

Sequence of Nasal-Stops as a Distinct Segment in Balinese

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Abstract

The article entitled “Sequence of Nasal-Stops as A Distinct Segment in Balinese” attempts to investigate whether Balinese has sequence of nasal stops both bilabial nasal stops (<m-b>, <m-p>), alveolar nasal-stops (<n-d>, <n-t>), and velar nasal-stops (<ng-g>, <ng-k>) or it has a prenasal stops both bilabial prenasal stops (<mb>, <mp>), alveolar prenasal stops (<nd>, <nt>) or it has velar prenasal stops (<ngg>, <ngk>). Based upon the data analysis, it has sequence of nasal-stop segments. The judgement is based on (1) the existence of suspicious syllabic nasal phonemes, (2) its clear word structure such as (a) VC.CVC e.g. <aggag> /aggag/ [ag.gag] ‘open’, (b) CVC.CV e.g. <bakta> /bakta/ [bak.ta] ‘bring’, (c) CVC.CVC e.g. <dapdap> /dapdap/ [dap.dap] ‘careful’ and (d) VC.CV e.g. <akta> /akta/ [ak.ta] ‘official document’. (3) On the bases of its clear word structure, Balinese shares sequence of nasal-stop segments both bilabial nasal-stop such as <m-b> e.g. <embok> ‘elder sister’ of which the right pronunciation is [ə̃m.bək] rather than prenasal stop [ᵐb] as in [ᵐbək], alveolar nasal-stop such as <n-d> in <cande> ‘just for kidding’ of which the right pronunciation is [cãn.də] rather than prenasal stop [ᵐd] in [cã.ᵐdə] and velar nasal-stop such as <ng-g> in <bengkek> ‘short body posture’ of which the right pronunciation is [bə̃ŋ.kək] rather than velar prenasal [ᵑg] in [bə̃.ᵑkək].

Keywords: Phoneme, Segment, Word, Right word structure

1. Introduction

Determining a segment of language speech sound is paramount to do prior to phonological research study because without this it is difficult to formulate a canonic pattern of language under study. The number of segments will be decisive in determining the canonical pattern of a word.

A study on Balinese speech sound has been done by I Wayan Pastika entitled “Balinese Phonology: A Transformation Generative Approach” but in determining sequence of nasal-stops as distinct segmental sequence or a segment is not studied yet by the researcher of Balinese Phonology. The study, however, determines straight away that a sequence of two phonemes is regarded as two distinct segments without any justification. As a matter of fact before determining it, it is necessary to interpret before hand that a sequence of nasal-stops phonetically, phonemically and orthographically be two distinct segments or the same ones.

This can be seen in the example of canonical pattern of word including (1) VC.CVC e.g.<embok> [əm.bək] ‘elder sister’, <ampak> [am.pak] ‘open’ <umbah> [um.bah] ‘wash’ <enggal> [eŋ.gal] ‘quick’ (2) CVC.CV: <kanta> [kan.ta] ‘neck’, <monto> [mɔn.to] ‘that’s it or that’s all’, (3) CVC.CVC e.g.<tampah> [tam.pah] ‘slaughter’, <lambet> [lam.bət] ‘whip’, <gembel> [gəm.bəl] ‘clench’, <kantih> [kan.tih] ‘out rigger’, <sanggah> [saŋ.gah] ‘family temple’ (4) VC.CV e.g. <anggo> [aŋ.go] ‘use’, <ento> [ən.to] ‘that’, <ampo> [am.po] ‘clay’ (Pastika, 2005:47--48).

With reference to such a fact, it is proved that two sequence of nasal-stops including <m-b>, <m-p>, <n-d>, <n-t>, <ng-g>, and <ng-k> belong to two distinct sequence segments (nasal-stop) or a segment (prenasal stop).

Balinese is one of the hundred biggest local languages existing in Indonesia. Balinese is widely spoken by Balinese people of Hindu living in the island of Bali (Satyawati, 2015:110). The total of Balinese native speaker is 4 million people.

2. The Scope and the Problem

The present study focuses suspected phonemes of language regarded as

(1) sequence of nasal-stops such as bilabial nasal-stop bilabial (<m-b>, <m-p>), alveolar nasal-stop (<n-d>, <n-t>), velar nasal- stops (<ng-g>, <ng-k>), or

(2) prenasal stops, such as bilabial prenasal stops (<^mb>, <^mp>), alveolar prenasal

stops (<ⁿd>, <ⁿt>) and velar prenasal stops (<^ŋg>, <^ŋk>). Based on the scope of the current study the problem is formulated whether sequence of nasal stops are regarded as two distinct segments or just a segment.

3. The Research Method

The present study employed three methods covering (1) the data collection, (2) the data analysis, and (3) the presentation of the data analysis result. Those three methods were really needed to obtain a good quality and accountable research.

The data collection was carried out by applying two methods namely the observation method and the interview method. The observation was done by observing the situation where the present study was done in particular users of Balinese language.

The interview was conducted in two ways i.e. the structured and unstructured method or incidental. The structured interview was done by preparing the research instrument particularly a number of questions to be asked and the unstructured interview was done incidentally whenever there was an occasion to interview the informan. The data was collected by recording technique and note-taking. The recording technique was used to assist the note-taking technique. Library research was also carried out by visiting the library to get the relevant references related to the present study.

The data was analysed using qualitative method on the basis of objective data and the presentation of the data analysis result was done by descriptive method which considered being useful to describe or explain the result of the data analysis.

4. Analysis

4.1 Balinese Consonants and Vowels

Consonant and Vowels are speech sounds as phonemic unit produced by the speech organ (Chaer, 2009:125). A speech sound is also defined as phonemic unit produced by the speech organ and is observed in Phonetics as phon or in Phonology as a phoneme (Kridalaksana, 2008:38).

Based on the study, Balinese has eighteen consonants including the stops [p, b, t, d, k, g], the affricates [c, j], the fricatives [s, h], the nasals [m, n, ŋ, ŋ], the lateral [l], the trill [r], and the semivowels [w, y] and ten vowels including [i, ɪ, e, ε, u, U, o, ɔ, ə, a] (Pastika, 2005:29, 38).

Table 1. Phonetic Segments of Balinese Consonants

Manner of Articulation	Place of Articulation				
	Bilabial	Alveolar	Alveo-Palatal	Velar	Glotal
Voiceless Stop	p	t		k	
Voiced Stop	b	d		g	
Voiceless Affricates			c		
Voiced Affricates			j		
Voiceless Fricatives		s			h
Nasal	m	n	ɲ	ŋ	
Lateral		l			
Trill		r			
Semivowel			y	w	

Table 2. Phonetic Segments Balinese Vowels

		Front	Center	Back
		Unrounded	Unrounded	Rounded
High	Tense	i		u
	Lax	ɪ		ʊ
Middle	Tense	e		o
	Lax	ɛ	ə	ɔ
Low			a	

Based on Table 1 above, Balinese has the nasals and the stops but does not have prenasal stops and in line with the study of Balinese, it is obvious that Balinese has sequence of two distinct consonants such as nasal stop. In spite of it, the question still arises why Balinese lacks the prenasal stops as a segment such as [ə̃m.bək] and not as [ᵐbək] ‘elder sister’.

4.2 Sequence of Consonants in the Suspected Words as Sequence of Two Segments or One Segment in Balinese

A single speech sound resulting from movement of a single articulator can be called a sound segment (Pike, 1978:11). Every segment of word can be described as the number out of a number components or features. Thus, [m] in word-initial “man” can be said to have the sounded feature, the feature that is made in the bilabial point of articulation and nasal manner of articulation (Ladefoged, 1982:241). A segment is a phoneme (Pike, 1987:107; Verhaar, 1979:48; 2010:55—56).

The following is a sequence of two consonants suspected as sequence of two segments or one segment. Bilabial nasal-stops <m-b>, <m-p> as [mb] or [ᵐb], [mp] or [ᵐp]. Alveolar nasal-stops <n-d>, <n-t> as [nd] or [ᵐd], [nt] atau [ᵐt]. Velar nasal-stops <ng-g>, <ng-k> as [ngg] or [ᵐg], [ngk] or [ᵐk].

4.3 Sequence of Nasal-stops as Distinct Segment in Balinese

Several points need stating in order to confirm that sequence of speech sounds as distinct segments or a segment (Pike, 1978).

First, finding out a sequence of speech sound that needs interpreting. On this respect the sequence of consonants that need interpreting including <m-b>, <m-p>, <n-d>, <n-t>, <ng-g>, and <ng-k>.

Second, finding out clear or general word structure. This means the word structure of which its speech sounds are potentially such not syllabic. For example the syllabic speech sound <m> tends to be *em* [əm] as <jambak> ‘pull someone’s hair’ pronounced as [jam.bak] and is inclined to be produced as [ja.əm.bak], <n> tends to be *en* [ən] such as <cande> ‘just for kidding’ pronounced as [can.də] and is inclined to be produced as [ca.ən.də] and <ng> tends to be [əŋ] such as <anggon> ‘use’ pronounced as [aŋ.gən] and is inclined to be produced as [a.əŋ.gən]. Based on the study on Balinese, the clear or general word structure in line with the sample data above it can be formulated as follows:

(1) VC.CVC ,e.g. : <aggag> /aggag/ [ag.gag] ‘open’

(2) CVC.CV e.g. : <bakta> /bakta/ [bak.ta] ‘bring’

(3) CVC.CVC e.g.: <dapdap> /dapdap/ [dap.dap] ‘careful’

<pakpak> /pakpak/ [pak.pak] ‘chew’

(4) VC.CV e.g. : <akta> /akta/ [ak.ta] ‘official document’

Third, interpreting the suspicious data according to the clear or general word structure can be described as follows.

(1) Based on the clear word structure VC.CVC, sequence of voiced bilabial nasal- stops <m-b> in <embok> ‘elder sister’ should be correctly pronounced as [əm.bək] rather than voiced prenasal stop [ᵐb] and neither is [ᵐbək]. Thus, a sequence of <m-b> is two sequence segment of voiced bilabial nasal-stop or [ᵐb].

The same case also happens to sequence of unvoiced bilabial nasal-stop <m-p> in <empel> ‘dam’ based on clear word structure VC.CVC pronounced as unvoiced bilabial nasal-stop [mp] in [əm.pəl] rather than a segment of unvoiced bilabial prenasal stop [ᵐp] in [ə.ᵐpəl].

(2) Based on the clear word structure CVC.CV, sequence of voiced alveolar nasal-stop <nd> in <cande> .just for kidding’ of which the right pronunciation is [can.də] rather than voiced unvoiced prenasal alveolar stop [ᵐd] and neither as [ca.ᵐdə].

It also happens to the sequence of unvoiced alveolar-stop <n-t> in <kanta> ‘neck’ of which the right pronunciation is [kan.tə] instead of unvoiced prenasal alveolar stop [ᵐt] and nor is pronounced as [ka.ᵐtə].

The sequence of voiced velar nasal-stop <ng-g> in <kangge> ‘be permitted’ of which the right pronunciation is [kaŋ.ge] instead of [ka.ᵑge]. It also occurs to the sequence of unvoiced velar nasal-stop <ng-k> in <bengka> ‘the stomach is filled with full of air’ of which the right pronunciation is [bəŋ.kə] instead of unvoiced prenasal velar stop [ᵑk] as in [bə.ᵑkə].

(3) Based on the clear word structure CVC.CVC, the sequence of voiced bilabial nasal-stop <m-b> in <kambang> ‘float’ of which the right pronunciation is [kam.baŋ] instead of voiced prenasal bilabial stop [ᵐb] as in [ka.ᵐbaŋ]. It also occurs to <dampel> ‘cover’ based on the clear word structure CVC.CVC, the sequence of unvoiced bilabial nasal-stop <m-p> in <dampel> of which the right pronunciation is [dam.pəl] instead of unvoiced prenasal bilabial stop [ᵐp] as in [da.ᵐpəl].

(4) Based on the clear word structure, CVC.CVC the sequence of alveolar nasal-stop <n-d> in <dandan> ‘hold in hand’ of which the right pronunciation is [dan.dan] instead of voiced prenasal alveolar stop [ᵐd] as in [da.ᵐdan].

(5) Based on the clear word structure CVC.CVC, as sequence of velar nasal-stop (<ng-k>) in <bengkek> ‘short body posture’ of which the right pronunciation is [bəŋ.kək] instead of prenasal velar stop [ᵑg], as in [bə.ᵑkək].

(6) Based on the clear word structure VC.CV as sequence of alveolar nasal-stop (<n-t>) such as <ento> ‘that’ of which the right pronunciation is [ən.to] instead of prenasal alveolar stop [nt], as in [nto].

Fourth, phonemically there is no such word in minimal pair or similar. There fore based upon the data analysis made, Balinese shares no prenasal stop both bilabial, alveolar, and velar.

4. Conclusion

Based on the data analysis above, it can be concluded that Balinese shares a sequence of two nasal-stop segments including both bilabial nasal-stop, alveolar nasal-stop, and velar nasal-stop. This is grounded on the application of clear word structure in words containing sequence of suspected nasal-stops.

References

- Catford, J.C. (1988). *A Practical Introduction to Phonetics*. Oxford: Clarndon Press.
- Chaer, Abdul . (2009). *Fonologi Bahasa Indonesia*. Jakarta: Rineka Cipta.
- Harimurti, Kridalaksana. (2008). *Kamus Linguistik*. Jakarta: Gramedia Pustaka Utama.
- Jenkins, Jennifer. (2009). *The Phonology of English as an International Language*. Oxford: Oxford University Press.
- Ladefoged, Peter. (1978). *Phonemics: A Technique for Reducing Languages to Writing*. Michigan: Ann Arbor/ The University of Michigan Press.
- Ladefoged, Peter. (1982). *A Course In Phonetics. Second Edition*. San Diego, New York, Chicago, Washington D.C., Atlanta, London, Sydney, Toronto: Harcourt Brace Jovanovich, Publishers.
- Ladefoged, Peter. (1987). *Phonetics: A Critical Analysis of Phonetics Theory and A Technic for the Practical Description of Sounds*. Michigan: Ann Arbor/: The University of Michigan Press.
- Ladefoged, Peter. (2007). *Phonetic Data Analysis: An Introduction to Fieldwork and Instrumental Techniques*. Malden, USA, Oxford, Victoria: Blackwell Publishing
- Pastika, I Wayan. (2005). *Fonologi Bahasa Bali: Sebuah Pendekatan Generatif Transformasi*. Denpasar: Pustaka Larasan.
- Satyawati, Made Sri. (2015). Grammatical Analysis of Balinese Adjectives. *International Journal of Linguistics*. <http://dx.doi.org/10.5296/ijl.v7i3.7706>.
- Verhaar, J. W. M. (1979). *Pengantar Linguistik Jilid Pertama*. Yogyakarta: Gadjah Mada University Press.
- Verhaar, J. W. M. (2010). *Asas-asas Linguistik Umum*. Yogyakarta: Gadjah Mada University Press.

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