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P R E F A C E

These linguistic papers deal with some living, native, even though minor, languages representing some of the lesser known ancient cultures of the Philippines. The studies were undertaken by members of the distinguished scholarly organization, the Summer Institute of Linguistics, with which we in the Institute for Language Teaching of the Graduate College of Education, University of the Philippines, are proud to have long-standing cooperative programs. The publication of these papers under our joint auspices carries our cooperation one step farther from where we started, which has been in the classroom. This publication demonstrates our basic belief that cross-fertilization should take place between teaching and research for the advancement of both of these educational activities.

Reforms in education both in the Philippines and abroad since the end of the last war have occupied the minds of educational leaders, who have often had to endure much frustration. The general public has been healthily agitated by some of these reforms. One of the best results has the improvement of teacher education through efforts to assimilate the valuable new triumphs of knowledge in the various subject-matter fields into the traditional curriculum of teacher education. The Graduate College of Education has been fortunate that it succeeded in a number of its reforms programs, one of them in language teaching. This success has been due partly to the cooperation of the Summer Institute of Linguistics with its rich resources of freshly garnered and highly respected linguistic knowledge about the Philippines. The Institute has been generous with technical personnel and materials. We started our first program for improving language teaching with assured help from their specialists for our linguistics courses in the face of limited University personnel in pure and applied linguistics. Thus we have been able to establish our graduate program for second language teaching.

The reform and strengthening of teacher education in this case is our College's contribution to the field of curriculum development, instruction, and the other relevant specializations

in professional education. The nature and the quality of this improvement actually reaches farther beyond the usual interpretation of changes in teacher education. Take these linguistic papers. They are new data about Philippine culture. With more data of this kind, we foster not only improved linguistic science but also a deeper Filipino consciousness, in terms of more mastery over our own Philippine materials for scholarly study, and better preparation for a genuine understanding of all the peoples, specially the neglected communities, that make up the Filipino nation. Joyful labor in the so-called technical educational fields is fundamentally humanizing education, just as humanistic studies ought to prove practical and useful in our lives.

ALFREDO T. MORALES

INTRODUCTION

We present here a selection of linguistic papers written by members of the Summer Institute of Linguistics and jointly published by that organization and the Graduate College of Education of the University of the Philippines. We wish to express our appreciation for the interest of the educators at the University, especially that of Miss Aurora L. Samonte, Assistant Director of the Institute for Language Teaching, and Dr. Alfredo Morales, Dean of the Graduate College of Education, which has resulted in the publication of these studies on some of the minor languages of the Philippines. Although most of these papers discuss phonological systems, studies of the grammatical structures are also in progress and are exemplified by the paper on Sangir phrases, a partial description of phrase types in that language.

The five phonology statements and one grammar paper in this collection have been prepared for publication with a view to providing both scholars and laymen with technical descriptions of the structures of these languages. Phonemic descriptions such as these form the bases of practical alphabets for laymen, and at the same time supply the scholar with research material for comparison with other Malayo-Polynesian languages.

In addition to the straight description, the reader will note interesting highlights in each paper. Unusual occurrences of consonant clusters both within the syllable and across syllable boundaries are discussed in the paper on "Pattern Congruity." Agusan Manobo has a rare (for Philippine languages) vowel phoneme and one section of that paper is devoted to a brief comparison of it with cognates in related dialects. Sequences of diverse vowel clusters complicated by occasional semivowels are highlighted in the Tausug paper. A variety of vowel problems are handled in the paper on Atta phonology. The author of the Dibabawon paper demonstrates a method of

analyzing stress based on the intonation patterns of words. Sangir, spoken by Indonesian immigrants in southern Philippines, shows a very complex pattern of substantive phrase functions which differs considerably from most Philippine languages.

ELMER WOLFENDEN
Consultant
Summer Institute of Linguistics,
Philippines

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THE PHONOLOGY OF AGUSAN MANOBO (WITH SPECIAL REFERENCE TO æ)

by Daniel and Marilou Weaver
Summer Institute of Linguistics
University of North Dakota

1. The æ Phoneme
2. The Syllable
3. Inventory
4. Consonants
5. Vowels

1. In Agusan Manobo¹ there is a vowel sound similar in both length and quality to that found in the English word "cat." That the sound, which we shall write æ , is phonemic is shown by the following contrasts: $\text{æ}:\text{a}$ kædu 'fire', kadu 'wood'; bugæ 'female pig', buga 'shell'; $\text{æ}:\text{e}$ ædew 'day', etew 'person'; tambæ 'medicine', tamped 'cut in pieces'; $\text{æ}:\text{i}$ sæ 'fault, sin', si (noun marker); bætik 'pig trap', bitu 'hole'; $\text{æ}:\text{u}$ sæ 'fault, sin', su 'because'; bæka 'never mind', buga 'shell'.

Since this sound is rare in Philippine languages, it has proven profitable to compare its occurrence with its reflexes in cognate words of nearby dialects.²

¹ The data presented in this paper were recorded during a residence of eight months in the barrio of Sagunto, municipality of La Paz, Agusan, under the auspices of the Summer Institute of Linguistics. The inhabitants of this barrio and of the surrounding barrios are primarily Manobo speakers, although some Visayan and English are spoken. Mr. Ricarido Martinez, a forty-year old resident of Sagunto, was the informant from whom these data were collected.

Special appreciation is due to R.S. Pittman for his suggestions and guidance in the writing of this paper. The authors are also grateful to several fellow-members of the Summer Institute of Linguistics for help and advice.

² The addition to this paper of information from other languages is in no way to be interpreted as a departure from standard principles for the identification of phonemes. æ is identified by reference to Agusan Manobo alone; the information from the other languages is added only because of its special interest.

1.1 Agusan Manobo and the dialect spoken by the Dibabawon Mandayans of northwestern Davao province are mutually intelligible. The following Dibabawon words are cognate with Agusan Manobo words containing æ:

English	Agusan Manobo	Dibabawon
'pig trap'	bætik	baatik
'rattan'	bægen	baagen
'wind'	kæmag	kaamag
'twenty'	kæwa'an	kaawa'an
'south'	bæbagan	baabagan
'pity'	kæ'at	kaa'at
'sin, fault'	sæ?	saa?
'medicine'	tambæ	tambaa
'left side'	kawæ	kawaa
'skin'	kindæ	kindaa
'chest'	dagæha	dagaa'a
'afraid'	hædek	'aadek
'easy'	mahæwey	ma'aawey
'carry'	dæhen	daa'en

Wherever the æ phoneme occurs in Agusan Manobo, the Dibabawon Mandayan has a lengthened a. This occurs in the first syllable of certain words, in the second syllable of some three-syllable words, and in certain final syllables. Forster and Barnard³ interpret aa as a sequence of geminate vowels occurring across syllable boundaries.

1.2 Binokid is the Manobo dialect spoken in the central and northern parts of Bukidnon province. Western Bukidnon Manobo is spoken in western and southwestern Bukidnon. Among words in Binokid and Western Bukidnon Manobo which are cognate with Agusan Manobo words containing æ are the following:

³ Forster, Jan and Barnard, M. L., *Phonemic Statement and Proposed Orthography for Dibabawon*.

See Forster, Jan and Barnard, M. L., *Dibabawon-Mandayan Vocabulary*, Summer Institute of Linguistics, Manila, 1954, for examples taken from that dialect.

English	Agusan Manobo	Binokid ⁴	W. B. Manobo
'rattan'	bægen	balagen	belagen
'pig trap'	bætik	— —	belatik
'crosspiece'	bæbag	balabagan	belabag
'wind'	kæmag	kalamag	keramag
'medicine'	tambæ	tambal	tambar
'sin, fault'	sæ?	sala?	sala?
'expensive'	mahæ?	mahal	mahal
'trousers'	sawæ?	salu?al	selu?al
'twenty'	kæwa?an	kaluwa?an	keluwa?an
'day'	?ædew	?aldaw	?andew
'afraid'	hædek	haldek	handek

The -ala-, -ela-, -era-, -al, -ar, -alu-, -elu-, and first-syllable -an- sequences in Binokid and Western Bukidnon Manobo become æ in Agusan Manobo. The first l found in salu?al and selu?al 'trousers' is lost without a corresponding occurrence of æ in the word sawæ 'trousers'. There is a change from l to n in the words ?andew and handek of WBM, presumably due to the influence of the following d phoneme.

2. It seems best to describe the remaining phonemes with reference to the syllable. A word may consist of as few as one or as many as six syllables. The syllable patterns are CV⁵ and CVC. The following examples illustrate the syllable patterns: CV te (noun marker), kun.te. ?en 'now'; CVC kan 'the, that', hi. ?u.dun 'agree'.

3. The phoneme inventory consists of sixteen consonants and five vowels. Consonants are: p, t, k, b, d, g, ? (glottal stop), r, s, l, m, n, ng (velar nasal), h, w, and y. Vowels are: æ, i, a, u, and e. e is the pepet vowel, common to a number of Philippine languages. A discussion of stress will not be included in this paper since it has not been completely analyzed.

4. Consonant phonemes are divided into two groups: stops and continuants.

⁴ Atherton, W., Unpublished vocabulary lists of Binokid. Elkins, R. E., Unpublished vocabulary lists of Western Bukidnon Manobo.

⁵ C stands for consonant; V for vowel.

4.1 The stops are p, t, k, b, d, g, and ʔ. p, t, and k are voiceless stops produced in the bilabial, alveolar, and velar points of articulation respectively. b, d, and g are the voiced counterparts. These stops have unreleased variants occurring before another consonant or silence and in syllable-final position.

The following examples illustrate the unreleased variants: p tap.liʔ⁶ 'fasten', ʔu.sip 'to ask'; b ma.geb.yey 'tired', ʔu.sab 'again'; t ket.ket. 'noise of insect', bag.net 'weed'; d sad.sad 'to feel for', hu.bad 'untie'; k ma.tak.siʔ 'fast, speedy', ma.bag.sak 'muddy'; g hag.dan 'stairs', hi.pag 'other side'. Released variants occur elsewhere.

The glottal stop, ʔ, occurs in all consonant positions in the syllable: word initially, between vowels, as the first of a CC cluster, as the second of a CC cluster, and word finally. Compare the following words: ʔamu 'monkey', bagʔang 'molar', baʔbaʔ 'mouth', buʔuk 'piece', bakaʔ 'jaw', ʔiduʔ 'dog'.

The following pairs of words show minimal contrast between stops p:b pituʔ 'seven', bituʔ 'hole', tapaʔ 'salted meat', tabaʔ 'fat'; t:d bataʔ 'child', badaʔ 'pass', buyat 'awake', beyad 'hand'; k:g bakaʔ 'jaw', багаʔ 'lung', ʔabaka 'hemp', ʔabaga 'shoulder'; ʔ:x (indicating absence) yawaʔ 'evil spirit', yawa 'body', багаʔ 'lung', бага 'ember'.

The following are contrasts between ʔ and k, and between ʔ and h: ʔ:k baʔuʔuʔ 'turtle', bakaʔ 'jaw', bagʔew 'new', bagket 'to tie'; ʔ:h ʔipag 'sister-in-law', hipag 'other side', ʔabaga 'shoulder', habagat 'strong wind and rain'.

The phoneme d alternates freely in intervocalic position with j in certain words. j is the norm for the nearby Umayam River area; d is the norm for the Adgawan River area in which these data have been collected. The two dialects have been mixed to the extent that some speakers in the dialect presented in this paper will use d and j interchangeably, while others use only d: budag, bujag 'old woman'; maradew, marajew 'good'.

⁶ Throughout this paper, a period (.) on the line within a word will represent syllable division.

4.2 The continuants are r, l, s, m, n, ng, h, w, and y. r is a voiced alveolar flap. l is a voiced alveolar lateral. s is a voiceless alveolar grooved fricative. m, n, and ng are voiced nasals at the bilabial, alveolar, and velar points of articulation respectively. h is a voiceless glottal fricative. w and y are nonsyllabic vocoids. They are given full phonemic status because of syllable pattern pressure: yawa 'body', wada? 'none', huyas 'perspire'. The following pairs of words show minimal contrast between the continuants: l:r pali? 'wound', pari? 'priest'; m:n ʔuma 'farm', ʔuna 'first', manda 'again', nanda 'only'; n:ng kandin 'he, him', kanding 'goat' ʔaned 'float', ʔanged 'like (comparison)'.

4.3 Within the syllable patterns there appears to be very little limitation of consonant distribution. All consonants occur in syllable-initial position. All except h occur finally.

There are no consonant clusters within the syllable. Consonant clusters may occur across syllable boundaries but are limited to two consonants. Almost any two of the consonants may occur as a CC cluster across syllable boundaries in C₁C₂ sequences. No C₁C₁ sequences have been observed within a word base.

5. The vowel phonemes, other than æ are i, a, u and e. i is a voiced high front unrounded vocoid. This sound varies from close to open position in a nonfinal syllable preceding a velar stop. i is to be read this way in each of the following examples: tig.bas 'stab'. pig- (past tense marker), hi.kem 'mat', mig- (past tense marker).

In three recorded examples, i has a high front rounded allophone ü in word-final position following u in a preceding syllable: bubü /bubi/ 'hair', tungü /tungi/ 'entrails', kusü /kusi/ 'herb'. a is a voiced open central low unrounded vocoid. e is a voiced high close central unrounded vocoid. u is a voiced high close back rounded vocoid. This sound varies from high to mid-position in word-final syllables.

5.1 The following pairs of words show minimal contrast between the vowel phonemes: a:i pali? 'wound', pili? 'select',

batad 'corn', bitad 'pull'; a:e sanga? 'branch', senge? 'one', bahi? 'variety of wood', behi? 'girl'; a:u bahi? 'a wood', buhi? 'alive', tu?ad 'to fall, as in a faint', tu?ud 'purpose'; i:u ?isa? 'one', ?usa? 'deer', gamit 'use', gamut 'write'; e:u bayed 'wave (n)', bayud 'dove', behi? 'girl', buhi? 'alive'; e:i ?enem 'six', ?inem 'drink'.

5.2 Each of the five vowel phonemes may be distributed as V in the syllable patterns CV and CVC. e has not been observed to occur contiguous to r. e has not been observed to occur as the first V in a CV?VC pattern of diverse vowels. With the exception of the sequence æ?a in kæ?at 'pity', the phoneme æ has not been observed in a sequence of æ?V. With the exception of æ, all other vowel phonemes may occur in sequences of identical vowels separated by a glottal stop: a?a ga?ad 'building material', i?i biti?is 'leg', e?e kunte?en 'now', u?u bu?uk 'hair'.

The following examples illustrate sequences of two different vowels: a?i ba?id 'to ask permission', kali?ag 'want, like'; a?u ka?uyug 'to fall', bu?ang 'foolish'; a?e ka?etawan 'world'; æ?a kæ?at 'pity'; u:i tu?ig 'year', hi?udun 'agree'; u?e du?en 'there'; i?e li?eg 'neck'.

THE PHONEMES OF TAUSUG

Seymour and Lois Ashley

Summer Institute of Linguistics

- O. Introduction¹
1. Interpretation of semivowels
2. Phoneme patterns
3. Description
4. Contrasts
5. Suprasegmental features
6. Distribution
7. Alternation between full phonemes

O. There are three languages in the Sulu Archipelago, Philippines: Yakan, Tausug, and Samal. Of these three, Tausug is the prestige language spoken by approximately 150,000 persons living on or near the island of Jolo.

The dialect represented in this paper is the one used in the municipality of Parang, Jolo, Sulu, where the writers resided during the years 1959-1962 under the auspices of the Summer Institute of Linguistics.

The informants who aided the writers in formal study were Bondad Gampal, a young man of about twenty-five, and Abdulmalik Sabdani, a younger man of eighteen. The parents of both are Tausug and both grew up in Jolo, although they have also studied outside Jolo and have a good understanding of English.

1. A discussion of the high vocoids precedes the presentation of the phoneme patterns. *i* and *u* pattern sometimes as consonants and sometimes as vowels. The determining criterion in each case is pattern pressure reinforced by phonetic evidence. Inasmuch as there are no words beginning or end-

¹ The authors are indebted to several colleagues of the Summer Institute of Linguistics for their invaluable help in the preparation of this paper.

ing with a vowel, the suspect vocoids are interpreted as consonants wherever they occur word initial or final. way 'none', bay 'house', yarih 'here', 'ikaw 'you'.²

When immediately following the initial consonant or immediately preceding the final consonant, i and u are interpreted as vowels because there are no nonsuspect consonant clusters word initial or word final. The following examples illustrate all the possible sequences of two diverse vowels in Tausug. sa.um' 'under', bu.ad 'expose to the sun', ka.it 'safety pin', si.ah (third person sing.), li.uh 'behind', mu.i' 'to go home'. The resultant clusters cannot be interpreted as VhV nor as V?V because they contrast with words such as ta?uh 'man', dahun 'leaf', tilu?an 'to throw', luha' 'tears', ta'iban 'spouse', tahi' 'sew', kali?un 'to dig', batihun 'to stir'.

It is possible that the words above showing diverse vowel sequences could be interpreted as having semivowels separating the vowel clusters because minimal pairs do not occur contrasting the sequences au/awu, ua/uwa, ia/ayi, iu/iyu, ai/iya, ui/uwi. Thus the words above might be written *sawum, *buwad, *kayit, *liyuh, *siyah, *muwi'. This possibility is discounted by phonetic evidence, however, because in the words kait 'safety pin', and saum 'under', (similarly with all words encountered involving ai, and au vowel sequences) even an artificial slowing of the words does not give rise to semivowel glides. Furthermore native reaction strongly resists such an interpretation. Since vowel glides are limited to the sequence, iya, iyu, uwi, and uwa where the high vocoid is always first in the sequence, we conclude that such glides are nonphonemic

² The nonsyllabic high vocoids in Maranao and Maguindanao, sister languages to Tausug, have been interpreted as allophones of high vocoids, cf. Howard P. McKaughan, *The Inflection and Syntax of Maranao Verbs*, Institute of National Language, Manila, and Ernest W. Lee, "On Non-Syllabic High Vocoids in Maguindanao" to be published in *Studies in Linguistics*. Although the authors of this paper feel that Tausug patterns are somewhat similar to the patterns of Maranao and Maguindanao, they conclude on the basis of native reaction to such writing that it is inadvisable to unite syllabic and nonsyllabic high vocoids into single phonemes.

³ In this paper syllable division is represented by (.); the symbol ? is used to represent the glottal stop, and ng represents the velar nasal.

off glides from the high vocoid to the following vocoid. We therefore write the above words without a semivowel separating the vowel cluster. *saum* 'under', *buad* 'expose to the sun', *kait* 'safety pin', *liuh* 'behind', *siah* (third person sing.), *mui?* 'to go home'.⁴

In word medial position clusters of two consonants may occur at syllable boundaries but never more than two; therefore the high vocoids *i* and *u* in the words *bainglupahun* 'forgetful', *kai?man* 'fifty', and *taumpa?* 'shoes', will be interpreted as vowels and not as consonants. Furthermore by analogy to the pattern CVVC in these words, and in the words *saum* and *kait*, we interpret as vowels the high vocoids *i* and *u* in *taikud* 'back' and *baita?* 'tell'. This means that the writing of the vocoids in suffixed word bases, such as *saukun* 'will dip', will be the same as in the unaffixed word base *sauk* 'dip'.

Within one-morpheme words, when not adjacent to word initial or word final consonants, *i* and *u* are heard and interpreted as consonant. *ba.yad* 'payment', *ba.wang* 'garlic', *?a.sa.wah* 'wife', *bu.a.yah* 'crocodile', *la.wa?* 'spider', *haw.-yu.ngan* 'funnel'.

2. Tausug has twenty-one phonemes distributed in four syllable patterns. The two nonsuspect patterns, CV and CVC, are established on the basis of such words as *ba.tuk* 'hide', *ka.tan* 'all', *sin* (a noun-marking particle), and *ban* 'if'. Patterns V and VC are established on the basis of the interpretation of the high vocoids which sets up vowel clusters: *sa.um* 'under', *li.uh* 'behind', *ki.a.it* 'was pinned'. Only the syllable CVC may stand alone as an utterance. V and VC only occur following V or CV; VC and CVC are the only syllables which occur word final.

Eighteen of the twenty-one phonemes are consonants and three are vowels: *p*, *t*, *k*, *?*, *b*, *d*, *g*, *j*, *m*, *n*, *ñ*, *ng*, *l*, *r*, *s*, *h*, *w*, *y*, and *i*, *a*, *u*.

⁴ cf. McKaughan, *The Inflection and Syntax of Maranao Verbs*, page 3, where he describes such nonphonemic glides in Maranao as being "phonetically distinguished from the non-syllabic variety of the phoneme by their shorter duration and less lip rounding." The same should be stated about the semivowel glides in Tausug.

3. The description of the phonemes which follows does not include suprasegmental items.

3.1 The consonants with unlimited distribution are p, t, k, ʔ, b, d, g, m, n, ng, s, l, r, w, and y. These are divided into stops and continuants.

The stops are p, t, k, ʔ, b, d, g. All stops, voiced and voiceless, are unreleased utterance final, and syllable final within the utterance when the following syllable starts with a stop or a nasal. Released stops occur elsewhere. t and d are pronounced with the tongue tip between the teeth. Both the released and unreleased variants of k and g tend to be backed.

The voiceless stops are p, t, k, ʔ. p has a voiceless unreleased bilabial stop allophone, ʔatup 'roof', kapkap 'to rape', ʔaapʔaap 'skin disease', ʔappaʔ 'grandfather (royal)', and a voiceless released bilabial stop allophone: patung 'bamboo', sumping 'flower'. t has a voiceless unreleased alveolar stop allophone, langit 'sky', kanat 'scatter', and a voiceless released alveolar stop allophone: tahun 'year', kutaʔ 'fort'. k has a voiceless unreleased velar stop allophone, balik 'to return', tuk-tuk 'forehead', and a voiceless released velar stop allophone: kalang 'coral', ʔakuh 'I'. ʔ is a glottal stop: ʔasibiʔ 'small', daʔan 'old'.

The voiced stops are b, d, g. b has a voiced unreleased bilabial stop allophone, taʔub 'high tide', kabkab 'fan'; a voiced released bilabial stop allophone, sumbing 'nicked', buling 'charcoal', and a voiced lenis bilabial fricative allophone which occurs only between vocoids: ʔiban 'companion', ʔibarat 'in case'. d has a voiced unreleased alveolar stop allophone, ʔuud 'maggot', tiadtad 'split bamboo walling', and a voiced released alveolar stop allophone: dahun 'leaf', duhun 'starving'. g has a voiced unreleased velar stop allophone, balig 'crooked', dagbus 'appearance', a voiced released velar stop allophone, gatas 'milk', gallang 'bracelet', and a voiced lenis velar fricative allophone which occurs only between vocoids: ʔabagah 'shoulder', way gawih 'no purpose'.

The continuants are m, n, ng, s, l, r, w, y. m is a voiced bilabial nasal: man (particle), laum 'inside', tumtum 'to remember'. n is a voiced alveolar nasal: niug 'coconut tree', tuntun 'lower with rope'. ng is a voiced velar nasal: dungdung 'to stare', la'ung 'according to'. s is a voiceless alveolar grooved fricative: sukud 'to measure', pastan 'wash basin'. l is a voiced alveolar lateral: pundul 'dull, not sharp', laasu? 'middle finger'. r is a voiced alveolar flapped vibrant: baran 'body', ruku? 'position of prayer'. w is a high back rounded nonsyllabic vocoid: way 'none', lanaw 'lake', dawah 'millet'. y is a voiced high front unrounded nonsyllabic vocoid: yarih 'here', layag 'sail', bay 'house'.

3.2 The consonants with limited distribution are: j, ñ, and h. Since these consonants do not occur syllable final they never occur as the first member of a consonant cluster. h, however, occurs syllable final at the end of an utterance.

The alveo-palatal consonants are j, and ñ. Each of these sounds could possibly have been interpreted as a sequence of two phonemes. However, we have not chosen to do so since there are no nonsuspect consonant clusters word initial and no clusters of more than two consonants at syllable boundaries. If j and ñ were to be interpreted as two consonant phonemes they would not fit into the pattern of permitted consonant clusters in Tausug (*magdzandzi? or *magdyandyi? 'to promise', *manyuknyuk 'finely ground'). Furthermore j has not been treated as d plus z because the sound z (voiced alveo-palatal grooved fricative) never occurs elsewhere in the language. j has not been treated as d plus the vowel i (high front vocoid) because there are words in which j contrasts with di: diuah 'twice', jualan 'frying banana', jiualan 'fried banana', diaag 'climbed', jagah 'guard', jiagah 'guarded'. Furthermore j and ñ have not been interpreted as d and n respectively plus the semivowel y because the high front nonsyllabic vocoid y does not occur following any other consonant.

The affricated stop is j. This phoneme has two submembers, a voiced alveo-palatal affricated stop and a voiced alveo-palatal stop with strong stop plus release articulation. The

submember with strong stop plus release articulation occurs only word medial between vowels, the other submember never does.

j is a voiced alveo-palatal affricated stop: jagah 'guard', magjanji? 'to promise'. There is another allophone which is a voiced alveo-palatal affricated stop with strong release articulation: sajah 'only', baju? 'clothing'. ñ is a voiced alveo-palatal nasal: buñug 'follow behind', ñulih (type of bird), ma-ñukñuk 'fine—not rough'. h is a voiceless glottal fricative: biha?un 'now', mahayang 'spacious', duah 'two'.

3.3 There are three vowel phonemes in Tausug: a, i, u. i has two submembers, a high close front unrounded vocoid and a high open front unrounded variety. The open variety occurs in closed (CVC) syllables preceding velars: ku.ting 'cat', ka.tig 'outrigger pole', pik.pik 'wings', tig.bas 'chop'. The close variety occurs in open syllables (CV, V) unless immediately followed by velar consonants and in closed syllables that are closed by ? or h: ?i.pun 'tooth', bi.i.hun 'to buy', ?u.i? 'return home'. si.pi? 'hand (of bananas)'. The close and open varieties freely alternate in closed syllables preceding consonants other than velars and in open syllables immediately followed by velar consonants: pi.kit 'paste', gi.i.pit 'was pinched', si.kih 'foot'.

a has two submembers, a low open central unrounded vocoid which we shall symbolize a, and a mid open central unrounded variety which we shall symbolize with e. a occurs without alternation in identical vowel sequences, (symbolizing phonemic vowel length) and preceding w or u: saw 'anchor', la.ngaw 'horsefly', la.um 'inside', ka.a.kas 'ringworm'. Elsewhere a and e freely fluctuate: ?a.sa.wah or ?e.sa.weh, ma.-lu. ?ag or me.lu. ?eg, ?a.ga.bah or ?e.ge.beh.

u has three submembers: u high close back rounded vocoid, o a mid close back rounded variety, and a high close central unrounded variety which we shall symbolize phonetically with i. u occurs following i and as identical vowels (vowel length): liuh 'behind', niuh (second person plural), hituud 'will push'. o and i occur elsewhere in free variation with u: mahapun or

mahapon or mahapin 'afternoon', bukbuk or bokbok or bikbik 'termite', ?itum or ?itom or ?itim 'black', taku? or tako? or takī? 'chin'.

4. Contrasts between similar consonantal sounds are given below. The three vowels are deemed sufficiently distinct to obviate the need for additional demonstration of their phonemic status.

Words showing contrast between similar stop consonants are:

p:b — sumping 'flower', sumbing 'nicked'; puling 'dust particle', buling 'charcoal'.

t:d — tahun 'year', dahun 'leaf'; pantay 'clearing', panday 'midwife'.

k:g — balik 'return', balig 'crooked'; kaatas 'paper, gatas 'milk'.

k:ʔ — balik 'return', bali? 'break'; kutuh 'head lice', ?utu? 'small boy'.

ʔ:x — ?uay 'rattan', way 'there is none'; buga? 'fear', bu?gat 'weight'.

Words showing contrast between continuants are:

m:n — tumtum 'remember', tuntun 'lower with rope'; mama? 'betel chew', nana? 'pus'.

n:ng — tuntun 'lower with rope', dungdung 'to stare'; lanaw 'lake', langaw 'horsefly'.

l:r — pali? 'wound', yarih 'here'; kali? 'to dig', karih 'come'.

y:h — baha? 'question word', baya? 'desire'; bahu? 'bad smell', bayuh 'to pound rice'.

Words showing contrast between continuants and stops are:

d:l — lu?un 'contents', du?un 'there'; dawah 'millet', la-wah 'left'.

ʔ:h — batiʔ 'awake', batih 'mix'; lutuʔ 'cooked, lutuh 'carry on head'.

d:r — The contrast between d and r is dependent upon Arabic loan words. Since d never occurs between vowels or between a vowel and a semivowel (although dd may so occur), and r occurs in this position only in pure Tausug words, the two sounds could possibly have been interpreted as submembers of one phoneme d. However, the borrowings from Arabic into Tausug are numerous enough and so generally used by all Tausug speakers as to warrant their acceptance as a new Tausug pattern: Ramadan (name of month), Dam-mang (name of a man); makruh 'taboo', dakdak 'laundry'; Jabur 'writings of Moses', buud 'mountain'; baran 'body', Ramadan (name of month).

5. One suprasegmental feature of Tausug, stress, is non-phonemic. Length, both vowel and consonantal, is phonemic. Pitch and intonation contours have not yet been analyzed.

5.1 The writers consider stress to be nonphonemic in Tausug because the occurrence of stress is predictable falling on the last syllable of a word. Furthermore, because it has been noted that vowel length and stress do not always occur on the same syllable, we conclude that vowel length can not be regarded as a stress phoneme: taabulláh (type of shrimp), karaahán 'able to carry', daahún 'will carry'. Isolation forms sometimes seem to be stressed on the penult and at other times the same form seems to be stressed on the ultima. This variation may be attributed to the nonphonemic nature of the stress. Within a context, however, stress falls only on the last syllable of a word. On many words there is a nonphonemic rise in pitch over the penultimate syllable which makes it hard to hear the final stress. Stress is helpful in determining word boundaries.

5.2 Consonant length is a common feature. It has been observed to occur with all the consonants except j, w, ʔ, h, ng, ñ. Long consonants are interpreted as sequences of two identical consonants since they occur only where a cluster of two

consonants may occur, i.e., at syllable boundaries. Long consonants are contrasted with short ones in the following list: *bissarah* 'speech', *bisah* 'pain'; *Jayyarih* 'proper name', *bayarih* 'to pay'; *maggaas* 'kaingin', *magaʔan* 'not heavy'; *ʔakkal* 'wisdom', *bakag* 'cardboard box'; *ʔabbuh* 'pride', *babuʔ* 'auntie'; *puddang* 'sword', *kuraʔ* 'horse'; *katarrangan* 'proof, written evidence', *burak* 'beauty powder made from rice'; *ʔappaʔ* 'grandfather', *ʔapah* 'husk'; *sullit* 'diaper', *sulig* 'grow'; *pun-nuh* 'sea turtle', *punung* 'faint'; *pattih* 'strongbox', *batih* 'stir'; *malummiʔ* 'dirty', *maluming* 'slow'.

5.3 Length occurs with all three vowels a, i, u. Long vowels are interpreted as sequences of two identical vowels on analogy with the pattern of clusters of two diverse vowels discussed in Section 1. Vowel length is contrasted with shortness in the following list: *ʔipun* 'tooth', *ʔiipun* 'slave'; *bat* 'in order that', *baat* 'sea cucumber'; *simud* 'mouth', *simuud* 'entered'; *taikud* 'back', *ʔuud* 'maggot'; *patung* 'bamboo', *baatung* 'peanuts'; *pituh* 'seven', *piiʔ* 'choose'.

Vowels of many word bases have length: *suud* 'to enter', *biih* 'to buy', *daah* 'to carry'. When these words are affixed they retain their length: *biihun* 'will buy', *makaraah* 'able to carry'. What appear to be long vowels reduplicate as short ones: *matuug*, but *matutuug* 'asleep', *daag*, but *nagdaraag* 'is climbing', *piiʔ*, but *magpipiiʔ* 'will be selecting'. This reinforces the conclusion that apparent long vowels are phonemically sequences of two similar short ones. It should also be noted that there are no rearticulated vowels in Tausug which would lead to a different interpretation of vowel length.

6. Tausug phonemes are distributed in syllables with certain restricted patterns.

6.1 Within the syllable all consonants may occur syllable initial, and except for *j* and *ñ*, they may all occur syllable final. Examples of syllable initial consonants are: *patay* 'die', *tagad* 'wait', *kaw* 'you', *ʔayaw* 'don't', *bay* 'house', *dagat* 'sea', *gan-bang* 'bamboo piano', *japang* 'woven leaf basket', *mamaiguʔ*

'to bathe', niah 'they', ngan 'name', silah 'they', habul 'blanket', lugu? 'song', yarih 'here', ñawah 'soul', wala? 'none', ruku? 'position of prayer'.

Examples of syllable final consonants are: ?aap?aap 'skin disease', ?ungsi? 'to ask again', batuk 'hide', bula? 'bamboo', ?isab 'also', sukid 'measure', daag 'climb', ?unum 'six', bitu?un 'star', japang 'leaf basket', dagbus 'appearance', habul 'blanket', suysuy 'story', ?ayaw 'don't, Jabur 'writings of Moses'.

The occurrence of syllable final h is restricted to utterance final syllables: magbatih 'to beat', Magbati kaw ?iklug. 'You will beat eggs.' siah 'he', Di? sia madtuh. 'He will not go'.

All the vowels occur without limitation within the syllable: i — V ?i.i.pun 'slave', VC bi.id 'slope', CVC sin (construction marker), CV pi.tuh 'seven'; a — V si.a.uk 'dipped water', VC si.am 'nine', CVC bat 'in order that', CV sa.ub 'lid'; u — V pi.u.nung 'fainted', VC sa.uk 'dip', CVC si.mud 'mouth', CV su.ka? 'vinegar'.

6.2 Consonant clusters occur only across syllable boundaries. Any consonant may occur as the second member of a consonant cluster. Any consonant, except j, ñ, and h, may also occur as the first member of a cluster. The following actual combinations have been noted: g preceding all consonants; pp, p?, tt, tk, tl, kt, kk, kb, km, kn, ks, ?b, bk, bt, bb, bl, dt, db, dd, dl, mp, mt, mb, mm, nt, nk, nd, nn, ns, ngp, ngt, ngk, ngd, ngg, ngs, ngh, ngl, st, sk, ss, sl, lt, lb, ld, ln, ll, wh, yb, ys, yk, yh, rm, kr, rn, kñ, nj, rr.

7. When, within an utterance, d occurs between two voicoids, it is replaced by r. d and r are, however, separate phonemes since they contrast in other positions: du?un 'there', but way ru?un 'there is none'; daan 'road', ha raan 'on the road'; duah 'two', dih 'here', but dua ri rua ru?un 'two here, two there'.

The above alternation of phonemes occurs regularly within the speech of our informants. Different alternations occur

normally within the speech of various other Tausug speakers. For instance, some speakers use tch where our informants use ss. (tch symbolizes a voiceless alveo-palatal affricated stop with strong release articulation.) 'aasang or 'atchang 'pigeon', kassa' or katcha' 'glass', bissarah or bitcharah 'speech'.

Some speakers use l where our informants use r: palman or parman 'word of God', kalna' or karna' 'so that', bissalah or bitcharah 'speech'.

It has been noticed that tch and r in the above alternations occur in the speech of individuals who have not adapted Arabic loan words to fit existing Tausug patterns.

SYLLABLES AND PHONEMES OF DIBABAWON

Jannete Forster

Summer Institute of Linguistics
and
University of the Philippines

- O. Introduction
- 1. Syllables
- 2. Suprasegmental Features
 - 2.1 Pitch
 - 2.2 Stress
 - 2.3 Length
- 3. Segmental Phonemes
 - 3.1 Vowels
 - 3.2 Consonants
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O. Dibabawon is a Manobo dialect spoken in northern Davao province in an area between the Libuganon River and the Diwata Mountains. In the Agusan River valley it is known as Mandayan.

Most of the materials for this paper were gathered during a residence of some eight months in Monkayo, on the Agusan River. Some additional data were gathered during a shorter period spent in the sitio of Casoon on the Saug River, and more recently in the sitio of Magsompao, Kaligotan, Asuncion.

The dialect differs slightly in the three locations mentioned, and the present paper is a composite phonemic description. Except where specifically stated otherwise, the description applies to all of the varieties studied.

1. A syllable is defined for Dibabawon as the smallest unit of speech on which contrastive pitch may occur. The syllable patterns are CV, CVC, V, and VC. V and VC syllables do not occur in utterance initial position. In a limited number

of borrowed words CCV or CCVC syllables occur, although these are often altered by the addition of a vowel (and consequently a syllable) to conform to the prevailing pattern for Dibabawon.

CV tī 'a, the', ?a 'I', ba.tu 'stone'; CVC kan 'the, that', di? 'but', sig.kīn 'pause, stop'; V ba.u 'widow, widower', ba.u.i 'type of reed'; VC ba.ud 'pigeon', bī.ad 'hand, dry', ba.is 'type of fermented drink', CCV pri.su.han, pi.ri.su.han 'prison', ?is.kwi.la, ?is.ku.i.la 'attend school'; CCVC plan.sa, pa.lan.sa 'iron', trak, ta.rak 'truck'.

The following observations of distribution of syllables in Dibabawon were made on the basis of a frequency count of approximately 750 polysyllabic roots. Of uninflected roots, 78% were disyllabic, 20% were trisyllabic. Of final syllables, 67% were CVC. Of nonfinal syllables, 65% were CV. In descending order of frequency, the most common syllable combinations occurring in uninflected roots were CV.CVC, CVC.-CVC, CV.CV, CV.CV.CVC, and CV.VC. Monosyllabic roots were not included in the count since, in such a limited list, they would constitute a misleadingly high proportion of the total.

2. Contrastive features of pitch, stress, and length occur on polysyllabic roots of Dibabawon. Any of these features may be modified by intonation, but a discussion of the intonation patterns is not within the scope of this paper.

2.1 On utterances having unmodified statement intonation, high pitch occurs regularly on the penultimate syllable. This is true in isolated or "list" words and also in longer utterances.

ba.ta? 'child', ba.ta?.ku 'my child'; ma.?as.lag 'large',
ma.?as.lag.sī.i 'this is large'.

2.2 Primary stress falls on the final or penultimate syllable of a polysyllabic word. Since speakers of American English tend to "hear" louder stress on any syllable which carries

relatively higher pitch, the fact that high pitch consistently occurs on the penultimate syllable of any utterance having unmodified statement intonation gives the impression that primary stress always occurs there also. While in fact primary stress is more common on the penultimate than on the final syllable of Dibabawon utterances, there are examples of contrast. Only one pair of words has been recorded to date in which placement of primary stress is the sole distinguishing feature. In the examples, (') preceding the syllable indicates primary stress, (") preceding the syllable indicates secondary stress.

'sa.kit 'pain', sa.'kit 'sick'; 'ba.sa 'read', ba.'sa? 'wet';
 "ʔa.ba.'ka 'Manila hemp', ʔa.'ba.ga 'shoulder'.

Secondary stress may occur on a word having three or more syllables, generally on alternate syllables not adjacent to primary stress. Compare the last two examples above. 'ma.-nuk 'chicken', "ma.nuk.'ma.nuk 'bird'.

2.3 There is a nonphonemic lengthening of the vowel nucleus of stressed penultimate syllables (where primary stress and high pitch coincide), especially in deliberate speech.

2.3.1 On the basis of pitch placement and syllable pattern, long vowels occurring in the final syllable of roots are interpreted as sequences of identical vowels occurring in the penultimate and final syllables. That is, a high-low glide occurs on long vowels in utterance final position, exactly paralleling the high-low pitch contour occurring on the last two syllables of an utterance (Section 2.1).

ʔi.nīm 'drink', ʔi.ni.m̄ = ʔi.ni.īm 'breakfast'; sī.ngī
 'one, singular', sī.ngī: = sī.ngī.i 'out of line'; ta.ba? 'lard, fat',
 ta.ba:ʔ = ta.ba.aʔ 'war spear'; ʔa.bu 'ash', ʔi.bu: = ʔi.bu.u
 'Ibuu' (ruler of the underworld); ya.bi 'key', ʔa.bi: = ʔa.bi.i
 'lips'; sa.m̄ 'stay down', sī.m̄ = sī.īm 'early'; bi.ad 'hand, dry',
 pa.d̄ = pa.ad 'palm of hand.'

2.3.2 Except across morpheme boundaries l and n are the only consonants which have been observed with length in Dibabawon. No minimal contrasts have been recorded between l and l: nor between n and n:.

sa.lig 'back edge of bolo, depend', sa.l:ag 'roast' (as coffee); da.lid 'root', da.l:ak 'mud'; ma.la.ʔag 'yellow', ʔa.l:ad 'guide'; bu.na.a 'strike', bi.n:a.a 'fine, penalty'.

The l: and n: phones do not occur contiguous to any other consonant, and within the permitted syllable patterns each is interpreted as a sequence of two identical consonants. sal.lag 'roast' (as coffee), dal.lak 'mud', ʔal.lad 'guide', bin.na.a 'fine, penalty'.

3. The segmental phonemes of Dibabawon are i, a, i, u; p, t, k, ʔ, b, d, g, r, s, h, l, m, n, ng, w, and y.

3.1 Dibabawon has four vowel phonemes, i, a, i, and u. Each vowel has been recorded as the nucleus of CV, CVC, V, and VC syllables, and all except i have been recorded following syllable initial CC. a accounts for more than half of the vowel occurrences, i and u approximately 17% each, and i 12%.

3.1.1 A description of the vowel phonemes follows.

i is a high front, close to open, unrounded vocoid. ʔibid 'lizard', piliʔ 'choose', puli 'only'. In some words borrowed into the dialect from Spanish and English (particularly recent acquisitions) the [e] phone is optionally retained. It has not been observed to contrast with [i]. [ʔeksakto] or [ʔiksakto] ʔiksaktu 'exact', [besbol] or [bisbol] bisbul 'baseball'.

a is a low central vocoid. It has been heard to fluctuate occasionally with a mid central vocoid in the prefixes paka—[pvkV] and pan—[pVn]. ʔabaga 'shoulder', pasak 'ground', ʔupat 'four'.

i is a high, central to back, unrounded vocoid. bikig 'bone', mingi pluralizing particle, ʔinim 'drink'. In the speech of some residents of Casoon and Magsompao, i has a mid front unround-

ed allophone [E] occurring in vowel sequences. [bEad] biad 'hand, dry', [baEy] baiy 'house', [sEEd] siid 'enter', [maEgdig] maigdig 'red' (from ma-) (+) (ligdig 'flame').

u is a high to mid, back, rounded vocoid. The lower variant of the phoneme occurs in utterance final syllables, particularly in the monosyllabic pronouns. ?ubud 'palm heart', [tu?od] tu?ud 'purpose', [nikiy ti tu?ud no] nikiy ti tu?ud nu 'what is your purpose?'

3.1.2 The following examples illustrate minimal contrasts between the vowel phonemes.

a:ɿ pali? 'cut', pili? 'choose'; lang?ag 'look up, scan', ling?ag 'peek'; saan "fermented drink of sugar palm", siin 'GI roof'.

a:i ?abiɿ 'weave', ?ibiɿ 'smoke'; saad 'under', siid 'inside'; badbad 'untie', biɸbiɸ 'wind, bandage'.

a:u ?anud 'float', ?unud 'flesh'; ?anad 'learn', ?anud 'float'; bangan 'ambush', bangun 'arise'.

i:i siga 'shine', siga 'sun'; ?apit 'stop en route', ?apit 'wade'; ?abii 'lips', ?abiɿ 'weave'.

i:u ?isa 'one', ?usa 'deer'; bilin 'remain', bulin 'charcoal'; gamit 'use', gamut 'root'.

i:u pinu? 'fill', punu? 'source'; baɸd 'wave', baud 'pigeon'; imit 'industry', imut 'fragrance'.

i:a:i:u tu?id 'straight', tu?ad 'topple', tu?id 'stump' tu?ud 'purpose'.

3.2 Dibabawon has sixteen consonants: p, t, k, ʔ, b, d, g, r, s, h, l, m, n, ng, w, and y. h does not occur in the Monkayo dialect, where it is replaced by glottal stop. r, at one time probably only a subphonemic variant of d occurring in intervocalic position, has gained phonemic status through the introduction of words from Spanish and English.

3.2.1 A description of the consonant phonemes follows.

p, t, and k, are voiceless, lightly aspirated stops at the bilabial, alveolar or interdental, and velar points of articula-

tion respectively. Each has a corresponding unreleased variant which occurs in utterance final position and in syllable final position preceding another stop.

b, d, and g are voiced, unaspirated stops at the bilabial, alveolar, and velar points of articulation respectively. Each of these also has a corresponding unreleased variant occurring in utterance final position and in syllable final position preceding another stop. In addition, d has an alveolar flap [r] allophone occurring between vowels in the ideolect of some speakers: [ngaran] or [ngadan] ngadan 'name', [marĩʔit] or [madĩʔit] madĩʔit 'bad'. Speakers in Casoon tend to prefer [r] in intervocalic position, while speakers in Magsompao favor [d].

r is a voiced alveolar flap which occurs in some words introduced into the dialect. It has phonemic status on the basis of usage in Monkayo, where it is retained. Literates in other areas also distinguish it from the intervocalic allophone of d. Preliterate speakers often substitute d for r in word initial position and l for r in word final position, as in dipil 'repair', and l for r in word medial position following another consonant, as in pidlu 'Pedro'. In intervocalic position r coincides with the intervocalic allophone [r] of d.

ʔ is the voiceless glottal stop, occurring in all consonant positions.

h is a voiceless velar aspirant. It occurs only in syllable initial position. It does not occur in the Monkayo dialect, where it is replaced by glottal stop.

m, n, and ng are nasal continuants at the bilabial, alveolar, and velar points of articulation respectively.

w and y are non-syllabic forms of the vocoids u and i respectively. They occur in all consonant positions.

3.2.2 For ease of comparison, pairs of words showing contrast between consonant phonemes are grouped together.

p:b puut 'sticky sap', buut 'brave'; ʔapug 'lime', ʔabug 'dust'; ʔapuʔap 'massage', ʔabuʔab 'to weed'.

t:d takip 'shutter', dakip 'capture'; ?atiy 'liver', ?adiy exclamation; kawat 'steal', kawad 'a type of basket'.

k:g kau? 'hat', gau? 'falsehood'; baka? 'jaw', бага? 'lung'; ?ilik 'armpit', ?ilig 'rub'.

?:X (indicating absence) ?uak 'waste', wakwak 'witch'; baït 'quid', ba?it 'attend'; layang 'to fly', lay?ang 'lie on back'; бага 'ember', бага? 'lung'.

?:h Note that the following contrast is valid in Casoon and Magsompao, but not in Monkayo. In the latter variety of Dibabawon the following forms are homophonous, glottal stop occurring in place of h. ?iniy?iniy 'stepmother', hiniyhinīy 'slowly'; ?ipag 'sister-in-law', hipag 'across'.

l:X Although not minimal, the l:X contrast is given for the interest of those who are familiar with Philippine languages in which l occurs in some or all of the following examples. balun 'well', baud 'pigeon'; bulak 'flower', buan 'moon, month'; kasal 'wedding', kawaa 'left side'.

l:d lawa 'body', dawa 'millet'; ?ilib 'spit', ?idib 'pointed'; kasal 'wedding', sadsad 'feel with the feet'.

l:r ligad 'to roll', rigalu 'gift'; pali? 'cut', pari? 'priest, compadre'; kasal 'wedding', usar 'to use'.

d:r dila? 'tongue', rilu 'clock'; ?idad 'age', gira 'war'; sadsad 'feel with the feet', usar 'to use'.

n:ng bana 'husband', banga 'type of palm'; nangin 'tell', ngangang 'shout'; tuntun 'to lower', tungtung 'to place on top'.

s:h Note that the following sets of contrast do not occur in the Monkayo dialect, where h is lacking. silīw 'bright', hiliw 'raw, unripe'; sapi? silver, money', hapit 'stop en route'; dišin 'strength', dihun 'leaf'.

3.3 The fact that high pitch is predictable in Dibabawon, always occurring on the penultimate syllable of an utterance having unmodified statement intonation, is referred to in the interpretation of semivowels occurring in the last two syllables

of an utterance. [bi|di?] bid.yi? 'fish spear', [ma|di?] ma.-di.u? 'far'; [ba|u] ba.uy 'change form', [ba|u] ba.u.i 'type of reed'; [bi|uak] bis.wak 'squeeze', [ʔi|suat] ʔi.su.at 'write with it'; [ka|kau] ka.kaw 'stilts', [ka|ka|u] ka.ka.u 'cacao'.

Placement of secondary stress on syllables preceding the penultimate (alternate syllables from primary stress) is referred to in the interpretation of semivowels occurring in other than the last two syllables of an utterance. Except when modified by intonation, stressed syllables do not occur adjacent to each other, nor do two unstressed syllables occur in sequence. [ˈgaiga|ia] = "gay.ga.'ya 'by and by', [sa|i|pit|si|pit] = sa.'i.pit.'si.pit 'scorpion'; [na|sau|nga|gan] = na.'sa.u.'-nga.gan 'placement of pig trap', [ˈsinau|saki|du] = "si.naw."-sa.ki.'du 'miniature bamboo water pole'.

The following examples show contrast between syllabic and nonsyllabic varieties of the high vocoids. w:u wada? 'none', ʔuas 'perspire'; kawad 'basket', kaua 'co-wife'; ʔitiw 'person', ʔitiug 'egg'. y:i yawayawa 'cat's cradle', ʔiapun 'supper'; layʔang 'lie on back', luiʔa 'ginger'; baui 'change form', baui 'type of reed'.

INTERACTION OF COEXISTENCE PHONEMIC SYSTEM IN ATTA

(Northern Cagayan Negrito)

Claudia Whittle

and

Ruth Lusted

Summer Institute of Linguistics

O. Introduction¹

1. Inventory
2. Interpretation
3. Description and Distribution
4. Summary

O. The Atta language is spoken by a Negrito people living in small groups scattered over a distance of about 90 kilometers across Northern Cagayan Province, from Claveria on the west to Aparri on the east and extending south into the edge of Apayao Subprovince, Luzon, Philippines. It is estimated that there are about 500 speakers.

Most Atta adults are bilingual, speaking Ilocano as a second language. Speakers of Ibanag report that their language is mutually intelligible with Atta. With the exception of a few children who are attending public school, the Atta people are preliterate.

There are three dialects of Atta: the Allacapan, the Marag, and the Pamplona; this paper deals with the dialect spoken in Pamplona.² Language data for this paper have been gather-

¹ We wish to acknowledge the assistance of Len E. Newell and Richard S. Pittman in the preparation of this study.

² The distinguishing feature between the three dialects is the distribution of the voiceless stop consonants p, t, and k, and the voiced stops b, d, and g in word final position. In the Allacapan dialect only the voiced stops occur; in the Marag dialect only the voiceless stops occur. The Pamplona dialect is distinct from the other two in that, of these six stops, only k occurs word final (with the exception of a very few loan-words in which p and t occur word final).

ed over a period of about four years. Informants for checking the material were Carmen Estaquio and her husband, Sid-doy Tiene.

1. One of the most interesting features of Atta phonology is the interaction of two coexistent phonemic systems.³ The first, referred to as System I, contains 14 consonants: p, t, k, ʔ (glottal stop), b, d, g, l, s, m, n, ng, w and y; three vowels: i, a, and u; and a prosodeme of length (written : after the vowels with which it occurs). System I accounts for a preponderance of the language data and includes the following general characteristics which are purportedly distinctive to proto-Atta: (1) Length is exhibited as a contrastive feature on every phoneme except ʔ (glottal stop). (2) There are no diverse consonant clusters within a word; diverse consonant clusters occur separated by word juncture. When words are affixed, diverse consonant clusters are obviated by various types of sandhi (assimilation of sounds at juncture).

Coexistent phonemic System II entered the language through loanwords, a large percentage of which are of Spanish origin. However, Spanish obviously does not account totally for the phonemes of System II, which are as follows: two consonants, r and j (as in English), and two vowels, e and o. The distinctive general features of System II are: (1) vowel clusters involving e and o, (2) diverse consonant clusters within a word.

2. The interaction of the distinctive features of System I and System II involves the occurrence of phonemes in certain syllable sequences.

2.1 A syllable is defined as a vowel with or without consonant margins. (A period is used to mark syllable boun-

Allacapan	Marag	Pamolona	English
balakad	balakat	balakak	'spider'
garasib	garasip	garasik	'scissors'
bila:g	bila:k	bila:k	'sun'

In the speech of those who have had frequent contact with Atta from a dialect area different from their own, there is free variation between these forms.

³ Kenneth L. Pike and Charles C. Fries, "Coexistent Phonemic Systems," *Language*, Vol. 25 (January-March, 1949), pp. 25-50.

daries within words. The syllable patterns are stated as consonant—C—and vowel —V— sequences.)

The four types of syllables occur initial, medial, or final within a word or utterance: V a.ri 'no' ku.ri.a:.ba:n 'scratch', du.a: 'two'; VC ut.ta: 'deer', gi.gi.am.mu.an 'learning', ap.pu.ak 'tree stump'; CV nu 'when', ba.ra.ngay 'boat', tak.ki 'foot'; CVC ke:n 'skirt', ka.kad.da.pa:n 'grassland', kad.dang 'tether'.

A word is bordered by word juncture (which is characterized by potential pause) and marked by primary stress on the ultima. Word juncture is represented by space.

Primary stress is characterized by volume, usually on the lowest pitch level of the speaker, but varying with the type of intonation contour. It is perhaps best described as a low push. Secondary stress accompanied by a rise in pitch occurs on long vowels. Because of its length and higher pitch characteristics, it sounds, to American ears hearing it for the first time, like primary stress.

Words are composed of from one to seven syllables: da:n 'old', bag.ga: ? 'polished rice', na.ra.ping 'dirty', ma.ka.tu.ruk 'asleep', a.ba.ri.u:.nga:n 'wasp', ma.gi.bi.-i.ban.na:k 'intermittent rest', i.na.la.-a.li.ma:.nu 'has shaken hands'.

2.2 Several of the Atta words in the above lists exhibit geminate consonant clusters across syllable boundaries. Phonetically, these are long consonants, i.e., consonants of two morae in length, each of which contrasts with a consonant of one mora in length but otherwise identical. If only System I data are considered in this analysis, the long consonants might be interpreted as consonants of one mora with a prosodeme of one mora of length (although even with the data thus limited, this analysis might not be preferable because of syllable juncture within long consonants).

The influence of System II loanwords exhibiting diverse consonant clusters across syllable boundaries facilitates the interpretation of the long consonants as clusters of geminate consonants at syllable juncture.

Various types of sandhi occurring at morpheme junctures obviate diverse consonant clusters in System I. Examples of sandhi at morpheme juncture are: *mag-* plus *do:yya:n* 'hammock' becomes *maddo:yya:n* 'to swing', plus *kagi* 'sound' becomes *makkagi* 'to make a sound' (but plus a vowel initial stem there is no sandhi, e.g., plus *alitu?* 'fence', *magalitu?* 'to make a fence'). *mang-* plus *ka:yu* 'wood' becomes *manga:yu* 'to get wood', plus *pi:ya?* 'chick', *mami:ya?* 'to hatch chicks' (but plus a vowel initial stem there is no change, e.g., plus *ulin* 'stern of boat', *mangulin* 'to paddle and steer in the stern'). Sandhi with other affixes varies, but the result of affixing consonant to consonant at morpheme juncture is either gemination of consonants or loss of one mora consonant, but never a diverse cluster.

The sandhi of System I has not affected most diverse two-consonant clusters in loanwords. The following diverse clusters have been observed: *pr le:pra:nu* 'airplane', *tr katri* 'bed', *ts kutsia:ra* 'spoon', *kl bisikle:ta* 'bicycle', *br libru* 'book', *gr te:le:gra:ma* 'telegram', *gl igle:sia* 'church', *rp sirpi?* 'hair clasp', *rt pue:rta* 'door', *rk me:rkulis* 'Wednesday', *rb surbi* 'use', *rd kardi:ne:s* 'sardines', *rg karga:* 'cargo', *rs karse:l* 'jail', *rm ispe:rma* 'candle wax', *rn to:rni:liu* 'joint', *lp go:lpi* 'all at once', *lt pultari* 'chicken coop', *lb ka:lbu* 'bald', *ld sulda:lu* 'soldier', *ls kalsa:da* 'road', *sp ispe:sia:l* 'special', *st la:stiku* 'elastic', *sk muska:da* 'chewing tobacco', *sm ismagal* 'slippers', *sn isna:p* 'snap', *mp lampa:su* 'cocunut husk floor skate', *mb bo:mba:* 'pump', *nt palantia:* 'flatiron', *nd kanda:du* 'lock', *ns sinsi:liu* 'change (money)', *ngk tarangka:* 'safety pin', *ngg anggu* 'gall', *yb buybuy* 'unidentified flower'.

Apparently the long consonants characteristic of System I across syllable boundaries have facilitated acceptance of diverse two-consonant clusters characteristic of System II across syllable boundaries. However, the syllable patterns of System I have predominated over loanwords which would introduce new syllable patterns. For example, syllables with initial consonant clusters have been obviated by the addition of a vowel before the first consonant, as in *isna:p* from *snap*, or by a vowel interposed between the two consonants, as in *pultari*

from poultry, palantia: from plancha, and tarangka: from tranca. Although *tr* occurs across syllable boundaries, as in *katri*, loanwords containing syllable initial *tr* have been modified by the addition of an *a* between these two consonants: *taraba:ku* from Spanish *trabajo* 'work'; *tara:k* from *truck*.⁴

2.3 The interpretation of length with vowels is involved with the analysis of *e* and *o*. Phonetically, all five of the vowels occur throughout the data comprising both System I and II. But setting aside recognizable loanwords for the moment, and considering only System I data, some interesting observations are possible: (1) Vowels *a*, *i*, and *u* far outrank *e* and *o* in frequency of occurrence. (2) Word initially, *a*, *i*, and *u* are common; there are only two words exhibiting word initial *e* and only two exhibiting word initial *o*. (3) Contrastive length occurs with *a*, *i*, and *u*; vowels *e* and *o* do not occur with contrastive length—they are always long, exhibiting two morae of length in open syllables (V and CV) and perhaps slightly less than two morae of length in closed syllables (VC and CVC). (4) In a system comprising the three vowels *a*, *i*, and *u*, there are six possible arrangements of these into two-vowel clusters: *ia*, *ua*, *iu*, *ui*, *ai*, and *au*. In the data under consideration (exclusive of recognizable loanwords), the first four of these clusters occur; *ai* and *au* do not occur. (5) Contrastive length (an extra mora) occurs only on the second vowel of a cluster. This characteristic has affected naturalization of loanwords, as will be noted later. (6) Vowels *e* and *o* (always long) do not occur in vowel clusters in the restricted data. (7) In affixation which would result in clusters *ai* or *au* at morpheme juncture, sandhi produces *e* instead of *ai* and *o* instead of *au*, each retaining the two morae length of the altered cluster. For example, *ma-* plus *iyawa:?* 'give' becomes *me:yawa:?* 'given', plus *utun* 'top' becomes *mo:tun* 'high'.

An analysis based on the restricted data would conclude that there are three vowel phonemes—*a*, *i*, and *u*, and that *e*

⁴In some of the examples of interaction, it will be noted that there are vowel changes. These involve stress, length, and the non-contrastive distribution of phonetic variants of the vowels and are dealt with in Section 3.6.

and o are phonetic forms of phonemic clusters ai and au respectively.

However, there are a number of common loanwords which, although naturalized in some respects, have introduced several new vowel clusters which must either affect the status of e and o or play havoc with the syllable patterns of the language. (A certain resistance to change in syllable patterns has already been noted in the alteration of loan syllable pattern CCV to fit the existing syllable patterns by the addition of a vowel between the two consonants—CVCV.) The following vowel clusters occur in loanwords: ie bie:rnis 'Friday', ue gue:bi 'Thursday', io bakasio:n 'vacation'.

With these three clusters to consider, e and o could not be treated as clusters themselves unless new syllable patterns were added which would admit clusters of vowels: VV, so that gue:bi would then be interpreted as *guaeibi⁵ (CV.VV.CV); and VVC, allowing the interpretation of bakasio:n as *bakasiaun (CV.CV.CV.VVC). In preference to this, vowels e and o have been interpreted as single naturalized phonemes.

Consequently, long vowels have been interpreted as single-mora vowels plus a prosodeme of one mora length, rather than as a sequence of two vowels.

Length is significant on three levels of meaning: (1) Length on a vowel is the only phonemic contrast in several minimal pairs of words; (examples are found in Section 3.5). (2) Length also occurs on the level of a morpheme; i.e., in some occurrences, length has lexical meaning. On this level, an affix morpheme of length, meaning plural, may occur on either a vowel or a consonant, depending on the syllable structure of the word: abbing 'child', a:bbing 'children'; lala:ki 'man', lalla:ki 'men'; babay 'woman', babbay 'women'. (3) Length on vowels is also a feature of various intonation contours, with intonational meaning.⁶

⁵ *, as per usage in: Frank E. Robbins, "Quiotepec Chinantec Syllable Patterning," *IJAL*, Vol. 27 (July, 1961), p. 248, to designate a possible phonemic shape which does not occur within the limits of the present description.

⁶ For a discussion on lexical meaning and intonational meaning, see Kenneth L. Pike, *The Intonation of American English*, University of Michigan Press, Ann Arbor (1947), pp. 20-25.

2.4 Although phonetic [d], [r], and [j] are common within the scope of System I data, they occur as phonetic variants of one phoneme, with the following complementary distribution: the alveolar flap [r] occurs between vowels (ari 'no'); the alveopalatal affricate [j] occurs before i except between vowels (jigu 'gravy'); and the alveolar stop [d] occurs elsewhere (danum 'water', padda:k 'wind'). This distribution is further illustrated in morpheme sequences. Between vowels within an utterance or through affixation, word initial d becomes r, and followed by infix -in-, d becomes j: dagun 'year', tadde: ragun 'another year'; do:k 'thing to be sent', plus mag-, maddo:k 'to send'; plus na-, naro:k 'sent'; plus -in-, jino:k 'thing sent'.

The phonetic presence of these three non-contrastive phones has apparently facilitated their naturalization from loanwords, which have introduced them in contrastive distribution, giving them the status of full phonemes in System II. Loanwords containing consonant clusters presented contrastive r contiguous to a consonant (for examples, see list under Section 2.2). In some instances, word initial r was rejected—Spanish reloj 'clock' became liro:s, but with the introduction of the custom of fiesta (in Atta, pie:sta), word initial r was accepted from reina, which became re:na 'fiesta queen'. Word initial r also occurs in names of people, but when it is the given name, it is often abbreviated by the loss of the initial r. Word final r apparently had little or no difficulty; for example, Spanish regular has become ligula:r 'ordinary'.

Contrastive distribution for j is limited. There are a few occurrences of j before vowels other than i. One could speculate with some basis that these involve vowel clusters with i as the first member, lost phonetically due to sandhi in close juncture; for example, Spanish medio has become me:ja 'half'. However, there are a few occurrences of d before i in contrast with j before i, and new loans are unaltered, in which j occurs in contrastive distribution with d and r—the latest, je:t 'jet plane'. (See Section 3.1 for further examples of these contrasts.)

2.5 Sounds which do not occur within the data of System I either as contrastive phonemes or as phonetic variants have not been readily accepted as phonemes. Rather, in loanwords presenting such innovations, apparently the closest existing equivalents—in the best judgment of the native speakers at the time of introduction—have been substituted. A few such changes are illustrated by the following examples: (1) p substituted for Spanish f: *conforme* has become *kampo:rme* ‘whatever you like’; (2) ɭ has substituted for some instances of d between vowels: *soldado* has become *sulda:lu*, but in a consonant cluster this sound has been lost: *padre* has become *pa:ri* ‘priest’; (3) for Spanish j (like a strongly aspirated English h) sometimes g has substituted in word initial position, except in proper names: *justo* has become *gustu* ‘correct’; k has substituted in word initial position in proper names: *Juan* has become *Kua:n* ‘John’, and in word medial position: *espejo* has become *ispe:ku* ‘mirror’; s has sometimes substituted for j in word initial position: *jabón* has become *sabo:n*, and in word final position: *reloj* has become *liro:s* ‘clock’; (4) examples of the naturalization of the Spanish alveopalatals, the lateral ʎ and the nasal ñ are: *silla* has become *si:lia* ‘chair’, *señal* has become *sinia:l* ‘indication’.

3. The phonemic status of phones has been determined by contrastive distribution in identical or corresponding environments. A number of the phonemes have phonetic variants.

The consonant phonemes consist of seven stops and nine continuants.

3.1 The stop consonants may be divided into three groups, the third of which consists of only one consonant—ʔ (glottal stop).

The first two groups of three stops each contrast in bilabial, alveolar, and velar points of articulation: (1) p, t, k, (2) b, d, g. All are unaspirated. The first group of three are voiceless, in contrast with the second group, which are voiced: (1) *pugu* ‘island’, *tula:ʔ* ‘lid’, *ka:gaw* ‘bug’; (2) *buku* ‘head sore’, *dupaʔ* ‘banana’, *ga:kaw* ‘chest’. In both groups, frica-

tive variants of the bilabial and velar stops (p, k, b, and g) occur between vowels either word medial or utterance medial: (1) api:pia 'many', lupe:? 'mud', api: 'fire', ari paga 'not yet'; akiki:li 'axila', dakula:? 'palm of hand', ume: kami 'we are coming'. (2) ubo:buk 'word', abe:? 'little maid', gabi 'night', ana:? ku nga babay 'my daughter'; agi:? 'flow', da:gu:m 'needle', mataki? ka gare:? 'unfortunately you are sick'.

The voiceless stops have unreleased variants in word final position. The voiced stops do not occur in word final position² except within an utterance as a result of sandhi, in which word final n completely assimilates to the initial consonant of the following word: awa:nin 'there is none now', awa:nig gare:? 'there is none now, unfortunately'. Of the voiced and voiceless stops, in the data of System I only the k occurs word final. However, loanwords have introduced a few instances of word final p and t as well: isna:p 'snap', biskuit 'biscuit'.

Loanwords which in the source language had a voiced stop in word final position have been naturalized by the replacing of the voiced stop with the voiceless stop at the same point of articulation: Spanish electricidad has become le:tarisida:t 'electricity'.

Contrastive length occurs with each of these six stops: p vs. pp malapa? 'soft', malappa? 'industrious'; api: 'fire', appi? 'rag'. b vs. bb abu 'ash', abbu? 'hole'; bubun 'a well', dabbun 'earth'. pp vs. bb dappa:? 'river', dabba:? 'shore'. t vs. tt lutu 'sore', luttu 'an edible tuber'; uta: 'vomit', utta: 'deer'. d vs. dd ka:da 'every', kadda? 'grass'; bada:ng 'bolo', ta:dda:n 'pay'. tt vs. dd maggitta: 'alike', maggidda: 'to lie down'. k vs. kk makko:ko? 'to steal', makko:kko:k 'to dig'; taki? 'pain', takki? 'my foot'. g vs. gg da:ga:? 'sand', dagga:? 'my turtle'; bagi: 'waterfall', baggi 'body'. kk vs. gg napakka: 'shattered', na-tagga:? 'hard'.

The occurrence of t before i is restricted to a few loanwords; for example, tie:mpu 'weather', ti:ya 'aunt'. The possible significance of this restriction becomes intriguing when it is further observed that stem initial t before infix -in- becomes s: talama:nan 'to destroy', sinalama:n 'destroyed'. This

information makes it necessary to contrast *t* with *s*: *ta:n* 'there', *sa:n* 'abdomen'; *tata*: 'nipa', *isa*:? 'to winnow'; *tt* vs. *ss gatta*? 'breast milk', *gassa*: 'native gong'. Only loanwords exhibit word final *s*: *antio:kus* 'eyeglasses', *ma:s* 'more'.

Although *s* occurs more frequently before *i*, there are many examples of occurrence before other vowels, and if all of them are loanwords, many do not exhibit other features that characterize loanwords, and their source is not known. For this reason *s* has been considered as belonging with System I; if it is not a proto-Atta phoneme, its degree of natralization far exceeds that of the other "new" phonemes.

Phonemic glottal stop, i.e., glottal stop which has contrastive significance in the sound system, occurs only in word final position. Phonetically, it closely resembles the unreleased velar stop *k*; examples of contrast between these two are: *a:puk* 'lime', *a:pu*? 'grandchild'; *ulak* 'rat', *ula*? 'blanket'.

When a word ending in glottal stop is suffixed, sandhi precludes its occurrence. For example, *no:no*:? 'mind' plus *-an* becomes *no:no:pan* 'to think'; *majjigu*:? 'to bathe' plus *-a*? becomes *majjigu:ka*? 'I will bathe', plus *-in* becomes *majjigu:kakin* 'I am bathing now'.

On the morphemic level, glottal stop occurs as a variant of the first person singular possessive pronoun *ku* 'my'; glottal stop occurs with words ending in a vowel: *wagi* 'brother', *wagi*? 'my brother'; *kusa*: 'cat', *kusa*:? 'my cat'.

3.2 The nine continuants are divided into three groups to facilitate description. Of the first group of four, three occur at the alveolar point of articulation: two of these are voiced—a flap *r* and a lateral *l*; the third is the voiceless sibilant *s*. The fourth, *j*, is a voiced alveopalatal affricate. With length, *r* is a trill. The other three have no phonetic variants. The *j* does not occur word final.

Contrasts between *d* of System I and *r* and *j* of System II are shown in the following list: *de:nu* 'oil', *re:na* 'queen', *je:t* 'jet plane'; *ka:da* 'every', *a:ran* 'offering', *me:ja* 'half'; *di* 'of' (plural person marker showing possession), *jila*: 'tongue'.

Examples of each with contrastive length are: d vs. dd bada:ng 'bolo', ta:dda:n 'pay'; r vs. rr makkare:ra 'to run', ge:rra 'war'; j vs. jj ujo:jin 'red', kajjing 'goat'; dd before i vs. jj before i baddi? 'small', mattajji? 'to smash'.

Examples of occurrence of l are: liwa:? 'wrong', le:nte: 'flashlight', lama:n 'wild pig', lupe:? 'mud', mala:lla:k 'bland', ne:litu? 'shut', malle:le:ku 'to go around', kitu:l 'deaf'.

Examples of s in various environments are: sika:n 'I', ise:-ra:ng 'to hang on a clothes hanger', sangaw 'by and by', so:gia:n 'where', su:n 'that's enough', langgusti 'gunny sack', ba:lsa: 'ferry', asisi:pi? 'scorpion', a:ssiru? 'dipper', ba:la:s 'bullet'.

Contrastive length occurs with both the lateral and the sibilant: l vs. ll ila? 'gnat', illa? 'thread'; s vs. ss kasi 'wild chicken', issi 'honey'; nabasa: 'wet', massa:? 'to winnow'.

3.3 Three voiced nasals make up the second group of continuants. These contrast at bilabial, alveolar, and velar points of articulation—m, n, and ng. Occurrence of these is illustrated in the following list: m minay 'he went', me:llaw 'drunk', mangi? 'corn', mo:lang 'don't want', muka:? 'forehead', nga:min 'all', la:gum 'inside', umu? 'nest'; n nikaw 'to you', ne:ppi? 'thin', na:ppa? 'cheap', nua:ng 'carabao', do:n na niuk 'leaf of coconut palm'; ng ngisi? 'black', nange:nge:yu 'wiggles', angang 'large clay jar', mangural 'dull', gabingo: 'tonight'.

Examples of each of the nasals with contrastive length are: m vs. mm manguma: 'to prepare a field', umma: 'morning'; ga:mi? 'clothing', na:mmi? 'sweet'; n vs. nn mapu:nu 'empty', mapa:nnu 'full'; ana:? 'offspring', maranna:? 'falling'; ng vs. ngng tanga 'a whole', tangnga: 'middle'; masingan 'to see', masingnga? 'delicious'.

3.4 The third group of continuants is composed of two voiced semivowels—palatal y and bilabial w. Examples of each are: y yine: 'this one', ya:ya 'that', ye:na 'mother', yu:rin 'there far', ayo:ng 'monkey', maguyung 'crazy', balaya:ng 'iron', ka:-kay 'grandfather', kiray 'eyebrow'; w we:k 'creek', wan 'yes', wa:tay 'axe', asisi:wi? 'humming bird', sawe: 'this here', bukkaw 'hawk', maka:baw 'forgetful', me:warawara:? 'scattered'.

Examples of the semivowels with length are: arayyu 'distant', do:yya:n 'swing', awayya: 'responsibility'; mawwagi 'related', tawwin 'curved blade', mawwakki:wang 'to shake the head in refusal'.

In syllable final position, w has been observed only after a. This is true also of y with two exceptions, both of which have one of the earmarks of loanwords, i.e., diverse consonant clusters: buybuy 'a flowering plant', balangko:y 'cassava'.

Words ending in ay or aw followed by an attributive, such as a possessive pronoun, exhibit sandhi in which ay becomes e: and aw becomes o: : balay 'house', bale: mi 'our house'; lappaw 'flower', lappo: na 'its flower'. However, ay also contrasts with e:, and aw with o: . ay vs. e: kawa:yan 'bamboo', asusuwe:ta:n 'road runner bird'; u:way 'rattan', yawe: 'that'; aw vs. o: ga-wagawa:ya:n 'health', go:wang 'underneath the house'; aggaw 'day', pu:ga:go: 'this afternoon'.

3.5 The five vowels are voiced vocoids and contrast in tongue position.

The two front unrounded vocoids are i and e. These contrast in tongue height; i is high and e is mid. Each of these has a close variant occurring in open syllables, and the close variant of i also occurs with length in either open or closed syllables: i iria:n 'to remove', i:tu 'dog', lappi 'basket', balli:? 'rice bird'; e ne:wasi? 'dropped', bine:sin 'hung', yawe: 'that'.

The front open unrounded variant of e occurs in closed syllables. The open variant of i never occurs with length. Length always occurs with e. Examples of occurrence of the open variants are: i uking 'charcoal', mabbalittak 'to turn over', jijjing 'wall', la:ngi? 'sky'; e we:k 'creek', lubbe:? 'arrive', ke:kke:ng 'bells'.

Examples of contrastive length with i are: i vs. i: lima: 'hand', li:ma: 'five'; lasi? shrimp', si:? 'thorn', baddi? 'small', bassi:? 'calf of leg'.

Two back rounded vocoids, each having two phonetic variants, also contrast in tongue height; u is high and o is low. The close variants occur in open syllables, and the close variant of u also occurs with contrastive length in either open or closed

syllables: u uru 'medicine', putu: 'heart', ulu 'head', atu:? 'smoke'; o ko:pun 'friend', mo:nak 'deep', mako:ne:? 'he can climb', mako:bo:buk 'he can talk'. The close variant of o also occurs in closed syllables before ? : no:no:? 'thought', abbo:? 'grandmother'.

The second variant of u is a high back open rounded vocoid, which occurs in closed syllables except with length: bullun 'rainbow', yu? 'the' (topic-marking particle), mammummul 'to suck', kappu? 'dust', abbu? 'hole'.

The variant of o which occurs in closed syllables is a mid back close rounded vocoid: do:n 'leaf', go:k 'leaf used with betel nut chew', taddo:ng 'hat'.

Examples of contrastive length with u are: u vs. u: bulu 'small variety of bamboo', pu:lu 'handle'; ipu? 'tail', agupu:? 'mosquito'.

The vowel a has three phonetic variants. A mid central close unrounded vocoid occurs in closed syllables except with length: ammay 'stalks of rice', kaddang 'tether', lummak 'to sink', dupa? 'banana'. Another variant is a mid central open vocoid which occurs in open syllables except with length: abaka 'hemp', gatu? 'debt', talinga 'ear'. The third variant is a low central open vocoid which occurs only with length: ka:luk 'unripe coconut', bula:wa:n 'gold', uga:? 'vein', ngila: 'yellow'.

Some pairs of words exhibiting a vs. a: as a minimal contrast are: atta: 'rice chaff', a:tta: 'name of the people and the language'; bagu 'new', ba:gu 'name of a tree'; dapan 'sleeping mat', dapa:n 'sole of foot'; бага: 'swelling', ba:ga: 'hot coals'; da:ga? 'my blood', da:ga:? 'sand'; ila? 'gnat', ila:? 'small knife'.

3.6 The phonetic variants of the vowels and the individual word stress and intonation pattern of Atta have influenced the naturalization of vowels in loanwords.

Vowels which occur in stressed syllables in the source language tend to become long vowels, which in Atta have secondary stress concurrent with high pitch. The following

examples from Spanish are stressed on the penult in their source form, which is given first: vaca has become ba:ka 'cow', banco has become ba:ngku 'bench'.

Vowels e and o, which are always long in Atta, have remained unchanged except for added length when from a stressed source syllable, but when their source is an unstressed syllable, they have changed to i and u respectively: escuela has become iskue:la 'school', embudo has become imbu:du 'funnel', vaso has become ba:su 'drinking glass'. Except for additional length on e and o, the following words are unchanged: pue:rta 'door', bo:la 'ball', bo:da 'wedding'.

When e is word initial in an unstressed open syllable in the source language, it is lost: electricidad has become le:tari:-sida:t 'electricity', elástico has become la:stiku 'elastic'.

A vowel cluster which in the source language has e as its first member is modified in one of three ways to avoid length on the first member of a vowel cluster: (1) The cluster may be reversed; Spanish aceite has become asie:te: 'motor oil'. (2) The second vowel of the cluster may be lost, as in reina, which has become re:na 'queen'. (3) The long vowel of the source may be changed to a short one if the second vowel of the cluster in the source is stressed; pasear (stressed in Spanish on the ultima) has become passia:r 'to take a walk'. In the last example, apparently the s was doubled because the a in the first syllable, an unstressed syllable in the source language, more closely resembled the phonetic variant of a in Atta which occurs in a closed syllable.

4. In summary, the predominant features of the host language seem to be: (1) syllable patterns, (2) stress, length, and word intonation pattern, (3) the existence of phones as phonetic variants of Atta phonemes previous to their recognition in contrastive distribution, and (4) distribution of phonetic variants of the vowels. Within these limitations, the chief contributions from the source languages are: (1) diverse consonant clusters, (2) new vowel clusters, and (3) contrastive distribution for the four phones: r, j, e, and o.

PATTERN CONGRUITY IN ILIANEN MANOBO PHONOLOGY

Robert and Felicia Brichoux
Summer Institute of Linguistics

- O. Introduction
- 1. Segmental Phonemes
- 2. Syllable Patterns
- 3. Alternate Analyses

O. The segmental phonemics of Ilianen Manobo illustrate a problem of phonemicizing on the basis of pattern congruity. This is an attempt to fit all the phonetic material into a symmetrical set of patterns based on the nonsuspect data. Involved in this problem are the interpretation of certain syllable patterns and the analysis of the phoneme *n*.

1. The segmental phonemes of Ilianen Manobo¹ are consonants *p, t, k, ʔ, b, d, g, ɸ, s, h, l, r, m, n, ng, w, and y*, and vowels *i, e, a, and u*.²

1.1 The consonant phonemes of Ilianen Manobo are described according to their manner of production: stops, fricatives, liquids, nasals, and semivowels.

1.11 Voiceless bilabial, dental, velar, glottal, and voiced bilabial, alveolar, and velar stops occur; all have unreleased

¹ Ilianen Manobo is a Malayo-Polynesian language spoken in the interior of the province of Cotabato on the island of Mindanao, Philippines. The present paper is based on approximately twenty months of field work by Mrs. Brichoux at periods between September, 1956, and August, 1959. This study was under the auspices of the Summer Institute of Linguistics, in cooperation with the University of North Dakota. Chief informants were Mrs. Tigar Zacharias, a monolingual speaker about 35 years old; and Inter Mantinanggit and Latipa Panduan, girls about 17 years old, bilingual speakers of Manobo and English. We are grateful to Jean Shand, Richard E. Elkins, and Howard P. Mc-Kaughan, all of the Summer Institute of Linguistics in the Philippines, for valuable discussions of the material.

² For a description of suprasegmental phenomena and juncture, see "Suprasegmental Features of Ilianen Manobo", an unpublished paper by Jean Shand.

allophones³ occurring utterance finally and as the first member of a consonant cluster with the exception of the voiced stops preceding l, r, or semivowels: p⁴ *kepkep* 'cling', *ʔapas* 'sufficient', *pakpak* 'wing'; t *ʔitʔit* 'leprosy', *datuʔ* 'chief', *tabtab* 'pasture'; k *wekwek* 'night sound', *kurut* 'curl', *ʔedtikaʔ* 'endure', *bangkew* 'spear'; ʔ *weʔwaʔ* 'clearing', *ʔegkeʔanʔan* 'slip'; b *kebkeb* 'chew hard food', *ʔabas* 'pierce', *bakbak* 'frog', *rabrab* 'trees burned accidentally'; d *ʔayadʔayad* 'exact', *dadu* 'plow', *dabdab* 'gossip', *ʔedlayang* 'fly'; g *ʔegkeʔulug* 'will fall', *guru* 'learn', *purigaʔ* 'red ants', *sanggat* 'hang', *selegya* 'woven bamboo walling'.

1.12 Fricatives occur at the bilabial, alveolar, and glottal points of articulation. *ɸ* is a voiced fricative and does not occur utterance initially, utterance finally, or as the first consonant of a cluster; it occurs as the second consonant of a cluster only after l, r, or semivowels: *ʔaɸas* 'rash', *bulɸul* 'hair'. *s* is a voiceless alveolar grooved fricative: *ʔasu* 'dog', *pispis* 'offspring', *seksek* 'corner'. *h* is a voiceless glottal fricative: *hane* 'expression to begin story', *merihaʔ* 'red', *wahwa* 'longlegged bird', *banhew* 'raise the dead'; *h* does not occur utterance finally.⁵

1.13 Liquids are voiced alveolar lateral, voiced alveolar trill or flap, and voiced bilabial, alveolar, and velar nasals. *l* *ʔulu* 'head', *ʔuntul* 'epitome', *ʔalʔal* 'ache', *lablab* 'hog'. Trilled and flapped varieties of *r* are in free variation in all environments: *ʔuru* 'worry', *ʔegkeʔerʔer* 'be weary of waiting', *rabrab* 'trees burned accidentally'; *m* *namat* 'leaf chewed with

³ For the analysis of the unreleased allophones of *p*, *t*, and *k*, we are indebted to Richard E. Elkins, "The Phonemes of Southern Bukidnon Manobo", "Papers on Philippine Linguistics", *Folklore Studies XII* (Tokyo, 1953), pp. 108-110. In this preliminary phonemic statement for the dialect adjacent to Ilianen Manobo, Elkins describes the allophones on the basis of their distribution within the syllable: the unreleased allophones occur syllable finally and the released allophones occur syllable initially.

⁴ In cases of phonemes having no distributional limitations, each phoneme is illustrated in the various environments in which it occurs: utterance initially, intervocalically, utterance finally, first consonant of a cluster, and second consonant of a cluster.

⁵ Less than a dozen occurrences of utterance-initial *h* have been found, and some of these are loan words.

betel', temtem 'light lamp', medmeriyu? 'very far'; n has two allophones, [nd], a voiced alveolar nasal followed by a voiced alveolar stop, occurs before l or r: sanley 'corn', kenret 'gathers in cloth', and n occurs elsewhere: nana? 'pus', ngaran 'name', tuntul 'correct', kidnat 'twitch'; ng nanga 'rattan', tungtung 'firefly', ngesnges 'whimper'.

The basis for analyzing [nd] as an allophone of n is the criterion which Swadesh⁶ labelled pattern congruity. The principle states: "...particular formulations must be congruous with the general phonemic pattern of the given language." The general phonemic pattern of Illianen Manobo shows clusters of no more than two consonants; the only exceptions are clusters of three consonants which contain [nd] in forms such as [sandley] 'corn' and [kendret] 'gathers in cloth'. The analysis of nd as an allophone of n allows the interpretation of [sandley] and [kendret] as sanley and kenret, following the general phonemic pattern of the language. Bloomfield⁷ had applied the principle of pattern congruity to the analysis of two consecutive phones, interpreting them as one complex phoneme. He said (p. 90): "...compound phonemes are combinations of simple phonemes which act as units so far as meaning and word-structure are concerned..." and (p. 131): "Since every utterance contains, by definition, at least one syllabic phoneme, the simplest way to describe the phonetic structure of a language is to state which nonsyllabic phonemes or clusters of nonsyllabic phonemes appear in the three possible positions: initially, before the first syllabic of an utterance; finally, after the last syllabic of an utterance; and medially, between syllables. In this respect the diphthongs and triphthongs of English play the same part as the simple vowels; it is precisely this fact that compels us to class them as compound phonemes and not as mere successions of phonemes..." and, (p. 136): "We observe especially that the structural pattern leads us to re-

⁶ Morris Swadesh, "The Phonemic Principle", *Language* X, 1934, pp. 117-129, reprinted in Joos, *Readings in Linguistics*, (Washington, American Council of Learned Societies), 1957, p. 35.

⁷ Leonard Bloomfield, *Language* (New York, Henry Holt and Company), 1933.

cognize also compound phonemes which resemble successions of other phonemes, but play the part of a simple phoneme..."

It might at first glance appear that the allophones *n* and *nd* of the phoneme *n* are not in complete complementary distribution, but that their distribution coincides in the intervocalic position, where both occur: *ʔenem* 'six', *ʔendeʔi* 'where'. This overlapping distribution is, however, only apparent and not actual. *n* of *ʔenem* 'six' is an allophone of the phoneme *n*, but *nd* of *ʔendeʔi* 'where' is not an occurrence of the *nd* allophone of the phoneme *n*. It is a sequence of the phoneme *n* and the phoneme *d*. It is only *nd* before *l* or *r* that is an allophone of *n*; *nd* between vowels is a sequence of *n* plus *d*. This indicates that the present analysis is a case of phonemic overlapping; the same phonetic sequence is sometimes interpreted as one phoneme (the phoneme *n*), and sometimes, as a sequence of phonemes (*n* plus *d*).

Bloch⁸ allows the analysis of a phone as a member of one phoneme in one environment and as a member of another phoneme in another environment, so long as the environments are defined and it is thus clear to which phoneme a given occurrence of the phone belongs: "Is the phonemic analysis of

⁸ Bernard Bloch, "Phonemic Overlapping", *American Speech* XVI, pp. 278-284, 1941, reprinted in Joos, *Readings in Linguistics* (Washington, American Council of Learned Societies), 1957, p. 93. Bloch in conversation adds the requirement that all allophones of a phoneme share some feature in common and since *d* does not share any feature with *n* Bloch therefore rejects the allophonic interpretation we have postulated. Our analysis, however, is congruent with his article referred to above. A somewhat parallel illustration of similar phones being analyzed as allophones of different phonemes is the English *h*-aspiration problem as handled by Pike. He also applies the criterion of patterning and states: "In English the problem is made more complex by the fact that [h] occurs as a separate phoneme in words like *hæt* 'hat', but that the [h] is phonetically similar to the aspiration following the [p] in *pæt* [p^hæt] 'pat'. Nevertheless the nonphonemic aspiration [h] and the phonemic *h* must not be equated, since the *p* does not occur at the beginning of heavily stressed syllables unaccompanied by [h] ... This essential association tends to force the two into a single phoneme... Furthermore, there is no parallel for consonant clusters which include [h] when these clusters constitute the first part of a syllable, so that a cluster initially with *ph would not fit any non-suspicious pattern whatsoever; this is additional evidence that in English [p^h] is a single phoneme." (Kenneth L. Pike, *Phonemics*, Ann Arbor, University of Michigan Press, 1947, p. 134.)

a dialect valid if it forces us to assign successive occurrences of the same sound to different phonemes? ...The intersection or overlapping of phonemes will be called partial if a given sound x occurring under one set of phonetic circumstances is assigned to phoneme A, while the same x under a different set of conditions is assigned to phoneme B; it will be called complete if successive occurrences of x under the same conditions are assigned sometimes to A, sometimes to B."

Fitting the Ilianen Manobo data into Bloch's definition: "The intersection of overlapping of phonemes will be called partial if a given sound [nd] occurring under one set of phonetic conditions (before l or r) is assigned to phoneme n, while the same [nd] under a different set of conditions (intervocalic) is assigned to phonemes n plus d; it will be called complete if successive occurrences of [nd] under the same conditions are assigned sometimes to n, sometimes to n plus d." The latter is not the case; the Ilianen Manobo analysis is a case of what Bloch calls partial, not complete, intersection.

Bloch concludes:⁹ "Partial intersection...can never lead to uncertainty in practice and may therefore be admitted in theory without violating sound phonemic method. The same cannot be said, however, of complete intersection. Examples are rare, and are always the result of an error in the analysis." It is therefore allowable, following Bloch's statement, to analyze [nd] as described above, and it is here considered to be the preferable analysis. Thus the Ilianen Manobo pattern of two-consonant clusters need not be violated.¹⁰

1.14 The semivowels, y and w, are nonsyllabic high, front, unrounded; and high, back, rounded vocoids, respectively. They occur in positions in which consonants occur except in those which are contiguous to a syllabic vocoid of the same quality. y 'ayad'ayad 'exact', beyqey 'shore', yapyap 'winnow'; w 'awa' 'go out', sewsew 'wade', welwelengi 'shake it'.

⁹ Ibid., page 94.

¹⁰ In some idiolects the allophone nd occurs only before r and not before l; [sanley] 'corn', [kenureŋ] 'gather in cloth'. The phonemic analysis of these idiolects is the same as for those idiolects in which [nd] occurs before l, differing only as to the distribution of the allophones: [nd] occurs before r, but [nd] does not occur before l.

1.2 The vowel phonemes of Ilianen Manobo are high, close, front, unrounded i; mid, open, central, unrounded e; low, open, central, unrounded a; and high, close, back, rounded u.¹¹ i wayig 'water', 'itu? 'puppy', merani 'near', 'iwad 'turn one's back'; e [i:] high, close, back, lengthened, unrounded allophone occurs only in the final syllable of an utterance in calling style¹² [ware'i:n] 'there is no more (calling style)', ['uyi:] 'yes (calling style)'. Mid, open, central, unrounded [e] does not occur contiguous to vowel a nor utterance finally.¹³ beinggey 'sister-of-mine', teru? 'finger', 'emew 'dumb', 'eyan 'that'. a bayi 'sister', taru? 'falsehood', deruwa 'two', (vowel a does not occur before a semivowel in the same syllable); u niyug 'coconut', 'uqal 'monkey', palu 'heel', 'elukuy 'friend', (u does not occur contiguous to w).

2. Careful examination of Ilianen Manobo utterances yields two distinct syllable patterns, CV and CVC. These primary patterns are found in sequences which do not contain segments which might be interpreted as either syllabic or nonsyllabic, i.e. high vocoids (here indicated by S) adjacent to other vocoids: ge.lat CV.CVC 'knife', lab.lab CVC.CVC 'hog', me.-ma. 'an CV.CV.CVC 'betel nut', 'eb.pi? .pi? CVC.CVC.CVC 'launder'. Application of these primary patterns to the remaining data, i.e. those containing high vocoids adjacent to vocoids, results in the analysis of the majority of such high vocoids as consonants: 'a.yam CV.SVC 'ayam CV.CVC 'pet', 'e.sa.wa CV.CV.SV 'esawa CV.CV.CV 'spouse', key.kew CVS.CVS keykew CVC.CVC 'you, yours', yap.yap SVC.SVC yap-yap CVC.CVC 'winnow'.

¹¹ The vowels are illustrated in the following environments: contiguous to another vowel, bounded by two consonants, preceding a semivowel in the same syllable, and utterance finally.

¹² In the final syllable of an utterance in calling style, the phoneme a of regular speech is replaced by the i: allophone of the phoneme e, and the e allophone of the phoneme e is replaced by its i: allophone. Thus 'uya? 'yes' in the regular speech becomes 'uye? and in calling speech ['uyi:]. 'uli? ke'en 'come home' in regular speech becomes ['uli? ke'i:n] in calling speech.

¹³ Occasionally the form [be], denoting emphasis, occurs in regular speech; however, its usual form is [bi:], with calling style intonation. This is the only occurrence of utterance-final e; therefore it is assumed that, [bi:] is the norm and that it signals calling style whenever it occurs.

Still remaining are the data which contain sequences of a high vocoid and another vocoid, in which the high vocoid is contiguous to a consonant in the same syllable or is the only phoneme in the syllable, for example, [lu.al] 'outside'. The primary patterns allow no consonant clusters within the same syllable nor vowel clusters across syllable boundaries; therefore it can be postulated, that there is a phonemic semivowel¹⁴ occurring between the adjacent vocoids and patterning as a consonant so that [lu.al] CS.VC becomes luwal CV.CVC 'outside', [pi.ak] CS.VC piyak CV.CVC 'chick', [da.un] CV.SC dawun CV.CVC 'leaf', [wa.ig] SV.SC wayig CV.CVC 'water', and [ba.i] CV.S bayi CV.CV sister'. The interpretation of words like [bai] as two syllables is based on both slowed speech and calling-style speech. In a tape recording played slowly, what is heard [bai] in person-to-person informant work is heard bayi; in some idiolects [bai] occurs as ba'i; both of these facts lend weight to the two-syllable conclusion. In the utterance-final syllable in calling style, vowel a is replaced by [i:], allophone of e, see fn. 12. Therefore if the a of [bai] is in the final syllable, one would expect its calling style form to be [*bi:y]; but the form in calling style remains [bai], giving support to the conclusion that the vowel a of [bai] is in the penultimate syllable. Thus, the primary syllable patterns form the basis for interpretation of certain phonetic vowel clusters. Transition is attributed phonemic status so that the semivowels have zero allophones in intervocalic positions contiguous to high vocoids. Or, what is phonetically i is i, iy, and yi phonemically; u is treated similarly.

3. Alternate analyses are available for the treatment of the stop-continuant pairs b and ϕ , d and r, and g and h; and for the treatment of the central vowels a and e.

3.1 An alternate analysis to be considered for b and ϕ , d and r, and g and h arises from the fact that ϕ does not occur utterance initially, utterance finally, or as the first consonant of a cluster, and occurs as the second consonant of a cluster only after l, r, or semivowels. The alternate analysis is an

¹⁴ Most phonetically similar to the high vocoid in the sequence, or if two, the first: [ni.ug] niyug.

attempt to eliminate these phonemes with a limited distribution by uniting *b* and *ɸ* as one phoneme, *g* and *h* as one phoneme, and, by analogy and for symmetry's sake, *d* and *r*. Although the members of each of these pairs are in minimal contrast (*ʔabas* 'pierce', *ʔaɸas* 'rash', *dadu* 'plow', *daru* 'sickness', *purigaʔ* 'ant', *merihaʔ* 'red'), there is a possibility of uniting each pair phonemically if the occurrence of each stop, *C*, is phonemicized in certain environments as *CC*. In environments where only the stop may occur, it is phonemicized *C*; in environments where either the stop or the continuant may occur, the continuant is phonemicized *C* and the stop, *CC*. For example, *ɸ* in the intervocalic position or following *l*, *r*, or a semivowel, is phonemicized *b*; *b* in the intervocalic position is phonemicized *bb*; *b* in other positions is phonemicized *b*. Thus *b* and *ɸ* are complementary in their distribution and may be analyzed as allophones of one phoneme, *b*.¹⁵

The alternate analysis parallels morphophonemic reductions which occur at morpheme boundaries. In each of the following examples, two successive occurrences of the same stop reduce to a single occurrence of the stop: *mib- + baʔal* becomes *mibaʔal* 'made', *mid- + daru* becomes *midaru* 'was sick', *mig- + genat* becomes *migenat* 'left'. The alternate analysis also parallels the consonant replacements which occur at morpheme boundaries. In the following examples, the stop phone in the utterance-initial position is replaced by the corresponding continuant in the intervocalic position: *ne- + bindas* becomes *neɸindas* 'torn', *me- + diyuʔ* becomes *meriyuʔ* 'far', *me- + gaʔan* becomes *mahaʔan* 'soon'.

The alternate analysis seems workable for *b* and *ɸ*. *ɸ* can be phonemicized as *b* between vowels and after *l*, *r*, and semivowels; and be phonemicized as *bb* between vowels and as

¹⁵ The six phonemes under consideration occur in the five environments listed in fn. 4, except for the following cases: *b* and *h* do not occur utterance finally; *ɸ* occurs as the second consonant of a consonant cluster only after *l*, *r*, or semivowels and never as the first consonant of a cluster nor utterance initially; *h* has been found to occur as the first consonant of a cluster only before *w* and the following clusters have not been found to occur: **wd*, **yd*, **ry*, and **lr*. The latter case of *h* and the clusters listed as not occurring may be due to an inadequate corpus. (Note examples given in the phoneme listings under each of these phonemes for environments.)

b in all other positions. For d and r, however, the alternate analysis is less advantageous. Since d and r contrast in all of the five possible environments, there can be an r allophone of the phoneme d occurring intervocalically and after l, r, and semivowels, to parallel the other stop-fricative sets; but there will also be an r phoneme occurring in all positions except intervocalic. g and h contrast in all positions except utterance finally, where h does not occur. There can, therefore, be an h phoneme occurring in all positions except intervocalically and finally.

Considering the alternate solution in view of the total distribution of the three stop-continuant sets, it now appears that the main advantage of the alternate analysis is economy of phonemes: φ is eliminated from the phoneme inventory. The advantage previously given, that of eliminating phonemes with limited distribution, no longer is an advantage because the alternate analysis yields several phonemes with limited distribution; in fact, all of the five resulting phonemes show some limited distribution. The first analysis given, that of interpreting the six phones as six separate phonemes, has the advantage of symmetry, and now is seen also to have the advantage of postulating phonemes having the widest possible distribution. Therefore, the first solution is chosen as the preferable one.

3.2 An alternate analysis of the central vowels a and e arises from the fact that vowel a does not occur before a semivowel in the syllable. It can therefore be postulated that e before a semivowel in the same syllable is an occurrence of an e allophone of the a phoneme. The phonemic status of a and e is not affected; but instead of the a phoneme having only the allophone a, and the e phoneme having the allophones e and i:, an a phoneme then has the allophones a and e, and the e phoneme has the allophones e and i:. This is another example of partial overlapping. An example of a morpheme ending in e plus a semivowel is: sukey 'pay'. sukey undergoes a stem vowel change, e becomes a when suffixed: sukey + -an becomes sukeyan 'is paid'. When the e of sukey 'pay' is postulated to be the e

allophone of a, the morphophonemics is simplified because the need to explain this change is eliminated. *sukey* can then be written **sukay* (allophone e precedes a semivowel in the same syllable) and *sukayan* will contain the allophone a which precedes a semivowel in the following syllable.

The analysis originally given in section 1.2 appears more advantageous for the data than the alternate analysis because the original analysis has the advantage of phonemic simplicity. The alternate description is the more complicated one, involving a larger number of allophones and involving two phonemes with phonetically identical allophones; its only advantage is that it provides for a simpler morphophonemics, a consideration actually outside the realm of phonemic analysis.

It would also be possible to postulate that [i:] in the utterance-final syllable of calling speech is an allophone of a, rather than of e, as syllable-final a in a regular style is replaced by [i:] in calling style. But syllable-final e in regular style is also replaced by [i:] in calling style and it is impossible to tell from the calling style form which vowel the form contains in regular style: regular style, [ʔiniʔad] 'here I am'; calling style, [ʔiniʔi:d]; regular style [midʔengked] 'he has stopped'; calling style, [midʔengkī:d]. Thus even if morphophonemic factors were considered valid considerations, the morphophonemic replacements would not be simplified by the alternate analysis. In the case of the original analysis, there is one morphophonemic replacement, a becomes e, and in the case of the alternate analysis, there is also one replacement, e becomes a. It is better on all counts to analyze [i:] as a member of the phoneme to which it is most phonetically similar, the phoneme e.

THE SUBSTANTIVE PHRASES OF SANGIR

Kenneth R. Maryott

Summer Institute of Linguistics

- O. Introduction.
- 1. Theme Phrase.
- 2. Comment Phrase.
- 3. Accessory Phrase.

O. There are three substantive phrase types in Sangir¹: the THEME, COMMENT, and ACCESSORY PHRASES. The three are presented in this paper for comparison with analogous constructions in other Malayo-Polynesian languages. The latter have been described by various authors under discussions of voice, topic, case, and topic-comment relations. Voice is usually defined as the syntactic relationship between the topic and the verb center²; the topic (sometimes termed focus) is

¹ Sangir is spoken primarily in a group of Indonesian islands located between northeastern Sulawesi, Indonesia, and southeastern Mindanao, Philippines. Speakers of this language have migrated to the coastal regions of southern Cotabato and Davao provinces until in 1960 there were estimated to be about 6000 Sangir in the Philippines. Data for this paper were gathered on Sarangani Island, Davao, where the author has been working under the auspices of the Summer Institute of Linguistics since 1960. The particular dialect of Sangir described in this paper is that of the Tabukang Katjamatan (municipality).

Phonemic symbols used in this paper follow in general the traditional Malayo-Polynesian orthographies. Specifically, *i* is the high central vowel, *w* is the voiced bilabial fricative, *gh* is the voiced velar fricative, *ng* is the velar nasal, *l* is the voiced retroflexed lateral, *ʔ* is the glottal stop. *dj* is the affricate, voiced alveolar stop and palatalized grooved fricative; this sequence occurs only in loan words. In the examples, the particular phrase being illustrated is set apart. For each illustration, a literal and free translation are provided. In the literal, a word root is represented by an English equivalent; if the translation of a root requires more than one word hyphens separate words in the sequence. Enclitics and particles are not translated but are placed within parenthesis in positions corresponding to their occurrence in Sangir utterances. For a description of the morphophonemics, see the paper "The Phonology and Morphophonemics of Tabukang Sangir" by this author, in a forthcoming issue of *Philippine Social Sciences and Humanities Review*.

² Howard McKaughan, *The Inflection and Syntax of Maranao Verbs*, p. 18. Bureau of Printing, Manila; 1958.

further defined as that substantive phrase which is under primary consideration in a given clause³; and case is the specific clause function (topic and/or actor, goal, referent, instrument, etc.) of a certain substantive phrase⁴. Voice is indicated by verbal affixation; both topic and case are marked by particles, clause position, sets of pronoun substitutes, or by a combination of these. There are two voices in Sangir⁵. In the subjective voice, the originator of the action is the topic, while in the objective voice, the goal of the action is the topic. The corresponding topic case function is performed by a substantive phrase here designated the theme phrase. Voices which do not occur in Sangir are the referential, which indicates that the topic is the beneficiary or location of the action⁶, and the accessory, which indicates that the topic is involved in or is the means used to effect the action⁷. Corresponding cases, however, do occur in Sangir and are manifested by substantive phrases: the referential case by the comment, and the accessory by the accessory phrase.

There are other clauses, command, quotation, and possessive, in which verbs are not inflected for voice. In equational and stative clauses, verbs do not occur. Entirely irrespective of the occurrence of voice and topic structuring, the same emic phrase types, theme and comment, are found to occur in all Sangir clauses; the accessory occurs in all but the nonverbal clauses. The designations theme, comment, and accessory phrase are judged sufficiently broad to be appropriate for all occurrences of their widely distributed members. The first two terms were suggested by Hockett's topic-comment dichotomy.

³ Janette Forster, *Dibabawon Verbal Clauses*, p. 6. This paper is presently in the process of publication.

⁴ Virginia Morey, *Cebuano Reference Materials*, p. 52. Summer Institute of Linguistics, Philippines, and the Philippine Association for Language Teaching; 1961.

⁵ Alice Maryott, *Nuclear Predications in Sangir*, p. 5. The paper is presently in the process of publication.

⁶ McKaughan, *op. cit.*, p. 18.

⁷ Morey, *op. cit.*, p. 47. Also compare the Implicative Voice-Mode in Tagalog described by Elmer Wolfenden in *A Restatement of Tagalog Grammar*, p. 15. Summer Institute of Linguistics and Institute of National Language, Manila; 1961.

tomy⁸, but are here modified to apply to those phrases which include only specified elements of Hockett's categories. Also, theme has been substituted for topic to avoid confusion with the latter term as used in the sense defined above.

It should be noted that no phrase type is obligatory in Sangir clauses. A complete utterance may often consist of only a verb. On the other hand, a phrase may also constitute a complete utterance, either in a linguistic or a situational context.

All of the phrases described in this paper are marked by particles which distinguish them and relate them to the clause as a whole. Though the particles themselves differ in form, it is convenient to refer to them collectively as ORIENTORS. Similarly, the other constituent of each phrase may be termed its AXIS⁹. Axes may also have included phrases.

Each of the three major phrase types subdivides into personal and nonpersonal emic categories, though the accessory phrase also has a subjective/objective dichotomy. The personal phrases are those in which the orientor includes a member of the morpheme class i, and the axes, personal names, titles, certain kinship/friendship terms, or pronouns: i Frans 'Franz', si Tuang Sarapili? 'Mr. Sarapile?', -ng Konsihali? 'the Councilor', i hapi?ku 'my friend', si amange 'his father', -ng sie 'him'. The nonpersonal phrases are those in which the orientor includes a member of the morpheme class u and in which the axis may be any substantive except personal entities from the above group. X hapi?ku¹⁰ 'my friends', su lan-tang dala 'in the farmhouse landward', u peking 'with a fish-hook', -ng balawo giguwa? 'by a big rat', X Sarangani 'Sar-

⁸ Charles F. Hockett, *Course in Modern Linguistics*, p. 201. The MacMillan Company, New York; 1958.

⁹ The terms orientor and axis were suggested by Benjamin Elson and Velma Pickett, *An Introduction to Morphology and Syntax*, p. 106. Summer Institute of Linguistics, Santa Ana, California; 1962. For the dual function of the orientor as an identifier and as a relater, note Wolfenden, *op. cit.*, p. 5. "Case-marking particles in Tagalog are impure markers. They show the construction they introduce to be substantival and related in case-like ways to other elements of the sentence."

¹⁰ X indicates the absence of any overt marker morpheme.

angani', su Sambiaiang naliu 'last Friday'. More will be said about the personal/nonpersonal distinction in connection with the phrases themselves.

There are two pronoun sets in Sangir which substitute in phrases: the *sie* and the *-e* sets. The third person singular form of each is utilized as a designation for that set as a whole. The inventory is shown in chart A.

Chart A

	<i>sie</i>	<i>-e</i>	<i>sie</i> and <i>-e</i>	
<u>Person</u>	<u>Singular</u>	<u>Singular</u>	<u>Dual</u>	<u>Plural</u>
1st	ia ?	-ku	kadini	kami
1st and 2nd			kadua	kite ?
2nd	kau	-u,-nu	dua	kamene
3rd	<i>sie</i>	<i>-e,-ne</i>	dīdua	sire

It will be seen that the dual plural forms of the two sets are identical. Singular forms of the *-e* set are enclitic. In this same set there are alternate forms for the second and third personal singular pronouns. These are phonologically defined as follows: *-u* and *-e* occur with consonant-final stems, and *-nu* and *-ne* occur with vowel-final stems. Koatengu (do *-u*,) 'is being done by you'; nipe pdatone (make-a speech *ne*), 'speech was made by him'.

The diagram of chart B is designed to summarize the phrase types and their emic subclassifications. Characteristic pronominal phrase constructions are included for convenient reference.

Chart B

SANGIR SUBSTANTIVE PHRASE TYPES

Phrase		Orientor	
Theme i sie	Personal		i
	Non-Personal		X
Comment si sie	Personal		si
	Non-Personal	Direct	X
		Indirect	su
Accessory	Subjective -ng sie	Personal	-ng, i
		Non-Personal	-ng, u
	Objective -ne	Personal	-ng, i
		Non-Personal	-ng, u

1. The orientors of the theme phrase are i marking personal, and X marking non-personal. When the axis of the theme phrase is a pronoun, it is from the sie set and its orientor is i. I Sake? (nakoa? sarang Gang). 'i Sake? (go to Glan)'. 'Sake? went to Glan.' I sie (nakoa? sarang Gang). 'i he (go to Glan)'. 'He went to Glan.' Taumata (nakoa? sarang Gang). 'person (go to Glan)'. 'The person went to Glan.'

The position of the theme phrase within the clause is not rigidly fixed, however the positions in which it most frequently occurs are (1) immediately preceding the verb phrase and (2) clause finally. I kami (ta makaiba? bale). 'i we (not find house)'. 'We were not able to find the house,' (Ta makaiba? bale) i kami. '(not find house) i we' 'We were not able to find the house.'

The theme phrase occurs as the topic of subjective and objective predications; that is, as the subject and object of clauses in which verbs are inflected to call special attention to

these grammatical categories. Subjective: baha (nīngiki asu). 'monkey (bite dog).' The monkey bit the dog.' Objective: baha (nikiking asu). 'monkey (bite dog).' 'The monkey was bitten by the dog.' In clauses not marked for voice and topic the theme phrase designates that entity about which a comment is predicated. In this usage, the theme phrase frequently follows the comment, although it may be preposed. (Dako'e) i kau. '(go) i you.' 'Go, you!' kaīng (matemang). 'food (delicious).' 'The food is delicious.'

1.1 Illustrations of the personal theme phrase in contexts with the subjective voice are as follows: (Bo'u ene) i Mīndihi (sau'e mīngala' ake?). '(after that) i mīndihi (again get water).' 'After that, Mendihi got water again.' I Opo'-lao Makatara (nīkoa' lapurang sarang Beo). 'i Councilor Makatara (make report to Beo).' 'The Councilor of Makatara made a report to Beo'. I kami (naoli' u i kami kai bo'u Kawio). 'i we (tel u i (we exclamation) from Kabio)'. 'We related that we were indeed from Kabio.'; with the objective voice: I Gaspari (katewe kai nionode ku' nipalidī). 'i Gaspar (actually (exclamation) drift (e) even lost).' 'Gaspar was actually carried away by the current and lost at sea.' I anu isi siba' si Montolalu (kinaiba' u manga gorela'e). 'i fellow call (si) Montolalu (find (u) (generalizer) guerrilla).' 'A fellow called Montolalu was found by guerrillas'. (Napilo' su tempong) i sire (potokang Kawe pia' aghide). '(arrive (su) time (ng)) i they (cut indeed have weapon).' 'When it came to the time of their beheading, they indeed had weapons.'; in a nontopic clause: (pia' pulunge darua; simbau?) i Sopia, (simbau?) i Teresia. '(have grandchild two; one) i Sopia, (one) i Teresia. 'There were two grandchildren; Sopia was one, Teresia was the other.' (Dinganku) i kaka'ku. (companion (ku)) i elder-brother(ku).' 'My elder brother was my companion.' I kamene tilung Hendrik dingangu i Hariri (tole si Tuang Sarapili?). 'i you three (ng) Hendrik and (i) Hariri (follow (si) Mr. Sarapili?). 'You, Hendrik, and Hariri follow Mr. Sarapile'.

1.2 Illustrations of the nonpersonal theme phrase in contexts with the subjective voice are as follows: Bahe? (sau?

nanambang kaiha'e). 'west-wind (again become forceful)'. 'The west-wind again became strong.' (intihang pia?) silihi (mimulusi i didua ene). 'Later have current sink (i) they-two those.' 'Later a current will sink those two.'; with the objective voice: Pilipinas (tawe ikasilo). 'Philippines (not see).' 'The Philippines could not be seen.' Taumata'e singkianu niasibang bo'u oto. 'person (suddenly exit from auto).' 'The people suddenly were put out of the auto.'; in a nontopic clause: (Nailo) kawaluso (seng marau). '(daybreak) Kabaluso (already far).' 'At daybreak, Kabaluso was already far away.' Laku? i sire (bo'u hote). 'dress i they (from abaca).' 'Their clothing was from abaca.'

2. The comment phrase is distinguished by an allomorph of the comment morpheme *s-* which occurs with the orientor. Personal comment phrases, therefore, are marked by the morpheme sequence *si*. Nonpersonal comment phrases are subdivided into indirect comment phrases, marked by the particle *su*, and direct comment phrases, marked by *X* (zero). Personal pronouns which substitute for both of the nonpersonal phrase types are from the *sie* set and always occur with the personal comment phrase orientor *si*¹¹. (I hapi'ku nakasilo) *si* Johanes. '((i) friend (ku) see) *si* Johanes.' 'My friend saw Johanes.' (I hapi'ku nakasilo) tau Amerika. '((i) friend (ku) see) person America.' 'My friend saw the American.' (I hapi'ku nakasilo) *si sie su* Ladiangasi'. '((i) friend (ku) see) *si him su* Dadiangas.' 'My friend saw him in Dadiangas.' (The pronoun, *si sie*, substitutes for both *si Johanes*, first example, and *tau Amerika*, second example.) It should be noted that when the axis of a comment phrase is the first personal pronoun *ia?*, the form becomes *sia?* and the occurrence of the orientor is regular. (I hapi'ku nakasilo) *si sia?* '((i) friend (ku) see) *si me*.' 'My friend saw me.'

The indirect and the direct comment phrases are emically distinct in that (1) they are marked by different orientors,

¹¹ Constructions similar to the personal and indirect comment phrases occur in a modifying relationship to head words. Since these constructions are considered part of the phrase level of the grammar, whereas the comment phrases are clause-level types, and since they manifest other distributional distinctions as well, they are considered to be separate emic constructions.

(2) when the two phrases co-occur in a single clause the direct always precedes the indirect, and (3) only the direct is limited to one occurrence per clause. (1,2) (Asu mī'tako) kina' su dapuhang. '(dog steal) fish **su** kitchen.' 'The dog is stealing fish in the kitchen.' (3) (I kami nī'kimbuni) su bulude su tempong Djapaing. '((i) we hide) **su** mountain **su** time **ng** Japan.' 'We hid ourselves in the mountains in the time of the Japanese.'

The direct comment phrase is relatively fixed as to its position within the clause. It regularly follows and is contiguous to the verb phrase, but infrequently it may occur clause initially. (Ia' makawaehi') arigang salana. (I pay-for) price **ng** trousers.' 'I am able to pay the price of the trousers.' Arigang salana (ia' makawaehi'). 'Price **ng** trousers (I pay-for).' 'I am able to pay the price of the trousers.'

The nonpersonal theme phrase, it will be remembered, also occurs with a zero morpheme orientor. The direct and the theme phrases may be distinguished, however, by their regular clause positions. When they co-occur and one phrase is in its less regular position, the direct is that phrase which immediately follows the verb or the theme is that phrase which immediately precedes the verb. (Uba' nīngiki) bawi. 'mon-key bite) pig.' 'The monkey bit the pig.' Bawi (uba' nīngiki). 'pig (monkey bite).' 'The monkey bit the pig.' (Nīngiki) bawi (uba'). '(bite) pig (monkey).' 'The monkey bit the pig.'

The clause positions of the personal and the indirect phrases are frequently the same as the direct phrase, but in addition, they more regularly occur elsewhere. The personal phrase, like the direct, is limited to one occurrence in a clause. (Bawinene nī' bī' bahi' u kalu) si sire su apeng (kanini). '(woman(ne) beat (u) stick) si them **su** beach (earlier).' 'Their sister beat them with a stick on the beach earlier.' With differences of emphasis and style only, the above clause may be rearranged as follows: (Bawinene nī' bī' bahi' u kalu) si sire (kanini) su apeng. (Bawinene nī' bī' bahi' u kalu kanini) si sire su apeng. Si sire su apeng (bawinene nī' bī' bahi' u kalu kanini).

The direct and the indirect comment phrases denote respectively the goal and the referent of an action; the personal comment phrase may indicate both. (Kawingku manulada?) mahuala, '(wife(ku) teach) young-woman.' 'My wife is teaching the young woman'. (Kawingku manulada?) si Nori?. '(wife(ku) teach) si Nori?.' 'My wife is teaching Nore'. (Pia? lango? dimoro?) si Bebi. '(have fly land) si Bebi.' 'There is a fly that landed on Bebi.' In nonverbal clauses the comment phrases designate that constituent or one of those constituents which predicate something about a theme. (Ia? pia?) tigali? si kau. '(I have) matter-of-business si you.' 'I have a matter of business for you.' (I sie) su baele. '((i) he) su field-his.' 'He is in his field.'

2.1 Illustrations of the personal comment phrase in contexts are the following: (Bo?u niningunung ake?) si Mindihi (ena pirua nipapoto?e i Tuang Datung Tabukang.) '(after drink water) si Mindihi (then poor-thing cut (i) Mr. Mayor Tabukang).' 'After drinking water of Mindihi, then, poor thing, the Mayor of Tabukang was beheaded.' (Ia? bo?u ningoka) si anu isi? siba? si Rumaloï. '(I after hit-with-first) si fellow call si Rumaloï. 'I already hit a fellow called Rumaloe'. (Indaung, ini) si dua. '(here, this) si you two.' 'Here, this is for you two.'

2.2 Illustrations of the indirect nonpersonal comment phrase in contexts are the following: (Kainge limbolongang nasi lau? u asing ku? ipalo? su mohong. 'food ball(ang) cooked-rice mixture (u) salt also throw su mouth.' 'Their food was rice balls mixed with salt, thrown into their mouths.' (Ia?) su taung ipa? u pulo (nakoa? sarang Manaro). 'I su year four u ten (go to Manaro)'. 'I, in the year forty, went to Manaro'. (I sire me?kaliomaning) su panunggung intana. '((i) they pray) su spiritng ground.' 'They pray to the spirit of the ground.' Su Sangihi? (pia? sinsule pesta). 'su Sangir (have one-time fiesta).' 'In Sangir there was once a fiesta.'

2.3 Illustrations of the direct nonpersonal comment phrase in contexts are the following: (Sarang sibangeng buhu?e nakasilo) Kiamba. '(to go-out (eng) new ?e see) Kiamba'.

'Toward sunrise, we could then see Kiamba.' (Boʻu nīnggeserīʻ) taumata (kai itiʻtaho su bukīʻ u harianga). '(after punish person ((exclamation) put-in (su) book (u) diary)'. 'After punishing a person, it is recorded in the diary.' (Lakuʻ i sire boʻu hote;) arenge baliʻ. '(dress (i) they from abaca); name (baliʻ)'. 'Their clothing was from abaca; its name was bali'.

3. The accessory phrase is characterized by an enclitic orientor **-ng**, which occurs with preceding vowel-final words, and by its allomorphs **i** and **u**, particles which occur following consonant-final words. Again, **i** is the personal phrase marker and **u** the nonpersonal; **-ng** is an allomorph of both¹². (Solo nihino) ng Pilita. '(lamp hit) **ng** Pilita'. 'The lamp was hit by Pelita'. (Solo nihino) ng batu. '(lamp hit) **ng** rock'. 'The lamp was hit by a ock'. (Solo niwaloʻ) i Pilita. '(lamp throw-at) **i** Pilita'. 'The lamp was thrown at by Pelita'. (Solo niwaloʻ) u batu. '(lamp throw-at) **u** rock'. 'The lamp was thrown at with a rock.'

In the introduction a dichotomy was mentioned that occurs in addition to the personal/nonpersonal classification of the accessory phrase. In this emic differentiation, the SUBJECTIVE and OBJECTIVE accessory phrases are marked as distinct by their occurrence with the predication types similarly designated. Pronouns substituting in the two phrases are also from different sets: **sie** set pronouns occur in the subjective accessory phrase and those from the **-e** set in the objective accessory phrase¹³. Bawine nīʻtahong **dario** su balong. 'woman put-in(**ng**) **child** (su) cradle.' 'The woman put the child in the cradle.' Bawine nīʻtahong **sie** su balong. 'woman put-in (**ng**) **him** (su) cradle.' 'The woman put him in the cradle.' Dario nitahong **bawine** su balong. 'child put-in(**ng**)

¹² Two enclitics which occur in Sangir are **-ko**, obligation, and **-ke**, intention. When one or both of these and an accessory phrase occur following a vowel-final verb stem, the enclitic orientor **-ng** occurs with the verb and with each of the other enclitics. (Simbalaʻ) ekeko. ('help') e. -ke , -ko. 'You must try to help.' (Simbalaʻ) engkengkong kamene. ('help-'e,) -ng, -ke, -ng, -ko, -nf (you)'. 'You all must try to help'. (The items not in parenthesis do not actually include the obligation and intention enclitics.)

¹³ As with the comment phrase, constructions similar to the accessory phrase occur as included or modifying phrases. Again on distributional grounds, these are analyzed as emically distinct.

woman (su) cradle.' 'The child was put into the cradle by the woman.' Dario nitahone su balong. 'child put-in/her (su) cradle.' 'The child was put into the cradle by her.

Similarly to the comment phrase, when the axis of an accessory phrase is the pronoun *ia*? the form becomes *sia*? and, in this case, the orientor does not occur. Infrequently the regular pronoun form is retained and the orientor is the non-personal *u*. The regular construction also occurs, but infrequently. (I anu mī'kakaloa) *sia*? (su hapi'e.). '((i) fellow joke) me ((su) friend(e)). 'The fellow is joking about me to his friend'. (I Tuang Sarapili? namaringang) *u ia*?. '((i) Mr. Sarapili? accompany (u) me'. 'Mr. Sarapile' accompanied me'. (I sie mapulu mī'bisara ng *ia*?. '((i) he desire converseng me'. 'He desires to converse with me'.

With respect to clause position, the personal accessory phrase occurs only immediately following the verb head. For this reason, the personal accessory phrase is seldom confused with the personal theme phrase, which it resembles. The personal theme phrase may occur in this position only when the verb would otherwise be clause-final and when the phrase occurs in its less regular position. (I Opo'lao timalintu?) *i kami*. '((i) Councilor take-pity) *i us*.' 'The Councilor took pity on us.' The position of the nonpersonal accessory phrase is most frequently identical to that of the personal accessory phrase. On the infrequent occasions when it occurs noncontiguous to the verb, its orientor is the allomorph *u*. (I kami nī'bike)ng habarī? mapia (si Lepi). '((i) we relate)ng news good ((si) Lepi)'. 'We related the good news to Lepi'. (I kami nī'bike si Lepi) *u habarī*? mapia. '((i) we relate (si) Lepi) *u news good*.' 'We related the good news to Lepi.'

The accessory phrase functions to designate that which in some manner is implicated in or accessory to an action; that is, the agent, instrument, or other entity secondarily involved in the action. The objective accessory phrase may indicate any of these and the subjective accessory phrase any except the agent. (Sope? samekang) *u pulisi*?. '(sailboat capture) *u police*.' 'The sailboat was captured by the police.'

(Kina? alakeng) u buwu. '(fish get u trap'. 'The fish was caught with a trap.' (Meda pilokang) u kaing. '(table put-on) u food.' 'The table is set with food.' Ia? ningala?) u buwu. '(I get) u fish-trap.' 'I caught (it) with a fish-trap.' (I sie nī-milo? u kaing su meda. '((i) he put-on) u food ((su) table).' 'He set the table with food.'

An important occurrence of the accessory phrase is with direct quotations. These are frequently marked and related to the introducing verb by the nonpersonal orientor while the entire quotation is itself the axis of the phrase. Further, the orientor may be repeated within an extended quotation, usually at the onset of a new breath group, to remind the listener that what is being spoken is a direct quotation. (I kami naoli?) u mapulu koe? itimbang... u nakoa? (kere...) '((i) we tell) u desire copra weigh... u do like...' 'We said, "(We) desire the copra to be weighed...Do it like this..."'

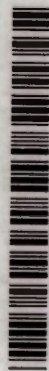
3.1 Illustrations of the personal subjective accessory phrase in contexts are the following: (I amange nīnahusu) ng Maka?ampo. '((i) father(e) chase)ng Maka?ampo'. 'His father chased Maka?ampo'. (Ia? mī?taku?)i mama?ku. '(I fear (i) mother(ku))'. 'I am afraid of my mother'. (Tuarinu mī?doa)ng kau. '(younger-brother(nu) pray)ng you.' 'Your brother is praying for you.'

3.2 Illustrations of the nonpersonal subjective accessory phrase in contexts are the following: (Tawe nahumpa?) u Pita (i kami tilu). '(not arrive) u Pita((i) we three).' 'We three did not arrive at Peta'. (Mapia i kadua mī?bera)ng bawera ini. '(good (i) we-two speak)ng word this'. 'It is good for us two to speak these words.' (I sire bo?u nī?si?suang) u ime. '((i) they after plant) u rice.' 'They are finished planting rice.'

3.3 Illustrations of the personal objective accessory phrase in contexts are the following: (Bo?u ene pinaboraāng) i Tuang Sarapili?. '(after that speak) i Mr. Sarapili?'. 'After that (they) were scolded by Mr. Sarapile?' (Ia? iliaha?) i papa?ku (su pangangagama). '(I lead) i fatherku (su) reli-

gion)'. 'I was led by my father in religion'. (Laku' ene bī-liang)ku. '(dress that buy-)I.' 'That dress was bought by me.'

3.4 Illustrations of the nonpersonal objective accessory phrase in contexts are the following: (Pelang nionodi?) u Bahe?. '(canoe drift) u west-wind'. 'The canoe was made to drift by the west-wind'. (intihang i didua tne ilurang) u sakaeng. '(later (i) they-two that (i) load) u boat.' 'Later those two will be loaded in a boat'. (Seng nirarihang) us manga Sinang Pita. '(already attack) u (generalizer Chinese(ng Pita'. '(He) was already being attacked by, for example, the Chinese of Pet'.



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