A STUDY ON MANGGARAINESE CONSONANT PHONEMES

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Abstrak. Penelitian ini adalah tentang inventarisasi bunyi-bunyi konsonan Dialek Manggarai 'S berubah menjadi H' (*Manggarainese Dialect S>H*, atau MDS>H) yang digunakan di wilayah Flores bagian barat, Provinsi Nusa Tenggara Timur. Inventarisasi bunyi konsonan yang telah dikenal meliputi delapan belas (18) bunyi konsonan, tidak termasuk unsure pra-nasal karena selama ini urutan bunyi nasal homorgan plus obstruent, yaitu /mp/, /mb/, /ns/, nt/, ŋk/ dan /ŋg/ dianggap deretan konsonan (*consonant clusters*). Penelitian ini difokuskan pada identifikasi fonem konsonan MDS>H, klasifikasi fonetik fonem konsonan, distribusinya dan deretan fonem konsonan. Dalam penelitian ini akan dianalisis klasifikasi fonem-fonem konsonan MDS>H atas dasar komposisi fonetisnya seperti arah aliran udara dalam proses penghasilan bunyi, posisi pita suara, tempat dan cara artikulasi.

Kata kunci: phoneme classification, place and manner of articulations, Manggarainese Dialects of S shift to H.

Introduction

The term of 'Manggarainese Dialect S>H' was first introduced by Verheijen (1991) to refer to the first language spoken in central and west Manggarai regencies, West Flores, East Nusa Tenggara Province, Indonesia. This term refers to such a mode of speech of its native speakers who prefer using [h] sound to [s] sound. This dialect is a mother tongue used in a broad domain of traditional ceremonies such as folk meetings (*bantang*), wedding ceremonies (*ta'eng*), language of literature (*go'et* =poem), folklore (*tomboturuk*) and even in Christian worship. Studies on Manggarainese phoneme inventory by Burgers (1946) and Mustika (2002) show different results: Burgers found 6 vowels and 26 consonants, while Mustika found 6 vowels and 25 consonants. The two studies differ not only in the phoneme inventory, but more importantly on their description of phonetic composition of the phonemes. These two studies lack information on the segmentation and classification of the consonant phonemes and consonant clusters.

Mustika employs Generative Phonology theory, whose main objective is to seek to establish a single underlying representation for every morpheme, from which the speaker will then derive, or generate, the appropriate phonetic surface form in any given context. Thus Generative Phonology theory focuses on not only technical terms but also in the number and nature of derivational device that allows itself to use.

The present study is a descriptive study on MDS>H consonant system, focusing on both the phonetic and phonemic levels of representation. The study specifically focuses on the identification and classification of the consonant phonemes based on the direction of air stream in initiation process, the state of vocal cords in phonation process, the place and manner of articulation. It also includes the phonetic distribution of the consonant phonemes and the consonant clusters. This study uses phonemic theory that is different from Mustika's study in some important aspects. First, the primary

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interest of phonemic study is to establish the sound system of the language. Morphologicalproblems such as the different representation of phoneme /ŋ/ in the word *long* /lɒŋ/ in isolation and /ŋg/ in more morphologically complex word *longer* /lɒŋgə/ is not the issue in the phonemic theory. In Generative theory, however, this complex derivation is "a matter of necessity, rather than a choice, arising from the overal objective of Generative Phonology" (Giegerich, 1992:301).

Second, phonemic theory adopts commutation test as a reliable test to find out the identity of phonemes. This method is simpler and straightforward in the establishment of the phonemic system of a language. In commutation, the contrastive function of phonemes can be demonstrated by providing a minimal distinction between two words. A distinction is called minimal if it cannot be resolved into further distinctions which are used to differentiate words of a language. In the English words *pill* and *bill*, for example, their initial segments are phonemic because of their minimal contrastive function in an identical context. Speakers of these two speech samples are faced with a series of two-choice selections. To state the message of pill he must decide for the voiceless stop against the voiced one.

The present study deals with the segmental consonant phonemes of MDS>H. The problems of the study are formulated as follows: (1) What are the consonant phonemes of MDS>H? (2) What are the classification of the consonant phonemes of MDS>H? (3) What are the distribution of the consonant phonemes of MDS>H? The present study is expected to contribute to better understanding of the consonant phonemes of MDS>H, and phonemic inventory in general.

Method

This study is designed to be a qualitative research since the purpose of the research is analyzing non-numeric data. Qualitative research is more open and responsive to its subject. It describes events, persons scientifically (Best and Khan, in Blaxter, Hughes and Tight, 1996:60). The description includes consonant phoneme inventory, consonant classification and distribution. The data of the study is consonant sounds of MDS>H. The main data were collected from 3 informants living in PacarHita village who are native speakers of the language. They are physically and mentally well, able to communicate both Indonesian and MDS>H, age between 20-40 years old, and have a minimum high school education. A secondary source is a dictionary of Manggarainese language to provide comparative information and support to the primary data. The informants are recorded when speaking in MDS>H. Notes are made on any necessary information not found in the recording. For practical reason, a list of MDS>H words containing consonant phonemes are prepared, to enable elicitation of consonant sounds not produced in the recording.

Result and Discussion

The analysis of the inventory of Manggarainese consonant phonemes in this study found eighteen segments:/p, b, t, d, k, g, c, z, m, n, ŋ, ʔ, h, s, l, r, w, y/ . This inventory does not include pre-nasal segments because they are interpreted as sequences of consonants or consonant clusters.

Classification of MDS>H Consonant Phonemes
The four basic kinds of phonetic classification of the MDS>H consonant phonemes: air stream direction, state of vocal cords, place and manner of articulation.

Air stream direction

The directions of the air stream in initiation process of production of MDS>H consonants are egressive and ingressive. In an egressive process the air stream moves out of the lungs, while in an ingressive process the air stream moves into the lungs.

The egressive mechanism consists of two types: pulmonic and glottalic. The MDS>H consonants produced with pulmonic egressive mechanism are: [p, b, t, d, k, g, γ,ʔ, c, z, m, n, ŋ, h, s, l, r, w, y]. These consonants are produced by narrowing the pulmonary space contracted by the chest muscles and diaphragm. The MDS>H consonants produced with glottalicegressive mechanism is the ejective stop symbolized as [t’]. This mechanism occurs when the vocal cords are spread apart hence the glottis is open. The larynx is narrowed and raised, so that the air in both the pharynx and mouth is blocked and compressed briefly. There is a strong puff of air when the air is released (Lagefoged, 1973, in Marsono, 1999:24). The apostrophe on the upper right side of the symbol denotes the ejective sound. Both ejective [t’] and plossive [t] are classified as apicodental in MDS>H. The former sound can only occur in word-final position, while the latter in both initial and medial positions. They are not phonemically contrast due to their phonetic similarity and complementary distribution.

The ingressive consonants in MDS>H are implosive [ɓ] and [ɗ]. These consonants are the results of glottalic ingressive air stream. This mechanism occurs by drawing the cords together, but the glottis is not completely closed. The larynx is narrowed and moved downward, thus producing a vacuum above it. When the stop is released there is a very slight movement of inward and the cords vibrate (Gleason, 1961:249).

State of the vocal cords

There are three states of the vocal cords in the production of MDS>H consonant sounds: closed glottis, narrow glottis and open glottis. MDS>H consonant sound produced with closed glottis is glottal plossive [ʔ] which is neither voiced nor voiceless (Jones, 1972:150). MDS>H consonant sounds produced with narrow glottis are [b, ɓ, d, ɗ, g, γ, z, m, n, ŋ, l, r, w, y]. MDS>H consonant sounds produced with open glottis are [p, t, t’, k, c, h, s].

Place of articulation

The chief classes of MDS>H consonants distinguished by their place of articulation are termed as bilabial [b, ɓ, p, m], labiodental [w], apicodental [t, t’], apicoalveolar [d, ɗ, n, l, r], laminoalveolar [c, s, z], mediopalatal [y], dorsovelar [g, γ, k, ŋ] and glottal [ʔ].

Manner of articulation

The chief classes of MDS>H consonants distinguished by their place of articulation are termed as stop [p, b, ɓ, t, t’, d, ɗ, c, k, g, ʔ], fricative [z, γ, s, h], nasal [m, n, ŋ], lateral [l], thrill[r] and semi-vowel [w, y].

Based on the place and manner of articulation, the MDS>H consonants phoneme classification can be summarized in Table 1as follows.

Manner of articulation		Place of articulation							
		Bilabial	Labio-dental	Apico-dental	Apico-alveolar	Lamino-alveolar	Medio-palatal	Dorso-velar	glottal
Stop	-v	P		t		c		k	
	+v	b			d				ʔ
Fricative	-v					s		γ	h
	+v					z		g	
Nasal	+v	m			n			ŋ	
Lateral	+v				L				
Thrill	+v				r				
Semi-vowel	+v		w				y		

Table 1. MDS>H consonants phoneme classification

Distribution of MDS>H consonant phonemes

The distribution of MDS>H consonant phonemes can be presented in Table 2 as follows.

No.	Distribution	Phonemes	Examples
1	Initial, medial and final positions	/p, t, k, m, n, ŋ, s, l, r/	/po/ (owl), /ape/ (what), /roŋop/ (scare)
2	Initial, and medial positions	/b, d, g, z, w/	/ba/ (to bring), /labar/ (to play/
3	Medial position only	/c, y, ʔ/	/pacar/ (name of a village)

Table 2. The distribution of MDS>H consonant phonemes

The above examples are phonemic transcription of the consonants. In facts, consonants /b/ and /d/ for example, has two phonetic realizations: plossive [b] and [d] occur in medial position after a homorganic nasal [m] and implosive [ɓ] and [ɗ] occur in other than the plossive one, as illustrated by phoneme /b/ below.

(1). a. word-initial position : [ɓa] /ba/ 'to bring'
b. word-medial position : [laɓar] /labar/ 'to play'
[lambar] /lambar/ 'four'

MDS>H consonant clusters

There are twelve (12) MDS>H consonant clusters, with maximum combination of two consonants. The consonant clusters found in the analysis consisting of homorganic nasals and obstruents: /mp/, /mb/, ns/, nt/, nd/, /ŋk/, /ŋg/, /bl/, /kl/, /gr/, /kr/ and /sr/. They are interpreted as consonant clusters for two main reasons. First, there are no minimal pairs of words to define their phonemic contrast as single units of phonemes. Nasals simply do not contrast in a position before the obstruents. Second, the realizations of the obstruents in such sequences are phonetically similar and in complementary distribution with those that occur singly in words. They are therefore the allophones of the same phonemes, and their allophonic differences are mostly conditioned by the phonological context in which they occur.

The MDS>H consonant clusters can be divided into two groups: sonorant plus obstruent and obstruent plus sonorant. The group of clusters consisting sonorant plus obstruent (or S-O clusters) are distributed in a distinct way. The sonorant plus voiced obstruent clusters of /mb/, /nd/, and /ŋg/, can be distributed in both initial and medial positions of words. While the sonorant plus voiceless obstruent clusters of /mp/, /ns/, /nt/, and /ŋk/ can only occur in medial position of words.

The group of clusters consisting obstruent plus sonorant (or O-S clusters) /bl/. /kl/, /gl/, /kr/, and /sr/ also has limited distribution, in that they can only be distributed in initial position of words. This pattern is also rare, in comparison to the sonorant plus obstruent clusters. The distribution of the MDS>H consonant clusters can be illustrated below.

a. S-O clusters:

Word-initial position:	/mb/ → /mbe/ 'goat'
	/nd/ → /ndol/ 'to pull'
	/ŋg/ → /ŋgala/ 'to plow'
Word-medial position:	/mb/ → /əmbo/ 'empty rice'
	/nd/ → /landa/ 'elastic, to stretch'
	/ŋg/ → /raŋga/ 'horn'
	/mp/ → /əmpo/ 'grandparent'
	/ns/ → /wansaŋ/ 'bamboo-flooring'
	/nt/ → /lonto/ 'to sit'

b. O-S clusters:

Word-initial position:	/bl/ → /blase/ 'salt-measuring sack'
	/kl → /klantu/ 'obstinate'
	/gl/ → /glaraŋ/ 'of Manggarainese leader'
	/kr/ → /kraeŋ/ → 'of Manggarainese aristocrats
	/sr/ →/srani/ → "Christian'

Conclusion

This preliminary study on MDS>H consonant phonemes and clusters can be summarized as follows. First, the MDS>H consonant phonemes consist of eighteen (18) consonants, whose phonetic realization comprises of twenty-two (22) consonant sounds. The phonemes are /p, b, t, d, k, g, c, z, m, n, ŋ, ʔ, h, s, l, w, y/. Phonetic realizations include: /p,b, ɓ, t, t', d, ɗ, k,g, ɣ, c,z,m,n, ŋ, ʔ, h, s, l, w, y/. These phonemes are identified based on the direction of the air stream in initiation process, the state of the vocal cords in phonation process, and the place and manner of articulation. The distribution of the MDS>H consonant phonemes includes three positions: initial, medial and final positions. While ten phonemes can be distributed equally in the three positions, five phonemes can only be distributed initially and medially, while three only medially. The MDS>H consonant clusters comprise of twelve clusters with the maximum two segment combination. These cluster combinations can be sonorant plus obstruent or obstruent plus sonorant. This study suggests that pre-nasal segments are non-existence in ManggaraineseMDS>H. However, further studies may be needed to examine the morphemic structure.

References

Blaxter, L., Hughes, C and Tight, M. 1996. *How to Research*. Throwbridge: Reedwood Books.

Burgers, P. S. 1946. *Voorlopige Manggaraische Spraak Kunst*. Netherlandsch: Unit de Bijdragen Tot Detaal Land-Envolkenkunde.

Crystal, D. 1987. *The Cambridge Encyclopedia of Language*. Cambridge: CUP.

Dinneen, F.P. 1967. *An Introduction to General Linguistics*. Cambridge; CUP.

Erb, M. 1999. *The Manggaraians: A Guide to Traditional Lifestyles*. Subang: Times Edition.

Francis, W. N. 1958. *The Structure of American English*. New York: Ronald Press.

Fromkin, V. 1983. *An Introduction to Language*. New York: Holt, Rinehart and Winston.

Giegerich, H.J. 1992. *English Phonology: An Introduction*. Cambridge: CUP.

Gleason, H.A. 1961. *An Introduction to Descriptive Linguistics*. New York: Holt, Rinehart and Winston.

Harris, J. 1994. *English Sound Structure*. Cambridge: CUP.

Hemo, D. 1990. Ungkapan Bahasa Manggarai. Ende: Percetakan Arnoldus.

Holmes, J. 1992. *An Introduction to Sociolinguistics*. New York: Longman.

Jacobson, R., Fant, C.G.M., and Halle, M. 1963. *Preliminaries to Speech Analysis: The Distinctive Features*. Cambridge: MIT Press.

Jones, D. 1972. *An Outline of English Phonetics*. Cambridge: CUP.

Konfrida, F. 2001. *A Study of Sikkanese Consonant Phonemes*. S1 Thesis. University of 17 Agustus 1945 Surabaya.

Malmkjaer. K. 1991. *The Linguistics Encyclopedia*. London: Routledge.

Marsono. 1999. *Fonetik*. Yogyakarta: Gadjah Mada University Press.

Mustika, I.W. 2002. *Fonologiu Bahasa Manggarai Dialek Manggarai Tengah: Sebuah Kajian Transformasi Generatif*. Denpasar: University of Udayana.

O'Connor, J.D. 1973. *Phonetics*. London: Penguin Books.

Verheijen, A.J. 1970. *Kamus Manggarai*. Netherlandsch Koninklijk Instituut Voortal Land-Envolkenkunde.

Yule, G. 1985. *The Study of Language: An Introduction*. Cambridge: CUP.