CONSONANT CLUSTERS IN INDONESIAN

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That consonant clusters is a rare phenomenon in a language of a particular family, does not necessarily mean that other languages belonging to that same family are also lacking in consonant clusters. In fact, clustering of consonants does occur, though not very excessively nor elaborately, and it is a common phenomenon in some Indonesian languages, such as Sundanese. (Here Indonesian languages is used in the widest sense of the word.) Two such languages of the same family having consonant clusters are Javanese and Sundanese. Malay, on the other hand, is a language where the use of consonant clusters is not tolerated. So much so that loanwords with consonant clusters borrowed from other languages tend to have a vowel inserted between the two consonants, for example: Sanskrit sstri - Mal. isteri, Dutch knecht - Mal. kenek and Arabic hukm - Mal. hukum, etc. However, the Malay used in Indonesia (which eventually became recognised as Bahasa Indonesia, the language of communication in the state of Indonesia, and which henceforth will be referred to as B.I.) underwent various changes. Loanwords included in the vocabulary of B.I. are so numerous that it has resulted in the number of phonemes being enlarged and the distribution of them changed. As a direct consequence of these changes the syllabic structure, and consequently the structure of its morpheme, underwent changes also. It is because of these that various ways of spelling words are to be found. In the case of consonant clusters there is a variety of spelling depending on the personal tastes of individuals. Those adhering to the Malay rule would avoid consonant clustering, while those proponents of modernisation would employ them constantly. Of course there are those who do not belong to any of the above categories, i.e. those who arbitrarily use both forms.

The question to ask now is whether clustering of consonants is
tolerated in Indonesian? If it is tolerated, what are they and what
rules do they adhere to? And the next question to ask is whether these
clusters are productive in word-formation? This is so without doubt,
as combinations of consonant sound clusters do add, theoretically, to
the possibilities in word-formation thereby adding greater flexibility
to the stock phonemes found in a language: in our case, Bahasa
Indonesia.

But first of all let us define what clusters are. Clusters are
combinations of sounds, usually consonants, consisting of two or more
phoneme sequences which may occur initially, medially or in the final
position of a word. Various terms are used for clusters in their
various positions. Uhlenbeck in his study of the structure of Javanese
morphemes (1949) uses **anlaut**, **inlaut** and **auslaut**, while Hockett (1958)
uses **onset** and **coda** for initial and final position. Gleason (1965) on
the other hand uses **initial** and **final**. In this paper I shall use
initial and **final** for the sequences of sounds in a syllable, whereas
those sound sequences in the medial position will be referred to as
intervocalic, i.e. occurring between two vowels and non-syllabic in
nature.

To study word clusters it is important for us to know the syllable
patterns and the morpheme structure of Bahasa Indonesia, as a study of
this nature is a study of both the phonology as well as the morphology
of a language. Uhlenbeck refers to it as phono-morphology.[1]

With regard to syllable patterns various studies have been made of
these. Harimurti Kridalaksana (1967) notes ten types of syllable
patterns in B.I.: V, VC, CV, CVC, CCVC, CCCV, CCCVC, CVCC and CCVCC;
while another study by G. Altmann (1967) on the structure of Indonesian
morphemes yields 12 types: V, VC, CV, VCC, CVC, CCV, CVCC, CCCV, CVCCC,
CCVCC and CCCVC. On the other hand the findings of a Committee
(PANITIA ... 1967), appointed by the Ministry of Education and Culture
to carry out reforms on the spelling of Bahasa Indonesia, mentions 13
types: V, CV, VC, CVC, CVCC, CCV, CCVC, CCCV, CCVCC, CCCVC, VC, VCCC
and CVCCC.

Of these patterns, the first four represent the most frequently
occurring pattern. This is to be expected, as the first four reflect
the Malay syllabic patterns. The remaining patterns give a clear indi-
cation of the growth of Bahasa Indonesia ever since it was adopted as
a national language in 1928 and officially recognised as the language
of the state in the 1945 Constitution.

With regard to the structure of the Indonesian morpheme Altmann
obtained 147 types ranging from one to five syllabic morphs. It is

interesting to note that although the characteristic Malay morpheme
structure (1. CVCVC, 3888 ± 35.58%; 2. CVCCVC, 1898 ± 17.25%; 3. CVCV,
767 ± 6.97%; 4. CVCVCV, 654 ± 5.96%; 5. VCVC, 450 ± 4.09%; 6. CVC, 298
± 2.70%) is by far the most predominant, there are however, other
types that would not have occurred 20 years, much less 40 years ago
when Bahasa Indonesia Riau was adopted as B.I.

Perhaps it is from the syllabic patterns that we can immediately
see the clustering of consonant sounds, where clustering of up to three
consonants is allowed. But before proceeding to a detailed examination
of clusters it is advisable that we give a clear definition of the
syllable in Bahasa Indonesia. A syllable is a peak of sonority, in
B.I. the peak of sonority is the vowel sound, with other sounds usually
preceding or following or both preceding and following the peak. In
oh, the peak of sonority is obviously o, in di the peak of sonority is
i and in nah, it is a. Of importance of course is juncture. Syllabic
division is intimately connected with juncture as there is normally an
almost imperceptible pause of silence between syllables, and this pause
could be equated with open structure, i.e. the sharp transition between
words. Both junctures are indicated by a sign; in our case the plus
sign (+) indicates an open juncture and a minus sign (-) refers to a
closed juncture, i.e. the pause in between syllables.

Languages tend to have specific syllabic patterns. In B.I. as we
have mentioned earlier, the pattern of consonant-vowel, consonant-vowel-
consonant, vowel-consonant, and to a lesser degree vowel, are the most
frequent. Although Altmann is more concerned with statistical proper-
ties rather than the pattern of syllabification, we can deduce that
certain syllable patterns do occur more frequently than others. Out
of the 11,006 morphemes studied, more than 90% can be attributed to the
V, CV, VC, CVC pattern. However, if we analyse further, for example
the monosyllabic words found in this study, we find that out of a total
of 531 one-syllable morphs (± 4.82%), 158 are words containing more
than two consonants; to be precise there are seven words of the VCC
type, 24 of the CCV, 40 of the CVCC, 50 of the CCVC, one of the CCCV,
two of the CVCCC, 13 of the CCVCC and three of the CCVC type (Altmann
1967:24). If we go further and study the phoneme sequence of disyl-
labic words, we obtain one type containing four consonants. It is true
that although the highest frequency obtained from the disyllabic words
are of the CVCVC type (Altmann 1967:24) there are also other types
containing more than three consonant phonemes. Of a total of 8,372
disyllabic words, seven words have eight phonemes. This means that,
as the peak of sonority in a syllable is a vowel sound, there are
therefore two vowel sounds with six consonant phonemes with the following

distribution: two of the CVCCCVCC type, one of the CVCCCCCVC, three of
the CCVCCCVC and one of the CCCVCCVC type. Apart from these there are
102 words containing seven phonemes and 2009 words with six phonemes.
This means that they are all potential cluster type of words, even if
in the case of the six phonemes sequence, they are intervocalic cluster.
In fact, 1898 are of the CVCCVC type. We could, of course, analyse
the other type, but from the above we can safely conclude that con-
sonant clustering is tolerated in Indonesian.

The next question to ask is whether there are 10, 12 or 13 patterns
of syllable in B.I.? The patterns given in the booklet formulated by
the Committee for Reforms in Indonesian spelling (PANITIA ... 1967) are
as follows:

1.	V	a-nak, i-tu, e-lang, u-fuk
2.	CV	ra-ket, ka-mi, fa-sal, di, po-li-tik
3.	VC	ar-ti, in-jak, ab-di, un-tai, en-do-krin
4.	CVC	tam-pak, fung-si, jum-at, tang-ki, bun-dar
5.	CVCC	teks, te-leks, pers, pa-ra-doks, mars
6.	CCV	kre-dit, gra-nat, kwa-li-tas, kri-tik, dra-ma
7.	CCVC	prang-ko, pro-gram, plong, tram-pil, blun-tas
8.	CCCV	stra-te-gi, in-stru-men
9.	CCVCC	kom-pleks, te-treks, ma-triks
10.	CCCVC	struk-tur, in-struk-si, ab-strak
11.	VCC	ons, eks
12.	VCCC	arts
13.	CVCCC	korps

Altmann (on the other hand) has failed to yield one of these, i.e. the
VCCC type, whereas Harimurti did not mention three, the VCC, CVCCC and
the VCCC type. After careful study of the stock morphemes found in the
Kamus Umum (Poerwadarminta 1961), we only failed to discover the VCC type.
Latif (1968) in his paper also doubted this syllable type. This would
leave us with 12 types of syllables, as given in Altmann's study. How-
ever, upon closer examination of Altmann's study, we failed to find a
syllable of the CVCCC type as well as the one-syllable morpheme of the
CCCV type as indicated in his study. From the above, then, we may say
that there are 11 syllable patterns.[2] We will now proceed to determine
the syllable division in Indonesian:

1) between two vowels, for example sa-at, di-a, ba-ik.
2) between a vowel and a consonant in a word, e.g. ri-ba, ti-dak,
   ta-buh, etc.
3) between two consonant sequences in the middle of a word, e.g.
   pak-sa, sak-si, rat-na, den-da, ting-gi, etc.

4) between the first consonant and the consonant cluster in the
   middle of the word, e.g. ab-strak, in-spek-si.
5) between a vowel or consonant and consonant cluster where the
   second member of the cluster is either w, y, i or r, e.g.
   e-kwi-va-len, o-byek, gam-blang, sas-tra, ga-plek.
6) between clusters of consonants where the second member of the
   first cluster is s and where the second member of the second
   cluster is an r, e.g. eks-tra, eks-trem, etc.

Neither Harimurti, Altmann, the LBK Committee nor the Guidelines laid
down for the new spelling mentioned what combination of sounds in a
cluster are possible in B.I. Altmann simply says that his "investiga-
tion of the phonological structure of Indonesian was obtained" from
An Indonesian-English Dictionary by Echols and Shadily (1961). He
further remarked that this dictionary was chosen because, and I quote
"... as compared to others, it does not take over those lexical units
which are "hereditary" in Indonesian Lexicography" (Altmann 1967:26).
All entries in the dictionary were included except for proper names,
words with the Sundanese eu, and some English and Dutch words, e.g.
crossgirl, jurk, etc. On account of Altmann's study we have examined
words which contain clusters. We have included only the root word found
in the *Kamus Umum* (Poerwadarminta 1961) for the purpose of our study.
This yielded 614 morphemes.

The greatest number of consonants in terms of size and type found
are stops and liquids. Of this group, combinations with laterals are
smaller in comparison with trills. Only five stops are possible with
laterals, the voiced and the unvoiced bilabial (pl, bl) the unvoiced
palatal (cl), and both the voiced and unvoiced velar (kl, gl), whereas
the combination of stops with trills yielded more types, e.g. voiced
and unvoiced bilabial (br, pr), voiced and unvoiced alveolar (tr, dr),
voiced and unvoiced palatal (cr, jr), and voiced and unvoiced velar
(kr, gr). Of these the palatal + liquids are the smallest in number,
yielding only one each. In fact the combination of the palatal and
lateral and palatal + trill of /men+clok/ and /men+crok/ is rather
doubtful as both words occurred having no contrastive significance.
The highest in frequency within this group is the combination of the
unvoiced bilabial + trill (97), nearly one sixth of morphemes contain-
ing clusters. Other combinations with liquids as the second group in
a cluster are the voiceless fricatives with laterals as well as with
trills and the combination with sibilants. Of this group one morpheme
is found with the combination of sibilant + lateral, e.g. /slaŋ/.
Four types can be found in combination, a semivowel as the second mem-
ber of a cluster, the voiced alveolar with the bilabial glide, the

unvoiced velar with the bilabial glide, and the unvoiced sibilant with
the bilabial glide. Only one type can be found in combination with the
palatal glide, and this occurs only in two words /o-byek/ and /su-byek/.
Perhaps the last possible combinations of clusters in the initial posi-
tion with consonants are the sibilants with stops, sibilants with
voiceless bilabial and sibilants with voiceless alveolar. Altogether
there are 23 types of two-consonant clusters.

Of the 23 consonant clusters, only three are found in B.I. All
three have sibilants as the first member, voiceless stops in the second
member and the trill as a third member. Of these three the combination
of sibilant + voiceless dental stop occurs more frequently than the two
others. In fact, the combination of sibilant + voiceless bilabial +
trill occurs only once, with the word /sprey/, and the combination stop
+ voiceless velar + trill only occurs twice, in the words /skrip/ and
/skripsi/.

Clusters in final position, on the other hand, are somewhat smaller
in number in comparison to initial clusters. There are only seven types
with two consonant clusters: the combination of stops with sibilant,
homorganic nasal + dental stop, dental nasal + sibilant, liquids with
bilabial and dental nasals and the trill + sibilants. It must be pointed
out that the number of morphemes containing final clusters with two
consonants is very small indeed, with the possible exception of the
voiceless velar stop + sibilants, whose frequency is relatively higher.
As mentioned above final clusters with three consonants did not occur
in the *Kamus Umum*, but did occur in Echols and Shadily's *Dictionary*.

Of greater number are the medial clusters, but as these are non-
syllabic, one can regard them as potential clusters, for when the
juncture is lost, then a cluster results.

The most frequent occurring cluster of this type, in terms of words
found, is the combination of homorganic nasals + stops, but in terms of
combinability with other consonants, the liquids, notably the trill, is
by far the greatest. It combines with almost all stops, laryngeals,
the fricative, the sibilants, the lateral and the semi-vowels. Less
frequent is the combination of stops with stops. An overall listing of
possible combinations is to be found in the appendix.

Finally, are clusters very productive in Indonesian? Perhaps at
this stage they are not very productive, but later on when these
clusters are accepted, they will be an element in word building.

In conclusion I would like to say that clustering is accepted in
Indonesian, with the restriction that it is only used in initial posi-
tion. With regard to words longer than three syllables, the preference
is always for clusters as they shorten the word, e.g. administrasi is

never spelt (or pronounced) administerasi. There is also a tendency
for some speakers to prefer the favourite disyllabic type, e.g. Inggris
instead of Inggeris, sastra in place of sastera, etc. The result of my
study on the Indonesian lexicon, currently in progress, may support this
or prove otherwise.

N O T E

1. Phono-morphematic Study is a study of how phones are combined.

2. In this respect we are in agreement with the decision made by the
Minister for Education and Culture when setting up guidelines for the
new spelling in August 1975. This was subsequently published in roneo
form under the title of General Guidelines for Spelling of Bahasa
Indonesia (Pedoman Umum Ejaan Bahasa Indonesia yang Disempurnakan,
1975).

APPENDIX

Syllabic Pattern in Indonesian

```
                    V
              VC   CVC   CV
        CCV  CCVC  CCVCC  CVCC  VCC
     CCCV      CCCVC        CVCCC      VCCCC
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A 1. Initial Clusters with two Consonants

    a. Stops + liquids

    pl [+plin-plan+]   pr [+pra-ju-rit+]

    bl [+blaŋ-ko+]   br [+breŋ-sek+]

    cl [+men-clok+]   tr [+tri-mur-ti+]

    kl [+kli-se+]   dr [+dra-ma+]

    gl [+aŋ-glap+]   cr [+men-crok+]

                           kr [+kris-ten+]

                           gr [+a-gra-ria+]

                           jr [+hi-jrah+]

    b. Fricatives + liquids

    fl [+flo-ra+]   fr [+front+]

    c. Sibilants and liquids

    sl [+slaŋ+]   sr [+sri-kan-di+]

    d. Stops and semivowels

    dw [+dwi-li-pat+]   by [+ŋo-byek+]

    e. Sibilants + stops

    sp [+spa-si+]

    st [+sta-di-on+]

    f. Sibilants + semivowels

    sw [+swa-tan-tra+]

2. Initial Clusters with three Consonants
   a. Sibilants + stops + liquids
   spr [+sprey+]
   str [+struk-tur+]
   skr [+skrip-si+]

B 1. Final Clusters with two Consonants
   a. Stops + sibilants
   ts [+skets+]
   ks [+in-deks+]

   b. Nasals + stops
   nt [+front+]

   c. Nasals + sibilants
   ns [+ons+]

   d. Liquids + nasals
   rn [+mo-dern+]   lm [+film+]

   e. Liquids + sibilants
   rs [+pers+]

2. Final Clusters with three Consonants
   a. Liquids + stops and sibilants
   rps [+korps+]

C   Medial (non-syllabic) Clusters
    a. Stops + stops
    bj [+ab-jad+]   /+ab<u>j</u>ad+/
    pt [+kap-ten+]   /+ka<u>pt</u>en+/
    pk [+ap-kir+]   /+a<u>pk</u>ir+/
    kb [+ak-bar+]   /+a<u>kb</u>ar+/
    kt [+sak-ti+]   /+sa<u>kt</u>i+/
    kd [+tak-dir+]   /+ta<u>kd</u>ir+/
    kc [+cek-cok+]   /+ce<u>kc</u>ok+/
    kj [+tak-jub+]   /+ta<u>kj</u>ub+/

    b. Stops + nasals
    tm [+at-ma+]   /+a<u>tm</u>a+/
    tn [+fit-nah+]   /+fi<u>tn</u>ah+/
    km [+lak-mus+]   /+la<u>km</u>us+/
    kn [+lak-nat+]   /+la<u>kn</u>at+/

c. **Stops + sibilants**

ps   [+op-sir+]   /+opsir+/
bs   [+ab-ses+]   /+abses+/
ts   [+fat-sal+]   /+fatsal+/
ks   [+pak-sa+]   /+paksa+/

d. **Stops + liquids**

kl   [+lak-lak-an+]   /+laklakan+/

e. **Stops + semivowels**

tw   [+fat-wat+]   /+fatwat+/
kw   [+dak-wat+]   /+dakwat+/

f. **Glottals + semivowels**

ʔy   [+raʔ-yat+]   /+raʔyat+/

g. **Laryngeals + stops**

hd   [+sah-du+]   /+sahdu+/
ht   [+bah-te-ra+]   /+bahtera+/
hk   [+bah-kan+]   /+bahkan+/
xt   [+tax-ta+]   /+taxta+/

h. **Laryngeals + nasals**

hm   [+rah-mat+]   /+rahmat+/
hn   [+tah-niah+]   /+tahniah+/

i. **Laryngeals + sibilants**

hs   [+tah-sil+]   /+tahsil+/

j. **Nasals + stops**

mb   [+tum-buh+]   /+tumbuh+/
mp   [+tum-pah+]   /+tumpah+/
nd   [+man-dur+]   /+mandur+/
nt   [+ken-taŋ+]   /+kentaŋ+/
nj   [+an-jiŋ+]   /+anjiŋ+/
nc   [+gon-caŋ+]   /+goncaŋ+/
ŋb   [+baŋ-buŋ+]   /+baŋbuŋ+/
ŋp   [+baŋ-pak+]   /+baŋpak+/
ŋg   [+baŋ-ga+]   /+baŋga+/
ŋk   [+saŋ-kur+]   /+saŋkur+/

k. **Nasals + sibilants**

mz   [+zam-zam+]   /+zamzam+/
ms   [+tam-sil+]   /+tamsil+/
ns   [+dan-sa+]   /+dansa+/
ŋs   [+baŋ-sa+]   /+baŋsa+/

l. Nasals + liquids
ŋl [+liŋ-luŋ+]   /+liŋluŋ+/

m. Fricatives + stops
ft [+daf-tar+]   /+daftar+/
fd [+af-dol+]   /+afdol+/
fk [+naf-kah+]   /+nafkah+/

n. Fricative-stops
fs [+taf-sir+]   /+tafsir+/

o. Liquids + stops
rb [+ser-ba+]   /+serba+/
rp [+gar-pu+]   /+garpu+/
rd [+gar-du+]   /+gardu+/
rt [+kar-tu+]   /+kartu+/
rc [+kar-cis+]   /+karcis+/
rk [+ber-kat+]   /+berkat+/
rg [+har-ga+]   /+harga+/
lp [+al-pa+]   /+alpa+/
lb [+kal-bu+]   /+kalbu+/
lt [+al-tar+]   /+altar+/
ld [+kal-du+]   /+kaldu+/
lj [+sal-ju+]   /+salju+/
lk [+kal-kun+]   /+kalkun+/
lg [+bul-gur+]   /+bulgur+/
lh [+wal-ha-sil+]   /+walhasil+/

p. Liquids + laryngeals
rh [+ger-ha-na+]   /+gerhana+/

q. Liquids + nasals
rm [+cer-mat+]   /+cermat+/
rn [+war-na+]   /+warna+/
rɲ [+ker-ɲut+]   /+kerɲut+/
lm [+il-mu+]   /+ilmu+/

r. Liquids + sibilants
rs [+ber-sih+]   /+bersih+/
ls [+pal-su+]   /+palsu+/

s. Liquids + liquids
rl [+ker-liŋ+]   /+kerliŋ+/

t. Liquids + semivowels

rw	[+ar-wah+]	/+arwah+/
ry	[+kar-ya+]	/+karya+/
lw	[+hal-wa+]	/+halwa+/
ly	[+bil-yar+]	/+bilyar+/

u. Sibilants + stops

sp	[+as-pal+]	/+aspal+/
sb	[+nis-bi+]	/+nisbi+/
st	[+mes-ti+]	/+mesti+/
sk	[+bas-kom+]	/+baskom+/
sj	[+mes-jid+]	/+mesjid+/

v. Sibilants + nasals

| sm | [+res-mi+] | /+resmi+/ |
| zm | [+az-mat+] | /+azmat+/ |

w. Sibilants + liquids

| sl | [+as-li+] | /+asli+/ |
| sr | [+has-rat+] | /+hasrat+/ |

Initial Clusters with two Consonant Phonemes

	p	b	t	d	c	j	k	g	h	m	n	ɲ	ŋ	f	s	š	x	z	l	r	w	y
p	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-
b																			+	+	-	+
t																			-	+	-	-
d																			+	+		
c																			+	+	+	
j																						
k																			+	+	+	
g																			+	+	+	-
h																			+	+		
m																						
n																						
ɲ																						
ŋ																						
f																			+	+		
s																			+	+	+	
š																						
x																						
z																						
l																						
r																						
w																						
y																						

Final Clusters with two Consonant Phonemes

	b	t	d	c	j	k	g	h	m	n	ɲ	ŋ	f	s	š	x	z	l	r	w	y
b	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–		
t														+							
d																					
c																					
j																					
k														+							
g																					
h																					
m																					
n		+												+							
ɲ																					
ŋ																					
f																					
s																					
š																					
x																					
z																					
l								+													
r									+					+							
w																					
y																					

Medial (non-syllabic) Clusters

	p	b	t	d	c	j	k	ʔ	g	h	m	n	ɲ	ŋ	f	s	š	x	z	l	r	w	y
p		+					+									+							
b																							
t											+	+				+					+		
d											+												
c																							
j																							
k	+	+	+	+							+	+				+				+	+	+	
ʔ																							+
g																							
h		+	+			+					+	+				+				+	+	+	+
m	+	+														+			+				
n		+	+	+	+											+							
ɲ																							
ŋ	+	+					+		+							+			+				
f		+	+			+										+							
s	+	+	+			+	+									+				+	+	+	+
š																							
x		+									+												
z											+												
l	+	+	+	+		+	+		+			+			+	+					+	+	
r	+	+	+	+	+	+			+	+	+	+	+	+	+					+		+	+
w																							
y																							

BIBLIOGRAPHY

ALTMANN, G.
    1967   'The Structure of Indonesian Morphemes'. *Asian and African Studies*, 23-36. Bratislava.

    1968   'Combinations of Consonants in Indonesian Morphemes of the CVCVC Type'. *MIO* 14:108-25.

ECHOLS, John M. and Hassan SHADILY
    1961   *An Indonesian-English Dictionary.* (2nd edn 1963.) Ithaca, N.Y.: Cornell University Press.

GLEASON, H.A.
    1965   *An Introduction to Descriptive Linguistics.* New York: Holt, Rinehart & Winston. (1st edn, N.Y.: Holt, 1955.)

HARIMURTI KRIDALAKSANA
    1967   'Pembentukan Istilah Ilmiah dalam Bahasa Indonesia'. *Simposium Bahasa dan Kesusasteraan Indonesia*, 83-95. Jakarta: Gunung Agung.

HOCKETT, C.F.
    1958   *A Course in Modern Linguistics.* New York: Macmillan.

INDONESIA: PANITIA EDJAAN LEMBAGA BAHASA DAN KESUSASTERAAN
    1967   *Edjaan Baru Bahasa Indonesia*, 1-9.

INDONESIA: MINISTRY OF EDUCATION AND CULTURE
    1975   Pedoman Umum Ejaan Bahasa Indonesia yang Disempurnakan. 9pp. Roneo.

LATIF, A.

    1968   Lafas dan Ejaan.   Paper presented to the Seminar for
               Bahasa Indonesia, Jakarta.

POERWADARMINTA, W.J.S.

    1961   *Kamus Umum Bahasa Indonesia.* 3rd printing. Jakarta: Dinas
               Penerbitan Balai Pustaka.

UHLENBECK, E.M.

    1949   *De Struktuur van het Javaanse Morpheem.* Bandung: A.C.
               Nix.