

INDONESIAN VOWELS AND THEIR ALLOPHONES

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Introduction

Verhaar's books entitled *Pengantar Linguistik (Introduction to Linguistics)* published by Gadjah Mada University Press and its elaborative edition *Asas-asas Linguistik (The Principles of Linguistics)* of the same publisher constitute linguistic works which strongly influence the development and advancement of linguistic studies in Indonesia. The innovations brought by these books are clearly seen in their formal approach towards linguistic units as the material object of any linguistic investigation. Long before the appearance of those Verhaar's books, Indonesian Linguists or linguists of bahasa Indonesia had been shackled by the traditional (notional) approach, as shown in the works of Alisjahbana (1978); Mees (1955); Zain (1943); Lubis (1954) (see Ramlan, 1985). Their traditional approach is a reflection of the strong influence of Greece grammar. Meanwhile, the formal approach practised by the modern linguists, in many respects, is much more objective than that of the traditional one. The modern approach is used, for examples, to identify linguistic units (such as morphemes, words, sentences, etc.), parts of speech, syntactic functions and their fillers, sentence types, etc.

Despite those advantages, Verhaar's works also conceal various linguistic problems which are either related to Indonesian, foreign or local languages in Indonesia. The problems presented in those books are very interesting, and frequently challenging for linguists to think of or give them some corrections or solutions.

The superiority of these books has been discussed by Alif (2002) in a regional conference held by University of Sanata Dharma, Yogyakarta to commemorate the one hundredth day of the author's death.

Accordingly, as a token of my respect to his service in developing Indonesian linguistics and his dedication to Gadjah Mada University, where he was formerly a visiting professor in Faculty of Letters (now Faculty of Cultural Sciences), I would like to discuss one important problem which exists in his second book *Asas-asas Linguistik*. The problem concerns with Indonesian vowels and their allophonic distribution, especially /i/ and /u/ in Indonesian syllabic systems. These problems have not been so far satisfactorily clarified in Indonesian phonology.

Indonesian Vowel System

From the view point of vowel inventory ownership, Indonesian belongs to the language of six vowel system. Those six vowels respectively are /i/, /u/, /e/, /o/, /a/, and /ə/. The distinctiveness of these vowels is characterized by their similar or parallel distributions and their capacity of differentiating meaning, except in several free variations such as *telɽ* and *telɽ* 'egg'; *əmpat* and *ampat* 'four', etc. /a/ and /ə/ are vowels with no allophonic variation. These vowels may occur in the beginning, middle, and end of Indonesian word stems of either open or close syllables, as seen in (a) to (f) below:

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- (a) *lada* 'papper'
- (b) *ada* 'exist'
- (c) *enam* 'six'
- (d) *akte* 'act'
- (e) *pegang* 'hold'
- (f) *santih* 'touch'
- (g) *serap* 'reserve'

Meanwhile, four other vowels /i/, /u/, /e/, and /o/ have one allophone, i.e [i], [u], [ɛ], and [ɔ] respectively. Therefore /i/ can realize as [i] and [ɪ] such as in *bibi* 'aunt' and *bibir* 'lip'; /u/ can realize as [u] and [ʊ] such as in *bubu* 'fish trap' and *bubur* 'porridge'; /e/ can realize as [e] and [ɛ] such as in *lele* 'cat fish' and *leleh* 'melting'; And, /o/ can realize as [o] and [ɔ] such as in *toko* 'shop' and *tokoh* 'figure'

/i/ and /u/, and their syllabic problems

Verhaar (1996) stated that the allophones of [i] and [u] occur in open syllables, while their variants [ɪ] and [ʊ] occur in the close ones. This view is also followed by Samsuri (1981). As [ɪ] and [ʊ] can not be found in close syllables, Verhaar believes that the directly following consonants, such as [m] and [n] in (9) to (14), are the initial sounds of the second (final) syllables.

- (9) *sindlr* 'tease'
- (10) *timba* 'bucket'
- (11) *bimbing* 'guide'
- (12) *jumpa* 'meet'
- (13) *lumpj r* 'mud'
- (14) *buntj t* 'tail'

As long as the pronunciation is concerned, this rule is not applicable to /e/ and /o/. If this rule is agreed, there are also big consequences towards the phonological structure of Indonesian base words since the words in (9) to (12) should be separated as (9a) to (14a) below:

- (9a) *si-ndlr*
- (10a) *ti-mba*
- (11a) *bi-mblng*
- (12a) *ju-mpa*
- (13a) *lu-mpj r*
- (14a) *bu-ntj t*

As such, in Indonesian, there must also be [nd], [mb], [mp], [nt] clusters, etc. My

intuition as an Indonesian native speaker will never receive the existence of these clusters even though they are commonly found in Javanese, the language spoken by the biggest ethnic in the archipelago. For Indonesian speakers the following syllabization (9b) to (14b) is considered more rational as the nasal initial syllables do not exist in Indonesian.

- (9b) *sin-dlr*
- (10b) *tim-ba*
- (11b) *bim-blng*
- (112b) *jum-pa*
- (13b) *lum-pj r*
- (14) *bun-tj t*

In this matter, the difference between orthographic and phonemic syllables can not be ignored. The sound shifting may occur in the phonemic syllables, but not on the others. For example, the consonant final base of Indonesian polymorphemic words which contain *per-an*, *peN-an*, *-an*, and *ke-an* are phonemically separated into (9c) to (12c) and orthographically into (9d) to (12d):

- | | | |
|-------|------------------------|----------------|
| (9c) | <i>per-a-da-ban</i> | 'civilization' |
| (10c) | <i>tim-ba-ngan</i> | 'scale' |
| (11c) | <i>pem-bim-bi-ngan</i> | 'guiding' |
| (12c) | <i>per-tem-pu-ran</i> | 'war' |
| (13c) | <i>ke-a-di-lan</i> | 'justice' |
| (14c) | <i>ma-ka-nan</i> | 'food' |
| (9d) | <i>per-a-dab-an</i> | |
| (10d) | <i>tim-bang-an</i> | |
| (11) | <i>pem-bim-bing-an</i> | |
| (12d) | <i>per-tem-pur-an</i> | |
| (13d) | <i>ke-a-dil-an</i> | |
| (14) | <i>ma-kan-an</i> | |

In both types of syllabization, the shifting of the final consonant's base will never form any cluster on the final syllables.

If Verhaar's opinion is rejected, the problems which need to be clarified are the allophonic /i/ and /u/ distribution rules as discussed in section 4 below.

Allophonic distribution rules of /i/ and /u/

Based on more careful data observation, the distribution rules of /i/ and /u/ have to be modified. So far, many linguists view that [ɪ]

and [ʃ] appear in all close syllables. This is not so, because these allophones can only be found in the final close syllables. Meanwhile, their variants can be found in other positions, as shown in (15) to (24) below.

- | | | |
|------|---------------|-------------------------|
| (15) | bim-blŋg | 'guide' |
| (16) | bəlimblŋg | 'star fruit' |
| (17) | kəlŋgklŋg | 'little finger' |
| (18) | təlunjʃ k | 'index finger' |
| (19) | kəmunlŋg | 'yellow wood tree' |
| (20) | kun-tʃ m | 'flower bud' |
| (21) | ke-ru-dʃ ŋg | 'veil' |
| (22) | səm-bi-lu | 'blade of split bamboo' |
| (23) | kun-ti-la-nak | 'supernatural being' |
| (24) | kən-du-ri | 'ritual meal' |
| (25) | sə-ru-lŋg | 'flute' |
| (26) | bə-ŋun-dal | 'hoodlum' |

[l] and [ʃ] also appear in monosyllabic words ending with consonants, such as in (27) to (30) below:

- | | | |
|------|---------|----------|
| (27) | tŋg | 'bin' |
| (28) | bls | 'bus' |
| (29) | pər | 'spiral' |
| (30) | (bʃ ŋg) | 'fellow' |

5. /e/ and /o/ and their distribution and harmony rules

The vowels /e/ and /o/ apparently have more complicated distribution rules as compared to /i/ and /u/. Their rules can be formulated as follows:

The allophones of these vowels, i.e [ɛ] and [ɔ] appear in final close syllables, such as in (31) to (34):

- | | | |
|------|-------|----------------|
| (31) | baɛt | 'ballet' |
| (32) | kaɛŋg | 'tin can' |
| (33) | taɛŋg | 'shield' |
| (34) | giɛŋg | 'ginseng' |
| (35) | baɔk | 'beam of wood' |
| (36) | keɔk | 'bend' |
| (37) | gaɔŋg | 'thief' |
| (38) | kaɔŋg | 'bat' |

On the other hand, the allophones [ɛ] and [ɔ] occur in open syllables and in non-

final close syllables. Besides this main rule, there are also harmony rules whose formulations are as follows: If the final syllables containing /e/ and /o/ are preceded by other identical vowels, those vowels will realize as <E> and <O>. Consider the following examples.

- | | | |
|------|---------|-----------------------------|
| (39) | lɛɛh | 'melt' |
| (40) | lɛhɛr | 'neck' |
| (41) | sɛrɛt | 'drag' |
| (42) | dɛrɛt | 'row' |
| (40) | tɔkɔh | 'figure' |
| (41) | lɔntɔŋg | 'rice steam in banana leaf' |
| (42) | kɔmpɔr | 'stove' |
| (43) | ɔpɔr | 'curry' |

These words are never pronounced like (44) to (51) below:

- | | |
|------|----------|
| (44) | *lɛɛh |
| (45) | *lɛhɛr |
| (46) | *sɛrɛt |
| (47) | *dɛrɛt |
| (48) | tɔkɔh |
| (49) | *lɔntɔŋg |
| (50) | *kɔmpɔr |
| (51) | *ɔpɔr |

If the peaks of the Syllables are filled by non-identical vowels, the pronunciation rules would be very loose. Both kinds of pronunciation are allowed in Indonesian although Indonesian speakers tend to choose (60) to (67) than (52) to (59):

- | | | |
|------|-------|---------------------|
| (52) | meja | 'desk' |
| (53) | sedan | 'car' |
| (54) | tega | 'have the heart to' |
| (55) | dekan | 'dean' |
| (56) | toga | 'academic gown' |
| (57) | lokan | 'pearl shell' |
| (58) | topan | 'thypoone' |
| (59) | sopan | 'polite' |
| (60) | mɛja | |
| (61) | sɛdan | |
| (62) | tɛga | |
| (63) | dɛkan | |
| (64) | tɔga | |
| (65) | lɔkan | |
| (66) | tɔpan | |
| (67) | sɔpan | |

6. Closing Notes

Based on the description given above, it can be stated two linguistic sound premises namely: (1) the phonological system of any language tend to be symmetrical and (2) the sounds are influenced by their phonological conditions. Further, based on the vowel diagram, in which both /i/ and /u/ are high vowels and /o/ and /ə/ are middle vowels, the first premise will cause the distribution rule of /i/ the same as /u/, while the rules of /e/ is the same as that of /o/. The second premise conforms with the harmony rules of /e/ and /o/, especially for words of having identical vowels. The harmony rules also follows the first premise because it can only be applied to the middle vowels. The widespread use of Indonesian often brings many problems for the researchers to conduct their investigation because their observation is often disturbed by many extralinguistic factors, such as individual, emotional as well as dialectal ones which have the potential to bring out various linguistic variations. Because of individual factors, Indonesian speakers may articulate certain vowels differently from other speakers. The example of emotional factors can be seen in the pronunciation of Krisyanto, the personnel of Jamrud music group, often pronounces ini 'this', itu that', di sini 'here', di situ 'there', begini 'like this', begitu 'like that' etc uncommonly becoming Inl, Itf, dl slnl, and dl Sitf, beglnl, and begltf. The emotional factors can be seen in the fact that Indonesian speakers often produce affective words whose pronunciation violate the ordinary pronunciation. For example, to gain certain effects in poetry readings, words such as pahlt 'bitter', getlr 'bitter', kabUt 'fog', etc. are pronounced pahit, getir, and kabut. Finally, dialectal factors, may also bring a similar problem. For example, Indonesian speakers who are originated from East Java will pronounce words such as tikUs 'mouse', untUng 'luck', pingglr 'edge', etc. slightly differently from others coming from other parts of Indonesia. The East Javanese will pronounce them tlkf s, Untf ng, Pingglr instead of the standard pronunciation. For the same reason, the people from Jakarta

as well as those from west Java pronounce lele 'cat fish', toko 'shop', sado 'horse carriage', sate 'meat skewer', etc. instead of the standard forms lele, toko, sado, and sate.

Vowel Symbols

[a]	: front, low, unround vowel
[i]	: front, high, unround vowel
[u]	: back, high, round vowel
[ɪ]	: front, middle high, unround vowel
[ʊ]	: back, middle high, round vowel
[e]	: front, middle, unround vowel
[ɛ]	: front, middle low, unround vowel
[ɔ]	: back, middle low, round vowel
[ə]	: midle, middle, unround vowel

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