

A SYNCHRONIC ANALYSIS OF TAGALOG PHONEMES

by

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ABSTRACT

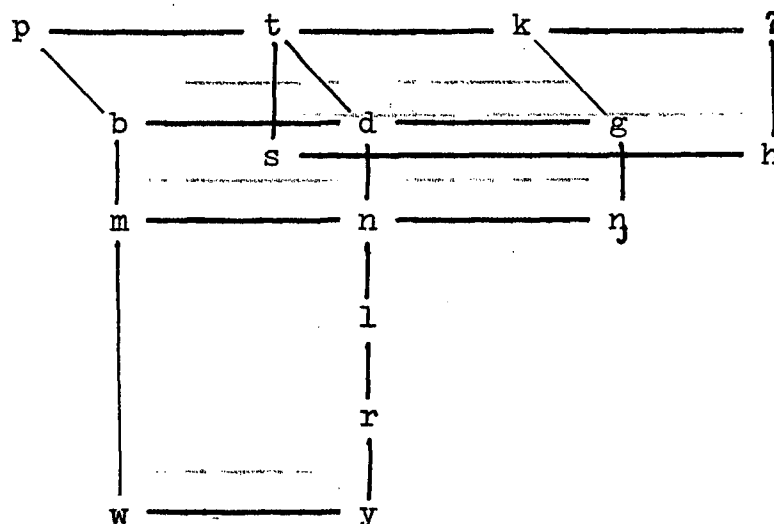
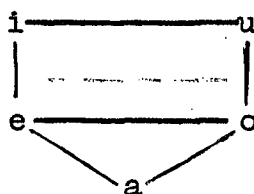
The title "A Synchronic Analysis of Tagalog Phonemes" as defined in the introduction, is the object of this study. It attempts to give a purely synchronic description of the phonemic system of the Tagalog language as spoken by the present investigator who has made herself the informant for this investigation. The purpose is to shape this material into the form of a useful introduction and a sound orientation for students of general linguistics, or linguists interested in the Philippine national language.

The phonemes of Tagalog are analyzed in terms of the formula:*

$$U = \frac{C}{V \atop D}$$

Unit refers to the phoneme. There are 21 segmental phonemes in Tagalog. They are classified and their patterns are established on the basis of the distinctive features by which they stand in contrast with each other. Among consonants there are two main dimensions of phonemic contrast: point of articulation and manner of articulation. A further contrast of voice versus breath exists in the stop phonemes only. The main distinctive features of Tagalog vowels involve two-dimensional contrasts in height and advancement of the tongue. There are other, subsidiary, features like lip-rounding, tenseness and laxness of the tongue, length, etc. Such contrasts are here represented by schematic diagrams:

*Pike, Unit (U) = Contrast (C), Variation (V) and Distribution (D). This information in capsule was explained by Prof. R. Roe of the SIL in a seminar at the University of the Philippines in 1964.

(i) Tagalog Consonant Pattern(ii) Tagalog Vowel Pattern

These phonemes have allophones which are either in complementary distribution or in free variation. The variations of phonemes within given morphemes are here considered to be morphophonemic alternations.

The basic syllable structures of Tagalog are CV and CVC, e.g., tubig /tubig/ 'water'. Tagalog words represented orthographically with a final vowel may end with either /?/ or /h/ which is not reflected in the writing system. The two are in contrastive distribution. Thus, bata /bata?/ 'child' vs. bata /batah/ 'bathrobe'.

Consonant clusters occur in all positions. Initial clusters

may be summarized in the following formula:

C = Consonant
 C_1C_2 = the first and second C
 C_2 = s l r w y

C_1 = t if C_2 = s
 C_1 = p b k g if C_2 = l
 C_1 = p b t d k g if C_2 = r
 C_1 = any C except w y if C_2 = w or y

These clusters may be illustrated in the following examples:

tsa /tsah/ 'tea', klase /klāseh/ 'class', diyān /dyan/ 'there',
 kwento /kwěntoh/ 'story', etc.

Suprasegmentally, Tagalog has three kinds of stress: primary /ˈ/, secondary /ˌ/ and weak (unmarked); three levels of pitch: /1/, /2/ and /3/, reading from low to high; and two terminal junctures: "single bar" /|/ and "rising" juncture /↑/.

Stress plays an important role in Tagalog and it is a distinctive phenomenon which conveys meaning. Stress is correlated with length. The following pairs of words are distinguished only by stress or length: baga /bā:ga?/ 'lungs' and baga /bā:gah/ 'ember' vs. baga /baga:??/ 'abscess' and baga /baga:h/ 'interrogative marker'.

The scope of this study does not include a detailed presentation and analysis of Tagalog suprasegmental features. Many interesting problems concerning the suprasegmental phenomena remain unsolved. The solution to these problems is left for later study.

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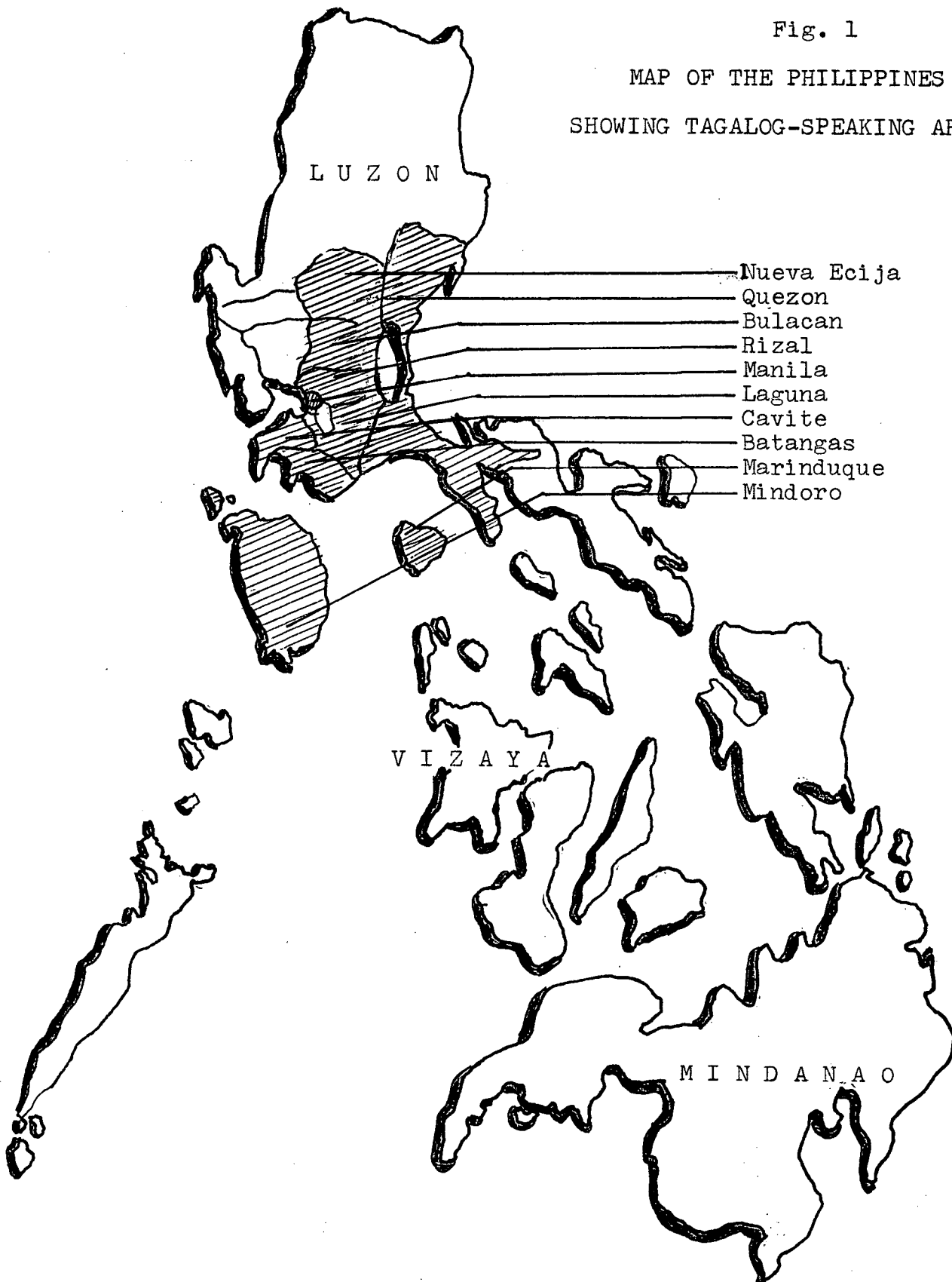
List of Symbols and Abbreviations

- [] Brackets; enclose phonetic transcription ([p])
- / / Slant lines or bars; enclose phonemic transcription (/b/)
- // // Double slant lines; enclose morphophonemic transcription (// e ~ i //
- ~ Squiggle; means "alternates (varies) with" or "in alternation with" ([ɪ] ~ [I])
- ~ Til or tilde; over a vowel, indicates nasalization of the vowel ([õ])
- ˘ In phonetic transcription, used under i and u to indicate glide values (a_i˘ = /ay/)
- ˆ Raised caret; indicates a sound with slightly higher articulation ([o^ˆ])
- ɟ Cedilla; indicates palatalized sound ([tɟ])
- Hyphen; indicates the position of a phoneme or affix in a word (r-for initial r; -r- for intervocalic r; -r for final r, or -in for suffix in; -in- for infix in)
- ˈ Acute accent; in phonemic transcription, over a vowel of a word indicates primary stress (/mahˈaɪ/ 'dear')
- ˌ Grave accent; in phonemic transcription, over a vowel of a word indicates secondary stress (/ləˌləkəd/ 'will walk')
- ˈ Superior vertical tick; in phonetic transcription, before the stressed syllable, indicates primary stress (/ˈsa:mah/ 'to go')

- , Inferior vertical tick; before the stressed syllable,
indicates secondary stress ([,sa:'sa:mah] 'will go')
- : Colon: indicates vowel length (['ba:ta?] 'child')
- | Single bar; indicates terminal juncture.
- ↑ Rising juncture; indicates terminal juncture.
- > means "becomes"
- < means "comes from"
- C for consonant
- CC for consonant clusters
- CC- for initial clusters
- CC for final clusters
- CC- for medial clusters
- V for vowel
- S for semivowel
- CVC Indicates a syllabic structure consonant-vowel-
consonant
- INL Institute of National Language
- SIL Summer Institute of Linguistics
- PCLS Philippine Center for Language Study

Fig. 1

MAP OF THE PHILIPPINES
SHOWING TAGALOG-SPEAKING AREAS



MAJOR CULTURAL-LINGUISTIC GROUPS

I LUZON

- ILOKO
- APAYAO
- TINGGIAN
- KALINGA
- IDANAG
- BONTOK
- IFUGAO
- KANKANAI
- IBALOI
- ILONGOT
- PANGASINAN
- SAMBAL
- PAMPANGAN
- TAGALOG
- BIKOL

II MINDORO

- TAGALOG
- IRAYA
- ALANGAN
- NAUHAN
- BATANGAN
- TAGAYDAN
- BANGON
- PULA
- BURID
- HANUNOO
- RATAGNON
- HILIGAYNON

III BISAYAN ISLANDS

- SAMAR LEYTE
- SUGBUHANON (CEBUANO)
- HILIGAYNON
- AKLAN

IV PALAWAN (CUYO & CAGAYANCILLO IS.)

- KUYONON
- SILANGANEN-TAGBANUWA
- TANGDULANEN-TAGBANUWA
- BATAK
- TAGBANUWA
- PALAWAN
- KE-NEY

V MINDANAO & SULU

- MORO [TAW BUC, SAMAL, BAJAU]
- MORO [TAW BUC, SAMAL, BAJAU]
- SUGBUHANON
- SUBANUN
- MARANAO (MORO)
- MAGINDANAO (MORO)
- TIRURAY
- DULANGAN (COTOBATO-MANOBO)
- TAGABILI
- BILAAN
- KULAMAN (MANOBO-SARANGANI)

- TAGAKAULO
- BAGOBO
- ATA
- MANGGUANGAN
- MANOBO [AGUSAN DIBABAON & OTHERS]
- BUKIDNON
- MANDAYA

MINOR CULTURAL-LINGUISTIC GROUPS

- 1 IVATAN
- 2 NECRITO
- 3 DUMAGAT
- 4 SADDANG
- 5 ISINAY
- 6 BARIDI
- 7 BANTON
- 8 HANTIK
- 9 AGUTAYNON

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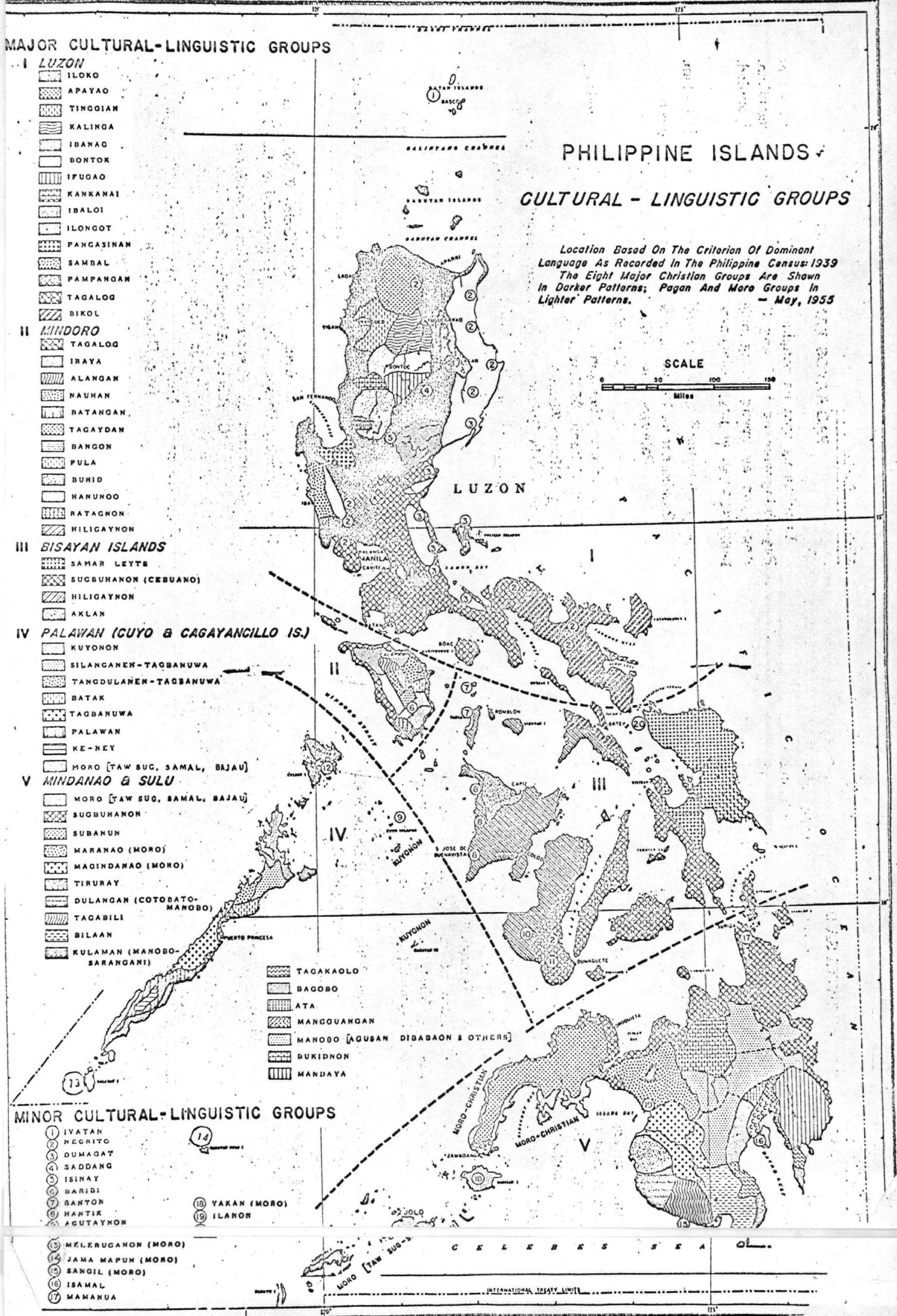
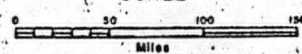
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- 15 MELERUGANON (MORO)
- 16 JAMA MAPUN (MORO)
- 17 SANDIL (MORO)
- 18 ISAMAL
- 19 MAMAKUA

PHILIPPINE ISLANDS CULTURAL - LINGUISTIC GROUPS

Location Based On The Criterion Of Dominant Language As Recorded In The Philippine Census: 1939
The Eight Major Christian Groups Are Shown In Darker Patterns; Pagan And Moro Groups In Lighter Patterns.
- May, 1953

SCALE



The Tagalog Language

How many Filipinos speak Tagalog? The 1960 census shows that the Tagalog language is spoken by about 45% of more than 27,000,000 population of the Republic of the Philippines, a country with a total land area of 115,000 square miles, composed of more than 7,000 islands off the coast of South East Asia in the Western Pacific. It is the language of the people from the central part of Luzon, the largest and the most thickly populated island in the Archipelago. This includes the city of Manila and provinces of Bataan, Batangas, Bulacan, Cavite, Laguna, Nueva Ecija, Marinduque, Mindoro and Rizal. In addition to Tagalog, other major languages are spoken, namely: Cebuano, Ilocano, Hiligaynon, Bikol, Pampango, Waray and Pangasinan, in addition to some 80 to 150 minor languages and dialects. Although all these languages belong to the Malayo-Polynesian family, they are not mutually intelligible.

Tagalog is spoken as a first or native language by 21% and as a second language by 23.3% of the population from other parts of the Philippine Islands, who also speak their own native language. The present year is 1967-- seven years after the latest census. The total population has increased to thirty-three million. By now, one could optimistically guess that more than 50% of the Filipinos can speak the language. The spread of education, the mobility of the population and the development of a number of mass media of communication-- radio, television, movies, local daily newspapers, comics, etc.-- have all contributed to the enrichment and propagation of the Tagalog language

all over the country.

Tagalog was made the basis of the national language by a constitutional mandate. The Constitution of the Commonwealth provided for the "adoption of a common national language based on one of the existing native languages." The need for linguistic study to determine the appropriate basis of a national language resulted in the creation of the Institute of National Language in 1936 by Commonwealth Act 184. Tagalog was officially chosen by the Institute on November 9, 1937. On December 30 of the same year, President Manuel L. Quezon proclaimed Tagalog as the basis of the national language. The teaching of the language in all public and private schools became mandatory. On July 4, 1946, it became one of the three official languages of the Philippines, the other two being Spanish and English.

Modern Tagalog includes elements from other Philippine languages and has adopted loanwords from Malay, Chinese, Spanish and English. Lexical items from other Philippine languages like Ilokano saluyot 'a kind of vegetable', pakbet 'a kind of vegetable dish', manong 'appellation given to older brother', manang 'appellation given to older sister', and Visayan bana 'husband', kalo 'hat, cap', inday 'little girl', dodong 'little boy', etc., have become a part of the Tagalog vocabulary. Tagalog words like utang 'debt', abo 'ashes', walo 'eight', anay 'termite', anting-anting 'talisman' etc., are identical with other Philippine languages in form and meaning. More than 3,000 Malay words are cognate with Tagalog. The following examples are identical in the two languages in form and meaning: mata 'eye',

dulang 'low table', payong 'umbrella', timbang 'weight', kambing 'goat', buaya 'crocodile', langit 'sky'. Around 1,500 words are of Chinese origin like tsa 'tea', pansit 'a kind of rice noodle cooked with shrimps, meat-balls', etc., madyong 'mahjong', susi 'key', bakya 'wooden shoes', lolo 'grandfather', etc. A word-list* shows 5,000 words borrowed from Spanish, such as maestro 'teacher', presidente 'president', silya 'chair', mesa 'table', barbekyu 'barbecue', gitara 'guitar', sumbrero 'hat', etc.

English has contributed approximately 1,500 words. Among the most common are iskul 'school', titser 'teacher', miting 'meeting', boksing 'boxing', tenis 'tennis', isport 'sport', etc. A few Japanese words like apa 'thin wafer', kimono 'a kind of blouse', geisha 'Japanese dancing girl', dyudo 'judo', samuray 'samurai', soya 'a kind of soy or bean', and sukiyaki 'a kind of Japanese dish', entered Tagalog directly.

A number of lexical items from different languages entered Tagalog through Spanish and English-- altar 'altar', sermon 'sermon', data 'data', album 'album' from Latin; diploma 'diploma', helikopter 'helicopter' telepono 'telephone' from Greek; amen 'amen', rabi 'rabbi', satanas 'satan', Sabado 'Saturday', from Hebrew; makaroni 'macaroni', ispageti 'spaghetti', opera 'opera', piyano 'piano', groto 'grotto' from Italian; bodabil 'vaudeville', kabaret 'cabaret', tsalet 'chalet', poltri 'poultry', prinsipe 'prince', prinsesa 'princess' from French; hamburger 'hamburger', semester 'semester', seminar 'seminar' from German; kukis 'cookies',

*Spanish Loan Words in Tagalog. Publication of the Institute of National Language, 1960.

bos 'boss', yate 'yacht', komando 'commando', from Dutch; kabayo 'horse', piso 'peso' from Mexican; mokasin 'moccasin', wigwam 'wigwam', kaukus 'caucus' from some Indian languages; diyas 'jazz' bandyo 'banjo' from some African languages; isputnik 'sputnik', sobyet 'soviet', kosmonot 'cosmonaut', boodka 'vodka' from Russia. Some of the words from other languages that entered Tagalog through Malay are bathala 'god', hukom 'judge', tumbaga 'copper' from Sanskrit; padyama or pidyama 'pyjamas', shampu 'shampoo', sari 'sari', guro 'teacher', bandana 'bandana' from Hindustani; alkohol 'alcohol', algebra 'algebra', aprikot 'apricot', kendi 'candy', magasin 'magazine', sherbet 'sherbet' from Arabic; salawal 'trousers', kalabasa 'squash', basar 'bazaar' from Persia; and sala 'error, sin', saksi 'witness' from the Indonesian language.

Tagalog is still growing. More and more new lexical items from different languages of the world have come into Tagalog through the mass media. They have become a naturalized part of the Tagalog-based national language.

It is interesting to note that this Tagalog-based national language was given several names. In 1940 it was officially known as the "National Language", then it was changed to "Filipino National Language". In 1955 a Department of Education circular was issued stating that the term "Filipino Language" shall be used in all correspondences, as well as in all circulars, memorandums, bulletins and forms, to refer to this subject in the curricula. Later the word language was dropped and it became "Filipino". In 1959, the Department of Education decided that the

national language should be known officially as "Pilipino" in the schools. This change attracted public attention. Why Tagalog? Why Pilipino?-- goes the question in the popular press. This has been a controversial issue.

A certain congressman representing the Visayan Islands filed a case in court against the Director of the Institute of National Language, the Director of the Bureau of Public Schools, the Secretary of Education, the Secretary of Foreign Affairs, and the President of the University of the Philippines, for unconstitutional acts; specifically, the charge was that the respondents have been teaching and propagating Tagalog as the national language when it is only the basis of the national language. The trial court decided the case in favor of the respondents. The complainant appealed to the Supreme Court where the case is now pending final decision.

Pilipino is the term more used in Philippine schools as the national language. Tagalog is still used in the United States, referring to the Philippine national language, especially in the schools that offer it as a regular course: University of California, Los Angeles, Cornell University, University of Hawaii, University of Michigan and Yale University. Filipino students of linguistics prefer Tagalog to Tagalog-based Pilipino. Is there really a difference?

Beginning Tagalog: A Course for Speakers of English* gives

*J. Donald Bowen (ed.), Beginning Tagalog: A Course for Speakers of English (Los Angeles: University of California Press, 1965) p. v.

the following distinction:

For student purposes, the difference between Filipino and Tagalog might best be described in terms of style and formality, in somewhat the way we can distinguish between the "For whom is this?" type of English and the "Who is this for?" type. Tagalog, the Philippine "Who is this for?" type, has been purposely chosen rather than Filipino, since it is the purpose of this text to prepare the student for an informal, inconspicuous, and native-like, rather than for a formal, noticeable, and school-like, control of the language.

Acknowledgments

This investigator is greatly indebted to Dr. Robert J. Gregg of the Division of Linguistics in the Department of Classics, University of British Columbia, for guidance and helpful suggestions and to Professor Ruth McConnell, her English professor, for she had the benefit of conversation with her on matters pertinent to the study, and offered her the collection of linguistics books available in her office.

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Written or verbal communication which this investigator has received from the following persons distinguished in their own field of specialization has spurred her on to linguistic studies and research -- Dr. Kenneth L. Pike and Dr. Richard Pittman of the Summer Institute of Linguistics; Dr. J. Donald Bowen, Dr. Clifford Prator, Dr. Robert Stockwell and Dr. Tommy R. Anderson, all of the University of California, Los Angeles; Dr. Robert Lado of the Department of Linguistics of Georgetown University, Dr. Howard McKaughn of the Department of Linguistics of the University of Hawaii, and Dr. Jose Villa Panganiban of the Institute of National Language-- to everyone of them, her grateful thanks.

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Dedicated

to

THE INSTITUTE OF NATIONAL LANGUAGE

1. INTRODUCTION. There is now a growing interest in Philippine linguistics. Tagalog, the basis of the Philippine national language, deserves some serious study. There is a crying need for linguistically-oriented materials on the Philippine languages. As there exists at present no adequate description of the sound system of Tagalog, it is urgent that something be made available.

1.1 Statement of the Problem. This thesis entitled "A Synchronic Analysis of Tagalog Phonemes" presents a new approach to traditional problems in Tagalog phonology. It attempts to solve them by applying the latest findings of modern descriptive linguistics. This study represents a rather radical departure from the traditional phonological analysis recommended by the Institute of National Language and being taught in Philippine schools.

1.2 Scope and Organization of the Materials. The nature of the study limits the scope of the discussion. It is purely a descriptive analysis of Tagalog phonemes-- segmentals and supra-segmentals. The text starts with the sounds of speech: phonetics, goes on to the significant sounds of speech: phonemics, and then the relation between the two is shown. Each significant unit is analyzed in terms of contrast, variation and distribution. Phonotactics, morphophonemics and alternative formulations are presented as separate topics. The last part is a description of the supra-segmental features: stress, length, juncture and pitch.

Terms used in the study are defined in the introductory pages. A table of symbols and abbreviations, a list of figures or

illustrations, and a discussion of the Tagalog language are given in the preliminary pages. Numerous cross references are also included. The concluding chapter gives a summary of the investigator's findings and conclusions. The bibliography and the index follow the body of the text.

1.3 Previous Studies Made on the Subject. Not much has been written on Tagalog phonology. There exist partial analyses in school textbooks of the sound system of the language, but these lack systematic linguistic orientation. At present there are only fragmentary analyses of Tagalog phonology extracted from informants in the "classic" fashion of descriptive linguistics, such as those of Bloomfield, Stockwell, Pittman and Hemphill. Articles on Tagalog phonemes written by Cayari and Paterno, both Philippine scholars, have been sources of information of later works.

For the purpose of this study, this investigator has consulted the published and unpublished researches on Tagalog undertaken by the team of writers of the UCLA-Philippine project, who with Galileo, feel that if they have seen further than others, it is because they have stood on the shoulders of giants.¹ The individual phonemic analysis on Philippine minor languages and dialects undertaken by the members of the Summer Institute of Linguistics and the publications of the Institute of National Language have been valuable sources of ideas and information.

¹Speech given on Dec. 2, 1962 at the National Teachers College to the Kapisanan ng mga Propesor sa Pilipino sa Dalubhasaan at Pamantasan (Association of Professors in Pilipino in Colleges and Universities) by Donald Bowen, Co-Director of the Philippine Center for Language Study.

All the earlier works mentioned above are not exhaustive but helpful. This thesis is modestly comprehensive. Such study is indispensable as a basis for further analysis of the higher levels (morphology and syntax).

1.4 Sources of Data and Methods of Approach. In this study the Tagalog which is analyzed is the personal dialect of a single individual, speaking in a single style, and at a single time-- the idiolect of the investigator. She has used herself as the informant as is the usual practice of linguists describing their own native speech for the benefit of other native speakers of the same language. What is presented, then, is a specimen of the speech of a native speaker from a Tagalog-speaking area.²

There is no specific corpus in this study. For pronunciation she has taken her own speech. Since the observations on Tagalog phonology made by scholars are all familiar to this investigator, her speech has been modified as a basis for transcription in particulars that she knows to be regional or atypical.

The method of analysis employed here is synchronic in principle and appropriate to the structure of the sounds of the language under investigation. The approach is resolutely eclectic. Approaches and techniques of linguists on both sides of the Atlantic are incorporated. Although there is no exclusive adherence to any one "school" of linguistics, the influence of American linguists such as Bloomfield, Hall, Hill, Hockett,

²This investigator-informant was born and reared in Lubang Island in the province of Mindoro. She has been residing in Manila since 1952 and working as a national language researcher at the Institute of National Language, Department of Education, Philippines.

Gleason, Pike etc., is apparent on every page.¹

This study revolves around the nuclear formula:³

$$U = \begin{matrix} C \\ V \\ D \end{matrix}$$

According to Pike, anything in this world can be analyzed in terms of the above formula. The table, for instance, is a unit; it contrasts with a chair; it varies with other tables in size, shape or color; its distribution is the purpose for which the table is made. In the world of language, in the lower level of linguistic analysis, the meaningful unit of sound is the phoneme. Phonemes have contrast, variation and distribution as described in this study.

³Pike, Unit (U) equals Contrast (C), Variation (V) and Distribution (D). This information in capsule was explained by Prof. Richard Roe of the Summer Institute of Linguistics in a seminar at the University of the Philippines in 1964.

1.5 Definition of Terms Used:

Synchronic here refers to the description of the phonemes and allophones of a given language (Tagalog) as they occur at one point of time or stage of linguistic development, without reference to historical changes.

Analysis refers to the study of words and forms which have been gathered and collated, for the purpose of isolating and listing the various phonemes with all their allophones.

Unit: This is a slice of sound which to the exclusion of everything that precedes and follows it in the spoken chain is the signifier of a certain concept (Saussure). In this study, unit refers to the phoneme.

Contrast is a differentiation between two linguistic elements which when substituted for each other may produce a change in function or meaning, in the way that Tagalog /k/ and /g/ distinguish kulay 'color' and gulay 'vegetable'.

Variation, also called alternation is a correspondence existing between two definite sounds or groups of sounds, and shifting regularly between two series of coexisting forms (Saussure). Free variation is variation (alternation) which does not distinguish forms.

Distribution: descriptively, this means the occurrence of phonemes or allophones in terms of environment or position in an utterance.

2. The Sounds of Speech: Phonetics

All linguists emphasize the fact that speech is the primary form of language and underlies all writing. The science of linguistics that deals with the materials of speech itself is known as phonetics. Speech can be studied in phonetics from three points of view. An analyst can study the production of speech sounds by the various organs of the vocal tract. Or he can describe the perception of sound waves by the hearer's ears. Finally he can study the sound waves generated by speaking and their transmission through the air. These are referred to as articulatory, auditory and acoustic phonetics, respectively.

The present study is concerned only with articulatory phonetics since it describes the principal parts of the body responsible for the production and differentiation of speech sounds and the processes involved.

3. Contoids and Vocoids

In classifying the speech sounds of Tagalog, two main types are to be distinguished:

1. Contoid, the type of sound which involves a complete stop or audible friction. In its articulation the stream of air is obstructed at one or more points, either by stopping the passage of air completely for a fraction of a second or by forcing it into narrow channels producing audible friction.

2. Vocoid, the type of sound which involves only resonance. The speech organs are used to form resonance chambers through

which the air current passes relatively unimpeded and without producing any audible friction.

There are intermediary stages between these two types of sound. Normally, the vocoids serve as centers of syllables or syllabic nuclei. Sometimes they occur, not as syllable-centers but adjacent to other vocoids which have this function; in this case, they are termed semivocoids. A combination of a full vocoid (i.e., one acting as a syllabic nucleus) plus a semivocoid is known as a diphthong.

The special terms contoid and vocoid are newly-invented words used by Pike⁴ and Hockett⁵ for what are normally called "consonant sounds" and "vowel sounds," respectively, in general phonetics. These new terms are used when referring to sounds on the strictly phonetic level in order to keep "consonants" and "vowels" for use exclusively as phonemic terms with reference to particular languages.

Fig. 4: A Chart of Tagalog Contoids

	Labial	Dental Alveolar	Velar	Glottal
Stop	[p]	[t]	[k]	[ʔ]
	[b]	[d]	[g]	
Nasal	[m]	[n]	[ŋ]	
Fricative		[s]		[h]

⁴ Kenneth L. Pike, Phonemics: A Technique for Reducing Languages To Writing (Ann Arbor: University of Michigan Press, 1947), pp. 21, 78.

⁵ Charles F. Hockett, A Course in Modern Linguistics (New York: Macmillan Company, 1958), pp. 69, 77.

Lateral	[l]
Flap	[r]
Semivowel	[w] [y]

Fig. 5: A Chart of Tagalog Vocoids

	Front Unrounded	Center Unrounded	Back Rounded
High	[i]		[u]
	[I]		[U]
Mid	[e]		[o]
Low		[a]	

Fig. 6: A Chart of Tagalog Diphthongs

	Front	Center	Back
High	[iw]		[uy]
Mid	[ey]		[oy]
Low		[ay] [aw]	

4. Relations Between Phonetics and Phonemics

In the early 1920's, leading linguistic scholars like Sapir, Bloomfield, Troubetzkoy, and others came to realize that, in the phonology of a language, it is important to identify and classify the functional units of sounds, phonemes, and their relation to one another. This approach recognizes the value of phonetics as a technique for analyzing the raw material of speech-sound. But, because the total number of possible speech-sounds in any one language is infinite, it is necessary to identify the phonemes uttered by the speakers to establish meaningful contrasts

within the system itself.

Thus, in describing the phonological aspects of language, the linguistic analyst takes into account the distinction between the raw materials of speech and its organization into functional units. In the study of articulatory phonetics, he is primarily concerned with the identification of the so-called "organs of speech" which are used in producing the sounds. He describes the actual speech-events in terms of their articulation. In phonemics, his main task is to go beyond the levels of raw materials and to identify the points of contrast and the relations between them. In the words of Pike, "phonetics gathers the raw material and phonemics cooks it."⁶ The definition of a phoneme as a functional unit of speech-sounds emphasizes the relations between phonetics and phonemics.

In modern linguistics, distinction is thus made between the "etic" and "emic"⁷ levels in analyzing the phonological structure. The suffixes -etic and -emic which are added to Latin root phon- 'sound', refer to nonfunctional and functional units, respectively. This pair of formative elements is fundamental and widely used to show the contrast between phonetic and phonemic levels of linguistic analysis.

Generally in phonological transcriptions, a phonetic symbol is indicated by square brackets [], and a phonemic symbol by slant lines / /. In phonetic transcription, analysts

⁶Pike, op. cit., p. 57.

⁷Pike, Language in Relation to a Unified Theory of the Structure of Human Behavior (California: Summer Institute of Linguistics, 1954-55-60), Chap. 3, et passim.

use each symbol in a one-to-one correspondence with a specific speech-sound, in a framework of reference of the possible sounds that could be uttered by speakers.⁴ In phonemic transcription, on the other hand, they keep a one-to-one correspondence between the symbol and the phoneme, but in the much more restricted framework of the maximal number of phonemes in the speech of one individual.⁵ Here only the relatively small number of functional units are represented.

For the purpose of accuracy in phonological detail, phonologists have developed systems of transcriptions: narrow transcriptions which indicate precisely every phonetic detail of speech sounds, and broad transcriptions which make use of fewer distinct phonemic symbols.⁶ A phonemically-based spelling adapted to the practical needs of a people or ethnic group is called ethnophonemic transcription (Hall).⁷

5. The Concept of Phoneme

Most linguists today base their phonological analyses and derive their principles of phonology from the concept of the phoneme.⁸ The formative element -eme⁸ means 'functional unit'.⁹ A phoneme is not itself a sound, but a unit which may include one or more sounds.¹⁰

Linguists have proposed various definitions of a phoneme depending upon the point of view taken.¹¹ Some define a phoneme

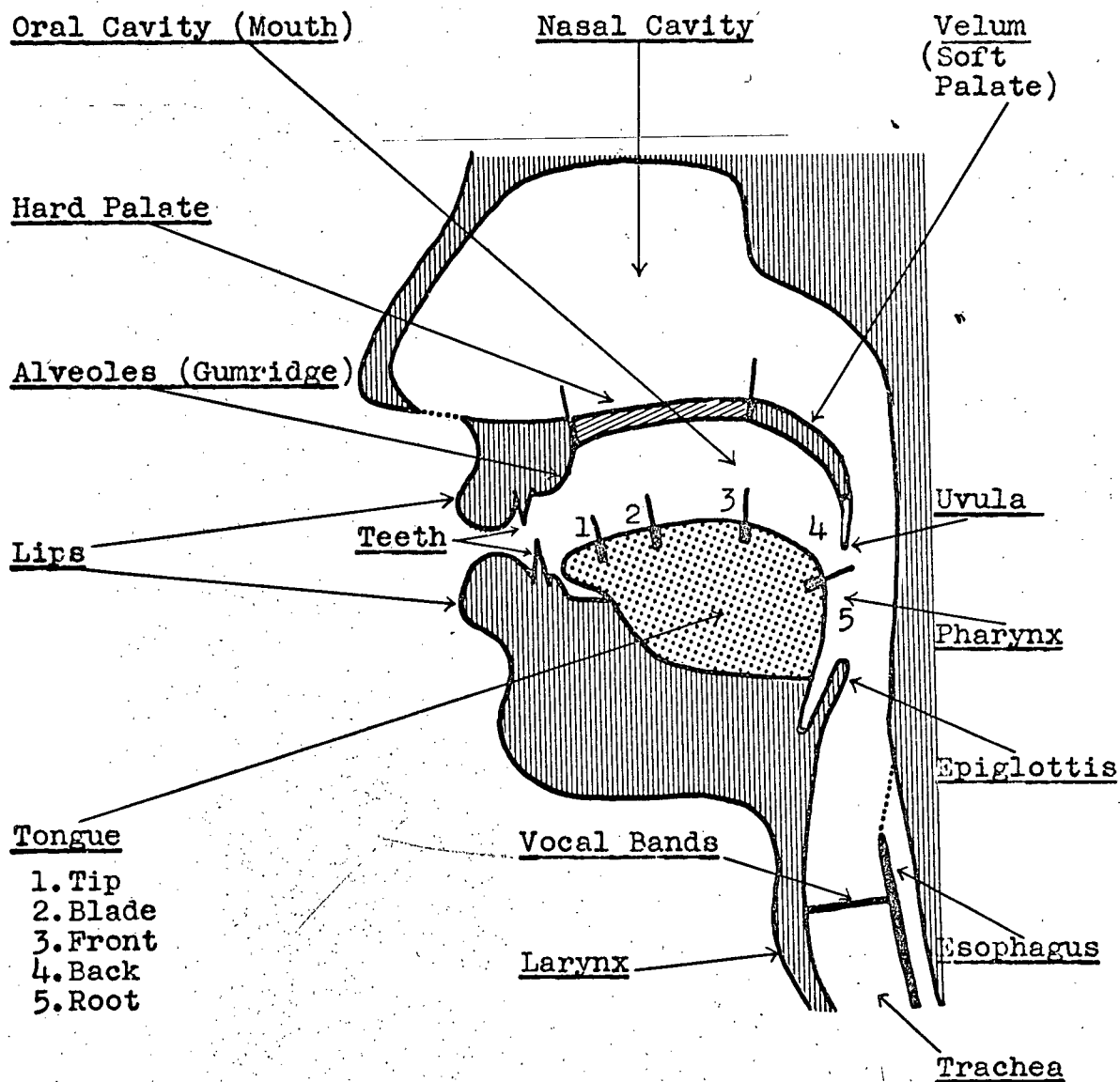
⁸Robert A. Hall Jr., Introductory Linguistics (New York: Chilton Company, 1964), p. 24.

as a significant feature of sound, a recurrent distinct unit, or a point of contrast. From the point of view of purely physical phenomena, the single event of speech is a "reality" and it is never repeated the same twice in succession. The discussion of the phoneme is based on the assumption that it is possible to divide any stream of speech into discrete segments (phonemes). The segmentation of a speech continuum is an "abstraction" on the lower level of linguistic analysis.

Fig. 7: A Table of Phonemic Symbols

CONSONANTS	Bilabial	Dental Alveolar	Velar	Glottal
Stop.....	p b	t d	k g	ʔ
Fricative..		s		h
Nasal.....	m	n	ŋ	
Lateral....		l		
Flap.....		r		
Semivowel..	w	y		
VOWELS	Front Unrounded	Center Unrounded		Back Rounded
High.....	i			u
Mid.....	e			o
Low.....		a		

CROSS-SECTION OF THE HEAD SHOWING THE ORGANS MOST DIRECTLY INVOLVED IN THE PRODUCTION OF SPEECH-SOUNDS.



6. Inventory of Tagalog Phonemes

All standard dialects of Tagalog seem to agree in distinguishing the same number of phonemes. The classes of Tagalog phonemes are two: segmental phonemes consisting of fourteen consonants / p b t d k g ʔ m n ŋ s h l r /, two semivowels / w y /, and five vowels / a e i o u /, and suprasegmental features of a contrastive kind, consisting of three stresses / ˙ ˘ ˜ /, three levels of pitch / 1 2 3 / and two junctures / | ↑ /.

The inventory list is illustrated in the following table of phonemic symbols (Fig 7). Here the symbols are arranged in rows according to the type or manner of articulation and in columns according to the articulators and point or position of articulation. The articulators are the different movable speech organs that produce the various sounds by their motion in relation to fixed points of articulation. The principal articulators are the tongue, the lower lip, the velum and the small appendage at the end of the velum, called the uvula. The main points of articulation are the upper lip, the lower teeth to some extent, the gum behind the upper teeth, called the alveolar ridge, and the velum. The articulators, at certain points and with certain manners of articulation, produce the consonant phonemes.

The vowel phonemes are arranged in rows according to tongue-advancement from the front through the center to the back of the mouth, lip-rounding from unrounded to rounded, and

in columns according to tongue-height from high, through mid to low.⁴

7. Segmental Phonemes

It was emphasized earlier that speech is primarily a continuum of articulations produced by the vocal organs, and that division of this continuum into successive segments is an artificial process, an abstraction.⁵ Linguists find such division necessary and practical in the study and analysis of language.⁶ The discussion was on the assumption that speech signal is a linear sequence of discrete segments, called segmental phonemes.⁷ Consonants and vowels were referred to as segmental or linear phonemes.⁸ Each was described and exemplified in typical Tagalog words in the following sections.

7.1 Consonants

Consonants involve the obstruction or restriction of the current of air at one or more points along its passage outward from the lungs.⁹ Here they were conveniently divided into six groups according to the manner of articulation.¹⁰

7.1.1 Stops

In the production of stops, the air stream may be completely stopped at some point by closing the passage through which it flows.¹¹ The characteristic feature of stops is a complete checking of the outgoing stream of breath.¹² Actually the complete articulation of a stop, such as the central sound /k/ in Tagalog lakad 'walk', has three phases:¹³ (1) a preliminary closing, or

⁹W. Nelson Francis, The Structure of American English (New York: The Ronald Press Company, 1958), pp. 72-73.

on-glide during which the articulator is brought into close contact with the point of articulation; (2) an intermediate closure, or period of silence, or in the case of voiced stops, of subdued vibration of the vocal bands during which the close contact is maintained; and (3) final release, or off-glide during which the articulator is separated from the point of articulation.

If a stop occurs finally in an utterance, it is unreleased, that is, the speech organs are simply retained in the position of closure. An unreleased stop is marked with a diacritic following the appropriate sound symbol, thus [-]. All stops, voiced and voiceless, are unreleased in utterance-final and syllable-final position within the utterance when the following syllable starts with another stop or with a nasal, as in pakpak 'wing' and paknit 'detached'. Released stops occur elsewhere.

/p/ is a voiceless bilabial stop produced by closing the lips tightly.

/b/ is a voiced bilabial stop formed like /p/ but with the addition of voice when the air stream is stopped at the point of articulation.

/t/ is a voiceless dental stop made by holding the tip of the tongue firmly against the back of the upper front teeth.

/d/ is a voiced dental stop articulated like /t/ but with the vibration of the vocal bands. Unlike English, / t, d / are dentals rather than alveolar.

/k/ is a voiceless velar stop produced by pushing the back of the tongue firmly against the velum. Under the influence of the neighboring sounds, the exact point of contact may vary considerably but these variations are not contrastive in Tagalog.

/g/ is a voiced velar stop formed like /k/ but with the addition of voice.

/ʔ/ is a voiceless glottal stop produced by tightly closing the glottis, thus checking the air current coming from the lungs. This sound is significantly contrastive in Tagalog in the same way as any other consonant.

7.1.2 Nasals

The characteristic feature in producing nasals is that the oral cavity is completely stopped at a certain point of articulation, but since the velum is lowered, the air passes freely through the nasal cavity and out through the nose. Sounds so formed in Tagalog are the voiced nasals / m n ŋ /. All three are unreleased in final position.

/m/ is a voiced bilabial nasal produced by tightly closing the lips while the velum is lowered and the vocal bands are vibrating.

/n/ is a voiced dental nasal articulated by bringing the tongue tip firmly against the back of the upper front teeth with the velum lowered.

/ŋ/ is a voiced velar nasal formed with the back of the tongue against the velum, which is lowered, allowing a passage of air from the pharynx to the nasal cavity.

7.1.3 Fricatives

In the articulation of fricatives the passage of the stream of breath is constricted at some point of articulation so as to leave only a narrow opening, shaped either like a groove or a slit, for the air current to pass through. Examples of fricative sounds in Tagalog are / s, h /.

/s/ is a voiceless alveolar fricative articulated by pushing the front of the tongue against the hard ridge behind the upper front teeth, leaving a slit-like opening for the jet of air to pass through.

/h/ is a voiceless glottal fricative formed without obstructing the oral cavity, and with a very slight friction in the glottis. Tagalog /h/ produces a soft hissing sound initially and a breathy release in word final position.

7.1.4 Lateral

In the formation of the lateral in general, the mouth is closed at the midline (front to back) by the contact of the tongue tip against the palate and there is an opening for the air to pass out over one or both sides of the tongue.

/l/ in Tagalog is a voiced alveolar lateral articulated with the tongue relatively straight and flat from the tip to the back and with the tip in contact with the alveolar ridge, producing a quasi-vocalic lateral resonance.

7.1.5 Flap

/r/ is a voiced alveolar flap formed by the rapid contact of the tip of the tongue against the alveolar region. In intervocalic position it is usually articulated with a single

tap trill. The majority of Tagalog words with /r/ are loans from Spanish and English.

7.1.6 Semivowels

Semivowel sounds are made, either with a rapid movement of the articulators from the characteristic initial position to the position for the vowel that follows, or with a rapid movement from the position of the preceding vowel to a characteristic final position. Nonfixed point of articulation characterizes the semivowels /w, y / in general.

/w/ in Tagalog is a voiced labiovelar semivowel articulated by rounding the lips while bringing the dorsum of the tongue toward the velum and then moving it rapidly into the position of the vowel that follows. The amount of lip-rounding and tongue-height depend upon the following vowel.

/y/ in Tagalog is a voiced alveolo-palatal semivowel produced by raising the front of the tongue close to the hard palate and back part of the alveolar region, with the tip pointing toward the upper teeth.

Phoneme	Phonetic Transcription	Conventional Orthography	Meaning
/p/	[pa'ʔa:h]	paa	'feet'
/b/	[ʔba:taʔ-]	bata	'child'
/t/	[ʔta:ʔoh]	tao	'person'
/d/	[da'li:ʔ-]	dali	'hurry up'
/k/	[ʔka:ʔIn-]	kain	'eat'
/g/	[ʔga:tas]	gatas	'milk'
/ʔ/	[ʔʔo:ʔoh]	oo	'yes'
/m/	[ma'ta:h]	mata	'eyes'
/n/	[ʔna:yon-]	nayon	'village'
/ŋ/	[ŋa'yo:n-]	ngayon	'now'
/s/	[ʔsa:gIn-]	saging	'banana'
/h/	[ha'li:k-]	halik	'kiss'
/l/	[ʔla:kad-]	lakad	'walk'
/r/	[ʔri:toh]	rito	'here'
/w/	[ʔwi:kaʔ-]	wika	'language'
/y/	[ʔya:baŋ-]	yabang	'pride'

Fig. 8: Consonant Phonemes (with Examples)

7.2 Vowels

Vowels, Bloomfield defines, are modifications of the voice-sound that involve no closure, friction, or contact of the tongue or lips.¹⁰ Speech sounds differ not only in quality but also in sonority. As explained by Bloch-Trager,¹¹ the sonority of a sound is determined primarily by the size of the resonance chamber through which the air stream flows. Thus, a low vowel is more plainly audible than a high vowel uttered with the same force, and any vowel is more sonorous than any consonant. They explain further that a sequence of sounds in a normal utterance is therefore characterized by successive peaks and valleys of sonority. The sounds which constitute the peaks of sonority are called syllabics and an utterance has as many syllables as it contains syllabic sounds.

The chart of vocoids (Fig. 5) lists the vowel sounds that normally occur in stressed syllables. In Tagalog, a lower variety of the high vowels is normally observed in unstressed syllables. The lower high [I] and [U] sometimes merge with the mid vowels in certain positions. Usually unstressed /e/ and /o/ retain the quality they have in stressed syllables. The low vowel /a/ keeps constant but in some positions it is somewhat raised towards the schwa position when unstressed.

Tagalog vowels may be classified on the basis of three intersecting criteria: tongue-advancement, tongue-height and lip-rounding.

¹⁰ Leonard Bloomfield, Language (New York: Holt, Rinehart and Winston, 1933) p. 102.

¹¹ Bernard Bloch and George L. Trager, Outline of Linguistic Analysis (Baltimore: Linguistic Society of America, 1942), p. 22.

The vowel phonemes are the following:

- /a/ low central unrounded
- /e/ mid front unrounded
- /i/ high front unrounded
- /o/ mid back rounded
- /u/ high back rounded

7.3 Interpretation of Semivowels

Semivowels are distinguished from vowels not so much by articulatory differences as by word position and duration. Vowels occur in the center or nucleus of the syllables. Semivowels, on the other hand, are found in consonantal positions, i.e., they are always found in the same syllable with a simple vowel, which is the nucleus or peak of the syllable. Unlike vowels, they are of short duration and they have no single position of articulation which gives them a definite color.

Tagalog semivowel sounds [i~y] and [u~w] pattern sometimes as consonants, and sometimes as vowels. The determining criterion in each case is pattern congruity. Since there are no words in Tagalog beginning or ending with a vowel, the suspect vocoids are interpreted as consonants in initial and final positions. Nonsuspect (non-ambiguous) sound sequences exert structural pressure on the suspect (ambiguous) sound sequences. Thus:

CV.CVC	CV.CVC	
ba.lak	['ba:lak~]	'plan'
ya.ta?	['ia:ta?~]	'perhaps'
wa.lis	[ua'li:s]	'broom'
?i.kaw	[?i'ka:u]	'you'
ka.may	[ka'ma:i]	'hand'
ba.liw	[ba'li:u]	'crazy'
bu.wan	[bu'ua:n~]	'moon'
ba.yad	['ba:iad~]	'payment'
bu.kid	['bu:kId~]	'farm'

On the basis of the canonical pattern of nonsuspect sequences CV and CVC, semivowels are interpreted as consonants in syllable initial and syllable final position, and as vowels when they are immediately following the initial consonant or immediately preceding the final consonant.

Intervocalic /w/ or /y/ (VwV or VyV) always goes with the following syllable, i.e., it is always syllable initial and does not constitute part of the /Vw/ or /Vy/ distribution which is here called a diphthong.

7.4 Diphthongs

The continuous nature of speech explains the presence of swift transitional sounds called glides.¹ A glide before another sound is called on-glide, and a glide coming after another sound is called off-glide. As described early in the preceding section (7.2), a syllabic, sometimes called a nuclear, is a vowel

Note: Syllable division here is represented by (.) and length by (:).

which is the most prominent sound in the syllable to which it belongs. When a vowel is uttered alone or contiguous to one or more consonants, it is always syllabic. A sequence of a syllabic vowel and a semivowel in the same syllable is called a diphthong. Its second component or off-glide is a non-syllabic. Diphthongs are therefore complex vowels and they are articulated with the tongue and jaw starting in one position and then gliding upward toward the position for one of the semivowels / w y /. The Tagalog diphthongs are / ey, ay, oy, uy, aw, iw /.

Phoneme	Phonetic Transcription	Conventional Orthography	Meaning
/a/	[ʔa'na:k̚]	anak	'child'
/e/	[ʔe:wan̚]	ewan	'I don't know'
/i/	[ʔI'na:h]	ina	'mother'
/o/	[ʔo:ʔoh]	oo	'yes'
/u/	[ʔu:tos]	utos	'command'
Diphthong			
/ey/	[ʔme:i̯]	may	'there is, are'
/ay/	[ʔbu:hai̯]	buhay	'life'
/oy/	[ʔa'po:i̯]	apoy	'fire'
/uy/	[ka'sui̯]	kasuy	'cashew'
/aw/	[sa'ba:u̯]	sabaw	'soup'
/iw/	[ʔsi:sIu̯]	sisiw	'chick'

Fig. 9: Vowel Phonemes and Diphthongs (with Examples)

8. Distinctive Features

It has been discussed that in linguistic descriptions utterances are represented as sequences of discrete segments called phonemes, which are functional units of speech sounds. Consonant and vowel phonemes, which respectively correspond to contoids and vocoids on the phonetic level, are distinguished from one another by a relatively small number of articulatory differences, e.g., voicing, bilabial position and stop articulation in the case of Tagalog /b/, or high and front tongue position and lip-spreading in the case of /i/. These differences which some linguists term distinctive features, are occasionally called phonological components, since phonemes are composed of distinctive features.

8.1 Consonant Patterns

Tagalog phonemes were classified and their patterns were established on the basis of these features by which they stand in contrast with each other. Normally, these distinctive features occur grouped together in 'bundles' of several features at a time: point of articulation, manner of articulation and voice or breath in consonants, and tongue-height, tongue-advancement, lip-rounding or spreading and other features in the case of vowels.

The distinctive feature framework (Fig. 10 & 11) that is due primarily to Jakobson¹² and Hall¹³ is here utilized as

¹²Jakobson, Roman, C. G. M. Fant and Morris Halle. Preliminaries To Speech Analysis (Cambridge, 1952).

¹³Hall, Op. cit., pp. 84 & 93.

it is helpful in understanding the functional relationships of the phonemes involved, although it is not of the essence of phonemic analysis.⁴ The graphic schemes of these features are such that each sound is set off from every other sound by a difference in at least one distinctive feature.⁵ As a result, the consonants are arranged in a series of intersecting classifications, making a striking, though considerably less elegant and less symmetrical pattern than those of vowels in the following section.⁶ This lack of overly neat patterns is to be expected, for, as Edward Sapir said, "no language forms a watertight system, and we should be suspicious if too pretty a picture results from the phonemic analysis of a phonetically asymmetrical situation."⁷ Following the working principle that "skewness should be avoided in shaping a description,"⁸ the problem of asymmetry was solved here by placing dental and alveolar articulations in one column, and semivowels /w/ (labiovelar) and /y/ (alveolo-palatal) under bilabial and alveolar, respectively.⁹

Among Tagalog consonants there are two main dimensions of phonemic contrast: point of articulation and manner of articulation.¹⁰ In addition, there is a further contrast in voicing in the case of stop phonemes only.¹¹ These contrasts occur singly or more than one at a time as distinctive features of particular phonemes.¹²

8.1.1 Voice versus Voicelessness

Voice, Gleason defines, is a regular, periodic vibration

generated through the action of the vocal bands. When the vocal bands are vibrating, they impart musical quality or regular vibration to the column of air that passes between them, and the resultant sound is voice. The vibration may be felt by putting a finger on the Adam's apple. The absence of the vibration of the vocal bands is referred to as breath or voicelessness, that is, the vocal bands are drawn back to let the air pass freely between them. Correlated thus are the Tagalog voiceless stops / p t k / and their voiced counterparts / b d g /. The voice-voiceless distinction occurs which sets them up in contrastive pairs, the members of each differing only in the presence or absence of voice. Fig. 10 below shows two dimensions of contrast in voicing represented here by slanting lines drawn downward.

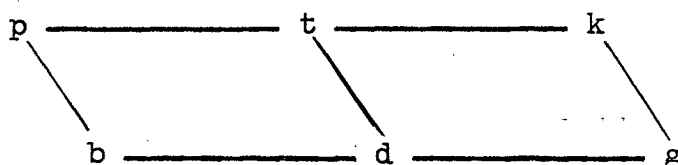


Fig. 10: Voiced-Voiceless Stops

The fact that every phonemic system has the "tendency toward symmetry" and the "tendency toward economy" is observed in the phonemic system of Tagalog. The voiceless-voiced pattern formed a perfect balance, but notice the "hole in the pattern" (or case vide) as linguists call it, created by the absence of a voiced counterpart to the voiceless glottal stop /ʔ/. However, with the voiceless glottal fricative /h/ in the same position of articulation with /ʔ/, a neat symmetry of

paradigm was formed (Fig. 11).*

There are, however, Tagalog consonants which are normally voiced but not contrastive to corresponding voiceless sounds in such a way as to make pairs. Such sounds are the nasals /m n ŋ/, the linguals or liquids /l r/ and semivowels /w y/. In these unpaired consonants, voice ceases to be a distinctive feature. In the system as a whole, except for stops, voice is not a distinctive feature.

8.1.2 Point versus Manner of Articulation

It has been noted that a phoneme as a linguistic phenomenon, derives its function from being in opposition with other comparable phenomena in the sound system. Thus, the Tagalog stop phonemes /p t k/ derive their special function from the fact that they show not only a two-way contrast with regard to voicing but also a three-way distinction in point of articulation indicated in the diagram by horizontal lines from bilabial, to dental, and to velar positions. The graphic representation also shows a three-way positional contrast of nasals /m n ŋ/ in the same manner, a two-way contrast of fricatives /s h/ and semivowels /w y/. Phonemes /l r/ are paired by their lingual quality and are not set off from any other consonants by point of articulation.

Contrast in point of articulation holds also for opposition in manner of articulation illustrated by vertical lines from stops, fricatives, nasals, linguals (lateral and flap) to semivowels in a five-dimensional pattern, hence the resultant Fig. 11.

*Note that a voiced glottal stop is a phonetic impossibility whereas a voiced counterpart of [h] exists, viz. [ɦ].

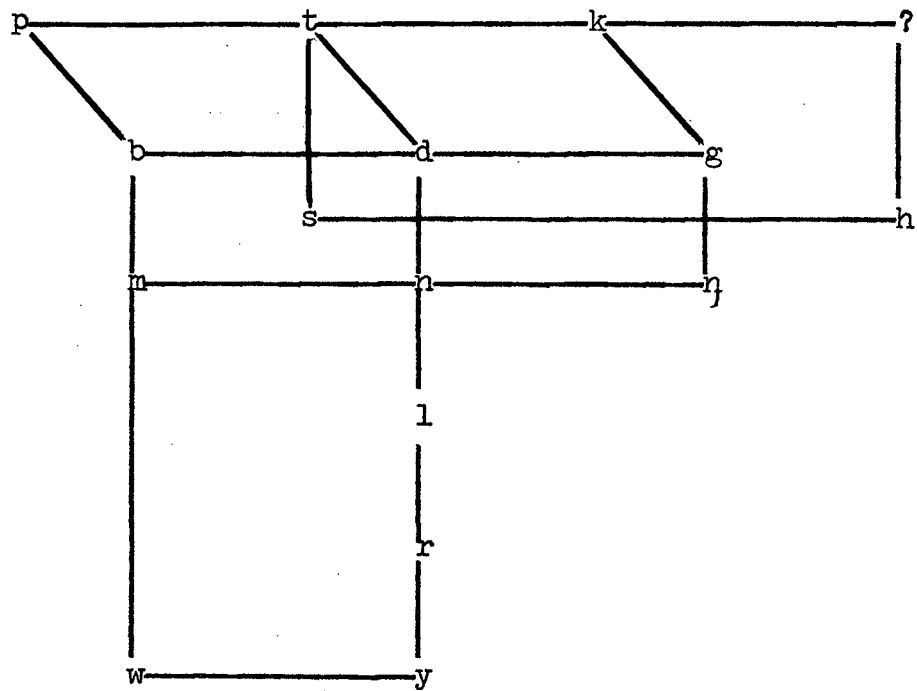


Fig. 11: Tagalog Consonant Pattern

8.2 Tagalog Vowel Patterns

The other major type of segmental phoneme is, of course, the vowel which corresponds to the vocoid on the phonetic level. Historically, Tagalog had a three-vowel system (Fig. 12) with lower variations or allophones of the two high vowels. In the present study a five-vowel system is used with the addition of /e/ and /o/ to the original three. A great number of Spanish and English loan words with /e/ and /o/ have long been a part of the common Tagalog vocabulary. These two sounds occur in unpredictable positions and they no longer alternate with /i/ and /u/ in educated speech.



Fig. 12: The Tagalog Vowel Triangle

The main distinctive features of Tagalog vowels involve two-dimensional patterns in height and advancement of the tongue. There are other features like rounding of lips, tenseness and laxness of the tongue, length, etc. The two-way contrasts include simply front-versus-back and high-versus-mid oppositions, but do not operate at the low level (Fig. 13).

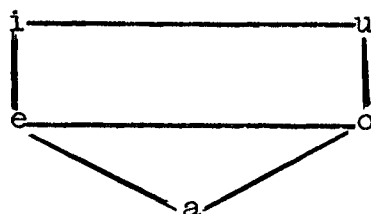


Fig. 13: The Vowel Triangle (Expanded)

In the light of this articulatory frame of reference, a phoneme is therefore the focal point of contrasts in a network of interlocking differences in the phonetic material of the language.

9. Contrast, Variation and Distribution

9.1 Contrast

In connection with distinctive features and acoustic correlates,¹⁴ Jakobson, Fant and Halle explain that there are some physical properties or features of sound which differentiate one phoneme from another. The sole function of sounds of language, Hockett said, is "to keep utterances apart." and that the phonological system of any given language is not so much a "set of sounds" as it is a "network of differences between sounds." This gives the phoneme its identity. The essence of phoneme, therefore, is distinctiveness or contrast. Some linguists call the contrast between the presence and absence of a feature, or between two distinctive features an opposition.

In Tagalog some pairs of phonemes differ only by one such opposition, others by two, and others by more than two. To make the differences in patterning evident, lines were drawn along each dimension of phonemic contrast, pointing out the differences in graphic representations as shown in Fig. 11 & 13.

¹⁴

Jakobson, Fant, Halle, op. cit.

Phonemes are therefore viewed in this light not as sounds produced in such-and-such manner but as elements which stand in contrast with each other in the phonological system of the language. Whenever two elements occur in the same environment (in the same position) with respect to each other, with different function or meaning, they are said to be in contrast with each other. If the two elements occur in such a way as to contrast with each other, linguists say they are in contrastive distribution. Thus, Tagalog /p/ and /b/ occur in the same environment as in pala ['pa:lah] 'shovel' vs. bala ['ba:lah] 'bullet', kapag [ka'pa:g] 'if' vs. kabag [ka'ba:g] 'fruit-bat', alap ['ʔa:lap] 'cut tip of grass' vs. alab ['ʔa:lab] 'blaze'. The two sounds thus contrast in initial, medial and final positions, in that they serve to distinguish words of different meaning. In the pair kupkop [kUp'ko:p] 'sheltered', vs. kubkob [kUb'ko:b] 'encircled', the two sounds are clearly in contrast with each other. The same is true of the opposition between /t/ vs. /d/ and /k/ vs. /g/ as shown in the pairs taga [ta'ga:ʔ] 'strike with a blade' vs. daga [da'ga:ʔ] 'mouse' and wakas [wa'ka:s] 'end' vs. wagas [wa'ga:s] 'pure'. Each pair /p/ vs. /b/, /t/ vs. /d/ or /k/ vs. /g/ has the same manner and point of articulation; the only difference between them is that / b d g / add voice to the features present in / p t k /.

Stops show contrast not only in voice but also in point of articulation; hence the pairs pagal [pa'ga:l] 'tired, fatigued' vs. tagal [ta'ga:l] 'duration' and bala ['ba:lah] 'bullet' vs. dala ['da:lah] 'fishing-net', which illustrate the opposition between bilabial and dental /p/ vs. /t/ and /b/ vs. /d/.

respectively. All the seven stops stand in contrast with one another in the following examples: pala ['pa:lah] 'shovel' vs. bala ['ba:lah] 'bullet' vs. tala ['ta:lah] 'leaking from a container' vs. dala ['da:lah] 'fishing net' vs. kala ['ka:lah] 'tortoise' vs. gala ['ga:lah] 'gala (uniform)' vs. Ala ['ʔa:lah] 'Allah, Mohammedan god'. Hughes calls these series of oppositions based on the same feature a series of correlation¹⁵ and name it by the feature in question.

Various possible kinds of correlation and series of correlations in Tagalog were determined and classified here as techniques of establishing phonemic units. Hence, the Tagalog correlation of voice includes the following phonemes:

p	t	k
b	d	g

Normally, each phoneme is a member of several correlations as in the case of the voiceless-bilabial /p/ which is not only contrasting with voiced-bilabial stop /b/ by the feature of voice but also (by position) with voiceless-dental stop /t/ and voiceless-velar stop /k/, hence a labial-dental-velar correlation. The following phonemes

b	d	g
m	n	ŋ

also show a correlation of nasality. The following forms mama ['ma:maʔ] 'any man, mister' vs. nana ['na:naʔ] 'pus' vs. nganga ['ŋa:ŋaʔ] 'prepared betel leaf, nut and lime, called buyo' are

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John P. Hughes, The Science of Language: An Introduction to Linguistics (New York: Random House, 4th Printing, 1964), p. 246.

conclusive evidences that nasals /m n ŋ/ form a contrast since the environment is manifestly the same and all occur in identical environment. They also show a labial-dental-velar correlation. Semivowel correlation is shown in the pairs lawa ['la:wa?] 'lake' vs. laya ['la:ya?] 'freedom', sabaw [sa'ba:u] 'soup' vs. sabay [sa'ba:i] 'together', wari ['wa:ri?] 'it seems' vs. yari ['ya:ri?] 'made' and kalawkaw [ka'la:u'ka:u] 'stir liquid with the hand' vs. kalaykay [ka'la:i'ka:i] 'rake'.

Tagalog vowels also participate in correlation, thus:

i	u
e	o

These vowels involve two dimensions of contrast. The three two-way contrasts involve a front-versus-back, high-versus-mid and unrounded-versus-rounded. With the levels of tongue-height contrasting with each other, there are variations having contrasts of front-versus-back in the high and mid levels. These vowel correlations are illustrated in the following examples: /i/ vs. /e/ as in iwan ['?i:wan] 'leave (someone)' vs. ewan ['?e:wan] 'ignorance or denial of knowledge of something', misa ['mi:sah] 'Mass' vs. mesa ['me:sah] 'table'; /u/ vs. /o/ as in bukal [bU'ka:l] 'water spring' vs. bokal [bo'ka:l] 'a member of provincial governing body', uso ['?u:soh] 'fashion, vogue' vs. oso ['?o:soh] 'bear'; /i/ vs. /u/ as in pito ['pi:toh] 'whistle' vs. puto ['pu:toh] 'rice bun', dila ['di:la?] 'tongue' vs. dula ['du:la?] 'play' and /e/ vs. /o/ as in gera ['ge:rah] 'war' vs. gora ['go:rah] 'cap', beses ['be:sas] 'number of times' vs. bohes ['bo:sas] 'voice'.

The process of classifying speech sounds into phonemes, which is normally observed, is simply that of applying the following criteria: distribution, phonetic similarity and identity of function or meaning. For this purpose, linguistic analysts use minimal pairs. These refer to pairs in which the two sounds involved are the only features that differentiate the words, as in the case of the pairs of words shown below. A minimally contrasting pair of utterances is conclusive and convincing evidence to show that two sounds do not belong to the same phoneme. Using the same articulatory frame of reference (Fig. 11 & 13), contrasts in voicing, point of articulation or manner of articulation are illustrated in the following list of Tagalog minimal pairs:



- ampon /ʔampɔ̃n/ 'adopted' vs. ambon /ʔambɔ̃n/ 'drizzle'
 kapag /kapáɡ/ 'if' vs. kabag /kabǎɡ/ 'fruit-bat'
 ipon /ʔipɔ̃n/ 'savings' vs. ibon /ʔibɔ̃n/ 'bird'
 lapi /lǎpiʔ/ 'affiliate, join' vs. labi /lǎbiʔ/ 'lips'
 paho /páhoʔ/ 'a species of mango' vs. baho /báhoʔ/ 'offensive odor'
 panday /pandǎy/ 'carpenter' vs. banday /bandǎy/ 'stupid, imbecile'
 panig /pǎnig/ 'side' vs. banig /bǎnig/ 'rural agricultural society'
 pantay /pantǎy/ 'of the same height' vs. bantay /bantǎy/ 'guard'
 panting /pantǐŋ/ 'fury, ire' vs. banting /bantǐŋ/ 'stretched'
 pantog /pantɔ̃ɡ/ 'bladder' vs. bantog /bantɔ̃ɡ/ 'famous, noted'

pangaw /paŋǎw/ 'clamp for punishment' vs. bangaw /baŋǎw/ 'fool'
 pangko /paŋkôh/ 'carry a person in the arms' vs. bangko /baŋkôh/
 'bank'

pasa /pasǎ?/ 'bruise' vs. basa /basǎ?/ 'wet'

pasag /pasǎg/ 'wriggling, spasm' vs. basag /basǎg/ 'broken (glass)'

patak /patǎk/ 'drop' vs. Batak /batǎk/ 'a town in Ilocos region'

pataw /pǎtaw/ 'weight for pressing something' vs. bataw /bǎtaw/
 'a species of vegetable'

pating /patin/ 'shark' vs. bating /batin/ 'net-trap'

pawa /pǎwa?/ 'everything, all' vs. bawa /bǎwa?/ 'each, every'

piko /pikoh/ 'pick-axe' vs. biko /bikoh/ 'rice cake'

pula /pǔla?/ 'adverse criticism' vs. bula /bǔla?/ 'lie, falsehood'

pulo /pulô?/ 'island' vs. bulo /bulô?/ 'calf, young of a carabao'

puno /punô?/ 'full, filled' vs. buno /bunô?/ 'wrestling'

puro /pǔroh/ 'pure' vs. buro /bǔroh/ 'preserved fruit or fish'

puti /pǔtih/ 'pick fruit from tree' vs. buti /bǔtih/ 'goodness'

sampa /sampaŋ/ 'go up, climb' vs. samba /sambaŋ/ 'adore'

sampit /sampaŋt/ 'entangled' vs. sambit /sambit/ 'mention in passing'

sapit /sǎpit/ 'arrival' vs. sabit /sǎbit/ 'hang, hook'

talop /tǎlop/ 'peel off' vs. talob /tǎlob/ 'cover made of soft
 material (leaves or cloth)'

talukap /talúkap/ 'eyelid' vs. talukab /talúkab/ 'carapace of crabs'

tampal /tampaŋl/ 'slap' vs. tambal /tambǎl/ 'reenforcement; pair'

tapak /tapǎk/ 'barefooted' vs. tabak /tabǎk/ 'bolo'

taping /tǎpin/ 'animal pest' vs. tabing /tǎbin/ 'screen, curtain'



- bukot /bukōt/ 'short-necked' vs. bukod /bukōd/ 'separate'
- gunting /guntīŋ/ 'scissors' vs. Gunding /gundīŋ/ 'a girl's name'
- hilot /hīlot/ 'midwife' vs. hilod /hīlod/ 'scrub with something
to remove dirt on the skin'
- Ita /ʔītah/ 'Negrito' vs. Ida /ʔīdah/ 'a girl's name'
- pantay /pantāy/ 'of the same height' vs. panday /pandāy/ 'carpenter'
- sabat /sabāt/ 'obstruction' vs. sabad /sabād/ 'interrupt a
conversation'
- taga /tagāʔ/ 'strike with a blade' vs. daga /dagāʔ/ 'mouse, rat'
- tala /tālāh/ 'leaking from a container' vs. dala /dālāh/ 'fishing
net'
- tala/ talāʔ/ 'notes, record' vs. dala /dalāʔ/ 'painful experience
learned'
- tali /tāliʔ/ 'string, tie' vs. dali /dāliʔ/ 'inch'
- tanak /tānak/ 'old, antique (porcelain)' vs. danak /dānak/ 'flow
(of blood)'
- tawa /tāwah/ 'smile, laugh' vs. dawa /dāwah/ 'a kind of grain'
- tila /tīlaʔ/ 'stopping, as of rain' vs. dila /dīlaʔ/ 'tongue'
- tinta /tintāh/ 'ink' vs. tinda /tindāh/ 'goods for sale'
- tula /tulāʔ/ 'poem' vs. dula /dulāʔ/ 'play'
- tulay /tulāy/ 'bridge' vs. Dulay /dulāy/ 'a girl's name'



baka /baká?/ 'maybe' vs. бага /bagá?/ 'tumor, boil'

balak /bálak/ 'plan' vs. balag /bálag/ 'bower, arbor, trellis'

kaka /kákah/ 'uncle, aunt' vs. gaga /gágah/ 'stupid, dumb (fem.)'

kala /kálah/ 'tortoise' vs. gala /gálah/ 'gala (uniform)'

kalang /kálan/ 'wedge' vs. galang /gálan/ 'respect'

kaya /káyah/ 'ability, capacity' vs. gaya /gáyah/ 'the same as'

kong /kõŋ/ 'pronoun ko, by me plus linker -ng' vs. gong /gõŋ/
'gong'

kulang /kúlan/ 'lacking' vs. gulang /gúlan/ 'age; maturity'

kulay /kúlay/ 'color' vs. gulay /gúlay/ 'vegetable'

kulo /kuló?/ 'boiling' vs. Gulo /guló?/ 'an island in Mindoro'

kuro /kúro?/ 'opinion' vs. guro /gúro?/ 'teacher'

ilak /?flak/ 'contribution for charity' vs. ilag /?flag/ 'parry'

lakas /lakás/ 'strength' vs. lagas /lagás/ 'fallen, falling off'

likas /likás/ 'natural, native' vs. ligas /ligás/ 'a species of
shrub'

likaw /líkaw/ 'coil, wind' vs. ligaw /lígaw/ 'courtship'

saka /sákah/ 'cultivation, tillage' vs. saga /ságah/ 'saga'

salok /sálok/ 'dipper, scooper' vs. salog /sálog/ 'pool, puddle'

tambok /tambók/ 'convexity' vs. tambog /tambóg/ 'dive, plunge'

tatak /taták/ 'stamp mark' vs. tatag /tatág/ 'stability, security'

tingka /tiŋká?/ 'crow or crop of fowls' vs. tingga /tiŋgá?/ 'lead
(metal)'

titik /títik/ 'letter of the alphabet' vs. titig /títig/ 'stare'
 tutok /tútok/ 'to draw near an object' vs. tutog /tútog/ 'snuff'

(ashes of cigar or cigarette)'

usok /ʔúsok/ 'smoke' vs. usog /ʔúsog/ 'flatulence, gas'

wakas /wakás/ 'end' vs. wagas /wagás/ 'pure'

p————t

pakas /pákas/ 'a kind of dried fish' vs. takas /tákas/ 'escape'

pakaw /pákaw/ 'hoop in the nose of carabao' vs. takaw /tákaw/
 'greediness'

pag /pag/ 'if' vs. tag /tag/ 'tag; affix'

paga /pagáʔ/ 'swollen, inflamed' vs. taga /tagáʔ/ 'strike with
 a blade'

pala /pálaʔ/ 'benefit, blessing' vs. tala /tálaʔ/ 'bright star'

palaro /palaróʔ/ 'sponsored game' vs. talaro /talaróʔ/ 'balance,
 scale'

palas /pálas/ 'pare, clip' vs. talas /tálas/ 'sharpness'

paling /páliŋ/ 'turn; inclination' vs. taling /táliŋ/ 'mole'

palo /páloh/ 'mast of a ship' vs. talo /táloh/ 'defeated'

palos /palós/ 'big eel' vs. talos /talós/ 'known, understood'

Panong /panónŋ/ 'a man's name' vs. tanong /tanónŋ/ 'answer, reply'

panga /panǎh/ 'jaw' vs. tanga /tanǎh/ 'stupid, ignorant'

Pangan /pǎnan/ 'a family name' vs. tangan /tǎnan/ 'held'

panggap /pangǎp/ 'pretense' vs. tanggap /tangǎp/ 'reception'

panghal /panhǎl/ 'uneaten food left on the table' vs. tanghal

/tanhǎl/ 'honor, exalt'

panglaw /paŋlāw/ 'melancholy' vs. tanglaw /taŋlāw/ 'light'

paos /paʔōs/ 'raucousness of voice' vs. taos /taʔōs/ 'through
and through'

papa /pāpah/ 'width of cloth; pope' vs. tapa /tāpah/ 'jerked beef'

papak /papāk/ 'eating only one kind of food without anything else'
vs. tapak /tapāk/ 'barefooted'

pari /pāriʔ/ 'priest' vs. tari /tāriʔ/ 'spur for fighting cock'

pasa /pāsah/ 'pass over' vs. tasa /tāsah/ 'cup'

pata /pātah/ 'leg of animals' vs. tapa /tāpah/ 'jerked beef'

payo /pāyoh/ 'advice' vs. tayo /tāyoh/ 'we (incl.)'

payong /pāyoŋ/ 'umbrella' vs. tayong /tāyoŋ/ 'delay, temporary
suspension of work'

pigil /pīgil/ 'held, detained' vs. tigil /tīgil/ 'stop'

pila /pīlah/ 'line, queue' vs. tila /tīlah/ 'maybe'

pili /pilīʔ/ 'selected' vs. tili /tilīʔ/ 'shriek'

pito /pītoh/ 'whistle, toy flute' vs. tito /tītoh/ 'uncle'

piyak /piyāk/ 'shriek of chicken' vs. tiyak /tiyāk/ 'exact, definite'

pukol /pukōl/ 'throw, cast' vs. tukol /tukōl/ 'even number'

pugon /pugōn/ 'cooking stove' vs. tugon /tugōn/ 'answer, reply'

pugot /pūgot/ 'behead' vs. tugot /tūgot/ 'stop, cease'

pulak /pūlak/ 'lop, cut off' vs. tulak /tūlak/ 'push, shove'

pulis /pulīs/ 'policeman' vs. tulis /tulīs/ 'pointed'

pulong /pūloŋ/ 'meeting' vs. tulong /tūloŋ/ 'help'

pulot /pūlot/ 'pick up; foundling' vs. tulot /tūlot/ 'permit'

punay /pūnay/ 'a species of bird' vs. tunay /tūnay/ 'true, real'

puto /pũtoħ/ 'rice bun' vs. tuto /tũtoħ/ 'perception'

putol /pũtol/ 'cut' vs. tutol /tũtol/ 'objection'

t ————— k

ta /tah/ 'you and I (enclitic dual)' vs. ka /kah/ 'you'

tabig /tābig/ 'push with the elbow' vs. kabig /kābig/ 'pull'

towards oneself'

tagayan /tagayān/ 'wine cup or glass' vs. Cagayan /kagayān/

'a province in Mindanao'

tala /tālah/ 'leaking from a container' vs. kala /kālah/

'tortoise'

talang /tālaŋ/ 'red cloud' vs. kalang /kālaŋ/ 'wedge'

talas /talās/ 'scraped off from the palm' vs. kalas /kalās/

'untied, loosened'

tambal /tambāl/ 'pair' vs. kambal /kambāl/ 'twin'

tambing /tambĩŋ/ 'put on equal share' vs. kambing /kambĩŋ/ 'goat'

tampay /tampāy/ 'serenity, calmness' vs. kampay /kampāy/ 'swinging'

of the arm; flapping the wings'

tampo /tampõh/ 'sulking' vs. kampo /kampõh/ 'camp'

tanang /tānan/ 'elope' vs. kanan /kānan/ 'right'

tanaw /tanāw/ 'visible from afar' vs. kanaw /kanāw/ 'stir and

dissolve'

tapis /tāpis/ 'a kind of apron' vs. Capiz /kāpis/ 'a city in the

Visayas'

tapon /tapõn/ 'cork' vs. kapon /kapõn/ 'castrated'

tapos /tapõs/ 'finished' vs. kapos /kapõs/ 'short, lacking'

tatlo /tatlõh/ 'three' vs. katlo /katlõh/ 'one-third'

tawa /tāwah/ 'laugh, laughter' vs. kawa /kāwah/ 'a big kettle'

tawad /tāwad/ 'haggle; bargain' vs. kawad /kāwad/ 'wire'

taway /tawāy/ 'stretch at arm's length' vs. kaway /kawāy/ 'wave the hand'

tawing /tawīŋ/ 'pendant; hanging and swinging' vs. kawing /kawīŋ/ 'interlinked, in series'

taya /tāyah/ 'calculation' vs. kaya /kāyah/ 'competence, ability'

tilos /tīlos/ 'point, pointedness' vs. kilos /kīlos/ 'action, movement'

tinis /tīnis/ 'shrillness of voice' vs. kinis /kīnis/ 'smoothness'

tono /tõnoh/ 'tone' vs. kono /kõnoh/ 'cone'

tuba /tūbah/ 'a species of shrub' vs. Kuba /kūbah/ 'Cuba'

tuba /tubāʔ/ 'intoxicating drink from palms' vs. kuba /kubāʔ/ 'hunchback'

tulig /tulīg/ 'stunned, stupefied' vs. kulig /kulīg/ 'the young of a pig'

tulog /tulõg/ 'asleep' vs. kulog /kulõg/ 'thunder'

tupi /tupīʔ/ 'fold, pleat' vs. kupi /kupīʔ/ 'a small buri bag'

turo /tūroʔ/ 'instruction' vs. kuro /kūroʔ/ 'opinion'

tuta /tūtaʔ/ 'puppy' vs. kuta /kūtaʔ/ 'fort'

tuto /tūtoh/ 'perception' vs. kuto /kūtoh/ 'head-louse'

salot /sālot/ 'pest, epidemic' vs. salok /sālok/ 'dipper, scooper'

k—————?

batik /bātik/ 'stain, spot' vs. bati /bātiʔ/ 'greeting'

batik /batīk/ 'a kind of imported fabric' vs. bati /batīʔ/ 'on speaking terms'

- kaba /kabāh/ 'beating, palpitation' vs. aba /?abāh/ 'oh'
- Cabra /kābrah/ 'an island in Mindoro' vs. abra /?ābrah/ 'gorge'
- kagaw /kāgaw/ 'itch mite' vs. agaw /?āgaw/ 'snatch'
- kahit /kāhit/ 'even if' vs. ahit /?āhit/ 'shave'
- kalam/kalām/ 'fornication; feeling of hunger' vs. alam /?alām/
'known'
- kanta /kantāh/ 'song' vs. anta /?antāh/ 'rancidity'
- kaso /kāsoh/ 'case' vs. aso /?āsoh/ 'dog'
- kawang /kawāŋ/ 'not adjusted' vs. awang /?awāŋ/ 'distance; crevice'
- kawit /kāwit/ 'hook' vs. awit /?āwit/ 'song, hymn'
- kay /kay/ 'person marker (sing)' vs. ay /?ay/ 'a construction
marker'
- tagak /tagāk/ 'a species of bird' vs. taga /tagā?/ 'strike with
a blade'
- talak /talāk/ 'chat, chatter' vs. tala /talā?/ 'notes, record'

b ————— d

- babaw /bābaw/ 'shallowness' vs. Dabaw /dābaw/ 'a city in Mindanao'
- baga /bāgah/ 'ember' vs. daga /dāgah/ 'dagger, sword'
- baga /bagā??/ 'tumor, boil' vs. daga /dagā?/ 'mouse, rat'
- bait /ba?it/ 'prudence, sense' vs. dait /da?it/ 'close together'
- bala /bālah/ 'bullet' vs. dala /dālah/ 'fishing-net'
- balang /bālaŋ/ 'locust' vs. dalang /dālaŋ/ 'infrequent; slow'
- balas /balās/ 'solidified syrup' vs. dalas /dalās/ 'fast; frequent'
- bali /bāli?/ 'break, fracture' vs. dali /dāli?/ 'inch'
- bali /balī?/ 'broken, fractured' vs. dali /dalī?/ 'quick; easy'

banak /bānak/ 'a species of fish' vs. danak /dānak/ 'flow
(of blood)'

bantay /bantāy/ 'guard' vs. dantay /dantāy/ 'rest the leg on
something'

banyos /banyōs/ 'sponge bath' vs. danyos /danyōs/ 'damages'

bangal /baŋāl/ 'broken off (branches)' vs. dangal /daŋāl/ 'honor'

basa /bāsah/ 'read' vs. dasa /dāsah/ 'family, lineage'

bating /batīŋ/ 'net-trap' vs. dating /datīŋ/ 'arrival'

baya /bāya?/ 'neglect' vs. daya /dāya?/ 'fraud, deceit'

bilig /bilīg/ 'cataract of the eye' vs. dilig /dilīg/ 'sprinkle'

bukal /bukāl/ 'water spring' vs. dukal /dukāl/ 'dug out'

bugtong /bugtōŋ/ 'riddle' vs. dugtong /dugtōŋ/ 'addition to lengthen'

buhat /būhat/ 'lift, raise' vs. duhat /dūhat/ 'blackberry'

bula /bulā?/ 'bubble, foam' vs. dula /dulā?/ 'play'

bungo /buŋō?/ 'skull' vs. dungo /duŋō?/ 'stupid'

buwag /buwāg/ 'demolished, abolished' vs. duwag /duwāg/ 'coward'

d————g

babad /bābad/ 'immerse in liquid' vs. babag /bābag/ 'impact, clash'

babad /babād/ 'thoroughly soaked in liquid' vs. babag /babāg/
'quarrel'

balad /bālad/ 'ballad' vs. balag /bālag/ 'bower, arbor, trellis'

bulid /bulīd/ 'fallen down' vs. bulig /bulīg/ 'the young of a
fish'

daan /daʔān/ 'way, road' vs. gaan /gaʔān/ 'lightness; ease'

dahak /dāhak/ 'expectorate phlegm' vs. gahak /gāhak/ 'long and
big rip'

dala /dalǎʔ/ 'painful experience learned' vs. gala /galǎʔ/

'wanderer'

dalang /dǎlaŋ/ 'infrequent; slow' vs. galang /gǎlaŋ/ 'respect'

dalas /dalǎs/ 'fast; often' vs. galas /galǎs/ 'roughness (touch)'

dalit /dǎlit/ 'psalm' vs. galit /gǎlit/ 'anger, fury'

damit /damit/ 'dress, clothes' vs. gamit /gamit/ 'used, worn out'

dapok /dapok/ 'weak; fragile' vs. gapok /gapok/ 'hollowed due

to attack of weevils, referring to wood'

diwang /diwaŋ/ 'celebrate' vs. giwang /giwaŋ/ 'rocking,

wabbling'

dulang /duŋaŋ/ 'low dining table' vs. gulang /guŋaŋ/ 'age,

maturity'

dulay /duŋay/ 'climb from branch to branch' vs. gulay /guŋay/

'vegetable'

t
|
s

ta /tah/ 'an enclitic pronoun, dual' vs. sa /sah/ 'in, on, from'

taad /taʔad/ 'the cutting of sugar cane' vs. saad /saʔad/ 'say,

answer'

taan /taʔaŋ/ 'reserve, reservation' vs. saan /saʔaŋ/ 'where'

tabon /tabon/ 'covered, e.g., with earth' vs. sabon /sabon/ 'soap'

takal /takal/ 'measured (capacity)' vs. sakal /sakal/ 'choke with

the hands'

taklang /taklǎŋ/ 'trip on the hock or bend of the knee' vs.

saklang /saklǎŋ/ 'pieces of bamboo placed crosswise on a roofing'

taklob /taklɔb/ 'cover' vs. saklob /saklɔb/ 'two equal and similar things joined together, facing each other'

tahol /tahól/ 'barking of dog' vs. sahol /sahól/ 'wanting, lacking'

tala /tála?/ 'bright star' vs. sala /sála?/ 'filter'

tala /talá?/ 'notes, record' vs. sala /salá?/ 'filtered, sieved'

talab /taláb/ 'susceptibility to; effectiveness of, e.g., medicine, weapons, etc.' vs. salab /saláb/ 'scorched, seared'

talang /talan/ 'red clouds at early morn or sunset' vs. salang /salan/ 'put over the fire for cooking'

talanga /talána?/ 'quiver for arrows' vs. salanga /salána?/ 'a species of ray'

talas /tálas/ 'sharpness' vs. salas /sálas/ 'living room'

talilong /taliflon/ 'a species of mullet' vs. salilong /saliflon/ 'place in the shade'

talo /táloh/ 'beaten, defeated' vs. salo /sáloh/ 'partake, join, e.g., in a meal'

talo /taloh/ 'defeated, lost' vs. salo /saloh/ 'catch, e.g., a ball'

talop /talop/ 'peeled, skinned' vs. salop /salop/ 'ganta (a measure)'

tampay /tampáy/ 'serenity, calmness' vs. sampay /sampáy/ 'hang, e.g., clothes on a line'

tanga /tanáh/ 'stupid' vs. sanga /sanáh/ 'branch'

tangay /taŋǎy/ 'carry away' vs. sangay /saŋǎy/ 'branch of an office'
 tangkal /taŋkǎl/ 'cage for chicken' vs. sangkal /saŋkǎl/ 'harden-
 ing of a mother's breast'

tanggol /taŋgól/ 'defend' vs. sanggol /saŋgól/ 'baby, infant'

tanghod /taŋhód/ 'wait hopefully' vs. sanghod /saŋhód/ 'smell a
 pestilent odor'

tapa /tapǎh/ 'smoked fish' vs. sapa /sapǎh/ 'food discarded
 after being chewed'

tapak /tǎpak/ 'footstep' vs. sapak /sǎpak/ 'breaking into two, as
 the branch of a tree'

tapak /tapǎk/ 'barefoot' vs. sapak /sapǎk/ 'clacking sound produced
 when eating'

tapal /tǎpal/ 'patch' vs. sapa /sǎpal/ 'bagasse, residuum'

tapat /tapǎt/ 'frank, honest; opposite' vs. sapat /sapǎt/ 'enough,
 sufficient'

tari /tǎri?/ 'metal spur' vs. sari /sǎri?/ 'species; variety'

tasa /tasǎh/ 'sharpen (point)' vs. sasa /sasǎh/ 'a species of
 palm'

tata /tǎtah/ 'grandfather' vs. tasa /tǎsah/ 'cup'

taway /tawǎy/ 'strike, e.g., with a bolo at arm's length' vs.
 saway /sawǎy/ 'forbid'

taya /tǎyah/ 'calculation' vs. saya /sǎyah/ 'skirt'

tigang /tigǎŋ/ 'extremely dry' vs. sigang /sigǎŋ/ 'stew'

tilay /tǐlay/ 'slight burn or scald' vs. silay /sǐlay/ 'short
 glance'

tining /tǐniŋ/ 'sediment' vs. sining /sǐniŋ/ 'art'

tinga /tiŋǎh/ 'small particles of food left between teeth' vs.

singa /siŋǎh/ 'blow one's nose'

tipi /tʰipi?/ 'press, compress' vs. sipi /sʰipi?/ 'copy'

tipon /tipõn/ 'gathered, collected' vs. sipon /sipõn/ 'cold'

tubo /tũbo?/ 'profit' vs. subo /sũbo?/ 'take into the mouth'

tukong /tũkoŋ/ 'tailless fowl' vs. sukong /sũkoŋ/ 'bundle of rattan'

tulong /tũloŋ/ 'help' vs. sulong /sũloŋ/ 'advance'

tumbong /tumbõŋ/ 'anus' vs. sumbong /sumbõŋ/ 'complaint'

tumpak /tumpāk/ 'correct' vs. sumpak /sumpāk/ 'popgun made of bamboo'

tundo /tundõ?/ 'prick' vs. sundo /sundõ?/ 'agreement'

tunod /tunõd/ 'dart, arrow' vs. sunod /sunõd/ 'follow'

tunog /tunõg/ 'sound' vs. sunog /sunõg/ 'burnt'

tungki /tuŋki?/ 'point, extremity' vs. sungki /suŋki?/ 'irregular growth of teeth'

tuso /tũsoh/ 'astute' vs. suso /sũsoh/ 'breasts'

tuya /tuyǎ?/ 'irony, sarcasm' vs. suya /suyǎ?/ 'fed up'

?

h

am /ʔam/ 'broth' vs. ham /ham/ 'ham'

amak /ʔamak/ 'tame' vs. hamak /hāmak/ 'oppressed'

baga /bǎga?/ 'lung' vs. бага /bǎgah/ 'ember'

baga /bagǎ?/ 'tumor, boil' vs. бага /bagǎh/ 'question marker'

bao /bāʔoh/ 'coconut shell' vs. baho /bāhoh/ 'bass (tone or voice)'
 baog /baʔōg/ 'sterile (woman)' vs. bahog /bahōg/ 'mixed (rice with something)'

bata /bātaʔ/ 'child' vs. bata /bātah/ 'bathrobe'

bubo /bubōʔ/ 'spill, overflow' vs. bubo /bubōh/ 'to frighten and drive away'

kata /katāʔ/ 'boiling' vs. kata /katāh/ 'you and I'

kuba /kūbaʔ/ 'hunchback' vs. Kuba /kūbah/ 'Cuba'

daan /dāʔan/ 'way, road' vs. dahan /dāhan/ 'slowly'

daop /daʔōp/ 'needy' vs. dahop /dahōp/ 'clasped together, as hands in prayer'

hili /hīliʔ/ 'envy' vs. hili /hīlih/ 'a species of fish'

hula /hūlaʔ/ 'guess, prediction' vs. hula /hūlah/ 'hula dance'

huli /hūliʔ/ 'forgetful' vs. huli /hūlih/ 'catch'

ilig /ʔilíʔ/ 'shake' vs. hilig /hilíʔ/ 'inclined'

iling /ʔilín/ 'shake the head' vs. hiling /hilín/ 'request, petition'

ipon /ʔípon/ 'savings; gathered' vs. hipon /hípon/ 'shrimp'

irap /ʔírap/ 'sullen look' vs. hirap /hírap/ 'difficulty'

itik /ʔítik/ 'duck' vs. hitik /hítik/ 'bent due to weight (of fruit)'

iwa /ʔíwaʔ/ 'stab, slash' vs. hiwa /híwaʔ/ 'slice'

nasa /násaʔ/ 'wish, desire' vs. nasa /náсах/ 'in, on'

paa /pāʔah/ 'feet' vs. paha /pāhah/ 'sash, band'

pait /pāʔit/ 'bitterness; chisel' vs. pahit /pāhit/ 'consumed' to the last bit'

pare /pāreʔ/ 'priest' vs. pare /pāreh/ 'vocative used in addressing a man'

piit /piʔft/ 'detained, jailed' vs. pihit /pihʔt/ 'turned'
 pipi /pʔpiʔ/ 'flattened, pressed' vs. pipi /pʔpih/ 'mute, dumb'
 saing /sǎʔiŋ/ 'cook rice' vs. sahing /sǎhiŋ/ 'maltha'
 sala /sǎlaʔ/ 'to filter' vs. sala /sǎlah/ 'fault; living room'
 sala /sǎlǎʔ/ 'filtered' vs. sala /sǎlǎh/ 'woven split bamboo
 used as railing'
 taas /taʔǎs/ 'height' vs. tahas /tahǎs/ 'direct, definite'
 tamo /tamǎʔ/ 'a species of plant' vs. tamo /tamǎh/ 'acquisition of'
 tubo /tǔboʔ/ 'growth; profit' vs. tubo /tǔboh/ 'tube, pipe'
 tundo /tundǎʔ/ 'prick' vs. Tundo /tundǎh/ 'a district in Manila'
 ulog /ʔulǎg/ 'shake' vs. hulog /hulǎg/ 'fallen off, dropped off'
 unos /ʔunǎs/ 'fog' vs. hunos /hunǎs/ 'tithe'

s—————h

basag /basǎg/ 'broken (glass)' vs. bahag /bahǎg/ 'G-string'
 busol /busǎl/ 'door-knob' vs. buhol /buhǎl/ 'knot, tie'
 paso /pǎsoʔ/ 'burn' vs. paho /pǎhoʔ/ 'a species of mango'
 sa /sah/ 'in on' vs. ha /hah/ 'a Tagalog expression (interrogation)'
 sabang /sǎbaŋ/ 'crossing, intersection' vs. habang /hǎbaŋ/ 'while'
 sabi /sǎbih/ 'say' vs. habi /hǎbih/ 'weave'
 sagap /sǎgap/ 'scoop' vs. hagap /hǎgap/ 'thought, idea'
 saging /sǎgiŋ/ 'banana' vs. haging /hǎgiŋ/ 'buzzing, hissing'
 salaan /salaʔǎn/ 'strainer' vs. halaan /halaʔǎn/ 'a species of clam'
 salabid /salabʔid/ 'obstacle' vs. halabid /halabʔid/ 'entangle'
 salang /sǎlaŋ/ 'put over the fire for cooking' vs. halang /hǎlaŋ/
 'crosspiece'

salang /salǎŋ/ 'touch lightly' vs. halang /hǎlaŋ/ 'traverse'
 salas /sǎlas/ 'parlor, hall' vs. halas /hǎlas/ 'scratch, e.g.,
 produced by the blades of grass'

salay /sǎlay/ 'bird's or rat's nest' vs. halay /hǎlay/ 'indecenty'
 salo /sǎloh/ 'partake, join, e.g., in a meal' vs. halo /hǎloh/
 'pestle'

salo /saloh/ 'catch, e.g., a ball' vs. halo /haloh/ 'hello'
 sanay /sǎnay/ 'practice, drill' vs. hanay /hǎnay/ 'row, file'
 sangga /sangǎh/ 'parry' vs. hangga /hangǎh/ 'until'
 sapin /sapin/ 'underlayer' vs. hapin /hapin/ 'string'
 sapit /sǎpit/ 'arrive' vs. hapit /hǎpit/ 'press'
 sarap /sarǎp/ 'delicious' vs. harap /harǎp/ 'front'
 sari /sǎri?/ 'variety' vs. hari /hǎri?/ 'king'
 sasa /sǎsa?/ 'gratify one's desire' vs. hasa /hǎsa?/ 'whet'
 siga /sigǎ?/ 'bonfire' vs. higa /higǎ?/ 'lie down'
 sigit /sigit/ 'shine through a slit crack' vs. higit /higit/
 'stretch'

silat /silǎt/ 'slits' vs. hilat /hilǎt/ 'stretched'
 silaw /silǎw/ 'dazzled' vs. hilaw /hilǎw/ 'unripe; raw'
 singa /singǎh/ 'blow one's nose' vs. hinga /hingǎh/ 'breath'
 sipag /sipag/ 'diligence' vs. hipag /hipag/ 'sister-in-law'
 suwag /suwǎg/ 'horns' vs. huwag /huwǎg/ 'don't'

b
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 m

baga /bagǎ?/ 'tumor, boil' vs. maga /magǎ?/ 'swollen'
 bago /bǎgoh/ 'new' vs. Mago /mǎgoh/ 'Magi'

balat /balāt/ 'skin' vs. malat /malāt/ 'hoarseness of voice'
 bali /balīʔ/ 'broken, fractured' vs. mali /malīʔ/ 'wrong, error'
 bana /bānah/ 'husband' vs. mana /mānah/ 'inheritance'
 banas /banās/ 'sultry' vs. manas /manās/ 'swollen; beriberi'
 banoy /bānoy/ 'eagle' vs. Manoy /mānoy/ 'elder brother'
 baso /bāsoh/ 'glass' vs. maso /māsoh/ 'mallet'
 biling /bilīŋ/ 'turn, gyration' vs. Miling /milīŋ/ 'a girl's
 name'
 buwal /buwāl/ 'fallen down' vs. muwal /muwāl/ 'full of food
 (mouth)'

d
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n

daga /dāgah/ 'dagger, sword' vs. naga /nāgah/ 'a species of tree;
 (cap) a city in the Bicol region'
 dahan /dāhan/ 'slowly' vs. nahan /nāhan/ 'where'
 dalag /dalāg/ 'mudfish' vs. nalag /nalāg/ 'a variant of sumalag
 parried'
 danay /dānay/ 'side, part' vs. nanay /nānay/ 'mother'
 dasa /dāsah/ 'family, lineage' vs. nasa /nāsah/ 'in, into, on'
 diyan /diyān/ 'there (near)' vs. niyan /niyān/ 'of that, by that'
 doon /doʔōn/ 'there (far)' vs. noon /noʔōn/ 'at the time, then'

g
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ŋ

бага /bagāʔ/ 'tumor, boil' vs. banga /baŋāʔ/ 'native earthen jar'

baga /bāga?/ 'lung' vs. banga /bāŋa?/ 'a species of palm'

bagay /bāgay/ 'thing, matter' vs. bangay /bāŋay/ 'quarrel'

bago /bagōh/ 'a species of tree' vs. bango /baŋōh/ 'fragrance, aroma'

bigas /bigās/ 'husked rice' vs. bingas /biŋās/ 'detached, worn out'

galit /gālīt/ 'anger, fury' vs. ngalit /ŋālīt/ 'gnashing of teeth'

galis /galīs/ 'dhobie itch' vs. ngalis /ŋalīs/ 'rub, friction'

gamay /gāmay/ 'used to; adjusted' vs. ngamay /ŋāmay/ 'numbness'

gata /gatā?/ 'coconut milk' vs. ngata /ŋatā?/ 'chew, masticate'

Gatal /gatāl/ 'a family name' vs. ngatal /ŋatāl/ 'trembling'

gawa /gawā?/ 'work' vs. ngawa /ŋawā?/ 'empty talking'

gayon /gayōn/ 'that way, like that' vs. ngayon /ŋayōn/ 'now'

giti /gitī?/ 'beginning to appear (perspiration)' vs. ngiti /ŋitī?/ 'smile'

pagal /pagāl/ 'tiredness, fatigue' vs. pangal /paŋāl/ 'blunt; wedge inserted in the mouth'

pagaw /pagāw/ 'hoarseness of voice' vs. pangaw /paŋāw/ 'clamp for punishment; handcuffs'

pagod /pagōd/ 'tired, fatigued' vs. pangod /paŋōd/ 'blunt, dull'

m—————n

kamaw /kamāw/ 'big earthen bowl' vs. kanaw /kanāw/ 'stir to dissolve (something)'

kamya /kamyāh/ 'a species of plant' vs. kanya /kanyāh/ 'his, her'

Mang /maŋ/ 'a particle antiponed to a man's Christian name' vs. nang /naŋ/ 'when'

masa /māsah/ 'dough' vs. nasa /nāsah/ 'in, on'

Minong /mīnong/ 'a man's name' vs. ninong /nīnong/ 'godfather'

mismis /mismīs/ 'particles of food left after meal' vs. nisnis
/nisnīs/ 'ravelled'

ngamay /ṅāmay/ 'numbness' vs. nganay /ṅānay/ 'with pa- first born'

sama /sāmah/ 'go, accompany' vs. sana /sānah/ 'expression of hope'

taman /tamān/ 'patience, diligence' vs. tanan /tanān/ 'all,
everybody'

n—————ṅ

bamban /bambān/ 'inside pellicle of fruit' vs. bambang /bambāṅ/ 'canal, drainage'

banal /banāl/ 'holy, pious' vs. bangal /baṅāl/ 'broken off (branches)'

banay /bānay/ 'slowly' vs. bangay /bāṅay/ 'quarrel'

bubon /bubōṅ/ 'small and shallow well' vs. bubong /bubōṅ/ 'roof'

bumbon /bumbōṅ/ 'heap, pile' vs. bumbong /bumbōṅ/ 'bamboo container'

buno /bunōʔ/ 'wrestling' vs. bungo /buṅōʔ/ 'skull'

ilan /?ilān/ 'how many' vs. ilang /?ilāṅ/ 'desolate place'

laman /lamān/ 'meat; content' vs. lamang /lamāṅ/ 'advantage'

lunos /lūnos/ 'affliction, grief' vs. lungos /lūṅos/ 'cape'

nawa /nawāʔ/ 'May it be so.' vs. ngawa /ṅawāʔ/ 'loud empty talking'

punas /pūnas/ 'sponge bath' vs. pungas /pūṅas/ 'getting up half
awake'

puson /pusōn/ 'hypogastrium' vs. pusong /pusōṅ/ 'impudent, shameless'

sanay /saṅāy/ 'used to, experienced' vs. sangay /saṅāy/ 'branch'

n
|
l

na /nah/ 'already' vs. la /lah/ 'musical note'
 naman /namán/ 'a Tagalog expression' vs. laman /laman/ 'content'
 nang /nan/ 'when' vs. lang /lan/ 'variant of lamang, only'
 nasa /náсах/ 'in, on, from' vs. lasa /láсах/ 'taste'
 nayon /náyon/ 'barrio' vs. layon /láyon/ 'aim, object'
 niig /niʔig/ 'tête-à-tête' vs. liig /liʔig/ 'neck'
 nino /nínoh/ 'whose' vs. Lino /línoh/ 'a man's name'

d
|
r

dilis /dílis/ 'a species of anchovy' vs. rilis /rílis/ 'railway'
 Dimas /dímas/ 'a man's name' vs. rimas /rímas/ 'a species of tree'
 Lida /lídah/ 'a girl's name' vs. lira /lírah/ 'lyre'
 padamdám /padamdám/ 'interjection, exclamation' vs. paramdam
 /paramdám/ 'hint, suggestive expression or action'

l
|
r

bala /bálah/ 'bullet' vs. bara /bárah/ 'measure equal to 2.75 ft.'

balat /balāt/ 'skin' vs. barat /barāt/ 'haggler'

bulak /bīlak/ 'cotton' vs. burak /būrak/ 'mire, mud'

bulo /būloh/ 'floss covering stems or fruit of plants' vs. buro
/būroh/ 'preserved fish or fruit'

bulol /bulōl/ 'obstacle in the throat' vs. burol /burōl/ 'hill'

kalang /kālaŋ/ 'wedge' vs. karang /kāraŋ/ 'awning'

dalas /dalās/ 'frequency' vs. daras /darās/ 'adze'

dula /dulāʔ/ 'play' vs. dura /durāʔ/ 'saliva, sputum'

dulo /dūloh/ 'end' vs. duro /dūroh/ 'offer insistently'

dulog /dulōg/ 'appear before a court' vs. durog /durōg/
'pulverized'

halang /hālaŋ/ 'obstacle, obstruction' vs. harang /hāraŋ/
'crosspiece'

iling /ʔilīŋ/ 'shake the head' vs. iring /ʔirīŋ/ 'abuse'

ilog /ʔīlog/ 'river' vs. irog /ʔīrog/ 'beloved'

lala /lālah/ 'braid' vs. Lara /lārah/ 'a girl's name'

lila /līlah/ 'of lilac color; earthen jar' vs. lira /līrah/ 'lyre'

lilip/līlip/ 'hem' vs. lirip /līrip/ 'comprehend, understand'

lolo /lōloh/ 'grandfather' vs. loro /lōroh/ 'parrot'

losa /lōsah/ 'porcelain plate' vs. Rosa /rōsah/ 'a girl's name'

pala /pālah/ 'shovel' vs. para /pārah/ 'stop'

palas /palās/ 'pared off, clipped' vs. paras /parās/ 'pungent,
biting'

piling /pilīŋ/ 'bunch, cluster' vs. piring /pirīŋ/ 'blindfold'

sala /salāh/ 'railing made of woven split bamboo' vs. sara /sarāh/
'closed'

talas /talās/ 'scrape off (palm leaves) vs. taras /tarās/ 'forwardness in speech'

tali /tāli?/ 'string, tie' vs. tari /tāri?/ 'metal spur of a fighting cock'

talik /talik/ 'dance, movement in dancing' vs. tarik /tarik/ 'steepness'

talo /tāloh/ 'defeated' vs. taro /tāroh/ 'porcelain or china jar'

tulo /tūlo?/ 'drop' vs. turo /tūro?/ 'instruction'

r
|
y

barong /barōŋ/ 'short for barong Tagalog, (a man's attire)' vs.

bayong /bayōŋ/ 'sack made of buri palm leaves'

kara /kārah/ 'the head side of the coin' vs. kaya /kāyah/ 'competence, ability'

Iran /irān/ Iran (Persia) vs. iyan /iyān/ 'that'

laro /larō?/ 'play, game' vs. layo /layō?/ 'go away, depart'

lugar /lugār/ 'place, site' vs. lugay /lugāy/ 'hanging loose (hair)'

sara /sarāh/ 'closed' vs. saya /sayāh/ 'joy, gladness'

Sara /sārah/ 'a girl's name' vs. saya /sāyah/ 'a native skirt'

w—————y

bahaw /bāhaw/ 'cold rice' vs. bahay /bāhay/ 'house'

kamaw /kamāw/ 'a big earthen bowl' vs. kamay /kamāy/ 'hand'

hiwa /hiwā?/ 'sliced' vs. hiya /hiyā?/ 'shame'

hiwas /hiwās/ 'oblique' vs. hiyas /hiyās/ 'jewel'
 lawa /lāwa?/ 'lake' vs. laya /lāya?/ 'freedom'
 pakaw /pākaw/ 'hoop' vs. pakay /pākay/ 'aim, object'
 sabaw /sabāw/ 'soup' vs. sabay /sabāy/ 'together; simultaneous'
 saklaw /saklāw/ 'within the scope' vs. saklay /saklāy/ 'hanging'
 sawa /sawāh/ 'boa' vs. saya /sayāh/ 'joy, gladness'
 tanaw /tanāw/ 'visible from afar' vs. Tanay /tanāy/ 'a town
 in Rizal'

tawa /tāwah/ 'laugh, smile' vs. taya /tāyah/ 'calculation'
 tiwa /tīwah/ 'intestinal worm' vs. tiya /tīyah/ 'aunt'
 tuwa /tuwā?/ 'joy, gladness' vs. tuya /tuyā?/ 'insult; irony'
 wari /wāri?/ 'it seems' vs. yari /yāri?/ 'make'

Double contrasts also occur in Tagalog disyllabic roots, usually formed by reduplicating the syllable. This type of contrast may be termed contrastive doublets. These are illustrated in the following examples:

p/b

kapkap /kapkáp/ 'frisk' vs. kabkab /kabkáb/ 'scrape off'
 kupkop /kupkóp/ 'sheltered' vs. kubkob /kubkób/ 'encircled'
 laplap /lapláp/ 'decorticated' vs. lablab /labláb/ 'voracious
 eating, as of a pig'
 luplop /luplóp/ 'sitting on a nest' vs. lublob /lublób/ 'wallowing'
 pakpak /pakpák/ 'wings' vs. bakbak /bakbák/ 'detached'
 papa /papāh/ 'papa, father' vs. baba /babāh/ 'carried on the back'
 papag /pápag/ 'bamboo bed' vs. babag /bábag/ 'impact, clash'
 papel /papél/ 'paper' vs. Babel /babél/ 'Babel (Tower of Babel)'

patpat /patpát/ 'stick' vs. batbat /batbát/ 'covered, adorned'
 pipi /pípih/ 'mute, dumb' vs. bibi /bíbih/ 'young duck'
 pitpit /pitpít/ 'flatten by pounding' vs. bitbit /bitbít/ 'carry'
 pukpok /pukpók/ 'beat, hammer' vs. bukbok /bukbók/ 'weevil'
 pudpod /pudpód/ 'worn out' vs. budbod /budbód/ 'scatter'
 pulpol /pulpól/ 'blunt' vs. bulbol /bulból/ 'hair'
 pumpong /pumpón/ 'sheaf of rice' vs. bumbong /bumbón/ 'bamboo
 container'

pupog /púpog/ 'attack of a fowl' vs. bubog /búbog/ 'crystal'
 pupot /pupót/ 'cover the mouth with the finger tips' vs. bubot
 /bubót/ 'immature, unripe'
 puspos /puspós/ 'thoroughly' vs. busbos /busbós/ 'operate on'
 sapsap /sapsáp/ 'a species of fish' vs. sabsab /sabsáb/ 'noisy
 and voracious eating, as of a pig'
 supsop /supsóp/ 'sip, suck' vs. subsob /subsób/ 'strike the
 head against a horizontal surface'

t/d

kitkit /kitkít/ 'scratched; disarranged' vs. kiðkid /kidkíd/
 'roll, reel'
 patpat /patpát/ 'stick' vs. padpad /padpád/ 'shipwrecked, drifted'
 satsat /satsát/ 'chat, chatter' vs. sadsad /sadsád/ 'anchored,
 grounded'
 sutsot /sutsót/ 'whistle' vs. sudsod /sudsód/ 'plowshare'
 tastas /tastás/ 'unstitched' vs. dasdas /dasdás/ 'pared off'
 tuta /tútah/ 'puppy' vs. duda /dúdah/ 'doubt'

k/g

laklak /laklāk/ 'gulp' vs. laglag /laglāg/ 'fallen, dropped'

luklok /luklōk/ 'sit (on a seat of honor)' vs. luglog /luglōg/

'a kind of noodle (pansit luglog)'

pakpak /pakpāk/ 'wings' vs. pagpag /pagpāg/ 'shake off'

saksak /saksāk/ 'stab' vs. sagsag /sagsāg/ 'trot'

taktak /taktāk/ 'jerk and shake' vs. tagtag /tagtāg/ 'unfastened'

tuktok /tuktōk/ 'pate' vs. tugtog /tugtōg/ 'music'

p/t

pakpak /pakpāk/ 'wing' vs. taktak /taktāk/ 'jerk and shake'

padpad /padpād/ 'driven away by waves or wind' vs. tadtad /tadtād/

'chopped, minced'

pagpag /pagpāg/ 'dust off' vs. tagtag /tagtāg/ 'unfastened'

papag /pāpag/ 'bamboo bed' vs. tatag /tātāg/ 'establish, organize'

paspas /paspās/ 'dust off; hurry' vs. tastas /tastās/ 'unstitched'

paypay /paypāy/ 'fan; shoulder-blade' vs. taytay /taytāy/ 'bamboo

plank or bridge'

pikpik /pikpīk/ 'pressed, compressed' vs. tiktik /tiktpīk/ 'spy'

pipa /pīpah/ 'cigarette pipe' vs. tita /tītah/ 'aunt'

pispis /pispīs/ 'remnants on the table after meal' vs. tistis

/tistīs/ 'surgical operation'

pukpok /pukpōk/ 'beat, hammer' vs. tuktok /tuktōk/ 'pate; knock'

pugpog /pugpōg/ 'rotting of the end of wood' vs. tugtog /tugtōg/

'music'

pupog /pūpog/ 'attack of a fowl' vs. tutog /tūtog/ 'snuff (ashes

of cigar or cigarette'

t/k

tabtab /tabtāb/ 'hew, trim' vs. kabkab /kabkāb/ 'scrape off'

tadtad /tadtād/ 'chopped, minced' vs. kadkad /kadmād/ spread,
unfolded'

taltal /taltāl/ 'verbal quarrel' vs. kalkal /kalkāl/ 'scraped;
scratched'

tata /tātah/ 'grandfather' vs. kaka /kākah/ 'uncle, aunt'

tawtaw /tawtāw/ 'touch the tip (fishing rod)' vs. kawkaw /kawkāw/
'dip the hand into the water and stir it'

taytay /taytāy/ 'bamboo plank or bridge' vs. kaykay /kaykāy/
scratch'

tistis /tistīs/ 'surgical operation' vs. kiskis /kiskīs/ 'rub
against'

b/d

baboy /bāboy/ 'pig' vs. Dadoy /dādoy/ 'a man's name'

bagbag /bagbāg/ 'broken up (land)' vs. dagdag /dagdāg/ 'addition'

basbas /basbās/ 'blessing; absolution' vs. dasdas /dasdās/ 'chopped
off'

busbos /busbōs/ 'surgical operation' vs. dusdos /dusdōs/ 'sarna
on the head'

butbot /butbōt/ 'dig up, search' vs. dutdot /dutdōt/ 'poke with
the finger'

d/g

daldal /daldǎl/ 'talkativeness' vs. galgal /galgǎl/ 'stupid, dull'
 dasdas /dasdǎs/ 'rasped, chopped off' vs. gasgas /gasgǎs/ 'scratched'
 dukdok /dukdǒk/ 'pounded, pulverized' vs. gukgok /gukgǒk/ 'grunt
 of pigs'
 sadsad /sadsǎd/ 'anchored, grounded' vs. sagsag /sagsǎg/ 'trot'

b/m

babad /babǎd/ 'thoroughly soaked in liquid' vs. mamad /mamǎd/
 'softened and swollen due to exposure to liquid'
 bubo /būboh/ 'a kind of fish-trap' vs. mumo /mūmoh/ 'particles
 of cooked rice left after meal'
 bubo /būbo?/ 'cast, smelt' vs. mumo /mūmo?/ 'ghost'
 bubog /būbog/ 'crystal' vs. mumog /mūmog/ 'gargle'
 busbos /busbōs/ 'surgical operation' vs. musmos /musmōs/ 'innocent'

d/n

damdām /damdǎm/ 'feeling' vs. namnam /namnǎm/ 'taste, savor'
 dikdik /dikdīk/ 'pounded, pulverized' vs. niknik /niknīk/ 'a species
 of fly'
 dutdot /dūtdōt/ 'poke with the finger' vs. nutnot /nutnōt/ 'rub
 off, wear away by friction'

g/ŋ

gaga /gagǎh/ 'violation of chastity' vs. nganga /ŋaŋǎh/ 'open
 (mouth)'
 galgal /galgǎl/ 'stupid, dull' vs. ngalngal /ŋalŋǎl/ 'loud crying'

gasgas /gasgǎs/ 'scratched, worn out' vs. ngasngas /ŋasŋǎs/
'loud empty talking'

gatgat /gatgǎt/ 'notch, dent' vs. ngatngat /ŋatŋǎt/ 'gnaw'

gawgaw /gawgǎw/ 'starch' vs. ngawngaw /ŋawŋǎw/ 'useless talk'

gutogot /gutgǒt/ 'entangled, disarranged' vs. ngutngot /ŋutŋǒt/
'insistent requesting for something'

m/n

mama /mǎma?/ 'any man, mister' vs. nana /nǎna?/ 'pus'

mismis /mismís/ 'particles of food left after the meal' vs.

nisnis /nisnís/ 'raveled'

n/ŋ

naknak /naknǎk/ 'swelling, abscess' vs. ngakngak /ŋakŋǎk/
'loud crying'

nana /nǎna?/ 'pus' vs. nganga /ŋǎŋa?/ 'prepared buyo'

nawnaw /nawnǎw/ 'to take root, as plants; germinate' vs. ngawngaw
/ŋawŋǎw/ 'loud empty talking'

nisnis /nisnís/ 'raveled' vs. ngisngis /ŋisŋís/ 'giggle'

nuynoy /nuynǒy/ 'meditate' vs. nguyngoy /ŋuynǒy/ 'continuous
crying over trifle'

t/s

tabtab /tabtǎb/ 'hewing' vs. sabsab /sabsǎb/ 'voracious and noisy
eating, as of a pig'

taktak /taktāk/ 'jerk and shake' vs. saksak /saksāk/ 'stab'

tadtad /tadtād/ 'chopped, minced' vs. sadsad /sadsād/ 'anchored,
grounded'

tagtag /tagtāg/ 'unfastened' vs. sagsag /sagsāg/ 'trot'

tantan /tantān/ 'cease, cessation' vs. sansan /sansān/ 'repeatedly,
incessantly'

tangtang /tangtān/ 'pull and jerk' vs. sangsang /sangsān/ 'strong odor'

tastas /tastās/ 'unstitched' vs. satsat /satsāt/ 'gossip'

tatag /tatāg/ 'stability' vs. sasag /sasāg/ 'split bamboo'

taytay /taytāy/ 'bamboo plank' vs. saysay /saysāy/ 'narration;
value'

tibtib /tibtib/ 'the end of sugar cane' vs. sibsib /sibfib/ 'setting
of the sun'

tiktik /tikfik/ 'spy' vs. siksik /sikfik/ 'crowded; insert into'

tigtig /tigfik/ 'jerking and shaking' vs. sigsig /sigfik/ 'torch
made of split bamboo'

timtim /timfim/ 'sufferance' vs. simsim /simfim/ 'taste'

tingting /tingfin/ 'midrib of palm leaves' vs. singsing /singfin/ 'ring'

tuktok /tukfok/ 'pate; knock' vs. suksok /sukfok/ 'insert into'

tungtong /tunfon/ 'cover for pots' vs. sungsong /sunfon/ 'sail
against the wind'

tutog /tufog/ 'snuff, e.g., cigars' vs. susog /sufog/ 'amendment'

s/h

sabsab /sabsāb/ 'voracious and noisy eating, as of a pig' vs.

habhab /habhāb/ 'attack by a dog or pig'

sadsad /sadsǎd/ 'anchored, grounded' vs. hadhad /hadhǎd/ 'rub vigorously'

sangsang /sangsǎŋ/ 'strong odor' vs. hanghang /hanhǎŋ/ 'peppery'
sutsot /sutsǒt/ 'whistle vs. huthot /huthǒt/ 'sip, suck'

?/h

inin /ʔinʔin/ 'leave (rice) on the fire after it has been cooked'
vs. hinhin /hinhin/ 'modesty'

utot /ʔutʔǒt/ 'keep or hold food in the mouth without chewing it'
vs. huthot /huthǒt/ 'sipped, sucked'

n/l

naknak /naknǎk/ 'swelling' vs. laklak /laklǎk/ 'gulp'

namnam /namnǎm/ 'taste, savor' vs. lamlam /lamlǎm/ 'flickering light'

nawnaw /nawnǎw/ 'to take root, as plants' vs. lawlaw /lawlǎw/ 'dangling'

nugnog /nugnǒg/ 'nearness' vs. luglog /luglǒg/ 'shake'

nuynoy /nuynǒy/ 'meditate' vs. luyloy /luylǒy/ 'hanging loosely'

w/y

kawkaw /kawkwǎw/ 'stirring liquid with the hand' vs. kaykay /kaykǎy/ 'scratching of chicken'

tawtaw /tawtǎw/ 'touch the tip, e.g., fishing rod' vs. taytay /taytǎy/ 'a bamboo plank or bridge'

wawa /wǎwaʔ/ 'mouth of a river' vs. yaya /yǎyaʔ/ 'invitation'

Double contrasts also occur in Tagalog words of three or more syllables, as in the following examples:

halakhak /halakhák/ 'outburst of laughter' vs. halaghag /halaghág/
'careless'

saluksok /saluksók/ 'anything carried at the waist' vs. salugsog
/salugsóg/ 'search, investigate'

pagakpak /pagakpák/ 'flapping of wings' vs. tagaktak /tagakták/
'downpour of perspiration'

palakpak /palakpák/ 'clap, applause' vs. talaktak /talakták/
'go through or across'

pagatpat /pagatpát/ 'a species of tree' vs. pagakpak /pagakpák/
'flapping of wings'

taluktok /taluktók/ 'top, summit' vs. saluksok /saluksók/
'carried at the waist, e.g. bolo'

taludtod /taludtód/ 'row, file' vs. saludsod /saludsód/ 'uproot
grass with a blunt instrument'

tagunton /taguntón/ 'inquire into, investigate' vs. sagunson
/sagunsón/ 'hem in'

tagimtim /tagimtím/ 'go into, seep' vs. sagimgim /sagimsím/
'premonition'

taliktik /taliktík/ 'sonorous voice' vs. saliksik /saliksík/
'research'

tibatib /tibátib/ 'dirt on the skin' vs. sibasib /sibásib/ 'rush
against violently'

tigatig /tigátig/ 'annoyance; excite to action' vs. sigasig
/sigásig/ 'diligence'

taritari /taritári²/ 'slanderos gossip' vs. sarisari /sarisári²/
'different kinds'

palapala /palàpālah/ 'platform; improvised canopy from branches'
vs. parapara /paràpārah/ 'everything, all'

halimhim /halimhīm/ 'brood, hatch' vs. halinhin /halinhĩn/
'replace, substitute'

halinhin /halinhĩn/ 'replace' vs. halinghing /halinhĩŋ/ 'neigh
of a horse'

kalawkaw /kalawkāw/ 'stir liquid with the hand' vs. kalaykay
/kalaykāy/ 'rake'

butuhan /butuhān/ 'skinny, bony' vs. botohan /botohān/ 'election'

Double transposed contrasts are very common in Tagalog words with a reduplicated closed syllable. For instance, /b/ contrasts with /d/ in budbod /budbōd/ 'scatter' vs. dubdob /dubdōb/ 'blaze'. The initial and final sounds of the reduplicated syllable interchange-- forming a contrast in syllable-initial and syllable-final positions. Examples of this type of contrasts are the following:

bakbak /bakbāk/ 'detached' vs. kabkab /kabkāb/ 'scraped off'
balbal /balbāl/ 'slang' vs. lablab /lablāb/ 'voracious eating'
basbas /basbās/ 'blessing' vs. sabsab /sabsāb/ 'noisy and
voracious eating'

kapkap /kapkāp/ 'frisk' vs. pakpak /pakpāk/ 'wings'

kidkid /kidkid/ 'roll, reel' vs. dikdik /dikdik/ 'pounded,
pulverized'

kubkob /kubkōb/ 'encircle' vs. bukbok /bukbōk/ 'weevil'

kudkod /kudkōd/ 'scraped off' vs. dukdok /dukdōk/ 'pounded'

kupkop /kupkōp/ 'sheltered' vs. pukpok /pukpōk/ 'beat, hammer'

kutkot /kutkōt/ 'scrape' vs. tuktok /tuktōk/ 'pate'

dasdas /dasdās/ 'pared off' vs. sadsad /sadsād/ 'anchored'

dibdib /dibdīb/ 'chest' vs. bidbid /bidbīd/ 'roll, reel'

dubdob /dubdōb/ 'blaze' vs. budbod /budbōd/ 'scatter'

dusdos /dusdōs/ 'sarna^{worn} on the head' vs. sudsod /sudsōd/ 'plow-share'

gitgit /gitgīt/ 'wale' vs. tigtig /tigtiḡ/ 'jerking and shaking'

gusgos /gusgōs/ 'untidiness' vs. sugzog /sugzōg/ 'search,

investigate'

gutgot /gutgōt/ 'disarranged, uncombed' vs. tugtog /tugtōg/

'music'

laklak /laklāk/ 'gulp' vs. kalkal /kalkāl/ 'scrape'

ladlad /ladlād/ 'unfurled' vs. daldal /daldāl/ 'talkativeness'

laglag /laglāg/ 'fallen' vs. galgal /galgāl/ 'stupid'

lublob /lublōb/ 'wallowing' vs. bulbol /bulbōl/ 'hair'

luplop /luplōp/ 'sitting on a nest' vs. pulpol /pulpōl/ 'blunt'

mismis /mismīs/ 'good remnants on the table' vs. simsim /simsīm/

'taste'

namnam /namnām/ 'taste, savor' vs. manman /manmām/ 'observe,

spy on'

nisnis /nisnīs/ 'raveled' vs. sinsin /sinsīn/ 'close, e.g., weave'

nutnot /nutnōt/ 'rub off' vs. tunton /tuntōn/ 'follow'

ngasngas /ḡasḡās/ 'loud empty talking' vs. sangsang /saḡsaḡ/

'strong odor'

ngatngat /ŋatŋát/ 'gnaw' vs. tangtang /taŋtán/ 'pull and jerk'

ngawngaw /ŋawŋáw/ 'loud empty talk' vs. wangwang /waŋwán/

'wide open'

ngisngis /ŋisŋís/ 'giggle' vs. singsing /siŋsiŋ/ 'ring'

padpad /paɖpaɖ/ 'driven by waves' vs. dapdap /daɖdaɖ/ 'a species of tree'

pikpik /pikpík/ 'pressed, compressed' vs. kipkip /kipkíp/ 'carry under the armpit'

puspos /puspós/ 'thoroughly' vs. supsop /supsóp/ 'sip, suck'

saksak /saksák/ 'stab' vs. kaskas /kaskás/ 'scrape'

sagsag /sagság/ 'trot' vs. gasgas /gasgás/ 'scratched'

sapsap /sapsáp/ 'a species of fish' vs. paspas /paspás/ 'dust off'

satsat /satsát/ 'chat' vs. tastas /tastás/ 'unstitched'

siksik /siksík/ 'crowded' vs. kiskis /kiskís/ 'rub against'

suksok /suksók/ 'insert into' vs. kuskos /kuskós/ 'husk'

sipsip /sipsíp/ 'sip, suck' vs. pispis /pispís/ 'remnants on the table after meal'

tabtab /tabtáb/ 'hewing' vs. batbat /batbát/ 'covered, adorned'

tagtag /tagtág/ 'unfastened' vs. gatgat /gatgát/ 'notch'

tibtib /tibtib/ 'the end of sugar cane' vs. bitbit /bitbít/

'carry'

tustos /tustós/ 'support, supply' vs. sutsot /sutsót/ 'whistle'

wakwak /wakwák/ 'big or long tear or rend' vs. kawkaw /kawkáw/

'stir, e.g., liquid'

yasyas /yasyás/ 'scrape' vs. saysay /saysáy/ 'narration; value'

i
|
e

iwan /ʔiwan/ 'to leave (someone)' vs. ewan /ʔéwan/ 'ignorance
or denial of something'

bila /bīlah/ 'split bamboo used as reenforcement' vs. bela
/bēlah/ 'sail of a boat'

bilo /bīloh/ 'ball, roll (flour or rice)' vs. belo /bēloh/ 'veil'

binta /bīntah/ 'Moro vinta or canoe' vs. benta /bēntah/ 'sales'

mina /mīnah/ 'mine' vs. Mena /mēnah/ 'a girl's name'

Misa /mīsah/ 'Mass' vs. mesa /mēsah/ 'table'

sili /sīlih/ 'pepper' vs. Cely /sēlih/ 'a girl's name'

Singson /sīŋson/ 'a family name' vs. Sengson /sēŋson/ 'another
family name'

tila /tīlah/ 'maybe, perhaps' vs. tela /tēlah/ 'cloth, fabric'

Tina /tīnah/ 'a girl's name' vs. tena /tēnah/ 'let's go'

tinis /tīnis/ 'shrillness of voice' vs. tenis /tēnis/ 'tennis'

i—————u

bikas /bīkas/ 'figure, posture' vs. bukas /būkas/ 'tomorrow'

biklat /bīklāt/ 'disjoined, spread out' vs. buklat /buklāt/ 'open'

bini /bīnih/ 'modesty' vs. buni /būnih/ 'herpes'

binyag /binyāg/ 'baptism' vs. bunyag /bunyāg/ 'exposed, known'

kilay /kīlay/ 'eyebrow' vs. kulay /kūlay/ 'color'

kilo /kilōʔ/ 'bent, crooked' vs. kulo /kulōʔ/ 'boiling'

kirot /kirōt/ 'smart, stinging pain' vs. kurot /kurōt/ 'pinch'

dila /dīlaʔ/ 'tongue' vs. dula /dūlaʔ/ 'play'

hila /hīlah/ 'pull' vs. hula /hūlah/ 'hula dance'

ika /?ikā?/ 'limping' vs. uka /?ukā?/ 'dug up, hollowed'

ikit /?īkit/ 'turn' vs. ukit /?ūkit/ 'carving; groove'

ihaw /?īhaw/ 'roast' vs. uhaw /?ūhaw/ 'thirst'

ilan /?ilān/ 'how many' vs. ulan /?ulān/ 'rain'

ilang /?ilāŋ/ 'wide open space, desolate place' vs. ulang /?ulāŋ/
'lobster'

likot /likōt/ 'mischievousness' vs. lukot /lukōt/ 'crumpled'

ligas /ligās/ 'a species of shrub' vs. lugas /lugās/ 'falling off'

ligaw /līgaw/ 'courtship' vs. lugaw / lūgaw/ 'rice gruel'

liha /līha?/ 'a section of fruit like orange' vs. luha /lūha?/
'tears'

pila /pilāh/ 'chipped off (edges or corners)' vs. pula /pulāh/
'red'

pilas /pilās/ 'rent, ripped' vs. pulas /pulās/ 'escape'

pison /piśon/ 'steam roller' vs. puson /puśon/ 'hypogastrium'

pista /pistāh/ 'holiday, feastday' vs. pusta /pustāh/ 'bet'

pito /pītoh/ 'cigarette pipe' vs. puto /pūtoh/ 'rice bun'

siko /sikōh/ 'shove with the elbow' vs. suko /sukōh/ 'up to
the limit of a distance'

siha /sīha?/ 'slit of fingers' vs. suha /sūha?/ 'a species of
orange'

silong /sīlon/ 'the space below the house' vs. sulong /sūlon/
'go ahead'

sinok /sinōk/ 'hiccough' vs. sunok /sunōk/ 'surfeit'

tiba /tibā?/ 'to cut down (banana fruit)' vs. tuba /tubā?/ 'an
intoxicating drink from palms'

tilis /tilís/ 'lye' vs. tulis /tulís/ 'pointed'
 tingga /tingǎ?/ 'lead (metal)' vs. tungga /tungǎ?/ 'drink, gulp'
 tipi /tipí?/ 'well-compressed' vs. tupi /tupí?/ 'fold, folded'
 tibo /tíbo?/ 'prick, thorn' vs. tubo /túbo?/ 'growth; profit'

e—————o

bela /bélah/ 'sail of a boat' vs. bola /bólah/ 'ball'
 beses /béses/ 'number of times' vs. boses /bóses/ 'voice'
 bote /bóteh/ 'bottle' vs. boto /bótoh/ 'vote'
 Eden /?edén/ 'Eden, Paradise' vs. Edon /?edón/ 'a boy's name'
 gera /gérāh/ 'war' vs. gora /górāh/ 'cap'
 peste /pésteh/ 'pest, epidemic' vs. poste /pósteh/ 'post, pillar'
 renda /réndah/ 'rein' vs. ronda /róndah/ 'night patrol'
 reseta /resétah/ 'doctor's prescriptions' vs. Roseta /rosétah/
 ' a girl's name'

u—————o

bubo /búboh/ 'a basket-like contraption used for trapping fish or
 shrimps' vs. bobo /bóboh/ 'stupid, dull'
 bukal /bukál/ 'water spring' vs. bokal /bokál/ 'a member of a
 provincial governing body'
 buhol /buhól/ 'knot' vs. Bohol /bohól/ 'Bohol city'
 buling /búliŋ/ 'smut, smudge' vs. boling /bóliŋ/ 'bowling'
 butas /bútas/ 'hole' vs. botas /bótas/ 'boots'
 kura /kúrah/ 'priest, clergy' vs. Cora /kórah/ 'a girl's name'
 muna /múnah/ 'beforehand' vs. Mona /mónah/ 'a girl's name'
 mura /múrah/ 'cheap' vs. Mora /mórah/ 'a Moslem girl'
 uso /?úsoh/ 'fashion, vogue' vs. oso /?ósoh/ 'bear'

The completely minimal pairs of words distinguished by /d/ vs. /r/, /i/ vs. /e/ and /u/ vs. /o/ contrasts (historically allophonic) are but few. However, there are many Tagalog words close to minimal contrasts. The following is a sample listing of these near-minimal contrasts:

d/r

daga /dǎgah/ 'dagger' vs. raha /rāhah/ 'rajah'
 danyos /dǎnyos/ 'damage' vs. rayos /rǎyos/ 'spoke of a wheel'
 datal /datǎl/ 'arrival' vs. ratan /ratǎn/ 'rattan'
 daya /dǎya?/ 'deceit, fraud' vs. raya /rǎyah/ 'linemark'
 dayami /dayǎmih/ 'straw' vs. rayuma /rayūmah/ 'rheumatism'
 didal /didǎl/ 'thimble' vs. ribal/ribǎl/ 'rival'
 dipa /dipǎh/ 'sideward extension of the arms' vs. ripa /rǐpah/
 'lottery'
 dulo /dūloh/ 'end' vs. rolyo /rōlyoh/ 'roll'
 dusa /dūsah/ 'sorrow, suffering' vs. Rosa /rōsah/ 'a girl's name'

i/e

arina /?arǐnah/ 'flour' vs. reyna /rēynah/ 'queen, muse'
 atis /?ātis/ 'a species of fruit' vs. ate /?āteh/ 'elder sister'
 bikas /bǐkas/ 'posture, built' vs. pekas /pēkas/ 'freckles'
 bikti /biktǐh/ 'kill by hanging' vs. berde /berdēh/ 'green'
 bihon /bǐhon/ 'a kind of noodle' vs. beho /bēhoh/ 'old, aged'
 bilin /bǐlin/ 'order; advice before leaving' vs. Belen /belēn/
 'a girl's name'
 kita /kǐtah/ 'earning' vs. ketong /kēton/ 'leprosy'
 klima /klǐmah/ 'climate' vs. krema /krēmah/ 'cream'

kundi /kundi?/ 'but, except' vs. konde /kõndeh/ 'count'
 giray /gĩray/ 'swaying movement' vs. gera /gěrah/ 'war'
 hibi /hĩbih/ 'dried shrimps' vs. hepe /hěpeh/ 'chief, boss'
 hili /hĩli?/ 'envy' vs. hele /hěleh/ 'cradle songs, lullaby'
 hintay /hintāy/ 'wait' vs. Tentay /tentāy/ 'a woman's name'
 hito /hĩto?/ 'a kind of fish' vs. heto /hětoh/ 'here it is'
 ihi /?ĩhi?/ 'urine' vs. ehe /?ěheh/ 'axle'
 Linda /lĩndah/ 'a girl's name' vs. renda /rěndah/ 'rein'
 lintik /lintĩk/ 'lightning' vs. lente /lěnteh/ 'flashlight'
 liit /li?ĩt/ 'smallness' vs. leeg /le?ěg/ 'neck'
 nina /nināh/ 'of them, by them' vs. Nena /něnah/ 'a girl's name'
 pikit /pĩkit/ 'close the eyes' vs. tiket /tĩket/ 'ticket'
 piho /pĩhoh/ 'certain, sure' vs. pero /pěroh/ 'but'
 pila /pĩlah/ 'line, queue' vs. pera /pěrah/ 'money'
 pilas /pĩlas/ 'tear, rend' vs. peras /pěras/ 'pear'
 pipi /pĩpih/ 'mute and dumb' vs. Pepe /pěpeh/ 'a boy's name'
 pisa /pisā?/ 'hatched; crushed' vs. pesa /pěsa?/ 'a kind of
 native dish'

pista /pistāh/ 'feast, holiday' vs. peste /pěsteh/ 'pest'
 sila /silāh/ 'they' vs. Sela /sělah/ 'a woman's name'
 silo /sĩlo?/ 'trap, snare' vs. Selo /sěloh/ 'a man's name'
 silya /silyāh/ 'chair' vs. selyo /sělyoh/ 'stamp'
 tinda /tindāh/ 'goods for sale' vs. benda /běndah/ 'bandage'

u/o

blusa /blūsah/ 'blouse' vs. bloke /blōkeh/ 'block'
 bruha /brūhah/ 'witch' vs. brotsa /brōtsah/ 'painter's brush'

bubo /bũbo?/ 'cast, smelt' vs. bobo /bõboh/ 'stupid, dull'

bukal /bukāl/ 'water spring' vs. lokal /lokāl/ 'local'

bula /bulā?/ 'bubble' vs. bola /bõlah/ 'ball'

buno /bunõ?/ 'wrestling' vs. bono /bõnoh/ 'bond'

buntal /buntāl/ 'fistcuffs' vs. mortal /mortāl/ 'mortal'

buti /bũtih/ 'goodness' vs. bote /bõteh/ 'bottle'

buto /butõh/ 'bone; seed' vs. boto /bõtoh/ 'vote'

kula /kulāh/ 'bleach clothes under the sun' vs. kola /kõlah/
'glue, paste'

kundi /kundĩ?/ 'but, except' vs. konde /kõndeh/ 'count'

kupya /kupyā?/ 'circumflex accent mark' vs. kopya /kõpyah/ 'copy'

kura /kũrah/ 'priest, clergy' vs. gora /gõrah/ 'cap'

kuro /kũro?/ 'opinion' vs. koro /kõroh/ 'choir'

kurso /kursõh/ 'diarrhea' vs. kotso /kotsõh/ 'cork-soled slippers'

kurtina /kurtĩnah/ 'curtain' vs. morpina /morpĩnah/ 'morphine'

kuta /kũta?/ 'fort' vs. kota /kõtah/ 'quota'

kutson /kutsõh/ 'cushion' vs. kotse /kõtseh/ 'car'

gulpe /gulpẽh/ 'blow, strike' vs. torpe /tõrpeh/ 'stupid'

gumon /gũmon/ 'addicted; rolling' vs. goma /gõmah/ 'rubber'

guro /gũro?/ 'teacher' vs. gora /gõrah/ 'cap'

lukot /lũkot/ 'crumple' vs. loko /lõkoh/ 'crazy, fool'

lumot /lũmot/ 'moss' vs. lomo /lõmoh/ 'loin'

luoy /lu?õy/ 'withered' vs. look /lo?õk/ 'bay'

lura /lurā?/ 'sputum' vs. loro /lõroh/ 'parrot'

lusak /lũsak/ 'mire, mud' vs. losa /lõsah/ 'porcelain (plate)'

luto /lũto?/ 'cooked' vs. lote /lõteh/ 'lot'

muna /mũnah/ 'beforehand' vs. moda /mõdah/ 'fashion, vogue'

mundo /mundōh/ 'world' vs. modo /mōdoh/ 'manners'

pulot /pulōt/ 'honey' vs. poot /po?ōt/ 'hate'

puri /pūrih/ 'praise, honor' vs. tore /tōreh/ 'tower'

puso /pūso?/ 'heart' vs. poso /pōsoh/ 'artesian well'

putal /putāl/ 'amount in excess of round numbers' vs. total
/totāl/ 'total'

suno /sūno?/ 'live with a person or family' vs. sona /sōnah/
'zone'

suob /su?ōb/ 'fumigation' vs. loob /lo?ōb/ 'inside, interior'

tumba /tumbāh/ 'fallen down' vs. bomba /bōmbah/ 'bomb'

tuna /tūnah/ 'tuna fish' vs. tono /tōnoh/ 'tone, tune'

tunay /tūnay/ 'real, true' vs. Tonang /tōnaŋ/ 'a woman's name'

tupa /tūpah/ 'sheep' vs. toga /tōgah/ 'cap and gown'

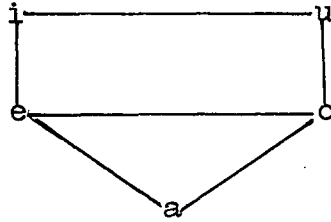
upa /?ūpah/ 'rent' vs. kopa /kōpah/ 'wine cup'

upak /?ūpak/ 'sheath of banana plant' vs. opal /?ōpal/ 'opal'

upo /?ūpoh/ 'gourd' vs. opo /?ōpo?/ 'yes, sir'

upong /?ūpon/ 'at the point of' vs. Opon /?ōpon/ 'a town in
Cebu City'

The following sample listing illustrates the five-way contrast of Tagalog vowels: /i/ vs. /e/ vs. /u/ vs. /o/ vs. /a/



atis /ʔātis/ 'a species of tree and its fruit'

ate /ʔāteh/ 'elder sister'

atubili /ʔatubīlih/ 'hesitance'

atole /ʔatōleh/ 'flour gruel'

atas /ʔātas/ 'order, command'

bikas /bīkas/ 'posture, built'

pekas /pēkas/ 'freckles'

bukas /būkas/ 'tomorrow'

bokal /bokāl/ 'a member of a provincial governing body'

bakas /bākas/ 'financial partnership in gambling'

bikat /bīkat/ 'large scar'

beki /bēkiʔ/ 'mumps'

bukal /bukāl/ 'water spring'

bokal /bokāl/ 'a member of a provincial governing body'

bakal /bakāl/ 'planting rice on upland'

biko /bikoh/ 'a kind of rice cake'
 beho /bēhoh/ 'old, aged'
 bubo /būbo?/ 'cast, smelt'
 bobo /bōboh/ 'stupid, dull'
 baho /bāhoh/ 'bass (tone or voice)'

Bikol /bikol/ 'Bicol region'
 beki /bēki?/ 'mumps'
 bukol /bukol/ 'boil, swelling'
 Bohol /bohōl/ 'Bohol city'
 bakol /bākol/ 'large basket'

bihon /bihon/ 'a kind of noodle'
 beho /bēhoh/ 'old, aged'
 buhol /buhōl/ 'knot'
 Bohol /bohōl/ 'Bohol city'
 baho /bāho?/ 'disagreeable odor'

bila /bilah/ 'split bamboo used as reenforcement'
 bela /bēlah/ 'sail of a boat'
 bula /būla?/ 'lie, falsehood'
 bola /bōlah/ 'ball'
 bala /bālah/ 'bullet'

bilihan /bilihan/ 'to buy from'
 betohin /betōhin/ 'to veto'
 butuhan /butuhan/ 'skinny, bony'
 botohan /botohan/ 'election'
 batuhan /batuhan/ 'stony place'

bilin /bīlin/ 'order; advice before leaving'

Belen /belēn/ 'a girl's name'

buling /būlin/ 'smut, smudge'

boling /bōlin/ 'bowling'

baling /bālin/ 'turn, inclination'

bino (de kina) /bīnoh/ 'a kind of wine'

Benus /bēnus/ 'Venus'

buno /bunō?/ 'wrestling'

bono /bōnoh/ 'bond'

banyo /bānyoh/ 'bathroom'

bitin /bītin/ 'hang'

Betty /bētih/ 'a girl's name'

buti /būtih/ 'goodness'

bote /bōteh/ 'bottle'

bati /batih/ 'stir, beat'

Bito /bītoh/ 'a man's name'

beto /bētoh/ 'veto'

buto /butōh/ 'bone; seed'

boto /bōtoh/ 'vote'

bato /batōh/ 'stone; kidney'

bigada /brigādah/ 'brigade'

Bretanya /bretānyah/ 'Britain'

bruha /brūhah/ 'witch'

brotsa /brōtsah/ 'painter's brush'

braso /brāsoh/ 'arm'

kilo /kɪloh/ 'kilo'

keso /kɛsoh/ 'cheese'

kula /kulāh/ 'bleach'

kola /kōlah/ 'glue, paste'

kala /kālah/ 'tortoise'

kilo /kilōʔ/ 'crooked, curved'

belo /bēloh/ 'veil'

kulo /kulōʔ/ 'boiling'

kola /kōlah/ 'glue, paste'

kalo /kalōʔ/ 'pulley'

kinding /kindiŋ/ 'affected gait'

kendi /kēndih/ 'candy'

kundi /kundiʔ/ 'but, except'

konde /kōndeh/ 'count'

kandila /kandilaʔ/ 'candle'

kisa /kisaʔ/ 'cereals mixed with rice'

kesa /kɛsah/ 'than'

kura /kūrah/ 'priest, clergy'

Cora /kōrah/ 'a girl's name'

kara /kārah/ 'head side of the coin'

kita /kitah/ 'visible from a distance'

ketong /kɛtoŋ/ 'leprosy'

kuta /kūtaʔ/ 'fort'

kota /kōtah/ 'quota'

kata /katah/ 'we (dual)'

ihī /ʔihiʔ/ 'urine'

ehe /ʔēheh/ 'axle'

uha /ʔuhāʔ/ 'cry of a new-born babe'

oho /ʔōhoʔ/ 'yes (less formal)'

ahon /ʔāhon/ 'to land, ascend'

ipa /ʔipāh/ 'chaff'

epiko /ʔēpikōh/ 'epic'

upa /ʔūpah/ 'rent, pay'

kopa /kōpah/ 'wine cup'

apa /ʔāpah/ 'wafer'

ipil /ʔīpil/ 'a species of tree'

epiko /ʔēpikōh/ 'epic'

upa /ʔūpah/ 'rent, pay'

opal /ʔōpal/ 'opal'

apaw /ʔāpaw/ 'overflowing'

isa /ʔisāh/ 'one'

ESSO /ʔēsoh/ 'ESSO gas'

usa /ʔusāh/ 'deer'

oso /ʔōsoh/ 'bear'

asa /ʔāsah/ 'hope'

giray /gīray/ 'stagger, totter'

gera /gērah/ 'war'

guro /gūroʔ/ 'teacher'

gora /gōrah/ 'cap'

gara /gāraʔ/ 'beautiful, splendid'

hibi /hĩbĩh/ 'dried shrimps'

hepe /hẽpeh/ 'chief, boss'

hupa /hupã?/ 'appeasement, mitigation'

hopya /hopyã?/ 'a kind of Chinese bun'

habi /hãbih/ 'weave'

hilik /hilĩk/ 'snore'

hele /hẽleh/ 'lullaby'

huli /hũlih/ 'catch'

honda /hõndah/ 'Honda bike'

halik /halĩk/ 'kiss'

hipon /hĩpon/ 'shrimp'

hepe /hẽpeh/ 'chief, boss'

upong /ʔũpon/ 'at the point of '

Opon /ʔõpon/ 'a town in Cebu'

hapon /hãpon/ 'afternoon'

libo /lĩboh/ 'thousand'

leon /leʔõn/ 'lion'

lubo /lubõ?/ 'depression in the ground'

lobo /lõboh/ 'balloon'

labo /lãbo?/ 'indistinctness; turbidity'

likot /likõt/ 'movement'

legal /legãl/ 'lawful, legal'

lukot /lukõt/ 'crumpled'

loko /lõkoh/ 'crazy, fool'

lako /lãko?/ 'goods being sold around'

liit /liʔit/ 'smallness, littleness'

leeg /leʔeg/ 'neck'

luoy /luʔoy/ 'withered'

look /loʔok/ 'bay'

laon /laʔon/ 'old'

limot /limot/ 'forget'

lente /lênteh/ 'flashlight'

lumot /lûmot/ 'moss'

lomo /lômoh/ 'loin'

lamo /lâmoh/ 'raft'

Lina /lînah/ 'a girl's name'

Nena /nênah/ 'a girl's name'

Luna /lûnah/ 'a family name'

La Loma /la lômah/ 'La Loma Cemetery'

lana /lânah/ 'wool'

Linda /lîndah/ 'a girl's name'

renda /rêndah/ 'rein'

ronda /rôndah/ 'night patrol'

lundag /lundăg/ 'jump'

landas /landăs/ 'path, way'

lintik /lintik/ 'lightning'

lente /lênteh/ 'flashlight'

lunti /luntîʔ/ 'green'

lomo /lômoh/ 'loin'

lantik /lantik/ 'bend, curve'

lira /līrah/ 'lyre'

letra /lētrah/ 'letter'

lura /lurā?/ 'sputum'

loro /lōroh/ 'parrot'

Lara /lārah/ 'a girl's name'

Lisa /līsah/ 'a girl's name'

letse (kondensada) /lētseh/ 'milk (condensed)'

lusak /lūsak/ 'mire, mud'

losa /lōsah/ 'porcelain (plate)'

lasa /lāsah/ 'taste'

litid /lītid/ 'ligament'

Letty /lētih/ 'a girl's name'

lunti /luntī?/ 'green'

lote /lōteh/ 'lot'

lati /lāti?/ 'marsh'

mina /mīnah/ 'mine'

Mena /mēnah/ 'a woman's name'

muna /mūnah/ 'beforehand'

Mona /mōnah/ 'a girl's name'

mana /mānah/ 'inheritance'

nina /nināh/ 'of them, by them'

Nena /nēnah/ 'a girl's name'

nuno /nūno?/ 'forefather'

nonong /nōnon/ 'a boy'

Nano /nāno?/ 'a man's name'

ngingi /ŋiŋi?/ 'the angle between fingers or toes'

nene /nēne?/ 'little girl'

nguso /ŋuso?/ 'upper lip'

ngongo /ŋoŋo?/ 'speaking with a nasal twang'

nganga /ŋaŋa?/ 'prepared buyo'

pila /pīlah/ 'line, queue'

pera /pērah/ 'money'

pula /pulāh/ 'red'

Pola /pōlah/ 'a town in Mindoro'

pala /pālah/ 'shovel'

pilas /pīlas/ 'tear, rend'

peras /pēras/ 'pear'

pulas /pulās/ 'escape'

posas /pōsas/ 'manacle, handcuff'

pasas /pāsas/ 'raisin'

pilok /pilōk/ 'twisted foot'

peluka /pelūkah/ 'wig'

pulot /pulōt/ 'honey'

poot /po?ōt/ 'hate, hatred'

palot /pālot/ 'odor of urine'

pipi /pīpih/ 'mute, dumb'

Pepe /pēpeh/ 'a boy's name'

puri /pūrih/ 'praise; honor'

pobre /pōbreh/ 'poor'

pare /pāreh/ 'vocative word used in addressing a man'

- pisa /pisǎ?/ 'hatched; crushed'
 pesa /pěsa?/ 'a kind of native dish'
 pusa /půsa?/ 'cat'
 posas /pōsas/ 'manacle, handcuff'
 pasas /pāsas/ 'raisin'

 piso /pīsoh/ 'peso'
 pero /pěroh/ 'but'
 puro /půroh/ 'pure'
 Poro (Poro Point) /pōroh/ 'name of a place'
 paros /pāros/ 'a species of clam'

 pista /pistǎh/ 'feast, holiday'
 peste /pěsteh/ 'pest'
 pusta /pustǎh/ 'bet'
 poste /pōsteh/ 'post'
 pasta /pāstah/ 'filling (dental)'

 sila /silǎh/ 'they'
 Sela /sělah/ 'a woman's name'
 sulo /sulō?/ 'torch'
 solo /sōloh/ 'solo'
 sala /sālah/ 'sin, fault'

 sili /sīlih/ 'pepper'
 Cely /sělih/ 'a girl's name'
 sulit /sūlit/ 'an accounting of'
 Solly /sōlih/ 'a girl's name'
 Sally /sālih/ 'a girl's name'

silya /silyáh/ 'chair'

selyo /sélyoh/ 'stamp'

sulyap /sulyáp/ 'side glance'

sodyo /sōdyoh/ 'sodium'

salya /sályah/ 'throw away'

sina /sináh/ 'person marker (pl.)'

senso /sénsoh/ 'census'

suno /sūno?/ 'live with a person or family'

sona /sōnah/ 'zone'

sana /sánah/ 'expression of desire or hope'

tilos /tílos/ 'pointed'

telon /telón/ 'curtain, screen'

tulong /túlon/ 'help, aid'

toro /tōroh/ 'bull'

talon /talón/ 'waterfall'

Tina /tínah/ 'a girl's name'

tena /ténah/ 'let's go'

tuna /tūnah/ 'tuna fish'

tono /tōnoh/ 'tone, tune'

tanang /tānang/ 'elope'

tinda /tindáh/ 'goods for sale'

benda /bëndah/ 'bandage'

punda /pūndah/ 'pillowcase'

Tondo /tōndoh/ 'a district in Manila'

banda /bāndah/ 'band, orchestra'

tinis /t̃inis/ 'shrillness of voice'

tenis /t̃enis/ 'tennis'

tunis /t̃unis/ 'lard'

tono /t̃onoh/ 'tone, tune'

tangis /t̃angis/ 'weep'

tira /t̃irah/ 'go ahead and act'

tela /t̃elah/ 'fabric, cloth'

turo/ t̃uro?/ 'instruction'

toro /t̃oroh/ 'bull'

taro /t̃aroh/ 'chinese jar'

Besides the preceding pairs of utterances, there is a number of native and loan words which have /r/, never /d/, /e/, never /i/, and /o/, never /u/. The following is but a short sample listing:

/d/ remains /d/, never /r/ even in intervocalic position in the following native words: kadakilaan 'greatness' < dakila /dakila?/ 'great'; kadahilanan 'cause' < dahil /dāhil/ 'because'; kadalagahan 'unmarried woman in general' < dalaga /dalāgah/ 'unmarried woman'; kadalamhatian 'extreme sorrow' < dalamhati /dalamhāti?/ 'affliction, sorrow'; kadamdamin 'of the same feelings' < damdām /damdām/ 'feel'; kadunguan 'timidity' < dungo /dungo?/ 'timid'; ipadala 'be sent' < dala /dalāh/ 'carry, bring'; madadala 'can be carried' < dala /dalāh/ 'carry'; madala 'to learn by unpleasant experience' < dala /dalā?/ 'unpleasant experience learned'; madaig 'to be surpassed' < daig /da?ig/ 'surpassed'; madama 'to feel, to touch' < dama /damāh/ 'feel, touch'; madalas 'frequent,

often' < dalas /dalās/ 'frequency'; madaldal 'talkative' < daldal /daldāl/ 'talkativeness'; madilim 'dark' < dilim /dilīm/ 'darkness'; madulas 'slippery' < dulas /dulās/ 'slipperiness'; padabug-dabog 'obeying in a reluctant or angry manner, accompanied by stamping of the feet' < dabog /dābog/ 'the act of obeying in such a manner', etc.

Always /e/ never /i/:

beses /bēses/ 'number of times', keso /kēsoh/ 'cheese', dwende /dwendeh/ 'dwarf', ebanghelyo /?ebanĥēlyoh/ 'epistle', eksema /?eksēmah/ 'eczema', ekstra /?ēkstrah/ 'extra', edad /?edād/ 'age', editor /?ēditōr/ 'editor', ehe /?ēheh/ 'axle', ehersisyo /?ehersīsyoh/ 'exercise', elektor /?elektōr/ 'elector', eleksiyon /?eleksyōn/ 'election', elegante /?eleganteh/ 'elegant', elise /?ēlisēh/ 'screw propeller', emperador /?emperadōr/ 'emperor', Enero /?eneroh/ 'January', epiko /?ēpikōh/ 'epic', eter /?ēter/ 'ether', etiketa /?etikētah/ 'label', gera /gērah/ 'war', helehele /hēlēhēleh/ 'pretension of dislike', nene /nēne?/ 'little girl', palengke /palēŋkeh/ 'market', Pebrero /pebrēroh/ 'February', preno /prēnoh/ 'brake', puwede /pwēdeh/ 'possible', rebelde /rebēldeh/ 'rebellious', remedyo /remēdyoh/ 'remedy', semestre /semēstreh/ 'semester', sesenta /sesēntah/ 'seventy', siyete /siyēteh/ 'seven', sorbetes /sorbētes/ 'ice cream', sweldo /swēldoh/ 'salary', tren /tren/ 'train', trese /trēseh/ 'thirteen', tsek /tsek/ 'check', tseke /tsēkeh/ 'cheque', tses /tses/ 'chess', yero /yēroh/ 'galvanized iron', etc.

Always /o/ never /u/ :

bakoko /bakōkoh/ 'a species of fish', bobo /bōboh/ 'dull;stupid', bola /bōlah/ 'ball', boses /bōses/ 'voice', boto /bōtoh/ 'vote', katoto /katōtoh/ 'companion, friend', kodigo /kōdigōh/ 'code', loko /lōkoh/ 'crazy', lola /lōlah/ 'grandmother', lolo /lōloh/ 'grandfather', loro /lōroh/ 'parrot', nota /nōtah/ 'note', O ! /ʔoh/ 'interjection Oh!', obaryo /ʔobāryoh/ 'ovary', obispo /ʔobīspoh/ 'bishop', oho /ʔōhoʔ/ 'yes (less formal)', onsa /ʔōnsah/ 'ounce', opera /ʔōperāh/ 'opera', operasyon /ʔoperasyōn/ 'operation', opo /ʔōpoʔ/ 'yes (formal)', Opon /ʔōpon/ 'a town in Cebu', optiko /ʔōptikōh/ 'optician', orador /ʔoradōr/ 'orator', oras /ʔōras/ 'hour, time', orasyon /ʔorasyōn/ 'angelus', orbit /ʔōrbit/ 'orbit', oregano /ʔorēganōh/ 'a species of herb', osana /ʔosānah/ 'hosanna', oso /ʔōsoh/ 'bear', ospital /ʔospitāl/ 'hospital', otso /ʔōtsoh/ 'eight', polo /pōloh/ 'polo shirt', polyeto /polyētoh/ 'leaflet', poso /pōsoh/ 'artesian well', posporo /pōsporōh/ 'match', solo /sōloh/ 'solo', soneto /sonētoh/ 'sonnet', tono /tōnoh/ 'tone', yodo /yōdoh/ 'iodine', yoyo /yōyoh/ 'a kind of toy', etc.

It should be noted that /o/ occurs in a number of native words as the vowel in the last two syllables with an intervening non-distinctive glottal stop which prevents a hiatus. Examples are bagoong /bagoʔōŋ/ 'salted and pickled fish', Bakood /bakoʔōd/ 'a town in Bulacan', ginoo /ginoʔōh/ 'gentleman', loob /loʔōb/ 'inside', noo /noʔōh/ 'forehead', oo /ʔōʔoh/ 'yes', noon /noʔōn/ 'that time', doon /doʔōn/ 'there', pook /poʔōk/ 'place', poot /poʔōt/ 'hate', totoo /totoʔōh/ 'true', etc. The sound /e/ occurs in the same way, as in leeg /leʔēg/ 'neck'.

9.2 Variation and Distribution

Earlier in the chapter mention has been made of the criteria involved in classifying speech sounds, namely, distribution, similarity and identity of function.¹ Points of contrast in the pattern of Tagalog and the relations between them have been identified. The classificatory process also involves subsuming certain sounds under the heading of a given phoneme; such sounds are called "positional variants" of the phoneme, because they vary according to the position in which they occur. For instance, the Tagalog sound [k] is one phone which is found in all positions except between vowels, as in kubo ['ku:boh] 'hut', bundok [bUn'do:k] 'mountain', bukbok [bUk'bo:k] 'weevil'; and the voiceless velar fricative sound [x] is another phone which occurs only between vowels, as in palaka [pala'xa:ʔ] 'frog', kuko [kU'xo:h] 'finger nail', pako ['pa:xoʔ] 'nail'. These two phones [k] and [x] function in Tagalog as one unit, a single phoneme, which is transcribed as /k/ wherever it occurs. In phonemic transcription, the words given above would be written respectively as /kūboh/, /bundōk/, and /bukbōk/, and /palakáʔ/, /kukōh/ and /pākoʔ/. Thus, in the cases described, the Tagalog phoneme /k/ has two positional variants, [x] when it occurs in intervocalic position, and [k] elsewhere.

Some linguists use the term "allophone" to refer to sounds subsumed under functional units in this way. It is derived from the prefix allo- plus phone, forming the term allophone which means 'sound which functions as a member of a phoneme.'¹⁵ Every

¹⁵Hall, op. cit., p. 26

phoneme has at least one allophone and some have two or more. The Tagalog sounds [k] and [x] under discussion are allophones of the phoneme which is transcribed as /k/.

In classifying speech sounds linguists have established the principle that sounds are grouped into phonemes in terms of their distribution, as well as in terms of phonetic similarities or differences. Distribution refers to the condition under which the two allophones occur, that is, the position in which they are found with respect to each other and to other sounds. It has been said earlier that if two elements occur in the same environment,* with different function, they are said to be in contrast with each other. Thus, in Tagalog, the sounds /k/ and /g/ occur in the same environment, e.g., in word-initial position, as in /kúlay/ 'color' vs. /gúlay/ 'vegetable'. They are in contrastive distribution and hence cannot belong to the same phoneme.

On occasions, however, two or more sounds in Tagalog occur in the same environment but they are not in contrast with each other. In such instances, the sounds are said to be in non-contrastive distribution. Linguists consider a noncontrastive distribution one of the prerequisites for classifying sounds as members of the same phoneme. If one sound occurs where the other never does, and vice versa, so that they complement each other, they are said to be in complementary distribution, as in

*The environment or position of an element consists of the neighborhood, within an utterance, of elements which have been set up on the basis of the same fundamental procedures which were used in setting up the element in question; neighborhood refers to the position of elements before, after, and simultaneous with the elements in question (Harris, p. 15).

the case of [k] and [x] described earlier. Another example of complementary distribution is the case of Tagalog [i] which occurs only under stress as in bilog ['bi:log] 'circle, roundness' and [I] which occurs in weakly stressed syllables, as in bilog [bI'lo:g] 'circular, round'.

Often, however, Tagalog sounds occur neither in contrastive nor in complementary distribution. They alternate freely with each other, as do the sounds [o] and [ɔ] in all positions, as in noon [nɔ 'ʔo:n] or [no 'ʔo:n] 'at that time', and buhok [bU'ho:k] or [bU'hɔ:k] 'hair'. Such sounds are said to be in free variation (free alternation), and of noncontrastive rather than complementary distribution. [o] and [ɔ] are said to be free variants since they occur in identical environment without producing a difference in meaning. In other words, they are freely substitutable for each other without change in meaning.

The criterion of similarity applies to physical resemblance in phonetic features. Thus Tagalog [i] and [I] have in common the fact that they are both high-front-unrounded vowels. They have identity of function in the fact that they both serve as allophones of the same phoneme /i/.

9.2.1 Allophonic Alternation of Consonants

Some Tagalog phonemes have only one allophone and others have two or more. /k/, for instance, has [x] as an allophone in intervocalic position. [x] has a velar articulation and it is never fronted even between front vowels. It is especially far back between back or low vowels or any combination of them, as in loko ['lo:xoh] 'crazy', suko ['su:xo?] 'surrender', pako ['pa:xo?] 'nail', malakas [mala'xa:s] 'strong', etc. The allophone [k] occurs elsewhere, as in kagat [ka'ga:t] 'bite', kapkap [kap'ka:p] 'frisk', pakpak [pak'pa:k] 'wing', etc.

In Tagalog, the [ʔ] allophone of the full glottal stop /ʔ/ occurs initially, medially and finally, varying in rapid speech with any partial glottal stricture, as in irap ['ʔi:rap] 'sullen look', itik ['ʔi:tIk] 'duck', paa [pa'ʔa:h] 'feet', pait [pa'ʔi:t] 'chisel', baga ['ba:gaʔ] 'lung', maaari [ma'ʔa:'ʔa:rIʔ] 'possible'. [ʔ] varies freely with [∅] (potential glottal stop) prevocalically. It does not contrast with absence of itself before vowels.

Tagalog /s/ has an [s] allophone occurring in all positions, e.g., sasama ['sa:'sa:mah] 'will go', siksik [sIk'si:k] 'full, crowded', musmos [mUs'mo:s] 'innocent', and a palatalized* [ɕ] occurring before /y/, articulated like English /s̺/ but with lip-spreading, e.g., siya [ɕya:h] 'he, she', siyam [ɕya:m] 'nine', siyampo [ɕya:mpoh] 'shampoo', syuting ['ɕyu:tIn] 'shooting,

*Palatalization is represented here by the mark (ɕ) under the palatalized consonant.

grasya ['gra:ʃyah] 'grace'. This allophone also occurs in cluster with /t/ which is very close to English /ʃ/, e.g., tʃa [tʃa:h] 'tea', lantsa [lan'tʃa:h] 'launch', plantsa [plan'tʃa:h] 'flatiron', tsaperon ['tʃa:per'ro:n] 'chaperone', Intsik [ʔIn'tʃi:k] 'Chinese'. There is no voiced allophone of /s/ in any position.

The /r/ in Tagalog has an allophone [r] which occurs in all positions, as in rito ['ri:toh] 'here', riyan [rI'ya:n] 'there', naririto ['na:rIrI,to:h] 'is here', prito ['pri:toh] 'fried', lugar [lU'ga:r] 'place', asahar [ʔasa'ha:r] 'orange blossoms'. The /r/ in intervocalic position and in other distribution is usually articulated with a single tap trill, but it varies freely with a multi-tap trill [R] under emphatic conditions, especially before consonants, e.g., areglado [ʔaRe'gla:doh] 'okayed, approved', arte [ʔa:Rteh] 'artificial way or manner; art', order [ʔo:Rder] 'order, command', siyempre ['syempReh] 'of course'.

Like /s/, any of the consonants may have a palatalized allophone before a yod* element. The articulation of the said consonant can be accompanied by a raising of the tongue toward the hard palate, as in piyano ['pya:noh] 'piano', piyer [pye:r] 'pier', biyahe ['bya:heh] 'trip, voyage', biyanan [bya'na:n] 'parent-in-law', tiyak [tya:k] 'exact, definite', batya [ba'tya:ʔ] 'large tub', kiya [kya:ʔ] 'gait, mannerism', diyas [dya:s] 'musical jazz', diyanitor ['dya:nI,to:r] 'janitor', radio

*Yod acoustically equals the sound of y added to the consonant.

['ra:dyoh] 'radio', Miyerkules ['mye:rkU:le:s] 'Wednesday',
maya-maya ['mya:'mya:ʔ] 'later on', kanya [kan'ya:h] 'his, her',
kampanya [kam'pa:nyah] 'campaign', ngiyaw [ɲya:w] 'mew of a cat',
silya [sɪl'ya:h] 'chair', sigarilyo [sɪga'ri:lyoh] 'cigarette',
riyan [rya:n] 'there', barberya [barber'ya:h] 'barbershop', etc.

Below is a listing of the consonant phonemes with, under each, the indication of the variations (allophones), the distribution or the conditions under which they occur, and examples in phonemic and phonetic transcriptions and in conventional orthography with the gloss.

Phoneme	Variation	Distribution	Example
/p/	[p]	Everywhere	/pakpāk/ [pak'pa:k] <u>pakpak</u> 'wing'
/b/	[b]	Everywhere	/bakbāk/ [bak'ba:k] <u>bakbak</u> 'detached'
/t/	[t]	Everywhere	/patpāt/ [pat'pa:t] <u>patpat</u> 'bamboo split'
/d/	[d]	Everywhere	/daldāl/ [dal'da:l] <u>daldal</u> 'talkativeness'
/k/	[k]	Everywhere except between vowels	/maŋkōk/ [maŋ'kō:k] <u>mangkok</u> 'bowl'
	[x]	Between vowels	/ʔabakāh/ [ʔaba'xa:h] <u>abaka</u> 'Manila hemp'
/g/	[g]	Everywhere	/gāgoh/ [ʔga:goh] <u>gago</u> 'stupid'
/ʔ/	[ʔ]	Everywhere	/bātaʔ/ [ʔba:taʔ] <u>bata</u> 'child'
	[∅]	In free variation with [ʔ] in pre-vocalic position	/paʔālam/ [pa'ʔa:lam] ~ [pa'a:lam] * <u>paalam</u> 'goodbye'

*The squiggle (~) is used here to mean "alternates, alternating, in alternation with".

/m/	[m]	Everywhere	/māma?/	['ma:ma?]	<u>mama</u>	'any man'
/n/	[n]	Everywhere	/nāmin/	['na:mIn]	<u>namin</u>	'our, ours'
/ŋ/	[ŋ]	Everywhere	/ŋisŋis/	[ŋIs'ŋi:s]	<u>ngisngis</u>	'giggle'
/s/	[s]	Everywhere	/sūsan/	['su:san]	<u>Susan</u>	'a girl's name'
	[ʃ]	Before /y/ and in cluster with /t/	/syēmpreh/	['ʃye:mpreh]	siyempre	'of course'

/tsinēlas/ [tʃI'ne:las] tsinelas

'slippers'

/h/	[h]	Everywhere	/hihip/	['hi:hIp]	<u>hihip</u>	'blow'
/l/	[l]	Everywhere	/lālim/	['la:lIm]	<u>lalim</u>	'depth'
/r/	[r]	Everywhere	/ritoh/	['ri:toh]	<u>rito</u>	'here'
	[R]	In free variation with [r] under emphatic conditions	/prēnoh/	['pRe:noh]	<u>Preno!</u>	'Brake!'
/w/	[w]	Everywhere	/wāwa?/	['wa:wa?]	<u>wawa</u>	'mouth of a river'
/y/	[y]	Everywhere	/yāyah/	['ya:yah]	<u>yaya</u>	'nursemaid'

9.2.2 Allophonic Alternation of Vowels

Tagalog /i/ has three allophones: [i] [ɪ] [I]. The high-front-tense-unrounded [i] occurs under strong stress* except in a prejunctural syllable (the last syllable before a juncture), e.g., kita ['ki:tah] 'visible from a distance', kanina [ka'ni:nah] 'a while ago', ninong ['ni:non] 'godfather', talino [ta'li:noh] 'talent', etc. The slightly lowered-high-front-tense-unrounded [ɪ] occurs under stress in prejunctural syllable, e.g., kami [ka'mI^:h] 'we', tabi [ta'bI^:h] 'side', marumi [marU'mI^:h] 'dirty', sakit [sa'kI^:t] 'sickness', bili [bI'li^:h] 'buy',

*This includes primary and secondary stress.

uwi [ʔU'wI^ˈ:ʔ] 'go home', etc. The lower-high-front-lax-unrounded [I] occurs under weak stress,* e.g., bakit ['ba:kIt] 'why', bigas [bI'ga:s] 'rice', bukid ['bu:kId] 'farm', ikaw [ʔI'ka:w] 'you', kaibigan [kaʔI'bi:gan] 'friend', etc. Occasionally, [i] and [I^ˈ] alternate freely in certain positions. The three allophones are in completely noncontrastive distribution, partially in complementary distribution and partially in free variation.

Similarly, /u/ has three allophones: [u]~[U^ˈ]~[U]. The high-back-tense-rounded [u] occurs under stress, except in pre-junctural syllable, e.g., puso ['pu:soʔ] 'heart', buti ['bu:tIh] 'goodness', tubig ['tu:bIg] 'water', upa [ʔu:pah] 'rent; pay', suka ['su:kah] 'vinegar', etc. The slightly lowered-high-back-tense-rounded [U^ˈ] occurs under stress in a pre-junctural syllable, e.g., sampu [sam'pU^ˈ:ʔ] 'ten', bukod [bU'kU^ˈ:d] 'separate', bagkus [bag'kU^ˈ:s] 'on the contrary', krus [krU^ˈ:s] 'cross', etc. The lower-high-back-lax-rounded [U] occurs under weak stress, as in bulaklak [bUlak'la:k] 'flower', sumbrero [sUm'bre:roh] 'hat', buto [bU'to:h] 'bone; seed', tuwa [tU'wa:ʔ] 'joy', tukso [tUk'so:h] 'temptation', etc.

The variants of /e/ are the mid-front-tense-unrounded [e] alternating freely with the higher-mid-front-tense-unrounded and slightly raised [e^ˈ] under any level of stress, except before /y/ where only [e^ˈ] occurs. Examples are pera ['pe:rah] 'money', beses ['be:ses] 'number of times', leeg [le'ʔe:g] 'neck', tren [tre:n] 'train', palengke [pa'le:nkeh] 'market', but [e^ˈ] in

*Weakly stressed syllables are left unmarked.

words like aywan [ʔeˈyˈwa:n] 'expression of negation', mayroon [meˈyroˈʔo:n] 'there is, are', kaysa [keˈyˈsa:h] 'than', kailan [keˈyˈla:n] 'when', ilagay [ʔilaˈgeˈy] 'to put'

The free variants of /o/ are the mid-back-tense-rounded [o], the higher-mid-back-tense-rounded and slightly raised [oː] which occurs under stress and alternates freely with [o], and the higher-low-back-tense-rounded [ɔ]. The variation is entirely free under any level of stress, as in oras ['ʔo:ras] ~ ['ʔoːras] ~ ['ʔɔ:ras] 'hour', pulot [pUˈlo:t] ~ [pUˈlɔ:t] ~ [pUˈloɔ:t] 'honey', noon [noˈʔo:n] ~ [nɔˈʔoːn] ~ [noˈʔoːn] 'that time', oo ['ʔo:ʔoh] ~ ['ʔo:ʔoːh] ~ ['ʔo:ʔh] 'yes', etc.

In the case of /a/, there are free variations within a range from slightly raised low-central-lax-unrounded [aː] to mid-central-lax-unrounded [ɐ] when under weak stress in certain words. Low-central-tense-unrounded [a] occurs under stress. This allophone is constant in its low central position in most Tagalog words. The following illustrates the occurrence of the variants of /a/ : paaralan ['paʔaraˈla:n] 'school', lalaki [laˈla:kɪh] 'man', pag-asa [pagˈʔa:sah] 'hope', dinadala [diːna:daˈla:h] ~ [diːna:dɐˈla:h] 'is being carried', ipadala [ʔiːpa:daˈla:h] ~ [ʔiːpa:dɐˈla:h] 'be sent', etc.

Length and nasality exist in Tagalog vowels. Stressed vowels are lengthened. Nasality is entirely conditioned by the presence of any one of the nasals / m n ŋ / after a vowel. Nasalization is strongest with / ŋ /. Examples are ngongo ['ŋõ:ŋõ?] 'speaking with a nasal twang', nganga ['ŋã:ŋã?] 'prepared betel leaf, nut

and lime', ngayon [ŋā'yɔ:n] 'now; today', ngipin [ŋĩ:pɪn] 'teeth', inyong [ʔɪn'yɔ̃:ŋ] 'your plus attributive marker 'ng'', and the like.

Phoneme	Variation	Distribution	Example
/i/	[i]	Under stress except in a prejunctural syllable	/balita?/ [ba'li:ta?] <u>balita</u> 'news'
	[I*]	Under stress in a prejunctural syllable	/gabĩh/ [ga'bI*:h] <u>gabi</u> 'night'
	[I]	Under weak stress	/gābih/ ['ga:bɪh] <u>gabi</u> 'yam'
/e/	[e]	Everywhere except before /y/	pésa?/ ['pe:sa?] <u>pesa</u> 'a kind of native dish'
	[e*]	Before /y/ under any level of stress	/eywān/ [ʔe*y'wa:n] <u>aywan</u> 'expression of negation'
/u/	[u]	Under stress except in a prejunctural syllable	/bũkas/ ['bu:kas] <u>bukas</u> 'tomorrow'
	[U*]	Under stress in a prejunctural syllable	/balũt/ [bu'LU*:t] <u>balut</u> 'duck's egg'
	[U]	Under weak stress	/bũkās/ [bU'ka:s] <u>bukas</u> 'open'
/o/	[o]	Everywhere	/nooñ/ [no'ʔo:h] <u>noo</u> 'forehead'
	[o*]	Under stress in pre-junctural syllable, and varies freely with [o]	/buo?/ [bU'ʔo*:?] <u>buo</u> 'whole'
	[ɔ]	Varies freely with [o] and [o*]	/pũso?/ ['pu:sɔ?] <u>puso</u> 'heart'

/a/	[a]	Everywhere under strong stress	/lálakad/ [ˌlaːˈlaːkad] <u>lalakad</u> 'will walk'
	[a^]	Under weak stress varies freely with [ə] in certain positions	/kinagalítan/ [kɪˌnaːga^ˈliːtan] ~ [kɪˌnaːgəˈliːtan] 'was scolded'

9.2.3 Alternation of Diphthongs

In Tagalog colloquial speech /ay/ varies freely with /ey/ or /e/, as in may [maːi] ~ [meːi] ~ [meːh] 'there is, are', kailan [kaʔiˈlaːn] ~ [kaːiˈlaːn] ~ [ˈkeːlan] 'when', Maynila [maːiˈniːlaʔ] ~ [meːiˈniːlaʔ] 'Manila', etc. In the same way /oy/ alternates freely with /uy/, as in baboy [ˈbaːboi] ~ [ˈbaːbui] 'pig', kasuy [kaˈsuːi] ~ [kaˈsoːi] 'cashew'. Diphthongs /ay/ and /ey/ do not alternate freely in all instances. Thus far, no contrast is found between /ay/ and /ey/, or between /oy/ and /uy/, but since there are contrasts between /a/ and /e/ or /o/ and /u/, the alternation is here treated as morphophonemic (See Morphophonemic Alternations).

9.2.4 Foreign Sounds

The following foreign sounds / f v θ ç j š z / occur in Tagalog but only in names and place-names. Below are examples:*

Names with /f/ :

Afurong, Alafriz, Alfaro, Alfonso, Alfredo, Bofill, Boniface, Bonifacio, Brofas, Ceferina, Ceferino, Delfin, Epifania, Epifanio, Estifania, Estifanio, Eufemia, Fabricante, Facunda, Facundo, Fajardo, Falconi, Falgui, Fallurin, Fallurina, Famdico, Famaran, Fandino, Fangonil, Faustino, Fausto, Fe, Federico, Felicitas, Felicisima, Felicisimo, Felipe, Felisa, Felix, Felwa, Ferdinand, Feria, Fermin, Fernandez, Ferolino, Ferrer, Fidel, Fiel, Figuracion, Filemon, Firmalino, Florida, Flor, Flora, Flordeliza, Florenda, Florendo, Flores, Floresca, Florita, Floro, Flory, Fonacier, Fondavilla, Fordham, Fournier, Fortunata, Fortunato, Francisca, Francisco, Franklin, Fred, Frederick, Frederico, Fredo, Frivaldo, Fuente, Fuentes, Fuentebella, Fundador, Godofreda, Godofredo, Josefa, Josefina, Josephine, Phodca, Rafael, Rafaela, Ranulfo, Rodolfo, Rufino, Rufo, Sofronio, Telesforo, Teofilo, Sinforo, Wilfredo, etc.

Place-names with /f/ :

Cape San Ildefonso, Factoria, Faire, Diffun, La Fortuna, Lefa Pt., San Alfonso, San Felipe, San Fernando, Punta

*The examples are mostly names of Filipino government officials listed in the 1966 Official Program of the Philippine Independence Celebration and some were taken from the directory of the Filipino Association in British Columbia, furnished by the Philippine Consulate in B.C. Place-names were taken from a map of the Philippines.

Flecha, San Francisco, San Ildefonso, San Rafael, etc.

Names with /v/:

Abueva, Adeva, Aldave, Alvaro, Alviola, Arviola, Anonueva, Arevalo, Avelino, Avenida, Aviles, Aviva, Bienvenido, Buenaventura, Buenavista, Buenviaje, Casanova, Claravall, Claveria, Cordova, Dadivas, David, Divinagracia, Eva, Elvi, Elvis, Elvira, Enverga, Evangelista, Evelyn, Eviota, Gavino, Guevara, Javier, Joven, Jovencio, Jover, Jovi, Jovita, Jovito, Leveriza, Levi, Leviste, Lovina, Malvar, Monteverde, Miravalles, Naval, Nieva, Nieves, Oliva, Oliver, Olivia, Primitiva, Primitivo, Providencio, Revilla, Salva, Salvador, Salvacion, Salvio, Salvosa, Severino, Silvertre, Stevan, Steve, Talavera, Tevera, Tevez, Raval, Vadivel, Valderama, Valdez, Valdezco, Valencia, Valenciano, Valenzuela, Valera, Valeria, Valeriana, Valeriano, Vallejo, Valmonte, Valmayor, Vamante, Vazquez, Vega, Velasco, Velasquez, Velayo, Velez, Veloso, Ventura, Venancia, Venancio, Venus, Verano, Verdolaga, Vergora, Verulo, Verzosa, Vicente, Vicenta, Vicky, Victor, Victorina, Vidal, Vital, Viernez, Villa, Villacorta, Villaflor, Villafuerte, Villagrancia, Villaluz, Villacruz, Villaluna, Villamar, Villamin, Villamor, Villanueva, Villapando, Villar, Villarama, Villareal, Villarosa, Villariano, Villas, Villasan, Villasis, Villegas, Villena, Vilumín, Vinzons, Viola, Viray, Virgilio, Virginia, Virola, Vivas, Vivencio, Vivero, Vives, Yuvienco, etc.

Place-names with /v/:

Alava Is., Altavas, Arevalo, Avenida Rizal, Aviles, Buevavista, Calver, Can-avid, Cavite, Claveria, Cervantes,

Cordova, Davila, Divilacan Bay, Divisoria, Diviusa Pt., Ivisan, Las Navas, Las Nieves, Lavezares, Lope de Vega, Malvar, Mari-veles, Navotas, Noveleta, Nueva Valencia, Nueva Viscaya, Pontevedra, Puerto Rivas, Reva Pt., Salvacion Is., San Vicente, Talavera, Valladolid, Vallehermosa, Valley Cove, Veltisezar, Verde Is., Passage, Viga, Vigan, Vigo, Villaflor, Villareal, Villasis, Villavert, Vellaviciosa, Vintar, Virac, Virgoneza, Viriato, Visita, etc.

Names with /θ/ and their corresponding nicknames:*

Anthea (Anty), Anthony (Tony), Arthur (Turing), Catherine, Cathy, (Catty), Kathleen (Katty), Dorothy (Dotty), Edith (Edita, Edit), Elizabeth (Betty), Ethel (Etel), McArthur (Turing), Meredith (Dita), Thelma (Tel, Telma), Theodocia (Toddy), Theodoro (Teddy), etc.

Names with /č/ :

Anchesa, Acheson, Ancheta, Arteche, Cacho, Cachola, Camacho, Chally, Charito, Charlie, Charles, Charlotte, Chavez, Chayong, Cheng, Cherry, Chichay, Chiongbian, Chito, Choleng, Chong, Cholly, Choy, Concha, Conchita, Dichoso, Echague, Echem, Hechanova, Inchong, Itchon, Kimachawa, Luchek, Marcha, Pancho, Sanchez, Richard, Sanchez, Sancho, Sy-changco, etc.

Names with /j/ :

Jack, Jackie, Jacqueline, Jane, Janet, Jenny, Jenifer, Jerry, Jill, Jim, Jimmy, Joan, Jo, Joe, Joel, John, Johnny, Johnson, Jojo, Jorge, Joseph, Josephine, Judy, Julie, Juliet, Jun, June, Junior, etc.

*Note the change of /θ/ to /t/.

Names with /s/ :

Anastacia, Asuncion, Bonifacio, Concepcion, Consolacion, Constancia, Crescencia, Crescencio, Francia, Encarnacion, Estacio, Jovencio, Lucia, Marsha, Marcial, Pacencia, Palacio, Pascacio, Pasion, Patricia, Patricio, Presentacion, Prudencia, Prudencio, Resureccion, Salvacion, Shea, Sheik, Shirley, Shir-lita, Venancia, Venancio, Visitacion, etc.

Names with /z/ :

Ablaza, Aboitiz, Alazar, Almanzor, Altavaz, Alvanez, Alvarez, Arquiza, Areza, Alzona, Arzadon, Asurez, Azares, Azcona, Aznar, Azucena, Baizas, Ballozos, Baltazar, Banzon, Bauza, Beatriz, Benitez, Benzon, Bermudez, Calaboza, Ceniza, Corazon, Cortez, Cruz, Cuizon, Daza, Daveza, Deza, Diaz, Diez, Dizon, Eleazar, Eliza, Elizalde, Enriquez, Esperanza, Estevez, Eva, Galvez, Ganzon, Gianzon, Gimenez, Guanzon, Gomez, Gonzal, Gonzales, Gonzaga, Gonzalo, Guzman, De Guzman, De la Cruz, Hernandez, Inez, Jimenez, Jozon, Lapuz, Lardizabal, Lazaro, Lazatin, Lecaroz, Legazpi, Lizaso, Lopez, Lorenza, Lorenzo, Lozada, Luz, Madrazo, Maleniza, Manuzon, Manzano, Marquez, Martinez, Martiz, Mendoza, Muniz, Munoz, Muzones, Nazario, Ordonez, Ortiz, Paz, Pelaez, Perez, Piczon, Quezon, Quiazon, Quibranza, Quizon, Ramirez, Requiza, Razon, Rodriguez, Romualdez, Ruiz, Salazar, Suarez, Tevez, Ticzon, Tizon, Tuazon, Tupaz, Yanzon, Valenzuela, Zacarias, Zabala, Zabol, Zafra, Zaide, Zalamea, Zaldivar, Zaldy, Zamora, Zapata, Zara, Zaragoza, Zenaida, Zialcita, Ziga, Zoilo, Zosa, Zubiri, Zuno, Zuzuarregui, etc.

Place-names with /z/ :

Azagra, Azpitia, Barbaza, Capiz, Gonzales, Jimenez, La Paz, Lezo, Lopez Bay, Luzon, Manreza, Pan de Azucar Is., Pozorrubio, Rizal, Sanchez Mira, San Lazaro, Sta. Cruz, Sta. Inez, Tanza, Tenzas, Zambales, Zamboanga, Zamboanguita, Zaragoza, Zarraga, Zimigui, Zitanga, etc.

These borrowed sounds, in general, are so represented in fact in the pronunciation of most educated Filipinos. A great majority of Tagalog speakers, however, especially those in remote towns and barrios who have not been subject to foreign linguistic influences, substitute the nearest native sounds for these foreign sounds. Some illiterate Filipino parents, for instance, would name their children Fe, Edith, David, or Rafael and call them Pe or Pi Idit, Dabid, or Paing, respectively; or call their home place Dibisoria, Nabutas, Saragosa or San Pilipi instead of the educated pronunciation for Divisoria, Navotas, Zaragoza or San Felipe, respectively. Also, it has been observed that older Tagalog speakers, especially those with knowledge of Spanish, in certain instances, replace /θ/ with /s/, and the younger speakers replace it with /t/ in pronouncing certain loan words like "three" which becomes /tri/ or /sri/. Perhaps /θ/ is replaced with /s/ because the two sounds exist as free variants of a single phoneme in some dialects of Spanish.

10. Phonotactics

Tagalog phonemes have been identified and the distribution of the individual phonemes has been described in the preceding section. The discussion here deals with the study of sequences of phonemes, referred to as "phonotactics." The term phonotactics, according to Hill, is the area of phonemics which covers the structural characteristics of sequences. It is essentially a description of the distribution of phonemes, once they have been identified. Since phonemics proper makes use of distributional criteria in identification, phonotactics is an extension of phonemics.¹⁶

10.1 The Syllable Structure

In Tagalog, the number of vocoid sounds in any utterance is correlated with the number of syllables which native speakers would instinctively recognize in that utterance. For instance, in the following words:* sa /sah/ 'in, on', sama sa.ma /sāmah/ 'go with someone', sasama sa.sa.ma /sāsāmah/ 'will go with someone', sama-sama sa.ma.sa.ma /sāmasāmah/ 'together', sasama-sama sa.sa.ma.sa.ma /sāsamāsāmah/ 'pretending to go with someone', sumasama-sama su.ma.sa.ma.sa.ma /sumāsamāsāmah/ 'always going with someone', a Tagalog speaker easily recognizes the number of

¹⁶Hill, Archibald. Introduction to Linguistic Structures (New York: Harcourt, Brace and Company, 1959, p. 68. He is indebted to an unpublished lecture by Robert P. Stockwell delivered before the Linguistic Institute held at the Georgetown University Institute of Languages and Linguistics in 1954.

*Syllable-division is represented by a period (.) on the line within a word.

syllables in each word. The syllable-division falls clearly between sounds. As said earlier, the sound articulated with the peak of sonority of a syllable is known as its nucleus or center. On the basis of this correlation between the number of full vocoids and that of syllables, the syllable is here defined as a segment of speech containing a peak of sonority with certain sounds grouped around it. A syllable ending with a vocoid with no contoid following in the same syllable is referred to as an open syllable, e.g., the first syllable of bata /bāta?/ 'child'; whereas that which ends with a contoid in the syllable after a vocoid is called a closed syllable, e.g., pakpak /pakpāk/ 'wings'. Some linguists use the expressions "free" and "checked" syllables, since "open" and "closed" are also used in describing the varieties of mid-range vocoids.

The syllable structure is here stated in terms of the permissible combinations of vowel (V) and consonant (C) in the syllables of the Tagalog language. It is assumed that the basic syllable structures of Tagalog are consonant-vowel (CV), e.g., the first syllable of mata /matah/ 'eyes', and consonant-vowel-consonant (CVC), e.g., the first and second syllable of mukha /mukhá?/ 'face'. It is assumed here that vowels do not structure with consonants to give the syllable patterns (V), (VC) or a final (CV). This investigator believes that Tagalog syllable structure requires a final consonant in all final syllables. Ordinary writing does not indicate how Tagalog words written with final /a e i o u/ are pronounced. Tagalog words spelled with a

final vowel may end with either /ʔ/ or /h/ although it is not reflected in the writing system. /ʔ/ and /h/ are contrastive phonemes in Tagalog, and substituting one for the other can change the meaning of a word. The following examples illustrate the point:

- 1.a. Maganda ang bata. 'The child is beautiful.'
 /magandāh ʔaŋ bātaʔ/
 (beautiful the child)
- 1.b. Maganda ang bata. 'The bathrobe is beautiful.'
 /magandāh ʔaŋ bātah/
 (beautiful the bathrobe)
- 2.a. Kunin mo ang бага. 'Remove the lung.'
 /kūnin moh ʔaŋ bāgaʔ/
 (get you the lung)
- 2.b. Kunin mo ang бага. 'Get the ember.'
 /kūnin moh ʔaŋ bāgah/
 (get you the ember)

It is therefore necessary and helpful for non-native speakers to transcribe Tagalog words written with a final vowel as ending in /ʔ/ or /h/, for even if the meaning is not changed by a wrong pronunciation, a foreign accent will result.

10.2 Consonant Clusters (CC)

Tagalog phoneme sequences are here described in terms of their clustering habits. Sequences of two or more consonant phonemes without the intervention of a vowel are referred to as consonant clusters. The clustering habits of Tagalog phonemes

are almost altogether the clustering of consonants alone, since Tagalog vowels do not cluster. That is, no two vowels occur without an intervening consonant or semivowel.¹ Historically, there are no consonant clusters in Tagalog except across syllable or morpheme boundaries and they are limited to two consonants only. Considering loanwords as an integral part of the language, the present study reveals that Tagalog consonant clusters occur freely in all positions. The only restriction is that clusters are rare finally.

10.2.1 Prevocalic Clusters

Prevocalic consonant clusters (CC-) can be summarized in a series of formulas:*

Let C = Consonant

C_1C_2 = the first and second C

C_2 = s l r w y

1. $C_1 = t$ if $C_2 = s$

2. $C_1 = p$ b k g if $C_2 = l$

3. $C_1 = p$ b t d k g if $C_2 = r$

4. $C_1 = \text{any C except ?}$ w y if $C_2 = w$ or y

The clusters described above are illustrated in the following examples:

1. tsa /tsah/ 'tea'

tsatsa /tsãtsah/ 'cha-cha dance'

*This investigator is indebted to an unpublished lecture given by Dr. Ernesto Constantino of the Department of Linguistics and Oriental Languages, in 1965 at the University of the Philippines.

tsaleko /tsalēkoh/ 'a kind of garment'
 tsalet /tsalēt/ 'chalet'
 tsamba /tsambāh/ 'good luck; guess'
 tsek /tsek/ 'check'
 tseke /tsēkeh/ 'cheque'
 tses /tses/ 'chess'
 tsinelas /tsinēlas/ 'slippers'
 atsara /ʔatsārah/ 'pickles'
 butse /butsēh/ 'crop'
 kotse /kōtseh/ 'car'
 kutsero /kutsēroh/ 'calash driver'
 lantsa /lantsāh/ 'launch'
 plantsa /plantsāh/ 'flatiron'
 mitsa /mitsāh/ 'wick'
 mutsatso /mutsatsōh/ 'houseboy'

2. plaka /plākah/ 'phonograph disk'
 plake /plakēh/ 'plaque'
 planeta /planētah/ 'planet'
 plano /plānoh/ 'plan'
 planta /plantāh/ 'plant; works'
 plasa /plāsah/ 'plaza'
 plasma /plāsmah/ 'plasma'
 plastado /plastādoh/ 'fallen flat'
 plastik /plastīk/ 'plastic'
 plata /plātah/ 'silver'
 plato /plātoh/ 'dish; plate'

plema /plēmah/ 'phlegm'
 plete /plēteh/ 'fare'
 plorera /plorērah/ 'flowervase'
 pluma /plūmah/ 'pen'

blangket /blāŋket/ 'blanket'
 blangko /blāŋkoh/ 'blank'
 bloke /blōkeh/ 'block'
 blusa /blūsah/ 'blouse'

klase /klāseh/ 'class'
 klabe /klābeh/ 'clavichord; key'
 klaro /klāroh/ 'white of an egg'
 klasika /klāsikah/ 'classic'
 klerk /klerk/ 'clerk'
 klima /klīmah/ 'climate'
 klinika /klīnikah/ 'clinic'
 kliyente /kliyēnteh/ 'client'
 klub /klub/ 'club'
 reklamo /reklāmoh/ 'complaint'

glab /glab/ 'glove'
 globo /glōboh/ 'globe'
 gladyola /gladyōlah/ 'gladiola plant'
 glorya /glōryah/ 'glory'

3. pranela /pranēlah/ 'flannel'
 Pranses /pransēs/ 'French'
 prangko /prāŋkoh/ 'frank, straightforward'

prasko /praskõh/ 'flask'
 premyo /premyõh/ 'prize'
 preno /prẽnoh/ 'brake'
 preskripsyon /preskripsyõh/ 'prescription'
 presidente /presidẽnteh/ 'president'
 presinto /presĩntoh/ 'precinct'
 preso /prẽsoh/ 'prisoner'
 presyo /prẽsyoh/ 'price'
 presyon /presyõh/ 'pressure'
 pribado /pribãdoh/ 'private'
 prebilehiyo /prebilẽhiyoh/ 'privilege'
 primero /primẽroh/ 'first'
 prinsipal /prinsipãl/ 'principal'
 pritada /pritãdah/ 'a kind of dish'
 probinsiya /probinsyãh/ 'province'
 programa /progrãmah/ 'program'
 propaganda /propagãdah/ 'propaganda'
 propesor /propesõr/ 'professor'
 propeta /propẽtah/ 'prophet'
 protesta /protẽstah/ 'protest'
 proyekto /proyẽktoh/ 'project'
 prutas /prũtas/ 'fruit'

bra /brah/ 'brassiere'
 bras /bras/ 'brush'
 braket /brãket/ 'bracket'
 Bretanya /bretãnyah/ 'Britain'

brigada /brigādah/ 'brigade'
 brigadyer /brigadyēr/ 'brigadier'
 brilyante /brilyānteh/ 'diamond'
 broker /brōker/ 'broker'
 bronse /brōnseh/ 'bronze'
 brongkitis /brongkītis/ 'bronchitis'
 brotsa /brōtsah/ 'painter's brush'
 bruha /brūhah/ 'witch; ugly woman'
 kubrekama /kubrekāmah/ 'bedspread'
 libra /librāh/ 'pound'
 libre /librēh/ 'free'
 libro /librōh/ 'book'

 trak /trak/ 'truck'
 trabaho /trabāhoh/ 'work, job'
 trahe /trāheh/ 'costume, apparel'
 trahedya /trahēdyah/ 'tragedy'
 traidor /traidōr/ 'traitor'
 transaksiyon /transaksiyōn/ 'transaction'
 trangka /trangkāh/ 'door fastener'
 trangkaso /trangkāsoh/ 'influenza, flu'
 trapo /trāpoh/ 'rag'
 trato /trātoh/ 'treatment'
 tren /tren/ 'train'
 trenta /trēntah/ 'thirty'
 tres /tres/ 'three'
 trese /trēseh/ 'thirteen'
 tripulante /tripulānteh/ 'crewman'

- trombon /trombõn/ 'trombone'
 trono /trõnoh/ 'throne'
 tropeo /tropẽoh/ 'trophy'
 trapik /trãpik/ 'traffic'
 atras /?atrãs/ 'backward movement'
 atraso /?atrãsoh/ 'tardiness'
 kontrata /kontrãtah/ 'contract'
 kontraktor /kontraktõr/ 'contractor'
 letra /lẽtrah/ 'letter, print'
 kamisadentro /kamisadẽntroh/ 'men's shirt'
 semestre /semẽstreh/ 'semester'
- dragon /dragõn/ 'dragon'
 dram /dram/ 'drum'
 drama /drãmah/ 'drama, play'
 dril /dril/ 'drill, exercise'
 drowing /drõwiŋ/ 'drawing'
 kuwadra /kwãdrah/ 'stable'
 kuwadrãdo /kwadrãdoh/ 'square'
 kuwadro /kwãdroh/ 'picture frame'
 padrẽ/pãdreh/ 'father, priest'
 kumpadre /kumpãdreh/ 'relation between one's godfather
 and parents'
 kumadre /kumãdreh/ 'relation between one's godmother and
 parents'
- kraker /krãker/ 'soda crackers'
 kredo /krẽdoh/ 'credo, creed'
 krema /krẽmah/ 'cream'
 krimen /krimẽn/ 'crime'

kriminal /kriminal/ 'criminal'
 krisis /krisis/ 'crisis'
 kristal /kristal/ 'crystal'
 Kristo /kristoh/ 'Christ'
 kritika /kritikah/ 'critic'
 krosing /krosing/ 'crossing'
 krudo /krudoh/ 'crude oil'
 kongkreto /konkrèto/ 'concrete'
 krus /krus/ 'cross'

graba /grabah/ 'gravel'
 grado /gradoh/ 'grade'
 gramatika /gramatikah/ 'grammar'
 gramo /gramoh/ 'gram'
 granate /granateh/ 'garnet color'
 grasya /grasyah/ 'grace'
 gratis /gratis/ 'free of charge'
 gripo /gripoh/ 'faucet'
 groto /groto/ 'grotto'
 grupo /grupoh/ 'group'
 programa /progrāmah/ 'program'
 kablegrama /kablegrāmah/ 'cablegram'
 telegrama /telegrāmah/ 'telegram'

4. buwal /bwal/ 'fallen, uprooted'
 buwan /bwan/ 'moon; month'
 buwanbuwan /bwanbwān/ 'a species of fish'
 buwaya /bwāyah/ 'crocodile'

- buwenas /bwēnas/ 'good luck'
 buwig /bwig/ 'bunch, clusters'
 buwis /bwis/ 'tax'
 buwisit /bwīsit/ 'bad luck'
 buwitre /bwītreh/ 'vulture'

 biya /bya?/ 'a species of fish'
 biyak /byak/ 'split'
 biyahe /byāheh/ 'trip, voyage'
 biyahero /byahēro/ 'traveler'
 biyas /byas/ 'space between joints of bamboo or cane'
 biyatiko /byātikh/ 'viaticum'
 biyaya /byāya?/ 'grace, blessings'
 biyenan /byenān/ 'parent-in-law'
 Biyernes /byērnes/ 'Friday'
 biyuda /byūdah/ 'widow'
 biyulin /byulīn/ 'violin'
 kubyertos /kubyērtos/ 'table silverware'
 nobyo /nōbyoh/ 'boyfriend, sweetheart'
 nobya /nōbyah/ 'girlfriend, sweetheart'
 kuwako /kwākoh/ 'smoking pipe'
 kuwaderno /kwadērnoh/ 'notebook'
 kuwadra /kwādrah/ 'stable'
 kuwago /kwāgoh/ 'owl'
 kuwan /kwan/ 'a common Tagalog expression when hesitating'
 kuwarentina /kwarentīnah/ 'quarantine'
 kuwaresma /kwarēsma/ 'Lent season'

- kuwarta /kwártah/ 'money'
 kuwarter /kwartér/ 'quarter'
 kuwarto /kwartõh/ 'room'
 kuweba /kwěbah/ 'cave'
 kuwelyo /kwelyõh/ 'collar'
 kuwenta /kwentáh/ 'count; computation'
 kuwentista /kwentístah/ 'story writer or teller'
 kuwento /kwentõh/ 'story'
 kuwerdas /kwerdás/ 'string of musical instruments'
 kuwero /kwěroh/ 'hide, skin'
 kuwintas /kwintás/ 'necklace'
 diskuwento /diskwěntoh/ 'discount'
- kiya /kya?/ 'affected gait, mannerisms'
 kiyapo /kyápo?/ 'a species of plant'
 Quiapo /kyápo?/ 'Quiapo district in Manila'
 kiyosko /kyõskoh/ 'Mosk'
 parokya /parõkyah/ 'parish'
 duwag /dwag/ 'coward'
 duwende /dwěndeh/ 'goblin; dwarf'
 duweto /dwětoh/ 'duet'
- diyablo /dyábloh/ 'devil; demon'
 diyagnosis /dyagnõsis/ 'diagnosis'
 diyagunal /dyagunál/ 'diagonal'
 diyalogo /dyálogõh/ 'dialogue'
 diyamante /dyamánteh/ 'diamond'

diyan /dyan/ 'there'

diyaryo /dyāryoh/ 'newspaper'

diyas /dyas/ 'musical jazz'

diyes /dyes/ 'ten'

diyeta /dyētah/ 'diet; daily allowance'

diyos /dyos/ 'god'

diyosa /dyōsah/ 'goddess'

medyas /mēdyas/ 'sock, stocking'

kudyapi /kudyapī?/ 'guitar'

komedya /komēdyah/ 'comedy'

trahedya /trahēdyah/ 'tragedy'

tadyang /tadyāŋ/ 'rib'

adyos /?adyōs/ 'goodbye'

guwantes /gwāntes/ 'hand gloves'

guwang /gwaŋ/ 'hollow, cavity'

guwapo /gwāpoh/ 'good-looking (male)'

guwapa /gwāpah/ 'beautiful, pretty (female)'

guwapito /gwapītoh/ 'handsome, good-looking'

guwaratsa /gwarātsah/ 'a kind of dance'

guwardiya /gwārdyah/ 'guard'

giya /gyah/ 'guide'

Guia /gyah/ 'a girl's name'

Guiang /gyaŋ/ 'a family name'

huwag /hwag/ 'don't'

huwad /hwad/ 'fake, forged'

Juan /hwan/ 'Juan, John'

Huwebes /hwēbes/ 'Thursday'

huwego /hwēgoh/ 'gambling'

huweting /hwētiŋ/ 'a kind of Chinese game'

huwes /hwes/ 'judge'

hiya /hya?/ 'shame'

hiyang //hyaŋ/ 'suitable to one's health'

hiyas /hyas/ 'jewelry'

hiyaw /hyaw/ 'shout, cry'

luwa /lwa?/ 'food ejected from the mouth'

luwad /lwad/ 'clay'

luwal /lwal/ 'out; outside'

luwalhati /lwalhāti?/ 'glory'

luwas /lwas / 'trip from town to city'

luwang /lwaŋ/ 'width'

luwat /lwat/ 'delay'

liyab /lyab/ 'blaze; flame'

liyad /lyad/ 'bent backward with the abdomen protruding'

liyag /lyag/ 'beloved, darling'

liyo /lyoh/ 'dizziness'

muwang /mwaŋ/ 'sense, knowledge'

muwebles /mwēbles/ 'furniture'

muwelye /muwēlyeh/ 'pier; axle'

muwestra /mwēstrah/ 'demonstration; sample'

miyembro /myěmbroh/ 'member'

miyentras /myěnttras/ 'meanwhile, while'

Miyerkules /myérkulēs/ 'Wednesday'

m̃iyopiya /myōpyah/ 'myopia'

maya-maya /myamyā?/ 'later on'

nuwebe /nwěbeh/ 'nine'

panuwelo /panwēloh/ 'shoulder kerchief'

Añonuevo /?anyonwěvoh/ 'a family name'

niya /nyah/ 'his, her; by him/her'

niyebe /nyěbeh/ 'snow'

niyog /nyog/ 'coconut'

Nieves /nyěves/ 'a girl's name'

ngawa /ŋwa?/ 'loud empty talking'

ngwe /ŋwe?/ 'cry of a carabao'

ngiwi /ŋwi?/ 'twisted (lips)'

ngiyaw /ŋyaw/ 'mew of a cat'

puwang /pwaŋ/ 'space, interval'

puwede /pwědeh/ 'possible'

puwersa /pwěrsah/ 'force'

puwerto /pwěrtoh/ 'port; entrance'

puwesto /pwěstoh/ 'position'

puwing /pwiŋ/ 'foreign body in the eye'

puwit /pwit/ 'anus'

piyano /pyānoh/ 'piano'

piyanista /pyanīstah/ 'pianist'

piyansa /pyānsah/ 'surety, bond'

piye /pyeh/ 'foot (measure)'

piyer /pyer/ 'pier'

piyesa /pyēsah/ 'musical piece'

piyak /pyak/ 'shriek (of chicken)'

kopya /kōpyah/ 'copy'

lumpiya /lumpyāʔ/ 'Chinese egg roll'

ruweda /rwēdah/ 'ring, as in a stadium; wheel'

Rowena /rwēnah/ 'a girl's name'

riyan /ryan/ 'there'

rosaryo /rosāryoh/ 'rosary'

suwabe /swābeh/ 'smooth, mild'

suwag /swag/ 'horn'

suwail /swaʔil/ 'rebellious, disobedient'

suwelas /swēlas/ 'sole of a footwear'

suwerte /swērtēh/ 'good luck'

suwi /swih/ 'shoot, sprout'

suwitik /swītik/ 'tricky, crafty'

entreswelo /ʔentreswēloh/ 'groundfloor'

siya /syah/ 'he; she'

siyam /syam/ 'nine'

siyap /syap/ 'chirping of a chick'

siyempre /syēmpreh/ 'of course'

siyete /syēteh/ 'seven'

siyok /syok/ 'cry of a frightened chicken'

siyoktong /syoktõŋ/ 'a kind of Chinese wine'

grasya /grāsya/ 'grace'

disgrasya /disgrāsya/ 'accident'

diborsiyo /dibõrsyoh/ 'divorce'

demokrasya /demokrāsya/ 'democracy'

tuwa /twa?/ 'joy, gladness'

tuwad /twad/ 'backward position of the buttocks'

tuwalya /twālyah/ 'towel'

tuwi /twi?/ 'every time'

tuwid /twid/ 'straight'

katuwiran /katwīran/ 'reason'

istatuwa /ʔistātawah/ 'statue'

tiya /tyah/ 'aunt'

tiyo /tyoh/ 'uncle'

tiyak /tyak/ 'certain, sure'

tiyaga /tyagã?/ 'diligence'

tiyan /tyan/ 'stomach'

tiyani /tyāni?/ 'tweezers'

tiyempo /tyēmpoh/ 'time; timing'

kristiyano /kristyānoh/ 'christian'

molestiya /molestyāh/ 'bother'

All /Cw/ and /Cy/ clusters alternate morphemically with /Cuw/ and /Ciy/ respectively (cf. Morphophonemics).

10.2.2 Intervocalic Clusters (-CC-)

Tagalog clusters occur medially in utterance, that is, across syllable or morpheme boundaries whether within words or between words. Intervocalic clusters are medial clusters which are combinations of permitted final single consonant and permitted initial single consonant. The situation can be symbolized as /-VCCV-/ in native words such as takbo /takboh/ 'run' and pakpak /pakpak/ 'wing'. The lexical frequency of this possible type of medial consonant clusters is very high. A sequence of three or four consonants occurring medially always has an internal open juncture breaking it into final consonant and initial clusters as /-VC + CCV-/ in loanword displey /displɛy/ 'display', or /-VCC + CCV-/ in ekstra /ɛkstrah/ 'extra'. Since they are interrupted by a juncture, these clusters are therefore not to be considered as three or four-consonant clusters.

A sample listing of clusters occurring across syllable or morpheme boundaries is given below:

kumusta /kumustáh/ 'greeting'
 maganda /magandáh/ 'beautiful'
 pag-asa /pagʔásah/ 'hope'
 doktor /doktór/ 'doctor'
 sapagka't /sapagkát/ 'because'
 aakyat ka /ʔáʔakyát kah/ 'you will climb'
 babalik siya /bábalík/ syah/ 'he will return'
 kain na /kaʔin náh/ 'eat now'
 suweldo /swéldoh/ 'salary'

mag-aral /magʔáral/ 'study'
 minsan pa /minsan páh/ 'once more'
 damdamin /damdámin/ 'feelings'
 magbasa /magbasáh/ 'to read'
 magsulat /magsulát/ 'to write'
 nagtatakbo /nagtatakbôh/ 'ran'
 pantalon /pantalôn/ 'pants'
 aklat /ʔaklát/ 'book'
 tiktik /tikťik/ 'spy'
 tindahan /tindáhan/ 'store'
 paligsahan /paligsáhan/ 'contest'
 protestante /protestánteh/ 'protestant'
 magbisekleta /magbiseklétah/ 'to bike'
 tugtog /tugtôg/ 'music'
 dalamhati /dalamhátiʔ/ 'sorrow, affliction'
 kongresista /kongresístah/ 'congressman'
 saliksik /saliksík/ 'research'
 sandata /sandátah/ 'weapon'
 ngisngis /ŋisŋís/ 'giggle'
 representante /representánteh/ 'representative'
 luningning /luniŋŋíŋ/ 'brilliance'
 adyos po /ʔadyos poʔ/ 'goodbye, sir'

10.2.3 Prejunctural Consonant Clusters (-CC)

Postvocalic, prejunctural clusters occur in Tagalog and they are limited to two consonants only. There are words with final clusters that are in normal, everyday use such as teks /teks/

'text', kyuteks /kyũteks/ 'nail polish', koteks /kõteks/ 'sanitary napkin, kotex', kliniks /klĩniks/ 'tissue paper, kleenex', baks /baks/ 'box', aysbaks /ʔãysbaks/ 'icebox', taks /taks/ 'tax;tack', tamtaks /tamtáks/ 'thumbtack', ispits /ʔispĩts/ 'speech', plits /plits/ 'pleat', istits /ʔistĩts/ 'stitch', tidbits /tidbĩts/ 'tidbits', tsesterfild /tsesterfĩld/ 'Chesterfield cigarette', kard /kard/ 'card', nars /nars/ 'nurse', pruns /pruns/ 'prunes', bins /bins/ 'bean', pork en bins /pork ʔen bins/ 'pork and beans', etc. Names with final clusters are not uncommon in Tagalog, such as Bert, Robert, Mark or Marc, Carl or Karl, Clark, Jorge, Donald, Clifford, Arnold, Frank, etc.

Some Tagalog speakers cannot pronounce certain phonemes in certain positions, as in the case of some older people's supposed "inability" to produce initial and final clusters, simply because these clusters were not originally present in the sound system of Tagalog. It has been observed that old people have the tendency to insert an intrusive vowel between the initial clusters, producing words like tarak /tarák/ for trak 'truck', kalasi /kalásih/ for klase 'class', tarabaho /tarabāhoh/ for trabaho 'work', palantsa /palantsāh/ for plantsa 'flatiron', pirito /pirĩtoh/ for prito 'fried', and the like. Another common observation is the introducing of the prothetic vowel /i/ or /e/ before loanwords beginning with /s/ plus consonant, as in Tagalog iskul /ʔiskũl/, isport /ʔispõrt/, istambay /ʔistambáy/, ispits /ʔispits/ from English school, sport, standby, speech, respectively. Perhaps this is due to the influence of Spanish

prothetic vowel occurring before /s/ followed by a consonant, as in Tagalog eskwela /ʔeskwɛlah/, espesyal /ʔespesyál/, istasyon /ʔistasyŏh/, iskandalo /ʔiskandalŏh/ and iskina /ʔiskínah/ from Spanish escuela 'school', especial 'special', estacion 'station', escandalo 'scandal', esquina 'street', respectively.

10.3 Vowel Frequency

It has been mentioned that there is a direct, one-to-one correlation between the number of vocoid sounds and the number of syllables in Tagalog (Cf. Sec. 10.1). There are as many syllables as there are vocoids in an utterance. The following observations on the frequency of vowels were made on the basis of a frequency count of 592 words from the following samplings of modern colloquial Tagalog: Ang Pulitika (Politics), Ang Pilipina (The Filipina) and Madaling-Araw (Dawn).¹⁷ The three samplings combined give a total of 1234 syllables. There are 688 syllables with /a/, 277 with /i/, 153 with /o/, 58 with /u/ and 58 with /e/.

A statistical analysis of the relative frequency of occurrence of vowel phonemes in the three samplings yields the following percentages arranged in the descending order of frequency.

¹⁷See Beginning Tagalog: A Course for Speakers of English (Berkeley and Los Angeles: University of California Press, 1965, pp. 208, 173 and 228, respectively.)

Vowel Phonemes	Frequency of Occurrence	Percentage of Occurrence
a	688	55.8%
i	277	22.4%
o	153	12.4%
u	58	4.7%
e	58	4.7%

In the above data, it is clearly evident that the vowel phoneme /a/ has the highest frequency of occurrence, /i/ coming next, followed by /o/. In the samplings used here, /u/ and /e/ have equal frequency of occurrence, but it has been observed in some Tagalog texts that /e/ is relatively less frequent than /u/; /e/ has a very low frequency of occurrence especially in literary Tagalog.

11. Morphophonemic Alternations

The variants of phonemes or allophones have been described in Sec. 9.2. Tagalog also exhibits a number of alternations of phonemes within morphemes. These alternations of phonemes within a given morpheme bridge the gap between the morphological and phonemic levels. Linguists call this field of analysis morphophonemics. Stockwell defines the term as the description of the

alternate phonemic shapes that morphemes have in a language.¹⁸

A detailed study of the morphophonemics of Tagalog is beyond the limits of this thesis. The aim here is to illustrate only the most common types of morphophonemic alternations which are characteristic of the Tagalog language. Such an analysis reveals the presence of important phenomena which go neglected in the traditional grammar of Tagalog simply because they are masked by deficiencies in the conventional orthography. These morphophonemic alternations are common among vowels as well as consonants.

For the Tagalog vowels, as indicated in the pattern (Fig.13), an underlying five-vowel system has been established, with a three-way contrast in tongue-height and a two-way contrast in tongue-advancement, which is valid in all positions, whether the vowels are strongly stressed or weakly stressed. However, there are instances where /i/ and /e/ or /u/ and /o/ alternate with each other in certain positions or certain environments. Since contrasts exist between these vowels, such alternations are treated here as morphophonemic rather than allophonic.

The following are examples of these morphophonemic alternations:

/i/ alternates with /e/ in a pre-junctural syllable, as in babae /babáʔeh/ ~ /babáʔih/ 'female', lalaki /lalákih/ ~

¹⁸R. Stockwell, A Contrastive Analysis of Tagalog and English (Los Angeles: University of California Press, 1958, p. B-4. Mimeo.) He gives excellent examples of morphophonemic alternations on p. B-35.

/lalákeh/ 'male', sakit /sakít/ ~ /sakét/ 'sickness'; /u/ alternates with /o/ in a prejunctural syllable, as in balut /balút/ ~ /balót/ 'duck's egg', bukod /bukód/ ~ /bukúd/ 'separate', kulot /kulót/ ~ /kulút/ 'curl'; /Cúw/ alternates with /Cw/, as in puwede /puwédéh/ ~ /pwédéh/ 'can be; possible', sweldo /swéldoh/ ~ /suwéldoh/ 'salary', kuwento /kuwéntoh/ ~ /kwéntoh/ 'story'; /Ciy/ alternates with /Cy/, as in diyan /diyán/ ~ /dyan/ 'there', tiyak /tiyák/ ~ /tyak/ 'sure, certain', kaniya /kaniyán/ ~ /kanyán/ 'his; her'; /ay/ alternates with /ey/ and /e/,* as in mayroon /mayroʔón/ ~ /meyroʔn/ ~ /méron/ 'there is, there are', kaysa /kaysán/ ~ /keysán/ ~ /késah/ 'than', aywan /ʔaywán/ ~ /ʔeywán/ ~ /ʔéwan/ 'an expression of negation'; /aʔi/ ~ alternates with /ay/, /ey/ and /e/, as kailan /kaʔilán/ ~ /kaylán/ ~ /keylán/ ~ /kélan/ 'when', kailangan /kaʔílangan/ ~ /kaylāngan/ ~ /keylāngan/ ~ /kélangan/ 'necessary'.

Alternations of consonants (Cf. Consonant Patterns) are also common in Tagalog. Some of these alternations are conditioned alternations as in the case of Tagalog nasals / m ~ n ~ ŋ / which occur in a great many words spoken in normal rapid conversation.

/m/ occurs before /p b/

/n/ occurs before /d l r s t y/

/ŋ/ occurs before /k g h w/

*Note the shift of stress with /e/.

This phenomenon of sound change is often referred to as assimilation, i.e., a phonetic process whereby two phonemes acquire common characteristics. It is a regressive or retrogressive assimilation in the case quoted since the assimilatory phoneme (the phoneme which produces this phenomenon) follows the assimilated phoneme. The very common instances are found in the names for numbers such as labinsiyam /labinsiyām/ 'nineteen' (< labi 'excess, more than' + -ng 'connective marker' + siyam 'nine'), limampu /limampũ?/ 'fifty' (< lima 'five' + -ng + pu 'ten'), sandaan /sandaʔān/ 'one hundred' (< isa 'one' + -ng + daan 'hundred'); in affix pang- /pang- ~ pan- ~ pam-/ 'pertaining to, for' plus a noun, as in pangkultura /pankultŭrah/ 'cultural', panlaro /panlarō?/ 'for playing, for sports' pambansa /pambansā?/ 'national', and in words following the noun marker ang 'the', as in ang bata /ʔambāta?/ 'the child', ang puso /ʔampŭso?/ 'the heart', ang tatay /ʔantātay/ 'the father'. Pronunciations are sometimes reflected in the spelling if they occur within words but not if they occur across word boundaries as illustrated in the above examples. In normal speech, assimilations across word boundaries are commonly observed, but they may or may not take place, depending upon factors like rate of speech, length of pauses between words, emphasis, etc.

Alternation between /d/ and /r/ is very common in intervocalic position, whether within words or across word boundaries, as in marumi /marumfɦ/ ~ /madumfɦ/ 'dirty', apat na raan /ʔapat na raʔān/ ~ /ʔapāt na daʔān/ 'four hundred', susulat

din ako /susulat din ?akoh/ 'I will write' and ako rin ay susulat /?akoh rin ?ay susulat/ 'I too will write'. As a rule then, /d/ becomes /r/ between vowels. The alternation, however, is not automatic. In some words, /d/ remains /d/, never /r/ even in intervocalic position (Cf. p. 88). Some of the alternations are dialectal alternations as in the case of /d/ alternating with /r/ in some words like dagasá /dagasá?/ ~ /ragasá?/ 'hasty, violent', rimarim /rimárim/ ~ /dimárim/ 'nausea, loathing', rahuyo /rahúyo?/ ~ /dahúyo?/ 'seduce'. In some dialects of Tagalog, the use of /r/ for /d/ is the usual practice.

Alternation between /r/ and /l/ or /d/ and /l/ seems to be stratified socially, with /r/ and /d/ among the better educated speakers and /l/ among the less privileged. Examples of this alternation are found in some few words like kuwarta /kwartáh/ ~ /kwaltáh/ 'money', lugar /lugár/ ~ /lugál/ 'place', and dura /durá?/ ~ /lurá?/ 'sputum'.

Other alternations which are normally observed among educated speakers are the alternations between /n/ and /ŋ/, as in kanina /kanínah/ ~ /kaŋínah/ 'a moment ago', dinig /diníg/ ~ /diŋíg/ 'hear', tinig /tínig/ ~ /tíŋig/ 'voice'; alternation between /n/ and /l/, as in nangka /nanká?/ ~ /lanka?/ 'jack-fruit', nilaga* /nilága?/ ~ /linága?/ 'boiled in water', nilugaw* /nilúgaw/ ~ /linúgaw/ 'rice gruel'; alternation between /k/ and /g/, as in bagsak /bagsák/ ~ /baksák/ 'fall;;failure'

*Metathesis.

lagpak /lagpāk/ ~ /lakpāk/ 'fall; failed', tigdas /tigdās/ ~ /tikdās/ 'measles'; alternation between /ʔ/ and /h/, as in bansa /bansāʔ/ ~ /bansāh/ 'nation', arina /ʔarīnah/ ~ /harīnah/ 'flour', ulinig /ʔulīnig/ ~ /hulīnig/ 'hear distinctly'.

Some alternations are stylistic alternations. The alternation between /p/ and /f/ is a case in point. Some educated speakers prefer to use the foreign sound /f/ to native /p/ for social prestige. This type of alternation is illustrated in certain words such as piyesta /piyēstah/ ~ /fiyēstah/ 'feast, holiday', pino /pīnoh/ ~ /fīnoh/ 'fine, refined', prutas /prūtas/ ~ /frūtas/ 'fruit', palda /pāldah/ ~ /fāldah/ 'skirt', etc. Alternation between /b/ and /v/ is also observed among educated speakers influenced by Spanish orthography. Examples of this alternation may be found in words like probinsiya /probinsyāh/ ~ /provinsyāh/ 'province', biyahe /byāheh/ ~ /vyāheh/ 'trip, voyage', biyuda /byūdah/ ~ /vyūdah/ 'widow', bakasyon /bakasyōn/ ~ /vakasyōn/ 'vacation', etc.

12.1 Suprasegmental Features

The study of prosodic features in modern linguistics is still in its infancy, or at any rate early adolescence, compared with the techniques for the systematic study of speech sounds. These features, which include stress, length, pitch, juncture, etc., have been variously named. Hughes, for instance, use the term prosodic as synonymous with suprasegmental. They are called suprasegmental or nonlinear because they are interpreted as an extra layer of structure superposed on the segmental phonemes. Some linguists use the general term prosody for suprasegmental phenomena in general, and prosodeme for a suprasegmental feature that is contrastive. There seem to be two "schools" of thought about the suprasegmental features. One school terms them suprasegmental features reserving the term phoneme for the linear phoneme, and the other refers to them as suprasegmental phonemes. There is some debate about it.

An analysis of Tagalog suprasegmentals was not attempted in this study. There are many interesting problems to be encountered. A few samples of the kinds of stress problems with some indications as to how they may be solved could be mentioned here.

In Tagalog, there is a rather complex system of written or printed accentuation recommended by the Institute of National Language and taught in the schools. The official "Grammar of the National Language" and other books used in Philippine schools present a system of accentuation using three types of accent marks,

namely: the acute accent (^ˈ) placed in any position above the vowel as in páaralán /páʔaralán/ 'school', the grave accent ([`]) representing a glottal stop placed over the final vowel, as in batà /bátaʔ/ 'child', and a circumflex accent (^ˆ) indicating the simultaneous presence of an acute accent and a glottal stop written above the vowel in word-final position, as in matandâ /matandaʔ/ 'old'. These are the three accent marks found in school textbooks and used in conventional orthography.

In the nomenclature of accent phenomena, it is traditional to use the same terms and describe them as presented above. The term accent is too often a source of confusion, since it is used to refer to written accent marks and as a general cover term for intensity and pitch. The same word is used in "foreign accent" which is the carry-over into a second language of habits of articulation from one's native or second language.

In this study, stress was preferred to accent, to refer to the phonemically significant force or loudness given a vowel or syllable. The stress situation in Tagalog has been long the object of debate among scholars. For individual words in Tagalog, this investigator set up three levels of stress: the strongest stress was called primary and in phonemic transcription it was marked by the acute accent /^ˈ/, written over the vowel phoneme forming the nucleus of the stressed syllable; the next strongest was called secondary which was marked by a grave accent /[`]/; and then the weak or zero stress which was left unmarked, or may,

optionally, be indicated by / ˘ /.

In a Tagalog word of more than one syllable, at least one syllable receives a greater degree of stress than the other or others. The three clearly different phonetic levels of stress may all be observed in a normal pronunciation of the following six-syllable sentence:

Lalakad na ako. /lálákad nah ʔakõh/ 'I'll go now.'

A word of three to six or more unstressed syllables in uninterrupted sequence are relatively common, as shown in the different forms of the stem tulong /túlon/ 'help.'

matulungin /matulunín/ 'helpful'

pagtutulungan /pagtutulunán/ 'act of helping one another'

makipagtulungan /makipagtulunán/ 'to cooperate'

pinakamatulungin /pinakamatulunín/ 'most helpful'

The unstressed syllables above are pronounced with more or less equal length and even tone.

Like the segmental phonemes, the stress phonemes may be established by studying their distribution and contrast. The location of stress in Tagalog is not fixed by automatic rules. Its occurrence is unpredictable. It is possible to change the meaning of a word or form by changing the place of stress. The following sentences contain a pair of words differentiated only by stress:

1. Iba baga ang baga sa baga at baga?

/ʔibáh bagáh ʔaŋ bágh sah bága? ʔat bagá?/

(different-interrogative-the-ember-from-abscess-and-particle lungs)

'Is ember different from abscess and lungs?'

2. Kakanin ng kasama ng kasama ang kakanin sa mesa.

/kàkànin naŋ kasámah naŋ kasamáh ?aŋ kakanín sah
mésah/

(will eat-noun marker-companion-of-the-tenant-the
goodies-on-table)

'The companion of the tenant will eat the goodies
on the table.'

3. Bata ng bata ang ginaw kahit walang bata.

/batáh naŋ báta? ?aŋ gináw káhít waláŋ bátah/

(bear-by-child-the-cold-even-without-bathrobe)

'The child could stand the cold even without a
bathrobe'.

4. Isa lamang ang lamang niya sa akin.

/?isáh lámang ?aŋ lámang niyáh sah ?ákin/

(one-only-the-advantage-him-over-me)

'He has only one advantage over me.'

5. Lalaki ang aso. Lalaki ang aso.

/lalákih ?aŋ ?ásoh/ /lálakín ?aŋ ?asóh/

(male - the - dog) (will grow big-the-smoke)

'The dog is male.' 'The smoke will grow big.'

In this case, stress plays a linguistic role in Tagalog and it is a distinctive phenomenon tied in with meaning. There is a considerable number of substantives which are distinguished only by stress. For example:

anak /?ának/ 'family, clan' vs. anak /?anáċ/ 'child'

balat /bálat/ 'birthmark' vs. balat /balát/ 'skin'

hamon /hámon/ 'challenge' vs. hamon /hamón/ 'ham'
pusod /púsod/ 'navel' vs. pusod /pusód/ 'chignon'
saya /sáyah/ 'skirt' vs. saya /sayáh/ 'merriment'

A stress can change the form class of a word. A word may be a verb or an adjective, depending upon the position of stress. The following minimal pairs are differentiated only by stress emphasis.

A.

ahit /ʔáhit/ 'shave' vs. ahit /ʔahít/ 'shaved'
kalat /kálat/ 'scatter' vs. kalat /kalát/ 'scattered'
gising /gísing/ 'wake up' vs. gising /gisín/ 'awake'
sira /síraʔ/ 'destroy' vs. sira /siráʔ/ 'destroyed'
ubos /ʔúbos/ 'consume' vs. ubos /ʔubós/ 'consumed'

B.

baliin /balíʔin/ 'to break (e.g. a stick)' vs. baliin /baliʔín/ 'easily broken'
basagin /baságin/ 'to break (e.g. glass)' vs. basagin /basagín/ 'easily broken'
biruin /birúʔin/ 'to tease' vs. biruin /biruʔín/ 'always being teased'
talunin /talúnin/ 'to defeat' vs. talunin /talunín/ 'easily defeated'
utangin /ʔutágin/ 'to get on credit' vs. utangin /ʔutaɡín/ 'taken on credit'

C.

antukin /ʔantukín/ 'to feel sleepy' vs. antukin /ʔántúkin/ 'habitually sleepy'

hiramin /hiramín/ 'to borrow' vs. hiramin /hirámin/
'borrowed'

sipunin /sipunín/ 'to catch cold' vs. sipunin
/sipúnin/ 'susceptible to cold'

tanggalin /tangkalín/ 'to detach' vs. tanggalin
/tàngálin/ 'detachable'

yamutin /yamutín/ 'to annoy' vs. yamutin /yàmítin/
'easily annoyed, cranky'

A noun may become an adjective by changing the position of stress. The following are examples:

buhay /búhay/ 'life' vs. buhay /buháy/ 'alive, living'

galit /gálit/ 'anger' vs. galit /galít/ 'angry'

takot /táktot/ 'fear' vs. takot /takót/ 'afraid'

gutom /gútom/ 'hunger' vs. gutom /gutóm/ 'hungry'

uhaw /?úhaw/ 'thirst' vs. uhaw /?uháw/ 'thirsty'

There is a meaning difference between verbs that have the primary stress on the ultima and the corresponding nouns that have the primary stress on the penult and the secondary stress immediately preceding the primary. Thus:

inumín /?inumín/ 'to drink' vs. inumín /?inúmin/
'drinks'

palitan /palitán/ 'to change' vs. palitan /pálitan/
'exchange'

singilin /singilín/ 'to collect accounts' vs. singilin
/singílin/ 'accounts collectible'

tahanan /tahanán/ 'to live in a house' vs. tahanan
/tāhānan/ 'home'

tanawin /tanawin/ 'to look from afar' vs. tanawin
/tānāwin/ 'scenery'

The following verbs with the stress on the penult are distinguished from the corresponding nouns with the stress on the ultima.

bihisan /bihisan/ 'to dress someone' vs. bihisan
/bihisān/ 'dressing-room'

hugasan /hugasan/ 'to wash' vs. hugasan /hugasān/
'place for washing'

orasan /ʔorasan/ 'to time' vs. orasan /ʔorasān/
'timepiece, clock'

pasukan /pasukan/ 'to enter' vs. pasukan /pasukān/
'opening of classes'

samahan /samahan/ 'to accompany someone' vs. samahan
/samahān/ 'company, society'

There are many other interesting examples of contrasting pairs. Only five samples for each set were given to illustrate the point. These samples were taken from the comparatively long list of minimal stress contrasts collected by this investigator for further study.

Tagalog utterances are spoken with three levels of pitch: low /1/, mid /2/, and high /3/. Pitch /1/ is the "normal level" for syllables under weak stress and pitch /2/ for syllables under secondary or primary stress. Pitch /3/ is for syllables with special emphasis. Normally, only pitch /1/ and /2/ are used in most contours. Pitch is correlated with stress. Tagalog has a syllable-timed rhythm since the rate of the utterance of

a succession of syllables remains approximately the same under any stress.

Closely allied with the problems of stress are those of junctures. Two types of terminal junctures are recognized in Tagalog. One may be labelled "level" juncture, or "single bar" / | /. It occurs both internally in utterance and finally, and has important syntactic functions. The other type may be labelled "rising" juncture / ↑ /, which marks a pitch rise. It occurs internally in utterance and finally in certain kinds of questions.

13.4 Alternative Formulations

A survey of various works on the phonology of Tagalog reveals the existence of more than one solution for certain phonemic problems. Differences in formulations for the same set of facts have been found. One analyst, for instance, starts from the same data and arrives at different conclusions because of differences in premises and procedures. This "non-uniqueness of phonemic solutions," as it is called by linguists, is observed in the already-extant phonemic analyses examined for this study.

The different formulations discussed here are not necessarily the most important, but perhaps the most revealing of the attitudes and philosophy of the analysts. There are, for instance, differences in graphic symbolization, such as the use of the digraph /ng/ for the velar nasal /ŋ/, or the choice of the symbol /ʔ/, /q/ or /' / for the glottal stop. The Balarila ng Wikang Pambansa (Grammar of the National Language)¹⁹ and the adaptations of it made by various writers symbolize the glottal stop by a grave accent /` / over the final vowel and by a hyphen /- / in word-medial position. But these are purely graphic differences.

Another point is the treatment of /ts/. Wolfenden,²⁰ for

¹⁹Balarila ng Wikang Pambansa. Publications of the Institute of National Language. (Manila: Bureau of Printing, 1949).

²⁰Elmer Wolfenden, A Re-statement of Tagalog Grammar. Published jointly by the Summer Institute of Linguistics and the Institute of National Language. (Manila: Bureau of Printing, 1961) p. 2.

instance, interprets /ts/ as a unitary contoid, describing it as an affricate sound written with a digraph, not a cluster as described in this thesis. Lopez,²¹ taking cognizance of Bloomfield's Tagalog analysis²² treats the affricate combination /ts/ as a single sound, with the /s/ always palatalized but he considers this sound as foreign and therefore not a part of the sound system of Tagalog.

The inclusion of loanwords introduces a few conflicting phonemic patterns. Earlier works, for instance, present a three-vowel pattern against the five-vowel pattern. Some analysts described i and e or u and o as allophonic variants, which are what they were historically and still are in some dialects of Tagalog. Bloomfield, for instance, assumes that the pairs are free variants ("the higher variants... are commoner than the lower"). Pittman writes:

The letter u and o in Tagalog, although useful for maintaining the distinctive spelling of certain borrowed words, are, in fact, simply two different letters for symbolizing a single phoneme. Such letters may be called 'allographs' and, in this case, represent 'allophones' or different pronunciations of a single phoneme... the difference between u and o as what it truly is-- a spelling convention only, and not a phonemic distinction such as the difference between, for example a and i.²³

²¹Cecilio Lopez, A Manual of the Philippine National Language (Manila: Bureau of Printing, 1940), p. 14.

²²Leonard Bloomfield, Tagalog Texts with Grammatical Analysis (Ann Arbor: University Microfilm Inc., 1917), p. 134

²³R. S. Pittman, Descriptive Linguistics Applied to Tagalog (Manila: Publication of the SIL and INL, Paper No. 11, Sept., 1956), p. 5-6.

Hemphill analyzes i and e as allophones in free variation, giving the examples lalaki or lalake (man), and u and o as allophones in complementary distribution, illustrating the point in these two sentences:

Umupo ka (Sit down.) and Tayo'y umupo (Let's sit down.)
 [umupuka] [tayoyumupo]

In the first one the sound written o is pronounced much like [u] but in the second, the o of umupo stands for the sound [o].²⁴ Wolfenden presents a five-vowel pattern and notes: "In most cases /e/ is a free alternant of word-final /i/ but the two contrast in Spanish loans."²⁵

There are different solutions proposed for this problem of phoneme intersection (two phonemes sharing common allophones) or intersection of allophones (the confusion of allophones of two different but similar phonemes). Analysts have difficulty deciding whether to describe i and e, for example as separate phoneme or allophones of a single phoneme. [e] as an allophone of /i/ occurs in final position only, and [i] occurs in final position in free variation with [e] and elsewhere. [e] as an allophone of /i/ is predicted in certain position. If its occurrence is predictable, one cannot say it is a phoneme. What is then the phonemic status of [e]?

The present investigator would not allow the variation of [i] and [e] in all instances. In a great many Tagalog words,

²⁴R. J. Hemphill, "The Analysis of a Language-- Sounds" in Background Readings in Language Teaching. PCLS Monograph Series No. 1 (Quezon City: The Phoenix Publishing House, 1962), p.33-34.

²⁵Wolfenden, loc. cit.

/i/ under strong stress does not alternate with /e/, and clear minimal contrasts for /i/ vs. /e/ have been established and recognized at least in educated speech (see pp.70 & 73). Applying the principle "once a phoneme always a phoneme," the problem here is solved by positing the keystone of the five-vowel system for Tagalog. This analysis is completely in agreement with that of Stockwell,²⁶ treating the alternation between /i/ and /e/, /u/ and /o/, and the like, as morpho-phonemic rather than allophonic.

Another interesting problem is in the interpretation of the basic syllable structure of Tagalog. The tradition has assumed that Tagalog has four basic syllable patterns, namely: V, VC, CV and CVC. This implies that the glottal consonant /ʔ/ does not occur word-initially, and that /h/ does not occur word-finally, an analysis that is reflected in the writing system.

The Stockwell formulation is stated as follows:

The four common syllable structures in Tagalog are /V/, /CV/, /VC/, and /CVC/. These may be represented in the single formula /((C) V (C))/, indicating that neither, either, or both consonants may be present, and that

²⁶Stockwell makes the following remarks: "The failure to consider loans as an integral part of the language is a weakness of other analyses... When items borrowed from Spanish lexicon, he explains, are considered (as they must be, since there is no structural way of discriminating between them and the non-borrowed items, and since the Tagalog speaker himself cannot tell one from the other unless he knows Spanish), then the case for five vowels is much more certain." (p. B-2 & 3).

the maximum syllable is /CCVC/, in which a two-consonant cluster initiates the syllable. The fullest syllable formula is then /(C) (C) V (C)/. /V/ includes diphthongs, i.e. /V/ and /S/. To include the second element of the diphthong requires that one further digit be added to the formula: /(C) (C * S) V (S) (C)/.²⁷

This analysis does not adhere to writing /ʔ/ before all initial vowels and /h/ after final vowels. Paterno concludes that "Glottal stop /ʔ/ occurs only in final position..."²⁸ whereas Cayari takes /ʔ/ as significant also in initial position.²⁹

Actually, native speakers of Tagalog automatically place a glottal stop before words beginning with a vowel in an utterance, and aspiration is always heard after a vowel in absolute final position. Either /ʔ/ or /h/ is present in word-final position in words written with a final vowel. The distinction is indirectly shown in school textbooks. Word final /ʔ/ is marked by /ˀ/ or /ʰ/ over the immediately preceding syllable although in rapid speech it is only pronounced sentence-finally. /h/ is shown as the initial sound in suffixes /-han/ and /-hin/ alternating morphemically with /-an/ and /-in/ respectively, e.g.,

²⁷Stockwell, op. cit., p. 34.

²⁸Adelaida Paterno, "Tagalog Consonant Phonemes Compared with English Consonant Phonemes." The MST English Quarterly (1957), p. 17.

²⁹R. M. Cayari, "The Phonemes of Tagalog." The Philippine Journal of Science (June, 1956), p. 251.

kabataan (< ka- + bata 'child, young' + -an > /kabataʔan/ 'youth, younger generation'), kababaihan (< ka- + babae 'woman' + -han > /kababaʔɪhan/ 'women in general'), basain (< basâ 'wet' + -in > /basaʔɪn/ 'to wet') and basahin (< basâ 'read' + -hin > /basáhin/ 'to read'). In this analysis suffixes /-an/ and /-in/ are described as consisting of two allomorphs each, one with and one without /h/.

The present study assumes that Tagalog has no final vowels. All absolute final vowels are here transcribed as /Vh/ or /Vʔ/ in contrast with /VC/ where /C/ represents all other final consonants, that is, the bases are described as having phonemic final /h/ or /ʔ/. This type of analysis eliminates the necessity of interpreting /-an ~ -han/ or /-in ~ -hin/ as allomorphs of the same morpheme, thus achieving economy and giving the pattern symmetry and morphophonemic regularity. This formulation is in agreement with that presented in the works of the Philippine Center for Language Study (e.g. in Beginning Tagalog: A Course for Speakers of English).

Earlier studies such as those of Cayari, Paterno, Stockwell, etc., assert that there are no final cluster in Tagalog but the present study reveals that final clusters also occur in a number of Tagalog words that are of general, normal and everyday use (Cf. Prejunctural Consonant Clusters). This study also disagrees with Stockwell's conclusion that "The only important restrictions on the distribution of the consonants are that /r/ is rare initially and finally..." (p. B-30). A long list of Tagalog words having initial and final /r/ disproves that conclusion.

Another difference is that some analyses have oriented their contrast on the basis of the voiced-voiceless axis only, whereas this study gives minimal contrasts on the basis of voicing, point and manner-of-articulation axis.

Other problems are concerned with stress or accentuation in Tagalog. There may be different solutions to the problem: which is phonemic-- length or stress?

At this early stage of development of Tagalog linguistics it is not easy to say that one type of linguistic formulation is superior or inferior to another. There is a possibility that the formulations presented in this thesis are the wrong ones. The other analyses might be correct. In the words of Hall:

It has been fashionable to distinguish, facetiously, between two approaches to linguistics, the 'God's truth' school (which supposedly considers that there is one fundamental truth to be expressed concerning every linguistic system), and the 'hocus-pocus' school (which treats linguistics as simply a set of game-like manoeuvres to be carried out according to the analyst's preconceived principles, and using the linguistic facts only as a set of data to be manipulated at will). In these terms, we can perhaps say that 'God's truth' in language (as in other matters) does exist, but that it is not given to man to discover it and formulate it in any but approximate terms, which can have only relative validity; and that hocus-pocus is basically foreign to the aims of linguistics or any other science, except as a perhaps unavoidable part of the 'philosophy of as if' inherent in all scientific analysis.³⁰

³⁰Hall, op. cit., p. 123.

14. SUMMARY CONCLUSIONS

Tagalog has twenty-one segmental phonemes: fourteen consonants / p t k ʔ b d g m n ŋ s h l r /, two semivowels / w y /, and five vowels / i e a o u /. The semivowels function as consonants in initial and final position. The diphthongs are: / ey ay oy uy iw aw /.

Some analysts present a three-vowel system of Tagalog: / i a u /. They describe [e] and [o] as allophones of /i/ and /u/, respectively, which they were historically, and still are in some dialects of Tagalog. The present study revealed that five vowel phonemes now exist in the language as evidenced by a considerable number of minimal and near-minimal contrasts. The alternations between /i/ and /e/, and /u/ and /o/ were here considered morphophonemic rather than allophonic. Other morphophonemic alternations commonly observed in Tagalog are:

// ay ~ ey ~ e //, // aʔi ~ ay ~ ey ~ e //, // Cuw ~ Cw //, // m ~ n ~ ŋ //, // Ciy ~ Cy //, // d ~ r //, // d ~ l //, // r ~ l //, // n ~ ŋ //, // h ~ l //, // k ~ g //, // ʔ ~ h //, // p ~ (/f/) //, and // b ~ (/v/) //.* Some of these alternations are conditioned, dialectal or stylistic alternations.

The basic syllable structure is CV and CVC. All final syllables require a final consonant. A Tagalog word ending with a vowel may have a final /ʔ/ or /h/ although this is not reflected in the writing system. Consonant clusters occur initially, medially and finally.

Suprasegmentally, Tagalog has three kinds of stress:

*The sounds in parentheses are not a part of the sound system of Tagalog.

primary /ˈ/, secondary /˘/ and weak (unmarked). It has three levels of pitch: /1/, /2/ and /3/, reading from low to high and two terminal junctures: a single bar / | / and a rising juncture / ↑ /.

As there exist minimal contrasts based on the incidence of the stress, it may be necessary to conclude that stress is phonemic in Tagalog. There are at least two contrasting levels of stress: primary vs. weak. An intermediate level of phonetic loudness or secondary stress is present in Tagalog but no contrast is involved. Its occurrence might turn out to be predictable, and it might be interpreted as an allophone of the primary stress, occurring in certain positions.*

There is a distinct correlation between Tagalog stress and length of the vowel in the stressed syllable. Length is conditioned by stress. Which is phonemic in Tagalog-- stress or length? If stress is phonemic, how many stress phonemes are there in Tagalog? Are pitch and juncture also to be considered phonemes?

The problems of stress, length, pitch, rhythm, juncture and intonation pattern of Tagalog need further study. Some aspects of these features require thought and research beyond the scope of this thesis. The solution to the problems is left for future investigation.

*In the present study the secondary stress is marked in the transcription as though it were an established phoneme.

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