

A COMPARATIVE PHONOLOGY OF THE EIGHT MAJOR PHILIPPINE LANGUAGES

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The Philippine language group consists of more than a hundred expression systems. It belongs to a larger family of languages known as Austronesian. There are approximately 500 members of the latter group and their geographical distribution extends from the Malagasy Republic in the west, to Easter Island in the east, and from Formosa in the north to New Zealand in the south.

The determination of the genetic relationship between these languages has been a major task which has occupied a number of linguists since the middle of the nineteenth century. But the most extensive and definitive works have been those of Otto Dempwolff in his Vergleichendes Lautlehre des Austronesischen Wortschatzes¹ and Isidore Dyen in his Lexicostatistical Classification of Austronesian Languages.² Dempwolff reconstructed a Proto-Austronesian sound system and a 2000-word vocabulary. He also analyzed the sound correspondences between Austronesian and eleven of its offspring. Dyen's work is a lexicostatistical comparison of the basic vocabularies of 245 Austronesian languages. In this work, he demonstrates that approximately three fourths of all the Austronesian languages belong to a large linguistic group with numerous sub-groups. This, he terms the "Malayo-Polynesian family."³ Works of a more limited nature which deal solely with Philippine languages are Cecilio Lopez's "Origins of the Philippine Languages"⁴ and Harold Conklin's "Outline Gazetteer of Native Philippine Ethnic and Linguistic Groups."⁵

The eight languages which are discussed in the present paper belong to the Philippine subgroup. Although they are structurally similar, phonologically, morphologically and syntactically they are not mutually intelligible. Their percentage of homosemantic cognates varies from 5% to less than 50%, depending upon the contiguousness of their locations.

The major languages are Bikol, Cebuano, Hiligaynon, Ilokano, Pampangan, Pangasinano, Tagalog and Waray (see Figure 1). Bikol is spoken by approximately 7.8% of the total population. Its geographical location is in the southeastern part of Luzon in the provinces of Albay, Camarines Sur, Camarines Norte and Sorsogon. Ilokano is spoken by approximately 11.8% of the Philippine population. Its geographical location is in the northwestern part of Luzon in the provinces of Ilocos Norte, Ilocos Sur, Abra and La Union. Pampangan is spoken in the central part of Luzon, in the province of Pampanga and parts of Tarlac, by approximately 3.2% of the population. Pangasinan is spoken in the northcentral part of Luzon in the province of Pangasinan and in parts of Tarlac by approximately 2.5% of the population. Tagalog which has the second largest number of speakers is native to Luzon and the neighboring islands. Approximately 21% of the population are native Tagalog speakers. Since that language has been designated the national language, and since it is compulsarily taught in all the schools of the Philippines under its national label "Pilipino," it is fast becoming the lingua franca of many of the Fili-

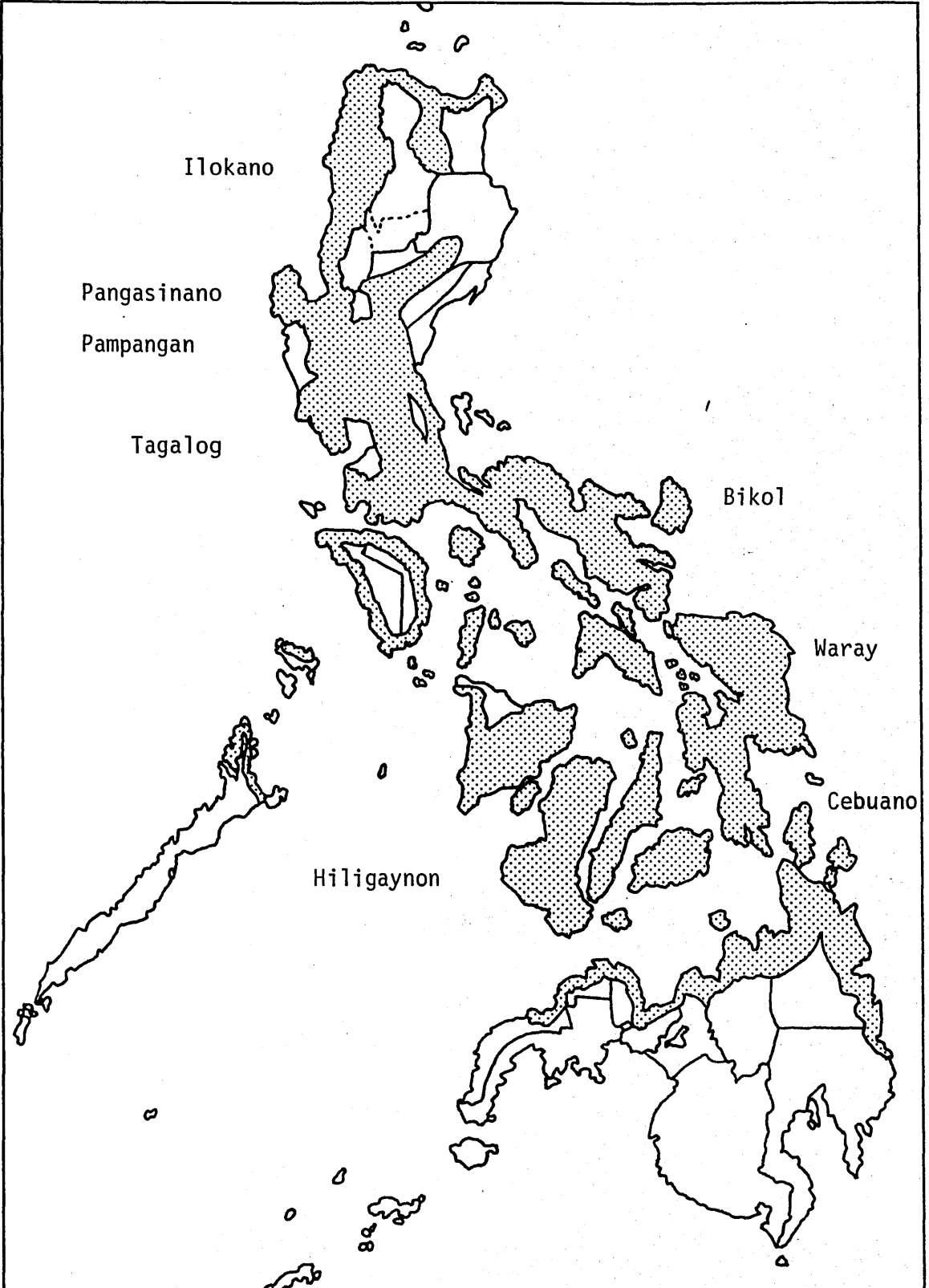


Figure 1

pinos. It is spoken natively in the cities of Manila, Quezon, Caloocan and Pasay, the provinces of Bulacan, Bataan, Cavite, Rizal, Quezon, Laguna, Batangas, Nueva Ecija, and in the coastal areas of the islands of Mindoro, Marinduque, Masbate and Palawan. Cebuano is spoken in the central part of the Visayan Islands, in the provinces of Cebu, Negros, Bohol, Misamis Oriental and Occidental, Surigao, and parts of Leyte and Masbate; and in the cities of Cebu, Bacolod, Davao, and Cagayan de Oro. Approximately 24.1% of the population speak it natively. Hiligaynon is spoken by approximately 10.4% of the Philippine population. Its native speakers live in the islands of Panay, Negros Occidental and Iloilo. Waray is spoken by approximately 5.5% of the total population of the country. The native speakers are found in the islands of Samar and Leyte.⁶

This paper presents the results of a diasystemic comparison of the phonological systems of the eight major languages of the Philippines. Although these languages have been subjected to phonological analysis employing various methodologies, there has been no attempt to construct a diasystem of them in order to present in a more explicit manner their structural interrelationship. Methods employed previously in the genealogical classification and subgrouping of these languages include:

1. qualitative procedures such as the discovery of exclusively shared non-accidental innovations, and judgement by inspection or intuition and
2. quantitative analysis such as lexicostatistics.

The diasystem method, which has been a useful tool in structural dialectology provides a different dimension to comparative linguistics: it permits a comparison of several systems simultaneously, thus enabling one to read immediately the phonological features of each language, and also the structural interrelationships within the linguistic group. The investigator, however, should establish criteria so that only closely-allied languages which exhibit a certain constancy and structural similarity of features will be admitted in a diasystem.

A diasystem is defined as "... the juxtaposition and combination in one single statement, of linguistic features in such a way that those which occupy equivalent places in several systems are united under the same heading."⁷ It is a system of a higher level, constructed "out of the discrete and homogeneous systems that are derived from description and that represent each a unique formal organization of the substance of expression and content."⁸ It is an abstraction of features which are constant in a variety of closely related languages. The phonemic features which are similar or perform equivalent functions in the languages under study are the diaphonemes and their physical realizations in the diasystems are called diaphones.

There are two levels of analysis in the construction of a diasystem. They are the diaphonemic and the diaphonetic levels.⁹ The former establishes the presence or absence of phonemic equivalences in the languages being compared, and the latter examines the phonetic realizations of the phonemes in the diasystem.

A preliminary step in the construction of a diasystem is the preparation of a phoneme inventory and an allophonic description of each of the linguistic systems to be compared. If separate descriptive studies are used as sources of data, the phonological notations should be uniform,

for clarity, and in order to facilitate the simultaneous comparison of the languages.

The diasystems which are presented in this paper incorporate information concerning the phonological and distributional features of the segmental phonemes of the eight languages. The supra-segmental phonemes were not included in the construction of the diasystem as conclusions about their nature and functions are tentative and controversial.

My sources for the comparative data were separate studies of the Philippine languages. Although the works were by competent investigators, various phonetic notations were employed, thereby necessitating a transposition into a uniform symbolization. For this study, I adopted the system suggested by Block and Trager in Outline of Linguistic Analysis¹⁰ for the symbolization.

The separate studies are:

- Cebuano: Tommy Anderson. A Contrastive Analysis of Cebuano Visayan and English. Ph.D. dissertation. UCLA. 1965.
- Bikol: Teodoro Llamzon. A Subgrouping of Nine Philippine Languages. Ts. Unpub. 1965.
- Hiligaynon: Purita Arandilla. A Contrastive Analysis of Hiligaynon and English. Ts. Unpub. n.d.
- Iloko: Nobleza Asuncion (Lande). Iloko Phonology. Ts. Unpub. 1960.
- Pampango: Catherine Clardy. Pampango Phonology. Ph.D. dissertation. Univ. of Texas. 1958.
- Pangasinan: Paul Schacter. A Contrastive Analysis of English and Pangasinan. Ph.D. dissertation. UCLA. 1960.
- Tagalog: Cecillio Lopez. 'Origins of the Philippine Languages.' Philippine Studies. Vol. 15, No. 1. (January, 1967).
- Waray: Teodoro Llamzon. A Subgrouping of Nine Philippine Languages. Ts. Unpub. 1965.

The Proto-Malayo-Polynesian data were from Dempwolff's Vergleichendes Lautlehre des Austronesischen Wortschatzes and Dyen's A Lexicostatistical Classification of the Austronesian Languages.

The basic vowel system of the eight languages consists of three phonemes: /i a u/. There is evidence which points to the existence of /e o/ in seven of the eight languages. But further investigation reveals that the words containing these phonemes are for the most part Spanish loan words. The very few other occurrences of /e o/ in the native language systems are in free variation or in alternation with /i u/ respectively. With these as evidence, it is more than likely that Spanish loan words introduced a split of the original protophonemes /*i *u/, and that this division is rather recent since the number which show contrasts

are statistically insignificant. Because of the special conditions concerning the existence of /e o/ in the languages under study, these phonemes were therefore regarded as allophones of /i u/ respectively. One Ilokano dialect has /ə/ (mid central unrounded). This occurs in lieu of /i/ in medial position. /u/ (high back unrounded) occurs in Pangasinano only when /u/ does not occur. Since /ə/ occurs in alternation with /i/ in Ilokano and /u/ occurs in alternation with /u/ in Pangasinano, and since they do not occur in the other languages I regarded /ə u/ as allophones of /i u/ respectively.

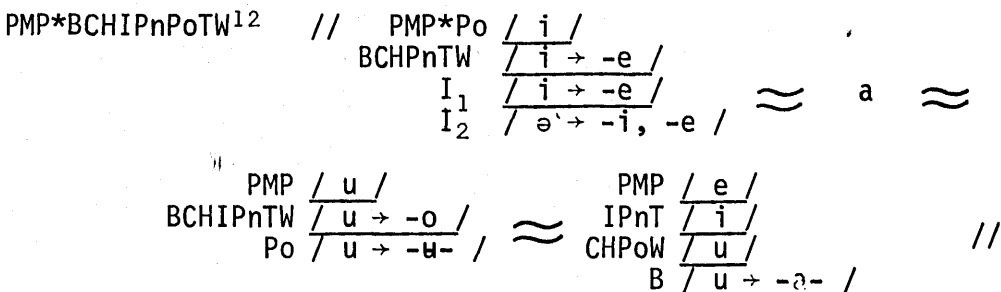
The consonants that occur in the eight languages are: /p t k b d g h m n ŋ s l r w y/. /ʔ/ occurs in seven of the eight languages studied. It does not occur in Pangasinano. /č ʝ/ occur in Pampangan, but only in loan words.

There is at least one stress phoneme and one length phoneme in each of the languages. Stress is always accompanied by length and high pitch but length may occur independently of stress. There are three pitch levels and three terminal contours which are common to the languages. A characteristic intonation pattern consists of two or more pitch levels and one terminal contour. The following intonation patterns are common to all of them: / (2) 3 2 ↘/, / (2) 3 2 ↗/, / (2) 3 2 →/, and / (2) 3 3 ↘/.

The Proto-Malayo-Polynesian (PMP) phonemes that are included in this study are /*i *a *u *e/, and /*p *t *k *b *d *g *ʔ *h *m *n *ŋ *s *l *r *w *r *R₁/.¹¹

A diaphonemic comparison of the major languages establishes the presence of parallel sets of phonemes, as in the following:

BCHIPnPOTW //iəasu//, //pətəkəbədəgšhəməŋəsəlɾwəyəw//.
The significant allophonic and distributional differences are illustrated in the following diasystem:



PMP /*i/ is retained in Pangasinano. Bikol, Cebuano, Ilokano, Pampangan, Tagalog and Waray have retained the sound but there is an alternation with /e/ in final position and in the case of Ilokano dialect number two, it has shifted to /ə/ in medial position. /*u/ as it is retained by the languages alternates with /o/ in final position. In Pangasinano, it changes to /u/ in medial position. /*a/ is retained in all positions in all the languages.

*/*e/* has changed to */i/* in Ilokano, Pampangan and Tagalog. In Cebuano, Hiligaynon, Pangasinano, Waray and Bikol it has shifted to */u/*, except that in the case of the latter, it changed to */a/* medially.

In the comparison of the consonants, the diasystem which was constructed appears to exhibit a similar degree of diaphonetic divergence as in the case of the vowels. The following phonemes show structural and functional equivalence:

$\begin{array}{l} \text{PMP*BCHIPnPoTW} // \\ \text{PMP*BCHPnTW} / \text{?} / \\ \text{Po} / \text{X} /^{13} \\ \text{I} / \text{?} \rightarrow \text{-X} / \end{array}$	$\begin{array}{l} \text{PMP*BHIPnW} / \text{d} / \\ \text{CPoT} / \text{d} \rightarrow \text{-r-} / \\ \text{PMP*BCHITW} / \text{h} / \\ \text{PnP} / \text{h} \rightarrow \text{-X-} / \end{array}$
$\begin{array}{l} \text{PMP*I} / \text{r} / \\ \text{CHPoT} / \text{l} / \\ \text{Pn} / \text{r} \rightarrow \text{-y-} / \\ \text{BW} / \text{r} \rightarrow \text{-l} / \end{array}$	$\begin{array}{l} \text{PMP} / \text{R}_1 / \\ \text{Po} / \text{r} / \\ \text{Pn} / \text{y} / \\ \text{BCHTW} / \text{g} / \end{array} //$

PMP */*d/* is retained in all positions in five of the eight languages. In Cebuano, Pangasinano and Tagalog, PMP */*d/* has remained in initial and final position but it has changed to */r/* in medial position. */*?/* is retained in seven out of the eight languages, although in Ilokano, it is lost in final position. Pangasinano has no */*?/*. PMP */*h/* has remained in initial and medial positions in six of the eight languages. It does not occur in final position in all of the eight languages. */h/* occurs only in loan words in Pangasinano and as in Pampangan, it is found only in initial position. PMP */*r/* is retained in Ilokano, but in Cebuano, Hiligaynon, Pangasinano and Tagalog, it has changed to */l/*. In Pampangan PMP */*r/* has changed to */y/* medially. It has changed to */l/* in final position in Bikol and Waray. PMP */*R₁/* (voiced velar fricative) has shifted to */r/* in Pangasinano, */y/* in Pampangan and */g/* in the other languages.

An inspection of the constructed diasystems reveals a high degree of pattern congruency and of distributional regularity among the eight languages. Furthermore, the diasystems suggest a highly uniform structure with points of difference concentrated on the diaphonetic level.

With this method of comparison, the sound features of the contemporary languages which developed from the parent language, including retentions and changes can be identified and read immediately and simultaneously. The results of this diasystemic analysis support evidence obtained by means of other research methods which point to a common genetic origin of the Philippine languages.

NOTES

- ¹Dempwolff, Otto. Vergleichendes Lautlehre des austronesischen Wortschatzes. Beihefte zur Zeitschrift für Eingeborenen-Sprachen, 15, 17, 19. Berlin, 1934-1938.
- ²Dyen, Isidore. A Lexicostatistical Classification of the Austronesian Languages. Supplement to IJAL, Vol. 31, No. 1 (1965).
- ³Ibid.
- ⁴Lopez, Cecilio. "Origins of the Philippine Languages." Philippine Studies 15:1:130-166 (1967).
- ⁵Conklin, Harold. "Outline Gazetteer of Native Philippine Ethnic and Linguistic Groups." Mimeo. New Haven, 1952.
- ⁶The information on percentages of speakers were obtained from the latest Philippine Census, which was taken in 1960.
- ⁷Pulgram, Ernst. "Structural Comparison, Diasystems and Dialectology." Linguistics 4.76 (1964).
- ⁸Weinreich, Uriel. "Is Structural Dialectology Possible." Word. 10.390 (1952).
- ⁹Cochrane, G.R. "The Australian English Vowels as a Diasystem." Word. 15.72 (1959). While Cochrane used the term "diaphonic" to mean comparison at the sub-phonemic level, I used "diaphonetic" in this paper to refer to the same phenomenon.
- ¹⁰Block, Bernard, and George Trager. Outline of Linguistic Analysis. Baltimore: Linguistic Society of America, 1942.
- ¹¹These reconstructions are based upon Dempwolff as revised by Dyen. Slight modifications were made for purposes of this paper.
- ¹²The abbreviations stand for Bicol (B), Cebuano (C), Hiligaynon (H), Ilokano (I), Pampangan (Pn), Pangasinano (Po), Tagalog (T), and Waray (W).
- ¹³X indicates loss or absence of a phoneme.