MENGEN ORTHOGRAPHY
Mengen Language
East New Britain Province

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MENGEN ORTHOGRAPHY PAPER

0. Introduction

The purpose of this paper is to discuss the orthography of the Mengen language. Mengen is an Austronesian language spoken by approximately 4,300 people in the East New Britain Province of Papua New Guinea. The Mengen people live within the Central Pomio and West Pomio Census Divisions for approximately 65 miles along the south coast from Matong village on the northeast to Lau village on the southwest. Mengen is a member of the Mengen language family.

All factors that are relevant to the design and use of the Mengen writing system will be discussed. Some areas have been more fully discussed in the Mengen Phonology Essentials and the Mengen Dialect Survey reports.

Decesions regarding the orthography have been made on the basis of easy readability and on maximum transfer to or from English and Tok Pisin. The conclusions reached in this paper are based on residency among the Mengen people since 1979 and on active involvement with them in the areas of literacy and translation.

1.0 Phonological System of Mengen

The Mengen language is comprised of sixteen phonemes which are made up of eleven consonants and five vowels according to the following chart:

Consonants:

		Bilabial	Alveolar	Velar
stops	vl.	p	t	k
stops	vd.	b [B]	r	g [G]
fricative	vl.		s	
nasals		m	n	N
lateral			l	

Vowels:

	Front	Central	Back
high	i		u
mid	e		o [O]

low   a
                                    [A]

1.1 Interpretation.

Further development of each of the following points of
interpretation, as well as word lists showing contrasts in all
environments, is found in the Mengen Phonology Essentials.

1.1.1 Voiced Stop Fricativization.

The voiced stops /b/ and /g/ are full stops *utterance* initial and
invariably become their fricative counterparts [B] and [G]
intervocalically. *Word*-initial /b/'s and /g/'s, however, which are
utterance medial are usually pronounced as their fricative counterparts
because of their intervocalic environment, i.e. between word-final
vowels (which is a feature of all words in the language) and the
following vowel. All /g/'s in the language are spelled with `g'.
However, in the case of /b/ and [B] both the testing of literacy
materials as well as the desire of the people psycholinguistically is to
write this phoneme as `b' word initial (even if it is mid-utterance) and
as `v' word medial. Therefore, this procedure has been followed.

1.1.2 /r/ as Voiced Stop.

/r/ fills the gap in the phoneme chart which is caused by the lack
of the voiced alveolar stop /d/ in the language. In fast speech the
trill [r] is pronounced as an alveolar flap. Native speaker intuition,
psycholinguistic testing while working on material production for the
vernacular pre-school, discussions with educated Mengen speakers on the
topic of "`d' versus `r'," the production of native authored materials
and the influence of English and Tok Pisin orthographies all underscore
the lack of /d/ in the phoneme inventory. At the same time, however,
there is the tendency for a flap of some kind to surface, especially in
fast speech, but in all cases it is /r/ which underlies this flap.

1.1.3 Velar Stop /k/

There is a great tendency for /k/ in Mengen to be pronounced as a
backed velar [k]. However, since there is no allophonic variation
between [k] and backed [k], it is simply written as `k' in all
environments.

1.1.4 Velar Nasal.

The velar nasal /N/ is written orthographically as `ng'. The people have
no problem with this orthographic representation, perhaps because nearly
two-thirds of the Mengen are literate in either English or Tok Pisin and
are accustomed to reading this symbol. `ng' has been consistently used
in all materials that have been developed in recent years, and native
authors consistently use it without question in both word-initial and
intervocalic positions. In all vernacular languages of the New Guinea

Islands the velar nasal is written as `ng', and this decision follows that convention.

1.1.5 Vowel Raising.

/a/ and /o/ are raised to their allophonic counterparts, [A] and [O], in the environment of consonant length. This generally occurs both preceding and following lengthened nasals and /l/ but only before other lengthened consonants. The vowels are written as `a' and `o' respectively which the people sense in each case and which has caused no problems in orthography testing.

1.1.6 Vowel Deletion.

Mengen displays optional vowel deletion both in word medial position (usually either where reduplicated forms juxtapose or across morpheme boundaries) and word final position (after various consonants but with the greatest tendency being after the velar nasal). Native authors will optionally write these vowels as they so desire. This optionality results in consonant clusters and word final consonants. These vowels can be deleted without any resultant confusion in reading since another word will never be formed through this process of vowel deletion. However, psycholinguistic testing has shown that these vowels, especially in word final position, should be written, especially in more "formal" settings such as translated Scripture and vernacular prep school materials.

1.1.7 Sequence or Unit.

1.1.7.1 Consonantal Palatalization and Labialization.

The following chart shows consonantal palatalization and labialization in Mengen. (+ indicates the presence of that feature and the environment in which it occurs, while − indicates its absence.)

	palat.	word init.	intervoc.		labial.	word init.	intervoc.
/p/	+	+	+	¦	+	+	+
/k/	+	+	+	¦	+	+	+
/g/	+	+	+	¦	+	+	+
/s/	+	+	+	¦	+	+	+
/m/	+	+	+	¦	+	+	+
/l/	+	+	+	¦	+	+	+
/b/	+	+	+	¦	+	−	+
/n/	+	−	+	¦	+	−	+
/N/	+	−	+	¦	+	−	+
/r/	+	−	+	¦	+	+	−
/t/	−	−	−	¦	+	+	+

Palatalized and labialized consonants have been shown to function in the language as the two segments of consonant-plus-vowel for the following reasons: 1) in minimal pairs of palatalized and non-palatalized consonants, the element which palatalizes a consonant in one of the pair is the syllable peak /i/ following that consonant in the

other of the pair; 2) both reduplicated and definite irrealis forms
cause the element that palatalizes or labializes the consonant in the
base form to surface; 3) psycholinguistic awareness of the native
speakers of the language who know the underlying vowel in a palatalized
or labialized consonant environment; and 4) the use of optional slow
speech which causes the underlying vowel to surface.

1.1:7.2 Consonant Length.

The alveolar consonants /t/, /s/, /n/ and /l/ and the nasals /m/
and /N/ are by far the most likely consonants to exhibit length in the
language. While /p/ and /k/ appear to have the potential of being
lengthened, there is still no record of it in the data. /b/, /r/ and /g/
will never be lengthened. Consonant length is being written as a double
consonant in every case. This has been the practice of those writing
native authored materials, and no problems have been discovered in
testing this in the vernacular prep school.

1.1.7.3 Vowel Glides.

Vowel glides have been interpreted as sequences of vowels based on
1) the occurrences of non-suspect vowel sequences; 2) the reverse
sequencing of vowels; and 3) minimal pairs in which a vowel glide is
also a sequence of two vowels over a syllable or morpheme boundary.
Today there is a tendency, especially among younger speakers, to
pronounce the vowel glides /ae/ and /ao/ as [æ] and [ɔ] respectively.
Testing this with native speakers of all ages, however, has not revealed
any problem with writing these two glides as vowel glides in their own
right as well.

1.2 Proposed Mengen Orthography.

The following symbols comprise the Mengen orthography:

          a b e g i k l m n ng o p r s t u v

2.0 Morphophonemics

There is not a great deal of morphophonemic activity going on in
Mengen that influences the orthography. That which must be considered,
however, are morpheme boundary vowel deletion, a rare case of consonant
deletion which also includes vowel deletion, and vowel length which
shows intensity in qualitative words ("adjectives"). All morphophonemic
changes except vowel lengthening are written phonemically because this
has been the practice of those writing native authored materials. It
promotes easy readability as well.

2.1 Morpheme Boundary Vowel Deletion.

There is both obligatory and seemingly optional morphophonemic
activity regarding vowel deletion over morpheme boundaries. Obligatory
vowel deletion occurs when the word final vowel precedes a vowel initial
possessive pronoun suffix as in the following examples:

ka `patient marker' + au `1sPos' = kau `me'
ka `patient marker' + ita `1plincl' = kita `us'
mata `eye' + au `1sPos' = matau `my eye'

In some instances there is optional stem final vowel deletion before a morpheme boundary which results in a consonant cluster across the morpheme boundary with the following consonant initial morpheme. In each case the newly formed consonant cluster must already exist unambiguously in the language. This seems to be a feature more of. spoken, rather than written, Mengen. See the following.

bale `house' + lona `its liver' = ballona `inside the house'
matana `type, style' + te `a' = matante `a (one) type'

2.2 Consonant-plus-Vowel Deletion.

Both consonant and vowel deletion concerns the word ina `time, when' when it is combined with the verbal prefix that is marked for person and realis/irrealis. It is used to introduce time-dependent clauses as in the following:

ina `time' + ko `2sRE' = ino `when you(sg)...'
ina `time' + kaka `2pRE' = inaka `when you(pl)...'

2.3 Vowel Lengthening

The vowel in the penultimate syllable of many qualitative terms shows grammatically conditioned (non-phonemic) length to convey the idea of `very'. This is a feature of spoken, rather than written, Mengen. See below.

gavili `long' ---> [gavi:li] `very long'
raumana `very' ---> [rauma:na] `very, very'

3.0 Word Divisions

Word divisions in Mengen are made according to the grammatical classes of words. Most nouns, verbs, adverbs and qualitatives ("adjectives"), including their various inflectional and derivational affixes, are isolated and stand independently, as in the following examples:

kani `to eat' (verb stem)

kaninni `to be eating' (verb continuative)

kaninge `shall eat it' (verb definite realis)

kaningi `food' (nominalized verb)

kaningime `foods' (plural nominalized verb)

gome `slowly' (advervial)

qomeqome `slowly' (adverbial: plural agents performing slowly)

bollau `large' (qualitative)

bollalau `large' (plural qualitative)

In addition to these major word classes which have "meaning" by themselves, others which do not have "meaning" in and of themselves are, nevertheless, still isolated as individual words. These include such things as interclausal relators; instrument, locative, source and goal markers; vebal prefixes; diectics; numbers; conjunctions; and small medial phrase elements such as possessive markers and generic-specific markers. (There is little question on the part of native authors or those preparing literacy and translation materials regarding the writing of the forms as separate words, and no problems are encountered in reading them as separate words.) See the following:

minamina `...therefore...' (interclausal relator)

Ke kuma ka pemo. `He worked with an axe.' (verbal prefix, instrument marker)

Ke momo nqa ura. `He is at the garden.' (locative)

Ke turu nqae Amerika. `He came from America.' (source marker)

Ke loa tae Rabaul. `He went to Rabaul.' (goal marker)

bale laekia `this house' (diectic)

bale lua `two houses' (number)

mao ba puri `taro and banana' (conjunction)

gie ae iau `my pig' (possessive marker)

puri a taina `a banana called *taina*' (generic-specific marker)

Plural markers, patient markers and inalienable possessive forms, none of which have any independent meaning, are always written as affixes on their base form, as in

qoeme `children' () qoe `child' + me `plural')

balia `to hit it' () balia `to hit' + a `patient marker')

kamau `my hand' () kama `hand' + au `1sgPos')

Words such as collective nouns and locative-adverbials that are formed through vowel deletion across morpheme boundaries will be written as one word. See

raqau `people' () ra `colletive' + aqau `person')

ngailu `upon, upward' () nga `locative' + ailu `above')

A number of word types can be written either as one word or more than one word. (No confusion of meaning will arise when writing them in either way, as contextual clues will carry the meaning.) First, there are words that have no morphophonemic reason for being joined, such as

rapanunqu // ra panunqu `men' (cf. ragau `people' above)

ngarume // nga rume `later' (cf. ngailu `upon' above)

Then, a number of adverbials of manner, adverbials of place and locative adverbs can be written as one or more than one word. Some are adverbs that carry the patient marker and immediately follow the verb. See

loakale // loa kale `go to get it'

paropite // paro pite `stomp on it hard'

Parts of some adverbs, e.g. laga (see below), are closely bound semantically to the other part of the word, but because they can appear on different forms there is fluctuation as to their being written separately.

lagape // laga pe `downward' (pe `down')

lagarume // laga rume `rearward' (rume `behind')

Parts of other semantically closely bound words, as shown below, are clearly free forms in other contexts. This raises the question of whether these closely bound forms are divided or united. (Again, there is no confusion of meaning no matter how they are written.)

ikia // i kia `this one' (i `3sg-free form' + kia `it' in a clause such as Ke kuma kia `He made it.')

tataru // ta taru `why' (ta `infinitive-free form' + taru `what?')

4.0 Loan Words

Mengen speakers use words from Tok Pisin or English for objects and concepts that are either foreign to the culture or unknown by the speaker for some reason. Following are the ways in which these loanwords are treated in relation to the Mengen phonemic and grammatical system.

1. Generally speaking, older speakers tend to use the more formalized ("genuine") Mengen phonological structures, while the younger, oftentimes more literate, speakers are freer in their speech and tend to pronounce the forms as the source language does.

2. `b' and `g' intervocalically are *not* fricativized, as in

[kalabus]

[nogut]

3. Older speakers will substitute a trill [r] in place of the `d´ in the loanword, thereby helping to substantiate the placement of `r´ as a voiced alveolar stop in the consonant phoneme inventory.

4. Consonant clusters, which are minimal in Mengen, are broken up with vowel insertion, usually the lax [ʊ], as in

[sʊnek] `snake´

5. As it is psycholinguistically felt that words in the language must have vowel final, the preference is to add a word final vowel in harmony with the immediately preceding vowel, as in

[Williama] `William´

[ausiki] `haus sik´

6. Transitive verb loanwords are formed by addition of ka, one of the patient markers in Mengen. (The other two patient markers are never used with loanwords as they are phonologically determined.) See

Gie ke bagarapim ka ura.   `The pig damaged the garden.´

5.0 Psycholinguistic Testing

Since 1988 the Mengen orthography has been used and tested extensively through the vernacular prep schools. An estimated 150 to 200 children have learned to read using this orthography, and no problems are known to have arisen. Stories required for the prep school are written in this orthography. Both prep school and bridging teachers have been very satsified with the proposed orthography. Parents have been appreciative of their children's success. Some from villages which do not have a prep school have sent their children to board in villages with a prep school so that their children can take advantage of it. Some parents have compared the progress of their child who has been going to prep school for even a short time with that of their other child who is in the early years of community school and have noted that the child in prep school is able to read and write better than his older sibling.

The Gospel of Mark was published in 1990 and distributed in the beginning of 1991. All 150 copies of the initial printing were sold, and a request from the people for a reprint has been submitted. Most of the copies of the first printing have gone to people on the south coast of Jacquinot Bay, but in testing Mark in approximately ten villages on the north coast of the bay, with the people both listening to it and reading it themselves, the book was received very favorably, and it is felt that most of the copies of the reprint could likely be sold on that side of the bay. Included in this testing on the north coast was a coastal village that had emigrated from the geographically distant but linguistically related "Bush Mengen" dialect, and they, too, received it very favorably. Both the success of the prep schools and the acceptance

of the Gopspel of Mark would indicate that this orthography has
definitely not impeded work in the vernacular.

6.0 Relationship to Other Orthographies

The only formal orthography in use today among the Mengen is the
orthography that is described in this paper. In the mid-1930s an
orthography was developed by Father Patrick Culhane, the first Catholic
missionary in the area with the Missionaries of the Sacred Heart order
which began work in the area in 1931. Two books that were published as
an outcome of his work have remained to today, one, a catechism and
liturgical worship book entitled *Katekismo e Katolik ora ra Maege me*
(Catholic Catechism of the Mengen) published in 1935, and a Bible story
book called *Bibel Katolik ae Sina ora ra Maege me* (Small Catholic Bible
of the Mengen) published in 1939.

The orthography as developed by Father Culhane differs in several
ways from the proposed orthography: 1) the use of 'q' for /g/; 2) the
use of 'g' for /N/; and 3) no representation at all of phonemic
lengthened consonants. (Note: A hand-written work entitled *Grammatical
Notes of Mengen dialect, Jacquinot Bay, Malemale* written in 1946 by an
unknown author used 'gh' for [G].) The proposed orthography uses 'g' for
/g/, 'ng' for /N/, and double consonants for all lengthened consonants.
As only one copy of the Bible story book is known to exist today, and as
the Catholic people have memorized the liturgical worship contained in
the catechism, the orthography as proposed by Culhane has little, if
any, influence on the people. As one leading community leader (and
current Member for National Parliament from the area) once said in
commenting on the earlier orthography, "In those days Father Culhane was
shaping a canoe for the very first time. Today we know how to make a
better canoe. Let's do it in the way it is done today." Because of the
literacy rate among the Mengen in Tok Pisin and English, the people
today desire that "better canoe" as represented by an orthography that
resembles those two languages as much as possible. The East New Britain
Department of Education has also supported this proposed orthography in
its assistance toward Mengen prep schools.

No other orthographies have had any historical influence on the
Mengen orthography. There has never been a "church" language in the
area. Also, the Kuanua language of the Tolai people in the Gazelle
Penninsula, which has influenced a number of languages in New Britain
and New Ireland primarily through the work of the United Church (which
is not represented among the Mengen), has had only minimal influence in
the Mengen lexicon through a few words mixed in with Tok Pisin in the
hymns of the Catholic church, and it has had no inut at all in the
orthography. Nor have any orthographies used in nearby languages in the
province impacted the area.

However, due to the increasing literacy rate and the relatively
high attitude toward formal education among the Mengen people, Tok Pisin
and English orthographies have probably had more influence than any
others on the language, resulting in a desire for an orthography that
resembles them as much as possible. Below is a comparison of the three
orthographies.

English	Tok Pisin	Mengen
a	a	a
b	b	b
c	–	–
d	d	–
e	e	e
f	f	–
g	g	g
h	h	–
i	i	i
j	j	–
k	k	k
l	l	l
m	m	m
n	n	n
o	o	o
p	p	p
q	–	–
r	r	r
s	s	s
t	t	t
u	u	u
v	v	v
w	w	–
x	–	–
y	y	–
z	–	–

The vast majority of the people who have been tested psycholinguistically or participated in writers courses tend to follow the proposed Mengen orthography throughout. When inconsistencies have arisen, little more than a brief explanation with examples from the language is necessary for them to understand the thinking behind it. There seems to be three primary areas in which Mengen authors lack some consistency in writing their language. The only one that is directly related to the orthography as such concerns those speakers who have had a good deal of exposure to Tok Pisin and English and may tend to write the semivowels 'w' and 'y', instead of 'u' and 'i', especially word initial before 'i', 'a' and 'u'. The other two areas of some inconsistency are the variation in which some of the words are divided and the habit of not always writing the word final vowel, especially following the velar nasal. Overall, the lack of any great amount of morphophonemic activity in the language contributes to a minimal number of inconsistencies in the use of this orthography.

7.0 Literacy Situation.

As alluded to a number of times in this report, all the Mengen who are of community school age and older are able to speak Tok Pisin to some extent, though the ability is somewhat minimal in aged women. Approximately two-thirds of these are also able to read it. All children prior to attending community school speak only the vernacular. People

who have been educated beyond high school, of which there are many, have come from basically all parts of the language community. They have learned English in varying degrees, but they generally use it only outside the Mengen area and in their line of work.

Historically speaking, the Catholic church has influenced the education of the Mengen people to a great extent. They were first educated in Catholic agency schools, and this tradition of education has continued to where Mengen now hold a variety of jobs around the country, some in high government and public service positions. A number of them are college and university educated. Within the specific church structure, for example, there are Mengen who are catechists, brothers, sisters, priests, and a bishop.

8.0 Dialect Situation.

(For words lists and discussion of any phonological differences among the Mengen, please see the Mengen Dialect Survey Report.)

Speakers of the Mengen language all call themselves "Mengen" and are able to communicate among themselves with no problem. Nevertheless, the general feeling among them is that the language divides into two main sections, one from Matong village westward to Malakaur village, and the other from Irena village to Lau village. (This coincides exactly with the villages that are in the Central Pomio and West Pomio community government areas respectively. If the term "prestige dialect" were to be used, it would likely refer to the dialect as spoken on the south coast of Jacquinot Bay. The overall feeling of homogeneity that prevails throughout the area allows those of each dialect to accept the "other" dialect as also being legitimate. Conscious effort has been made, for example, to include specific words and expressions from both the north and south coasts of the bay in each prep school primer.

More villages on the south coast than on the north coast feel that there are other villages that speak the language exactly the same as they. This may be influenced by the fact that there is a greater homogeneity among the south coast villages than on the north coast where some villages have emigrated there from the Bush Mengen area and from the Kol (non-Austronesian) and Tomoip languages. On the other hand, all Mengen villages, except for the few emigrant villages, feel that they speak basically the same language but with slight variations though still understood.

Following are further summary statements regarding the dialect situation.
1. There are no phonemes that are unique to any one village. All villages will be able to use the proposed orthography.
2. There is some very minor alternation between the alveolars /s/ and /t/ shown by only three villages on only two items of the 140-word list.
3. The two emigrant villages on the north coast from the Bush Mengen area are the only villages seemingly prefering the /ou/ vowel digraph instead of /au/ in word final position, though even they preferred the /au/ digraph word medial.

4. Even when words are reported as non-cognates, each village knows the term that every other village uses in that instance in nearly 100 per cent of the cases.

5. There is a tendency to pronounce the vowel digraph /ai/ as [ei]. However, older speakers say that /ei/ is never correct. In this instance, only 'ai' has been used in prep school primers without any problem.

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