in Bugis characters extracted from the first story published by Matthes in his Bugis anthology (Vol. I, 1864:1), and adds an interlinear transcription based on Matthes' transcription system. In the text in Bugis script, he erroneously adds a *ma* and a *na* for the nasals in the words *amboq* and *indoq*, respectively, which in Bugis script are never expressed, and thus writes in fact 'amabo' and 'inado'.

Zur Erläuterung des Schriftsystems und Alphabetes der Sprache
diene folgende Uebersicht:

Alphabet.

Zeichen.	Name.	Lautwerth.	Zeichen.	Name.	Lautwerth.
ka	ka	ka	tscha	tscha	tscha (= éa)
ga	ga	ga	ja	ja	ja*
nga	nga	Nasal	uja	uja	ü**)
n'kak	n'kak	k	n'tschak	n'tschak	tsch (= é)
pa	pa	p	a	a	engl. a (= 'a)
ba	ba	b	ra	ra	ra
ma	ma	m	la	la	la
m'pak	m'pak	p	wa	wa	englisches wa
ta	ta	t	sa	sa	sa
da	da	d	ha	ha	ha
nâ	nâ	n	iya	iya	iya (Ligatur).
n'rak	n'rak	r			

*) Ein weicher Laut zwischen ja und tscha.

**) Wie uja (das j wie ein kaum hörbares i).

Jedem Consonanten, oder jedem (geschriebenen) Buchstaben des Alphabetes (die oben erwähnten 4 Ergänzungs-Buchstaben ausgenommen), wohnt als zugehöriger Vocal schon das unreine, dem $\sim$ a entsprechende α (ä) inne. Jeder Consonant bildet desshalb schon ohne besonderen zutretenden Vocal eine eigene Sylbe; sobald ihm ein solcher (sogenannter beweglicher oder Zusatz-) Vocal zutrifft, versteht sich dies von selbst.

Der beweglichen Vocale sind fünf, nämlich:

•	i
•	u
•	kurzes e
•	o und
•	ö (kann nach Maassgabe seiner Stellung im Worte und nach Maassgabe der folgenden Consonanten auch wie öu oder öm (öng) lauten).

Die Sprache der Bugis hat zwei Interpunctonszeichen: $\dot{\cdot}$ für das Ende des Satzes und $\circ$ für dasjenige eines längeren Abschnittes. Zur Bezeichnung der Zahlen in jeder Verwendung derselben bedient sie sich durchaus der europäischen Zahlzeichen.

Fig. 5. Bugis script. Seelieb 1854.

1.5 Seelieb

Thomsen's *Code* was also reprinted in Austria at the imperial and royal court and state printing office (*Kaiserlich-königliche Hof- und Staatsdruckerei*) in Vienna in 1854, with a German translation of the English part by E. Seelieb, 'a member of the state printing house' (*Mitglied der Staatsdruckerei*), on the instigation of Professor H.C. Millies of Amsterdam (Noorduyn 1957:243). Millies was a theologian connected with the Netherlands Bible Society and therefore interested in procuring printing types of the Bugis and Makasarese script for the publication of Matthes' linguistic and Bible translation works. He sent a copy of the *Code* to Vienna, but the results achieved there were not considered satisfactory and the Vienna attempt was terminated.

Comparison of the Viennese types with those in the *Code* shows that this decision was justified. Though the Viennese types are clearly based on the Thomsen ones, in several instances they display obvious misinterpretations, such as in the case of <nra> looking like a <pa> with a small horizontal underneath, and the quite aberrant <ca> (see Fig. 5).

1.6 Tetterode

A few years later Millies was successful in the Netherlands. The type-founder N. Tetterode at Rotterdam succeeded – at his own expense (Veth 1856:198) – in founding, under the direction of Millies, printing types of the Bugis/Makasarese script from models sent by Matthes. A specimen was printed in broadsheet in 1856 (*Spécimen* 1856).

These types were generally received very favourably, even by Matthes, who only commented that a few of them were still less than satisfactory, as the founder had deviated too much from the models he had sent (Matthes 1857:550). A set of the types was sent to Makasar and was used for printing the first Bugis work edited and translated by Matthes, the epic story of Daeng Kalebbu (Matthes 1858b), which was printed at Muller, Schmidt & Co at Makasar. His Makasarese grammar (Matthes 1858a) was printed in these types in Amsterdam by C. Spin & Co (see Fig. 6).

§ 2. Deze letters zijn de volgende:

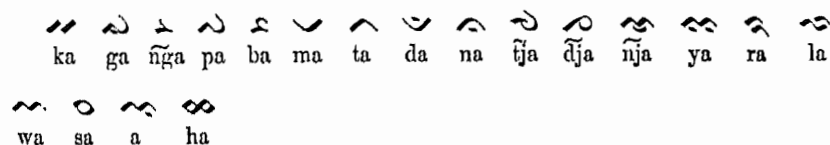


Fig. 6. Bugis/Makasarese script. Matthes 1858a:1.

It is not difficult to see which types Matthes thought still needed improvement. They were changed over the next few years, and comparison of the two fonts shows that five types (<nga> ʌ, <ba> ʌ, <ca> ʌ, <ja> ʌ, and <sa> ʌ) were involved, as well as all dots, both those belonging to the basic characters and those used as vowel marks. In general, the changes can be said to be in the direction of greater harmony and uniformity. Curved lines in <ca>, <ja> and <sa> were elongated in conformity with other characters such as <ga> ʌ and <pa> ʌ. The small horizontal in <ba> and in <nga> was given an angular shape (ʌ) in conformity with, for instance, <ra> ʌ. The dots were changed from elongated parallelograms into diamonds, which made their sides parallel to all oblique lines in the basic characters.

§ 2. De Boeginesche letters zijn de volgende:

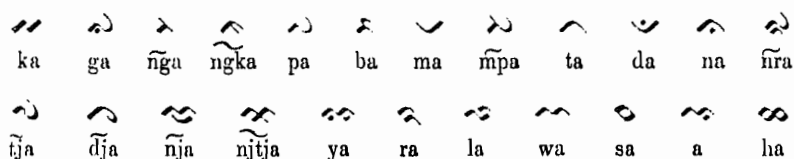


Fig. 7. Bugis/Makasarese script. Matthes 1875a:2.

The new, improved font certainly deserves to be characterized as an elegant and harmonious set: Matthes was the designer and he did an excellent job. His Makasarese anthology (Matthes 1860), his edition of the Bugis epic story of the first Boné expedition (Matthes 1862) and all later works were printed in the new font (see Fig. 7).

2. *Variations in handwriting*

One of the consequences of the internal harmonization of Matthes' font of printing types was that a number of variants were, in this font, either suppressed or systematically prescribed. Some examples of these systematically prescribed consequences will be given, then some other variants gathered from manuscripts will be described.

2.1 *Prenasalization*

One of the few differences in the Bugis/Makasarese script as used for writing Bugis texts and for writing Makasarese texts is that Bugis can use four basic characters indicating prenasalized consonants, which are never used in Makasarese.

Two of these special characters are related in shape to the character for the non-prenasalized consonant concerned: the <mpa> 𐌥 and <nra> 𐌦 are identical in form to <pa> 𐌥 and <ra> 𐌦, respectively, with the addition of a small oblique upward stroke on the left side and the right side of the basic character, respectively. The <nca> 𐌦 is related in form to the <nya> 𐌦 in that the small curve below the main part of the <nya> is turned downwards rather than upwards. The <ngka> 𐌦 does not seem to be related in shape to the <ka> 𐌦.

There is no linguistic reason why these characters indicating prenasalized consonants would be used in Bugis but not in Makasarese, as the four consonant clusters concerned exist in both languages. It is no coincidence, however, that three of the four consonants indicated as prenasalized by these characters are voiceless stops. Since a large-scale devoicing of prenasalized stops has historically taken place in the Bugis language, the frequency of prenasalized voiceless stops in the Bugis lexicon greatly exceeds that of the voiced ones. Some examples out of many are: Bg *langkaraq* vs. Mk *lang-garaq* 'small prayer house'; Bg *jampu* vs. Mk *jambu* 'rose-apple'; Bg *janci* vs. Mk Ml *janji* 'promise'.⁷ Such devoicing did not occur in Makasarese. It is reasonable, therefore, to assume that the use of the three special characters indicating prenasalized voiceless stops in Bugis can be accounted for by the high frequency of these stops in Bugis. From the fact that the shape of three of the Bugis characters for nasal clusters is derived from that of characters for non-prenasalized consonants it can be inferred that these derived characters were later additions to the script.

Contrary to Matthes' rule that the characters for prenasalized consonants should be written everywhere in Bugis texts where they occur in the language, one often finds the characters for non-prenasalized consonants used instead. One of many examples is manuscript NB Boeg 87 (Fig. 8) of the Matthes collection in the Leiden University Library, written by an anonymous copyist in a style of writing described by Matthes as 'a letter considered pretty by the Buginese' (Matthes 1875b:29). One can also compare two Boné court diaries, one (dated 1745-1762) in which prenasalization is indicated (KITLV Or 545/270; see Fig. 10), and one (dated 1804-1819) in which it is not (KITLV Or 545/269; see Fig. 9).

⁷ As was pointed out by Mills (1975:601-602), the Bugis devoicing of nasal clusters has in a few cases also complicated morphology, in that, for instance, early ***manggaug* 'to rule' < *gaug* could be read without special difficulty, but after the devoicing of nasal clusters took place, the base *gaug* could less easily be recognized in prefixed *mangkaug*; writing *ngka* rather than *ka* lets the reader know that a morphophonemic alteration is involved. However, this cannot be the sole or main reason for the special attention to nasal plus voiceless stop clusters in Bugis script. For one thing, only three of the nasal clusters concerned include a voiceless stop since /r/ in /nra/ is voiced, and for another, for a competent Bugis speaker/reader *ma[ng]gaug* is in no way more difficult to read and understand than *ma[ng]kauq*.

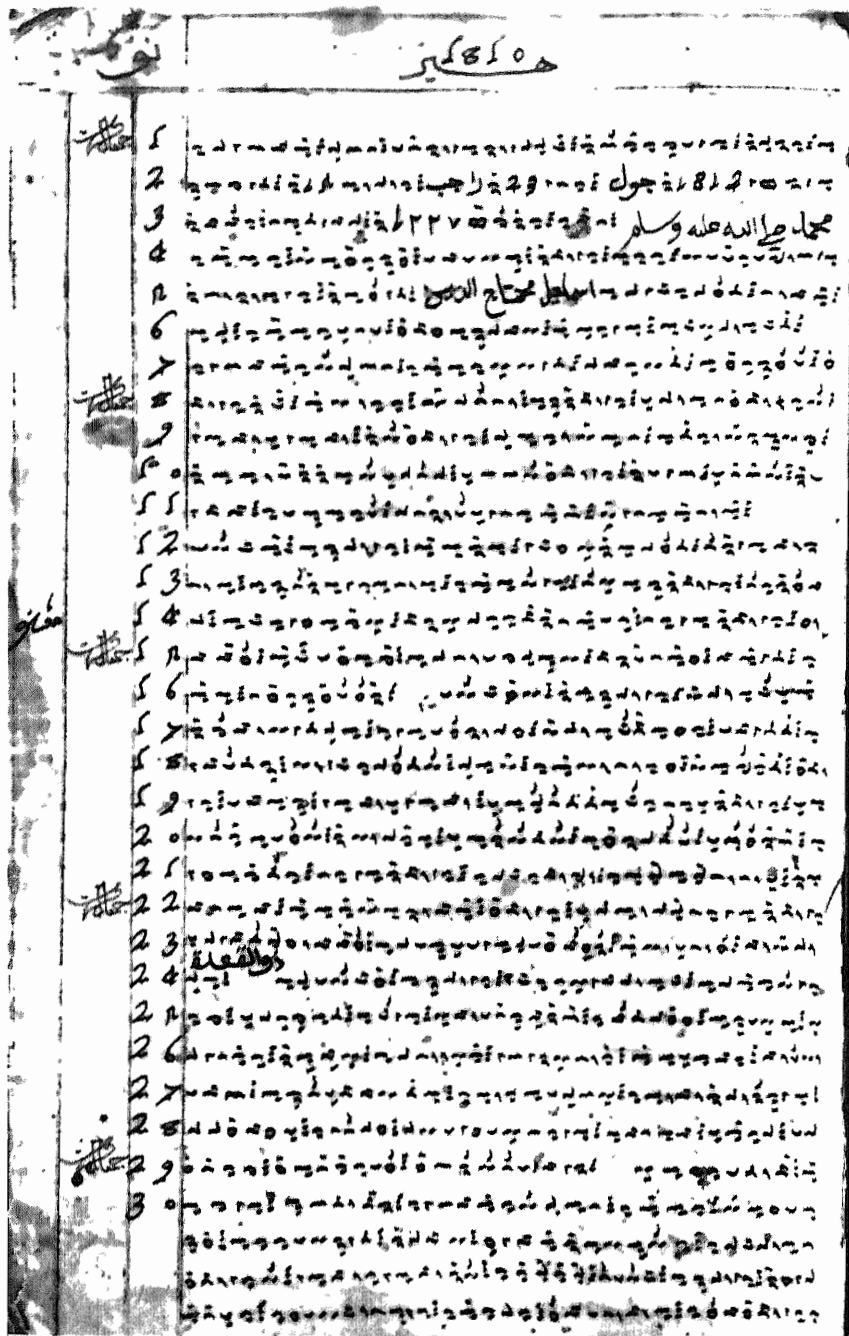


Fig. 9. Bugis diary text in Bugis script. KITLV Or 545/269, p. 44.

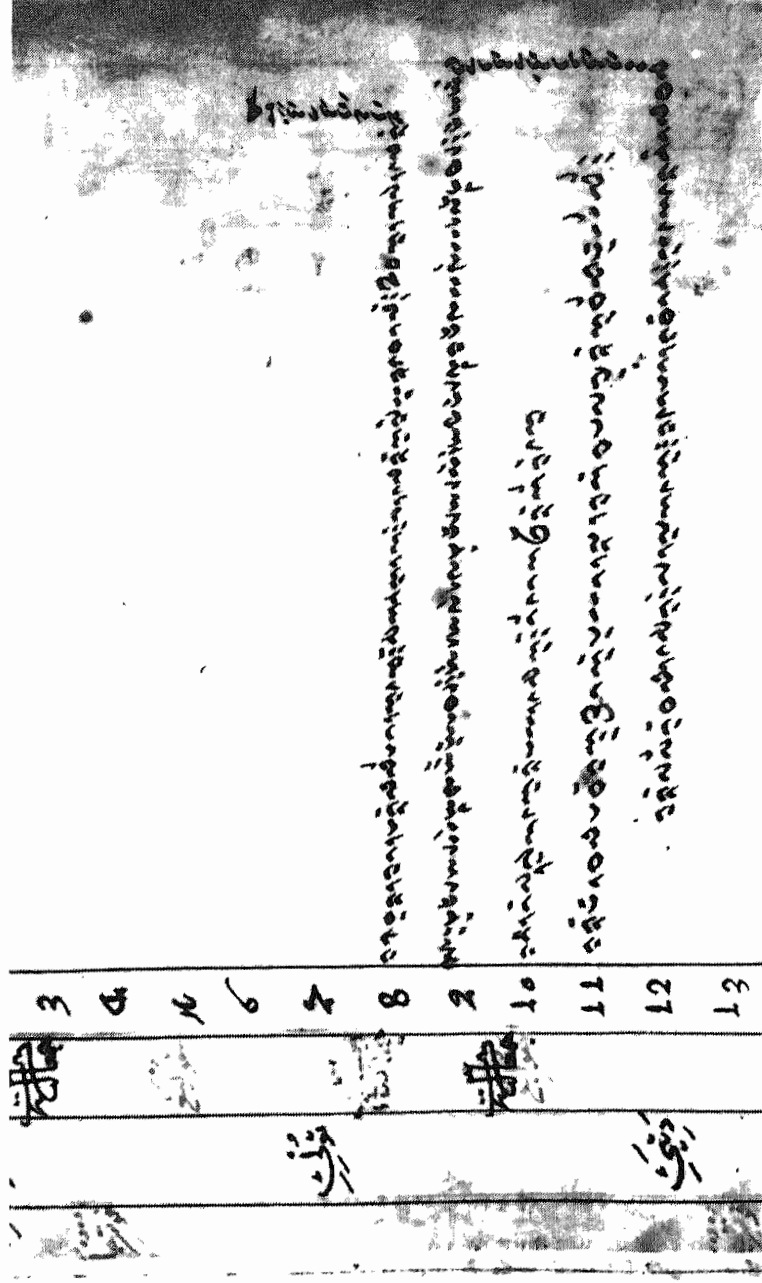


Fig. 10. Bugis diary text in Bugis script. KITLV OR. 545/270, p. 'November 1810'.

It can be inferred that the use of the Bugis characters for prenasalization was in fact optional. They could be employed or not, as the scribe wished. A clear example is the early twentieth-century autograph manuscript of the epic text edited by R. Tol, who found 'absolutely free variation' in this respect in this manuscript written by the professional author Mallaq daéng Manajéng (Tol 1990:132).

Another significant example is the private letter written in Bugis by Petta Bétténg (that is the Ranreng Béttémpola, the highest aristocratic functionary in the Bugis principality of Wajo') on 10 April 1941, and addressed to Ince Nuruddin (a Bugis former school inspector in Makasar), in which the prenasalized characters are nowhere used (KITLV Or 245/110; see Fig. 11). For instance, the town of Singkang, where the writer lived, is written *sika*. Even as late as 1941, apparently, omitting prenasalization was an accepted custom in letter writing by educated Buginese.

It should be added here that another use of the characters has been attested. In the autograph written by Mallaq daéng Manajéng, these characters for prenasalization were sometimes used for indicating a final nasal occurring in the syllable concerned (Tol 1990:124).

2.2 Final nasal indicated in Makasarese by the Bugis shwa vowel mark

A direct link with the final remark of the preceding section may be found in the use in Makasarese of the vowel mark ([˘]) which in Bugis script indicates shwa and is styled *ecceq* in Bugis. Since no shwa occurs in Makasarese phonology, this mark could not be employed for that purpose in writing Makasarese texts. As a consequence Matthes does not mention it in his description of the Makasarese script and never uses it himself in texts he published in that language. He knew, though, that it existed in Makasarese too (Mk *ancaq*) and was employed occasionally in Makasarese texts to indicate a final nasal in the syllable concerned. According to him, this use was merely for the benefit of beginning readers (Matthes 1858a:11; 1875a:14). It may be that Matthes heard this explanation from Makasarese informants. It seems more likely, however, that since this vowel mark could not be used for the same purpose in Makasarese as in Bugis, it was instead employed in the former language for indicating a final nasal as an alternative in the same optional manner as the characters for prenasalization were used in Bugis writing.

An example of the use of *ancaq* for indicating a final nasal in Makasarese is manuscript NB Boeg 67 (Fig. 12) of the Matthes collection, a tragic love poem written by a copyist named I Sanggain Takalar (Matthes 1875b: 20). There is no reason to assume that this manuscript was written for beginning readers of Makasarese.

فصل
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Fig. 12. Makasarese text in Bugis/Makasarese script. NB Boeg 67, p. 1.

The *ancaq* mark is also attested in the Makasarese manuscript of the Jayalangkara story which was the version Matthes used for his text edition (Kros 1990:41-42).

2.3 Word separation

For printing Bugis and Makasarese texts in Bugis/Makasarese script, Matthes introduced the separation of words by leaving a space between them. Matthes applied this feature himself without comment and may have considered it a self-evident improvement based on the western style of writing. That it was a European influence may also be inferred from the fact that spaces between words are also to be found in the text of the *Code of Maritime Laws* in Thomsen's 1832 edition (see Fig. 4).

Traditionally and in older manuscripts (and in many later ones as well) there was never a space between words, as in any Indian-derived syllabary script. The only sign used for indicating the beginning of the next word or group of words is the punctuation mark of three dots in an oblique line above each other called Bg *pallawa* 'divider' Mk *passimbang* 'intervener' (↗).

The habit of leaving spaces between words gradually changed manuscript writing as well as letter writing. An example of the former is manuscript NB Boeg 205 (Fig. 13), written by Ance Nanggong, who was a teacher of Makasarese at the teachers' training college in Makasar from the time Matthes was its first director (1876-1879), and who wrote and published several books in Makasarese. An example of the latter is the letter written in Bugis by Petta Bétléng in 1941 (mentioned in section 2.1; see Fig. 11). The four-volume school book *Wajémpajéng* by La Side (1948) containing Bugis children's stories also systematically displays word separation.

2.4 Flattened curves in cursive writing

A general feature of handwriting found in some manuscripts is what might be styled 'flattened curves'. The V-shaped and inverted V-shaped constituent parts of some characters of the Bugis script are flattened down to slight curves, even approaching straight lines, in all characters concerned. This is probably what was censured by Matthes as 'slipshod writing' (*slordig geschreven*), for instance in manuscript NB Boeg 16 (Matthes 1875b:9; see the illustration of a few lines from this manuscript in Hilgers-Hesse 1967:558).

However, it also occurs in court diary manuscripts and letters (for instance the Boné court diary KITLV Or 545/270 (Fig. 10), and the royal letter from British Library Add. 12359 depicted in illustration no. 80 in Gallop and Arps 1991:109). In such eighteenth- and early nineteenth-

century manuscripts, this feature may be ascribed to fluent cursive writing. It is also a conspicuous feature of the script in the (probably) eighteenth-century Bugis inscription on stone in Brunei (Noorduyn 1993).

2.5 An alternative <a>

A small alternative detail is found in some manuscripts in the place in which the dot is put in the syllable-initial <a> character. In the standard shape, the dot is placed in the right-hand inverted V of the basic character (↖), but occasionally it is found in the left-hand inverted V (↗). This variant way of writing the syllable-initial <a> character is found, for instance, throughout manuscript NB Boeg 185 of the Matthes collection, which was copied by a certain Aji Muda at Tempe, Wajo' (Matthes 1875b: 68) and in NB 182 (Fig. 14).

That this variant writing may be a special habit of an individual writer is shown by the manuscripts written by Tajuddin ibn Siraj al-Arifin (1813-1879), a former lieutenant of the Malay community in Makasar (NB Boeg 7, 28, 208, 209, 214, and 215; Matthes 1875b: 5, 6, 12; 1881: 7, 16, 22, 23). All these manuscripts show the same style of writing this character throughout, an additional peculiarity being that the dot is not placed in the left-hand but in the right-hand inverted V whenever an <o> vowel mark (which has its place to the right of any basic character) follows the <a> character. The same way of writing the syllable-initial <a> character is found in LOr 1922 (Fig. 15), written by an unknown copyist.

The dot in the left-hand inverted V of the <a> also occurs as a systematic feature in the Bugis stone inscription in Brunei (Noorduyn 1993:108), which may date from the eighteenth century.

It is clear that this alternative variant crops up now and then as an individual, personal option, which is occasioned by the structure of the character concerned, because the right-hand placement of the dot is traditionally but not significantly determined.

2.6 Variants of <ka>, <ngka>, <ca>, <ja>, <nca>, <sa>, and <ha>

There are a few other characters which are often found in a shape that diverges from that of the standard printing types. The following are a few examples.

In apparently fluent cursive writing, <ka> is often written in such a way that the second upward stroke starts at the point where the first ends, or both strokes are almost horizontal and the one just following the other, for instance in manuscripts NB Boeg 182 (Fig. 14) and LOr 1923 VII (Fig. 16). Whereas this can be explained as a result of cursive writing, it is not a likely explanation of another variant of <ka>, which is written with the two

Handwritten Bugis text in Bugis/Makasarese script, consisting of approximately 25 lines of text. The script is a complex, cursive system with many diacritics and ligatures. The text is written in a single column, with some lines starting with a small decorative mark. The ink is dark, and the background is a light, textured paper.

Fig. 16. Bugis text in Bugis/Makasarese script. LOr 1923 VII, p. 2.

upward strokes not leaning forward, as is standard, but backward (↖; for instance in LOr 1922 V; see Fig. 17).

The <ngka> usually has the form of an inverted V-shape with a small vertical stroke descending from the top (⋈, as for instance in Thomsen's publications). This is quite different from the standard type ⋈ if we perceive it as a prostrated capital F, but is basically similar if we perceive the standard type as an inverted V-shape with the descending vertical starting at a point slightly to the left of the top.

The <ca> ⋈ is often less similar to <pa> ⋈ than it is in the standard form, and consists of a basic inverted V-shape followed by a V-shape placed under the right-hand leg of the inverted V-shape (for instance in KITLV Or 545/269; see Fig. 9).

The <ja> often has the rounded shape it had in the first style of printing types, which was altered shortly afterwards (see section 1.6; Fig. 6).

The <nca> often has the form of a basic double inverted V-shape with a single one below its centre. This is only slightly different from the printing type, which can be described in the same way.

The <sa> sometimes has the shape of an S, that is, either an oblique forward stroke with two small rectangular strokes, one upwards at its bottom and one downwards at its top, or an oblique backward stroke with the same small strokes (for instance in LOr 1922; Fig. 17).

The <ha> – which is very rarely found in manuscripts because in the Bugis and Makasarese languages /h/ occurs practically exclusively in loanwords from Arabic – may be found written as a circle with a backward oblique stroke within it (LOr 1922; Fig. 15), or more or less similar to the European figure '8' (LOr 1923 VII; Fig. 16).

2.7 The special Luwu' characters

A list of special Luwu' characters was published in facsimile and briefly described by Noorduyn and Salim (1988; see Fig. 18) from the only manuscript known to contain them (VT 123 of the National Library collection in Jakarta), four of the characters having been mentioned by Cense in his description of the manuscript (Cense [1952?]:5). The descriptions in the 1988 publication must be corrected in one respect, since the character described there as <ba> in fact represents the prenasalized /ba/, and so is <mba>.

The list therefore contains eight characters for which there are no alternatives in the standard script and five for which there are.

Four of the former represent syllables with prenasalized stops: three voiced stops (/mba/, /nda/, and /nja/) and one voiceless stop (/nta/), and four syllables with geminated consonants: one stop (/tta/), two nasals (/mma/ and /nna/), and one continuant (/ssa/). In all cases the characters have a composite shape in that they consist of the character with a non-prenasalized or

non-geminated consonant and a small oblique stroke added, three of these being a downward stroke at the right side, and five an upward stroke at the left side. In one case, that of the <nta>, the character is not based on its non-prenasalized basic form – which is used as base for the <nna> – but on that of <nya>. The characters having a V-shape as base have their added stroke on the right side, and those having an inverted V-shape as base have their added stroke on the left side. It is clear that these upward and downward strokes are similar to the upward strokes indicating prenasalization in the standard character for <mpa> and <nra>. But in the Luwu' characters they are used indiscriminately for either prenasalization or gemination.

𐌒 = 𐌒 = 𐌒 =	ngka	𐌒 =	ngka
𐌒 = 𐌒 =	nga	𐌒 =	nga
𐌒 =	ba	𐌒 =	ba
𐌒 =	sa	𐌒 =	sa
𐌒 = 𐌒 = 𐌒 =	ha	𐌒 =	ha
𐌒 =	mpa	𐌒 =	mpa
𐌒 =	nta	𐌒 =	nya
𐌒 =	nda	𐌒 =	da
𐌒 =	nja	𐌒 =	ja
𐌒 =	nna	𐌒 =	na
𐌒 =	ssa	𐌒 =	sa
𐌒 =	tta	𐌒 =	ta
𐌒 =	mma	𐌒 =	ma

Fig. 18. Special Luwu' characters. Noorduyn and Salim 1988:351.

The reason why these additional characters for prenasalization and gemination were developed may have been merely the wish for greater certainty in reading texts by enhanced distinctiveness in the script, but may perhaps also be ascribed partially to linguistic or dialectal differences. For instance, the high aristocratic Balirante title, which is written with <nta> and contains the Toraja word *rante* 'plain', is limited to Luwu'.

Of the Luwu' variants, the <mpa> can be described as a <pa> with an added V-shape crossing its bow on the left side.

The Luwu' variants for <nga> and <ngka> seem to be constructed in a similar way. They consist of a basic inverted V-shape (that is, a <ta>) and a <pa>, respectively, and an <é> vowel mark intersecting the top or, alternately, this vowel mark on the top and a dot below it. In this way, the last-mentioned variant looks like a standard <ba> with a dot below it.

Two of the four variants for <ha> also seem to be constructed on the basis of a <pa>, but with two curves added, one above and one below the base.

The <sa> sometimes has the S-shape, which is also encountered in some manuscripts from outside Luwu' (see section 2.6 above, and Fig. 17).

There seems to be no special reason why these exceptional shapes were developed rather than using the standard models. They most probably should be considered part of a different scribal and 'scriptological' tradition.

2.8 The palm-leaf style types

R.A. Kern, well known for his voluminous catalogues of *La Galigo* epic manuscripts, was the first to recognize the existence of a special style of Bugis script, which he named the 'palm-leaf style' (*palmbladschrift*) because it is particularly (though not exclusively) to be found written on prepared leaves of the *lontar* palm (*Borassus flabellifer*). These *lontar* leaves were cut to the shape of ribbons 2 or 3 cm wide and some 60 cm long, joined together for many metres and inscribed with one line of script only.⁸ Kern mentions a few particulars of this style of Bugis script when he describes the manuscripts concerned (Kern 1939:580-583, 1075-1076). This style, according to Kern, is a simplification compared with the style known from manuscripts on paper; curved letters are avoided (perhaps due to the physical constraints imposed by the writing material); the <a> is often a single dot. Curiously enough, not only the simplified types occur in these manuscripts but also the more complicated ones, and those difficult to

⁸ The ribbons of such a Bugis palm-leaf manuscript are usually some 60 to 80 cm long and have been joined by overlapping the next ribbon onto the end of the previous one for a few centimetres and sewing them together. The beginning of the first ribbon is fixed in a notch of a wooden reel. By turning the reel around, the ribbon is tightly wound on the reel. Rolled up, the reel and ribbon form a disk. The end of the last ribbon is fixed on a second reel in the same manner as the beginning of the first. The two reels are fastened in a fork. When one reel is wound off, the other is wound on. The text written on the ribbon can be read between the two reels. By turning one reel while reading, the text on the ribbon rolls passed the reader's eyes.

The above description of an ingenious Bugis invention, adapted from Kern's (1939:580-581), can be tested in but a few places in the world. The still extant palm-leaf ribbon manuscripts are kept in Leiden (LOr 5475), Amsterdam (Tropical Museum 673/4), Manchester (John Rylands University Library Bugi 3 and 3a; cf. Ricklefs and Voorhoeve 1977:35; Gallop and Arps 1991:111), and Jakarta (Perpustakaan Nasional 780, *Sureq Baweng*).

Handwritten text in Palm-leaf script, consisting of approximately 15 lines of characters. The script is a form of Southeast Asian writing, likely from the LOR 6147 collection, page 146. The characters are stylized and arranged in a dense, horizontal flow across the lines.

Fig. 19. Palm-leaf script. LOr 6147, p. 146.

write: there are four different types of <ka>, three of <sa> (Kern 1939:581), and two different characters each for <ka, ja, sa>, and <a> used indiscriminately in one and the same paper manuscript (Kern 1939:1075).

If we look at the script used in two of the four sample manuscripts mentioned by Kern (LOr 5475 and 6147 [Fig. 19]; see Kern 1939:580-583, 390), we see particularly divergent shapes of four characters, those for <ka, ja, sa>, and <a>.

The <ka> occurs in the shape of an X (✕), or in that of two vertical strokes, one after the other (||).

The <ja> consists of three dots, two next to each other and the third centred below, or above them (••, or •.).

The <sa> has two shapes, one, just a vertical stroke (|), and second, a vertical stroke with a forward curl at the top and a backward curl at the bottom, together forming an S-like shape: (ſ).

The <a> is a single dot. As to this character it should be added that the <i> vowel mark, being a dot above the basic character, was regularly put above the dot representing the /a/, but if the <u> vowel mark would just have been a dot below the dot being the /a/, the resulting syllable-initial <u> would have been indistinct from the syllable-initial <i>. Therefore one extra dot was added here. As a result, <a> is one dot (•), syllable-initial <i> two dots above each other (••), and syllable-initial <u> three dots one above the other (•••).

Apart from these divergently shaped characters, the standard ones, as Kern remarked, are also used in these manuscripts. Including the latter, there are thus three variants for <ka>, three for <ja>, three for <sa>, and two for <a> in this palm-leaf style.

According to Kern, a vertical drift is to be observed in this style of characters. This is true, but for a limited number of characters only. The two strokes of <ka> are verticals in this style; the <nga> consists of a basic inverted V-shape with a small vertical on top of it (Λ); the <ba> consists of a basic inverted V-shape with a small vertical on top of it which in its turn has a small forward stroke at the top (⋈); the <é> and <o> vowel marks are also nearly vertical, as they are in Thomsen's publications (see section 1.3; Figs. 3 and 4).

If there is any general difference in this palm-leaf style of writing between manuscripts on paper and those on palm-leaf ribbon, this vertical drift is stronger in the latter.

Kern speculates that there may have been a time when the material written upon was bamboo tubes, on which the characters were written vertically in a top-to-bottom direction, and from this material one passed on to palm-leaf ribbon (Kern 1939:581). This speculation might explain the vertical drift in writing on palm-leaf ribbon as a remnant from a vertical writing direction, which changed into a horizontal direction in writing on ribbon. It is known that the Philippine script was written vertically on bamboo tubes,

from bottom to top, left to right (Francisco 1973:18). But there is no evidence whatsoever testifying that this was ever the case in South Celebes.

Though the extant Bugis manuscripts on palm-leaf ribbon are few and probably not old, and this kind of writing material is not known to be used elsewhere, it may still be an ancient kind of material, as is shown by an ancient piece of information in the Chinese *Sung dynasty annals*, quoted by Kern from a translation by Groeneveldt. In it, it is told that, in 977, the king of P'uni (that is, Brunei) sent tribute to the emperor of China accompanied by a letter, which is described as follows:

The letter was enclosed in different small bags, which were sealed, and it was not written on Chinese paper, but on what looked like very thin bark of tree; it was glossy, slightly green, several feet long, and somewhat broader than one inch, and rolled up so tightly that it could be taken within the hand. The characters in which it was written were small, and had to be read horizontally. (Kern 1939:582)

The writing material described here may – in view of the measurements mentioned – be identified as a ribbon and may have been made of palm leaf, while the horizontal writing direction also agrees with that on the Bugis palm-leaf ribbon. Although again there is no guarantee that it was used in South Celebes at that time, there is the distinct possibility that the Bugis way of writing on palm-leaf ribbon as well as the palm-leaf style of writing are old.

Kern supposes that the style of Bugis script we know from most paper manuscripts did not derive from this palm-leaf style found on ribbon manuscripts because these were far too awkward and easily broken, but from a style used on palm-leaf paper, because this material must have been much more useful as writing material and must have been in use prior to European paper in any case, since *lontaraq* 'lontar' signified both the writing material and writings inscribed upon paper (Kern 1939:582).

Although possibly, or even probably, there once was an older style of Bugis script, which formerly may have been used for writing on palm-leaf paper, there is no evidence whatsoever to indicate the form of its characters. On the other hand, there are indications for seeing in the palm-leaf style of script an earlier style, from which at least some of the characters of the standard style and its variants can be shown to derive.

3. Graphs and graphemes in Bugis /Makasarese script

It is one of the most conspicuous aspects of the Bugis/Makasarese script that quite a number of its characters are closely related in their outer form. A few examples are the characters which differ only by the absence or presence of a dot (<na>  and <ta> ; <ma>  and <da> ; <pa>  and

<ga> ; <wa>  and <a> ); or by having one or two inverted V-shapes (<ta>  and <wa> ; <na>  and <ya> ). Clearly both a dot and an inverted V-shape are basic elements of these characters, which in one case can represent by themselves a particular syllable (for example <ta>) but in other cases are constituent parts of composite characters and do not represent any linguistic unit. In such cases they are basically graphs, non-significant building stones, within graphemes, significant writing characters, and only indirectly what the latter are directly, namely relevant parts of the syllabary script system.⁹

After eliminating the standard style of printing types as a later development and focusing first on previously common variants and then on characters in the palm-leaf style, it is now possible to show that the greatest part of the characters as graphemes consist of no more than four basic elements or graphs. They are: 1. the vertical stroke; 2. the V-shape; 3. the inverted V-shape; 4. the dot.

If these graphs are taken into account, the following characters can be derived from them or from combinations of them (see Table 2):

1. the single vertical is <sa>, the double vertical is <ka>;
2. the single V-shape is <ma>, the V-shape with internal dot is <da>;
3. the single inverted V-shape is <ta>, the double inverted V-shape is <wa>, the inverted V-shape with internal dot is <na>, the double inverted V-shape with internal dot is syllable-initial <a>, two inverted V-shapes one above the other is <ra>, the inverted V-shape with a vertical upon its top is <nga>, the inverted V-shape with a vertical descending from its top is <ngka>, the inverted V-shape with a vertical upon its top which has a small horizontal at its top is <ba>;
4. the single dot is syllable-initial <a>, two dots above each other is syllable-initial <i>, three dots above each other is syllable-initial <u>, three dots in a triangle is <ja>;
5. the V-shape combined with an inverted V-shape on top of it, together forming a diamond, is <sa>, the V-shape combined with an inverted V-shape to its left is <pa>, the same combination with a dot in the inverted V-shape is <ga>, the same combination with a dot in the V-shape is <la>, the inverted V-shape with a V-shape below its right leg is <ca>, the inverted V-shape with a V-shape on its top, together forming an X-shape, is <ka>, the double inverted V-shape combined with a V-shape below its centre is <nya>, the double inverted V-shape combined with a single inverted V-shape below its centre is <nca>, the double inverted V-shape combined with a double V-shape below it is <ha>.

⁹ The terms 'graph' and 'grapheme' are used here in a slightly different way from general usage in publications on scripts and writing, in which 'graph' may be defined as 'any unit of any script', and 'grapheme' as 'writing sign representing a distinct element of the spoken language' (Sampson 1985:22, [adapted from] 25).

Table 2. The single and combined Bugis graphs, partly consisting of graphemes no longer in use.

	vertical	V-shape	inverted V	dot
single	sa l	ma ∪	ta ∩	a .
double	ka ll		wa ∪∪	
single + dot		da ∪	na ∩	
double + dot			a ∩∩	
2 above each other			ra ∩	i ∴
3 above each other				u ∴
3 in triangle				ja ∴ or ∴
+ vertical on top			nga ∩	
+ vertical from top			ngka ∩	
+ vertical with horizontal on top			ba ∩	
+ inverted V on top		sa ∩		
+ inverted V on left		pa ∩		
+ inverted V on left + dot in inverted V		ga ∩		
+ inverted V on left + dot in V			la ∩	
+ V below right leg			ca ∩	
+ V on top			ka ∩	
double + V below centre			nya ∩	
double + inverted V below centre			nea ∩	
double + double V below centre			ha ∩	

The above results are for a large part what in Bugis is styled the *sulapaq eppaq walasuji* (or *walasugi*, or *alasugi*, or *wolasuji*), the lozenge, which according to Mattulada is traditionally explained as the origin of the script as well as the essence of micro- and macrocosm (Mattulada 1985:8-10; see Cense 1979:7, 908). There appears to be every reason for paying close attention to this traditional concept, which seems comparable to the Javanese *mancapat* concept. The Makasarese equivalent *salapaq appaka* may denote the ghosts of the four quarters of the sky, to whom specific offerings are made, the spirits guarding the four sides of the human body, and generally knowledge of magic (Cense 1979:727-728).

Another consequence of the systematically coherent structure of the Bugis script as explained above is that this must have some bearing upon the genetic relation of this script with other scripts in Southeast Asia. If this structure is unique, the question arises as to which details or parts of the Bugis script are derived from outside and which are not.

The inner form of this script clearly conforms to all other Indian-derived scripts in the area, as is demonstrated by its syllabic-phonemic type, the vowel in each syllabic character being the inherent /a/, the placement of the other vowels above, below, before and after the basic character, as well as the traditional listing of the characters according to the articulatory features of the consonants concerned. The only major difference from the Indian list-

ing is that in the Bugis/Makasarese sequence – inexplicably, because contrary to the logical sequence – the labials, dentals and palatals follow the velars in this retrograde order.

While it is undeniable that this inner form must derive from one or another Indian-derived script, and ultimately from one of the Indian ones, the question must be asked which of the Bugis/Makasarese characters were derived directly from their counterpart in another script, such as a Sumatran, a Javanese, or a Philippine one, and which were wholly or partly invented locally.

If a discussion of this relation between the various scripts is based on a comparison of the outer form of the characters in the standard Bugis printing style and in the Javanese, or Kawi, or Sumatran scripts such as Batak or Rejang, any conclusions drawn may be unfounded. A conspicuous example is the Bugis and Sumatran (Rejang) character indicating <ngka> 𐌐. The fact that the two characters seem to have a nearly identical shape to what was described above (section 2.6) as a prostrated capital F (Fachruddin 1983:41) must be deemed a mere coincidence: as explained above, this shape of the Bugis character is a late development, originating in the framework of designing printing types; the more original shape is quite different, an inverted V-shape with a vertical descending from the top.

The existence of a special structure in the script means that one or more designers must at one time have been at work in introducing this structure in the existing material.¹⁰ This does not mean that the script in this form was an invention pure and simple, as the indigenous opinion seems to hold. New shapes must have resulted from remodelling existing shapes, derived from older forms. That such has been the diachronic development of this and other related scripts was lucidly demonstrated by Hendrik Kern in 1882 and 1885 (Kern 1882:197-199; 1885:62-72). Two essential examples must suffice here, those of <ka> and <na>.

¹⁰ That the design or reform of a specific script can be credited to a particular person is uncommon in the history of the writing systems of the world but not unknown. The most remarkable example is King Sejong (reigned 1418-1450) of Korea, who is credited with inventing and promulgating the unique Han'gul script in 1446; Chinese examples are the reform of Qin and Li Su about 200 BC (Coulmas 1992:118, 94-95; Sampson 1985:122).

It is of course unknown whether one person designed the reformed Bugis script, and if so, who he was. If one thinks of the early sixteenth-century Daeng Pamatteq, the first harbour master of Makassar, who is sometimes credited with inventing the Makasarese script or with reforming it (Cense 1951:54; Noorduyn 1965:153), there are several difficulties making this possibility less likely. For one thing, the early sixteenth century seems rather late for the invention or even the reform of either the Bugis or the Makasarese script; a much longer development prior to that time must be postulated. The most serious objection is that, as Fachruddin has convincingly argued, the expression used in the *Makasarese chronicle* to describe Daeng Pamatteq's services must mean that he introduced, not the Makasarese script, but Makasarese historical recording (Fachruddin 1983:35-40).

The <ka> character was:

- | | |
|--|----|
| 1. a Latin cross in India, Mauryan time, third century BC: | + |
| 2. left and right tips curved down, Kutai, fifth century AD: | ⋈ |
| 3. left and right verticals to bottom, Early Kawi, eight to tenth century: | rh |
| 4. upper vertical lost, Later Kawi, tenth to thirteenth century: | m |
| 5. middle vertical detached from upper bar, Later Kawi, tenth to thirteenth century: | rn |
| 6. left or middle vertical lost, Lampung, Batak: | Λ |
| 7. upper bar lowered, character turned 90°, Philippines: | ⊥ |
| 8. upper bar disappeared, Bugis/Makasar: | |

The <na> character was:

- | | |
|---|---|
| 1. long vertical on short horizontal in India, Mauryan, third century BC: | ⌋ |
| 2. horizontal rises, tips turn down, left one in loop, Kutai, fifth century AD: | ⌋ |
| 3. top bar to the right, Kawi, eight to tenth century: | ⌋ |
| 4. vertical lost, loop becomes circle, Batak: | o |
| 5. lower bar lost, tips of top bar turn down, Philippines: | ⌋ |
| 6. vertical lost, loop/circle becomes dot, Bugis/Makasar: | ⌋ |

These two examples show how a continuous development of simplification brings forth, in the Bugis/Makasarese shape of <ka> || (two verticals) and <na> ⌋ (inverted V-shape and internal dot), three of the Bugis/Makasarese graphs shown above to be the essential elements of the system: 1. vertical, 2. inverted V-shape, 3. dot.

It is clear that, in the case of the Bugis/Makasarese <ka> ||, the vertical position of the palm-leaf style is the original one, while the oblique position, either forward (standard) or backward (variant), both occasioned by cursive writing, derives from the vertical position used on palm-leaf material.

To acquire insight into the details of how the remodelling of the earlier script led to the forms of the Bugis characters attested in the sources, one must study the forms and variants of the Bugis-derived scripts found in the region and of the old Makasarese script. That will be done on another occasion.

ABBREVIATIONS

BKI	Bijdragen tot de Taal-, Land- en Volkenkunde
KITLV	Koninklijk Instituut voor Taal-, Land-, en Volkenkunde
LOr	Leiden University Library, Oriental manuscript
NB	Nederlands Bijbelgenootschap

REFERENCES

- Cense, A.A., 1951, 'Enige aantekeningen over Makassaars-Boeginese geschied-schrijving.' *BKI* 107:42-60.
- , [1952?], Buginese en Makassaarse handschriften Batavia. [Typescript.]
- , 1979, *Makassaars-Nederlands woordenboek*. 's-Gravenhage: Nijhoff.
- Chao, Yuen Ren, 1961, 'Graphic and phonetic aspects of linguistic and mathematical symbols.' In: Roman Jakobson (ed.), *Structure of language and its mathematical aspects* (Providence: American Mathematical Society), pp. 69-82.
- Chrestomathies océaniques*, [ca 1845], *Chrestomathies océaniques. Textes en langue bougi* I. [n.p.:n.n.]
- Coulmas, Florian, 1992, *The writing systems of the world*. Oxford: Blackwell.
- Crawford, John, 1820, *History of the Indian archipelago*. Edinburgh: Constable.
- Damais, Louis-Charles, 1948, 'Écriture bugie.' In: Charles Fossey (ed.), *Notices sur les caractères étrangers anciens et modernes* (Paris: Imprimerie Nationale de France), pp. 375-380.
- Diringer, D., 1968, *The alphabet. A key to the history of mankind*. New York: Funk & Wagnalls.
- Dulaurier, E., 1845, 'Code bougie.' In: J.M. Pardessus, *Collection de lois maritimes antérieures au XVIII^e siècle*, vol. 6 (Paris: Imprimerie Royale), pp. 377-379, 467-480.
- Fachruddin Ambo Enre, 1983, *Ritumpanna welenrennge. Telaah filologis sebuah episode sastra Bugis klasik Galigo*. Jakarta: Universitas Indonesia. [Unpublished doctoral thesis.]
- Francisco, Juan R., 1973, *Philippine palaeography*. Quezon City: Linguistic Society of the Philippines.
- Friedrich, Johannes, 1966, *Geschichte der Schrift*. Heidelberg: Winter.
- Gallop, Annabel Teh, and Ben Arps, 1991, *Golden letters. Writing traditions of Indonesia. Surat emas. Budaya tulis di Indonesia*. London: The British Library; Jakarta: Lontar.
- Hilgers-Hesse, Irene, 1967, 'Schriftsysteme in Indonesien: Makassaren und Buginesen.' *Studium Generale* 20:548-558.
- Humboldt, Wilhelm von, 1832, 'Extraits d'une lettre de M. le baron G. de Humboldt à M.E. Jacquet sur les alphabets de la Polynésie asiatique.' *Nouveau Journal Asiatique* 9:481-508, 574.
- Jacquet, E., 1831, 'Mélanges malays et polynésiens. Notice sur l'alphabet Yloc ou Ylog.' *Nouveau Journal Asiatique* 8:1-45.
- Jensen, Hans, 1969, *Die Schrift in Vergangenheit und Gegenwart*. Berlin: Deutsche Verlag der Wissenschaften.
- Kern, Hendrik, 1882, 'Over de opschriften uit Koetei in verband met de geschiedenis van het schrift in den Indischen Archipel.' *Verslagen en Mededeelingen der Koninklijke Akademie van Wetenschappen*, Afd. Letterkunde 2: 182-203 [Reprinted in: *Verspreide Geschriften* 7 ('s-Gravenhage: Nijhoff, 1917), pp. 55-76.]
- , 1885, 'Eene bijdrage tot de kennis van 't oude Philippijnsche letterschrift.' *BKI* 34:56-72 [Reprinted in *Verspreide Geschriften* 10 ('s-Gravenhage: Nijhoff, 1928), pp. 331-350.]
- Kern, R.A., 1939, *I La Galigo. Catalogus der Boegineesche tot de I La Galigo-cyclus behorende handschriften bewaard in het Legatum Warnerianum te Leiden alsmede in andere Europeesche bibliotheken*. Leiden: Legatum Warnerianum.
- Kros, A.M., 1990, *Pau-pauanna Jayalangkara (Het verhaal van Jayalangkara). Een Makassaarse teksteditie*. [Unpublished *doctoraalscriptie*, University of Leiden.]
- La Side, 1948, *Wajémpajéng. Sureq baca-bacang basa Ugiq*. Amsterdam/Batavia: Versluys. Second edition.
- Matthes, B.F., 1857, 'Auszüge aus briefen an Prof. Fleischer.' *Zeitschrift der*

- Deutschen Morgenländischen Gesellschaft* 11:549-553.
- , 1858a, *Makassaarsche spraakkunst*. Amsterdam: Muller.
 - , 1858b, *Boegineesch heldendicht op Daeng Kalabu*. Makassar: Muller, Schmidt.
 - , 1860, *Makassaarsche chrestomathie*. Amsterdam: Muller.
 - , 1862, *Boegineesch heldendicht op den eersten Bonischen veldtogt van 1859*. Makassar: Eekhout.
 - , 1864, *Boeginesche chrestomathie*, vol. I. Makassar: Sutherland.
 - , 1875a, *Boeginesche spraakkunst*. 's-Gravenhage: Nijhoff.
 - , 1875b, *Kort verslag aangaande alle mij in Europa bekende Makassaarsche en Boeginesche handschriften, vooral die van het Nederlandsch Bijbelgenootschap te Amsterdam*. Amsterdam: Nederlandsch Bijbelgenootschap.
 - , 1881, *Vervolg op het kort verslag aangaande alle mij bekende Makassaarsche en Boeginesche handschriften, vooral die van het Nederlandsch Bijbelgenootschap te Amsterdam*. Amsterdam: Nederlandsch Bijbelgenootschap.
 - Mattulada, 1985, *Latoa, satu lukisan analitis terhadap antropologi politik orang Bugis*. Yogyakarta: Gadjah Mada University Press.
 - Mills, R.F., 1975, Proto South Sulawesi and Proto Austronesian phonology, The University of Michigan. [Unpublished Ph.D. thesis.]
 - Noorduyn, J., 1957, 'C.H. Thomsen, The editor of *A code of Bugis maritime laws*.' *BKI* 113:238-251.
 - , 1965, 'Origins of South Celebes historical writing.' In: Soedjatmoko et al. (eds.), *An introduction to Indonesian historiography* (Ithaca and London: Cornell University Press), pp. 137-155.
 - , 1993, 'A Bugis inscription in the Udok-Udok cemetery, Brunei'. *Journal of the Malaysian Branch of the Royal Asiatic Society* 66:103-112.
 - , and M. Salim, 1988, 'Special Buginese characters in Luwu' manuscripts.' *BKI* 144:351-352.
 - Pardessus, J.M., 1845, *Collection de lois maritimes antérieures au XVII^e siècle*, vol. 6. Paris: Imprimerie Nationale.
 - Pelras, Christian, 1975, 'Introduction à la littérature bugis.' *Archipel* 10:239-267.
 - Raffles, Thomas Stamford, 1817, *The history of Java*. London: Black, Parbury and Allen. 2 vols.
 - Ricklefs, M.C., and P. Voorhoeve, 1977, *Indonesian manuscripts in Great Britain. A catalogue of manuscripts in Indonesian languages in British public collections*. [Oxford]: Oxford University Press. London Oriental Bibliographies 5.
 - Sampson, Geoffrey, 1985, *Writing systems. A linguistic introduction*. London, etc.: Hutchinson.
 - Seelieb, E., 1854, *Die Sprache der Bugis*. Wien: Kaiserlich-königlichen Hof- und Staatsdruckerei.
 - Spécimen*, 1856, *Spécimen des caractères de la langue de Macassar et de la langue bouguie, dans l'île de Célèbes, Indes Néerlandaises, gravés et fondus par N. Tetterode, fondeur en caractères à Rotterdam, sous la direction de Mr. H.C. Millies, d'Amsterdam*. Rotterdam: [n.n.]
 - [Thomsen, C.H.], 1832, *A code of Bugis maritime laws, with a translation and vocabulary, giving the pronunciation and meaning of each word*. Singapore: Mission Press.
 - , 1833, *A vocabulary of the English, Bugis, and Malay languages, containing about 2000 words*. Singapore: Mission Press.
 - Tol, Roger, 1990, *Een haan in oorlog. Toloqna Arung Labuaja: een twintigste-eeuws Buginees heldendicht van de hand van I Mallaq Daéng Mabéla Arung Manajéng*. Dordrecht: Foris. [Doctoral thesis, University of Leiden.]
 - Veth, P.J., 1856, 'Maandelijksch overzicht der Indische letterkunde.' *Tijdschrift voor Nederlandsch Indië* 18.2:192-198.