Journal Impact Factor (JIF)™ 2022: 0.2 | 5 Year: 0.2 | *Source: Journal Citation Report™ 2023 (Clarivate Analytics)*

RUPKATHA JOURNAL ON INTERDISCIPLINARY STUDIES IN HUMANITIES

ISSN 0975-2935 | Indexed in the Web of Science Core Collection™ Emerging Sources Citation Index (ESCI)

https://doi.org/10.21659/rupkatha.v15n3.05 | Volume 15, Number 3, 2023 | Dynamic Impact Dimensions

Research article

Phonological idiosyncrasies of the Southern Sorsogon dialect in Bulan, Philippines

Dominic Bryan S. San Jose[1], John Gerald A. Pilar[2]

[1,2]University of Negros Occidental-Recoletos, Philippines.

Abstract

This research sought to examine the Southern Sorsogon (Sso) dialect's distinctive phonetic features in Bulan, Philippines. In the urban and rural communities of Bulan in the province of Sorsogon, six native speakers were specifically selected based on the selection criteria. The qualitative text analysis approach used in this study was based on the transcripts of in-person interviews and other contacts between the researchers and native speakers. The Sso dialect's segmental sounds and phonological characteristics were examined to unravel its phonetic characteristics. The results showed that there were four vowels with unique vowel lengths [a], [i], [u], [ʊ], fourteen consonants [b], [p], [m], [d], [t], [s], [n], [r], [l], [g], [k], [ŋ], [ʔ], [h], and two semiconsonants [w], [y]. Sounds like voiced alveolar-fricative [z], labiodental [v], [f], interdental [ð], [θ], palatal-fricative [ʒ], [ʃ], post alveolar fricative consonant [sh], and palatal-affricate [ʤ], [tʃ] were non-existent in the Sso dialect. Other features detected were the gliding consonants, the widespread use of /r/ for further plurality, the suffix /-on/ for comparative, superlative, or exaggerations, and lexical variations for emphatic expressions and even angry registers. Although this study contributes to the documentation, preservation, and enrichment of the Sso dialect for its future in machine translation, further investigations are recommended to confirm the findings.

Keywords: Bikol, Bikolano, segmental sound, phonological idiosyncrasy, Southern Sorsogon dialect

SUSTAINABLE DEVELOPMENT GOALS Quality Education

1. Introduction

The unprecedented development in computational linguistics, machine translation (MT), computer-aided translation (CAT), and even the creation and expansion of online language databases (Oco et al., 2016; Heggarty et al., 2019; List et al., 2022) encourage researchers to explore and study the minor languages for documentation, compilation, preservation, and promotion purposes. Incremental linguistic-related studies fuel knowledge generation and gradually improve human quality of life.

Article History: Received: 15 June 2023. Revised: 04 August 2023. Accepted: 09 August 2023. Published: 20 August 2023.

Citation: Jose, Dominic Bryan S. San, John Gerald A. Pilar. 2023. Phonological idiosyncrasies of the Southern Sorsogon dialect in Bulan, Philippines. *Rupkatha Journal* 15:3. https://doi.org/10.21659/rupkatha.v15n3.05

The overwhelming richness of linguistic diversity in Asia, especially in Southeast Asian countries, remains severely underdocumented (Van Driem, 2006). As far as computational linguistics, machine translation, and databases are concerned, many languages still remain low-resource (Joshi et al., 2020). Reasons may include scattered data instead of scarcity and a lack of support from concerned institutions (Arora et al., 2022). In response, the research focus should shift from the macro-level to more detailed bottom-up investigations of language groups and their speakers (Klamer, 2019), including the variations of those languages.

The linguistic landscape of the Philippines is fertile ground for researchers to explore its languages, listed by Ethnologue at approximately 187. Interestingly, each of those distinct languages, used interchangeably with dialect (Mesthrie, 2009), presents us with several variations. This is true in the case of the Bikol language used in the Bicol region, which is considered one of the country's most linguistically diverse areas (Lobel & Tria, 2000).

The Bicol region, comprised of the four provinces on the mainland (Camarines Norte, Camarines Sur, Albay, Sorsogon) and two island provinces (Masbate and Catanduanes), is geographically situated at the southern end of Luzon, the Philippine archipelago's largest island. The spoken language in this region is commonly referred to as Bikol, but its varieties are divided into 11 varieties with sub-varieties (McFarland, 1974). In Sorsogon province, the locale of this study, the spoken Bikol has four varieties: Masbate-Sorsogon Bikol; Bikol Sorsogon; Waray Sorsogon; and Miraya Sorsogon (Dio & Jamora, 2014).

The researchers' attempt to study one of the varieties of Bikol Sorsogon marks another milestone in documenting, recognizing, and preserving this vanishing variety in the municipality of Bulan, Sorsogon. This variety of Bikol, which McFarland (1974) labeled as the Southern Sorsogon (Sso) dialect and exists to some degree in the adjacent municipalities of Matnog, Irosin, Bulusan, and Gubat, is gradually converging with the Sorsogon main variety due to increased mobility and interactions and high levels of borrowing (McFarland, 2004).

The Sso dialect has phonological idiosyncrasies that this study investigates. Since one of the researchers is a native of Camarines Norte, where Tagalog and Bikol Naga are spoken, and he lived in Legazpi City, Albay, for a good number of years, where he interacted with native speakers from Southern Sorsogon, this observation of the Sso dialect manifested the distinct intonation and accent. Advancing the research on and analysis of the phonological idiosyncrasies of the Sso dialect may contribute to a deeper understanding and appreciation of this variety of Bikol in the province of Sorsogon. Hence, this paper intends to analyze the phonological idiosyncrasies of the Sso dialect in Bulan, Sorsogon, Philippines.

2. Phonology of the Philippines' major languages

In his survey of nine Philippine languages, Llamzon (1969) identified similar phoneme inventories in Cebuano (Ce), Hiligaynon (Hi), Waray (Wa), and Bicol (Bi): 3 vowels /a, i, u/; 14 consonants /p, t, k, b, d, g, h, q, m, n, ng, s, l, r/; 2 semivowels /w, y/; a phoneme of length /:/; and at least one phoneme stress /ˈ/. Tagalog (T) has identical consonants and semivowels, but its vowels are /a, e, i, o, u/.

Ilocano (Il.) has four vowels /a, e, i, u/; 13 consonants /p, t, k, b, d, g, q, m, n, ng, s, l, r/; and two semivowels /w, y/. Kankanay (Ka.) has identical inventory phonemes, except that it has /h/ for Ilocano /s/. Ibanag (Ib.) has six (6) vowels: /a, e, i, o, u, ə/; 13 consonants /p, t. k, q, b, d, g, m, n, ng, s, l, r/; 2 semivowels /y, w/. Ifugao (If.) has five vowels /a, e, i, o, u/; 12 consonants /p, t, k, q, b, d, g, m, n, ng, h, l/; and two semivowels /y, w/.

In a phono-lexico-statistical analysis of 11 Bikol-Sorsogon varieties, Sso in Bulan is included in one of the four major groups formed based on identical phonological features and apparent cognate percentage (de la Torre & Gonong, 2020). In a recent study of East Miraya, a Bikol variety in Pilar, Sorsogon, the lexical categories like nouns, verbs, and adjectives introduced content words with these lexical markers: Nouns (naka-, pig-(h)an, -in-(h)an, uro-an, na- -an, mag-); Verbs (nag-, in-, ni-, tig-, -umin-, pig-, -in-an, tiga-, naga-, pina-, nagka-ra-, pigpara-, -on, maka-); Adverb (pa-) (Lorenzana, 2018).

Other than the studies of Lorenzana in 2018 and de la Torre and Gonong in 2020, available studies directly related to phonological studies of the Sso dialect are evidently scarce. Hence, this is an attempt to provide a comprehensive description of the Sso dialect since there is not one in the existing literature. It also attempts to narrow the gap in the literature that concentrates on studying the distinct features of the Sso dialect. A thorough examination of the Sso dialect's phonological peculiarities would support knowledge of and appreciation for Sso dialect phonemics, which serve as the foundation for other Bikol language variations' lexical categories. Furthermore, they would offer compelling proof of the existence of the Sso dialect in Bulan, Sorsogon, as a subgroup of the Bikol language.

3. Methodology

3.1. Research design

A qualitative text analysis method is used in this study. It systematically and rigorously identified patterns and themes within a set of data, reducing them while paying close attention to their source in order to derive insightful interpretations of the information (Hassan, 2022). As a replication of Pilar`s phonological idiosyncrasy of the Kawayan dialect of Southern Negros (Pilar, 2022), it adopted the utilization of a modified tagmemic approach (Kenneth, 1967); notations used for the underlying patterns; use of nucleus and margin slots for vowel and consonant, respectively; and an Excel Pivot Table to treat the raw data for accuracy and consistency (Pilar, 2022).

3.2. Participants

The study purposefully identified six informants to participate in the interview: three from the town proper or urban area and three from outside the town proper. The researchers adopted the following selection criteria: 1) The informant was a native and had lived more than 50 years in Bulan; 2) The informant was 60 years old or older; 3) The informant was a well-versed speaker in their native tongue; 4) The informant could tell folktales aside from their personal story.

3.3. Research Instrument

The researchers used a semi-structured interview (Moustakas, 1994; Creswell, 2009) to allow the participants to speak in their Sso dialect. The informants responded to the interview inquiries,

which were divided into two parts: personal stories and folktales. The informants were able to provide a total of 11,805 words that were subjected to analysis and investigation.

3.4. Data collection procedure

The researchers followed the following steps to collect the necessary data for the study: 1) consultation and brainstorming regarding the overall design and objective of the study; 2) collaboration with local researchers to identify the informants; 3) identification of the qualified informants; 4) meeting, orientation, and signing of the informed consent; 5) data collection via interviews in two sets, autobiographical and folklores; 6) transcription of the recorded interviews; 7) revisiting the informants for validation and confirmation of their stories; 8) cross-examination and validation with the two selected inter-coders and an intra-coder; and 9) analysis and presentation of the result.

3.5. Data analysis

The interviews with the informants produced 11,805 words, which served as the raw data. As a foundation for phonological analysis of the Sso dialect, the researchers used frameworks from past studies of Bikol description (McFarland, 1974; Mattes, 2014) and lexical categories (de la Torre & Gonong, 2020; Lorenzana, 2018). The phono-lexico-statistics method developed by Blair (Blair, 1990; Mann, 2005) was specifically used in this study, including Pilar's revisions (2022), which included the 148-word list made up of the following words: 1) utterances that at least two out of the six informants used; 2) using the syntactic rules and fundamental grammatical categories, the inter-coders and intra-coder had selected and further validated the word list for the validity of the data for interpretation by taking consensus among themselves on the identification of the content words, whether they were nouns, verbs, adjectives, or adverbs; 3) for the purpose of tracking the informants' utterances, the phonemic inventory and features category matrix was repeatedly played from the digital recorder with the designated "time-stamp"; 4) the inter-coders received digital copies in which the sentence structures or words were noted to match the descriptions of the dialect's nouns, adjectives, adverbs, and verbs; the conversation contained passages to agree on categorizing the content words; 5) the other experts provided further validation for the study's accuracy and precision, for instance segmental sounds, in interpreting and examining the lexicon's finalized word list.

The word level served as the unit of analysis for the phonological feature analysis (Selkirk, 1981; Gussmann, 2002). The informants' recordings and transcriptions were converted into words at the word level, which were then processed on a computer to create a word concordance. The subsequent protocol for analysis: 1) transcription of the interview; 2) exclusion of the interview words remaining in the raw data; 3) database storage of the raw data is maintained for future use; 4) using sifting and scrutiny to produce the final set of word lists for analysis, the raw data transmit agreement between inter-coders and intra-coder; and 5) the word list was resubmitted for final approval and decided upon through rigorous negotiations so that the word list would be legitimate, trustworthy, and prepared for interpretation.

3.6. Data trustworthiness

The researchers used the methods suggested by Lincoln and Guba (1985) and supported by Creswell (2013) and Merriam and Tisdell (2016) to establish the trustworthiness of this study. The

researchers observed credibility, transferability, dependability, and confirmability. Data collection was conducted over a significant period of time, and strict data analysis and validation were observed. The approach and process were explicitly stated and described. The information supplied by the informants served as the foundation for all assertions.

3.7. Ethical consideration

Since this study adhered to ethical research methodology and relied on informants' informed permission while taking into account their age and health, their free will and the confidentiality of their identities were given priority. Each informant and a family member who is familiar with the recording devices were explained. The informant's possible withdrawal from the discussion was explained. The family members of each informant provided assistance. After the interview, the informants received a token of appreciation. Any remaining mistakes in the final product are fully recognized and the authors alone are accountable for them.

4. Results

The pronunciation of words in the dialect is the main focus of the phonetic characteristics description. Additionally, the study has accounted for a primary number of sounds. They are the minimally complex group of sounds that must represent the orthography in order to read and comprehend the language while speaking and listening with comprehension. This study specifically looks at phonemes and stress. A phoneme is a unit of sound that is unique to a specific language, whereas stress is the emphasis placed on a single syllable within a word.

4.1. Phonological features of Sso dialect

The samples in Table 1 from the word list are commonly spoken in Bulan but rarely or never spoken in other Bikol dialects in the Bicol region.

Samples from Word List	Syllabication	Accent	Variant	Gloss
maaringasa	ma.a.ri.nga.sa	ma.a.ri.NGA.sa		humid
mapuyo	ma.pu.yo	ma.PU.yo	wara ribok	quiet
saragday	sa.rag.day	sa.rag.DAY	saraday, saradit	small ones
mahisdal	ma.his.dal	ma.his.DAL	maringsal	restless, mischievous
hubog	hu.bog	hu.BOG	hultok	drunk
mapiniton	ma.pi.ni.ton	ma.pi.NI.ton	malipot	very cold
maramokon	ma.ra.mo.kon	ma.ra.MO.kon	masamokon	very messy
awaton	a.wa.ton	a.WA.ton		very slow
hararagyo	ha.ra.rag.yo	ha.ra.rag.YO	harayo	far from others (plural)
magkaramanghod	mag.ka.ra.mang.hod	mag.ka.ra.MANG.hod	magturugang	siblings
daranondanon	da.ra.non.da.non	da.ra.non.DA.non	tarabang	helping each other

pamunay-munay	pa.mu.nay.mu.nay	pa.mu.nay.MU.nay	pahingalo	resting
kahiran	ka.hi.ran	ka.HI.ran	kaiwal	enemy
kaupod	ka.u.pod	ka.U.pod		companion, company
gingot	ging.ot	GING.ot		grass
mayad	ma.yad	ma.YAD	tadong, dianison	very well
magliwan	mag.li.wan	mag.li.WAN	magbulos	to change clothes
magrelanse	mag.re.lan.se	mag.re.LAN.se	mamakal	to shop (in a market)
inhihimo	in.hi.hi.mo	in.hi.HI.mo	tiggigibo	something being done
naguuyag	nag.u.u.yag	nag.u.u.YAG		playing
baratog	ba.ra.tog	ba.RA.tog		to start (with others)
inngangarat	in.nga.nga.rat	in.nga.nga.RAT		anxious, worried
kawat	ka.wat	KA.wat		to steal

Table 1. Phonological features of Southern Sorsogon dialect in Bulan
Table format from Pilar (2023)

The words included in Table 1 present some examples for intensive analysis and interpretation. The word *sa.rag.DAY* for instance has variants that are used interchangeably in Bulan. While the variant *saraDIT* may also be spoken in the areas north of Bulan and descended from Legazpi-Bikol or standard Bikol, the variant *sa.ra.DAY* may be influenced by the speakers from the south like Masbate. Available variants are possibly used in the northern or southern dialects.

The stress is usually found in the last or penultimate syllable as in *ma.a.ri.NGA.sa, ma.PU.yo, ma.his.DAL, ma.pi.NI.ton, ma.ra.MO.kon, a.WA.ton, ha.ra.rag.YO, mag.ka.ra.MANG.hod, da.ra.non.DA.non, ka.HI.ran, ka.U.pod, GING.ot, ma.YAD, mag.LI.wan, mag.re.LAN.si, in.hi.HI.mo, nag.U.u.yag, ba.RA.tog, in.nga.nga.RAT*, *KA.wat*.

The closer analysis reveals that some of the words with stress at the last syllables are adjectives like *sa.rag.DAY*, *ma.his.DAL, hu.BOG, ha.ra.rag.YO, ma.YAD, in.nga.nga.RAT.* However, when a suffix is appended, the stress is typically put at the penultimate syllable as in *ma.pi.NI.ton, ma.ra.MO.kon.* The rest of the words with stress at the penultimate syllables are nouns, verbs, and other adjectives.

Unlike English, Sso dialect is quite versatile. For example, although it is not always the case, adjectives can be transformed into verbs by adding different affixes and by changing the stress, or nouns by retaining the stem or root.

To make them verbs: 1) change the stress from the penultimate or last syllable to the first syllable: from *ma.a.ri.NGA.sa* (humid) to *MA.a.ri.nga.sa* (it will get humid); from *ma.PU.yo* (quiet) to *MA.pu.yo* (to be quiet)*;* from *ma.his.DAL* (restless) to *MA.his.dal* (to be restless or to move a lot here and there); from *ma.pi.NIT* (cold) to *MA.pi.nit* (to become cold); from *ma.ra.MOK* (messy) to *MA.ra.mok* (to be messy); 2) add different affixes: from *ma.a.ri.NGA.sa* (humid) to *mi.NA.a.ri.nga.sa*

(it gets humid); from *ma.pi.NIT* (cold) to *nag.PI.pi.nit* (it`s getting cold); from *ma.PU.yo* (quiet) to *MAG.pu.yo* (imperative: to be quiet).

To make them nouns, just retain the stem: from *ma.a.ri.NGA.sa* (humid) to *a.ri.NGA.sa* (humidity); from *ma.pi.NIT* (cold) to *pi.NIT*; from *ma.ra.MOK* (messy) to *ra.MOK* (mess).

A suffix *on* is added to express either comparative or superlative and emphatic exaggeration as in *ma.ra.MO.kon* (very messy), *hu.BO.gon* (very drunk), *ma.his.DA.lon* (hyper-active), *ma.pi.NI.ton* (very cold), *a.WA.ton* (very slow)*, ma.YAD.on* (very good).

The verbs are typically formed from the stems, which in turn serve as nouns as in *re.LAN.si* (market)*, HI.mo (something to do), u.YAG* (game or play). In some cases, stems are verbs that can be transformed into nouns as in *u.POD* (to accompany)*, HI.ran* (to fight)*, KA.wat* (to steal)*.*

Suffixes are appended depending on the sentence's tense, mood, and voice. To express the present tense, *nag* is used, and reduplication of the first syllable of the stem: *nag.re.re.LAN.se, nag.hi.HI.mo, nag.U.u.yag.* To express the past tense, *nag* is used without reduplicating the first syllable of the stem: *nag.re.LAN.se, nag.HI.mo, nag.u.YAG*. The future tense is expressed by using *ma*: *ma.u.POD, ma.HI.mo, ma.u.YAG*.

The mood, especially the imperative mood is expressed by using *mag*: *mag.re.LAN.se, mag.HI.mo, mag.u.YAG, mag.u.POD.* The passive voice present tense is expressed by using *in* or *gin* and reduplication of the first syllable of the stem as in *in.hi.HI.mo* (something being done), *in.U.u.yag* (a game being played), *in.HA.ha.pot* (being asked), *in.ha.HA.tag* (being given). The passive voice past tense is expressed usually by adding the first letter of the stem and *in*: *hi.na.POT*, *hi.NI.mo*, *hi.NA.tag*; and *in* for stem that starts with a vowel: *i.nu.POD*, *i.nu.YAG*.

The alveolar-flap /r/ with any of the vowels /a, e, i, o, u/ are typically added to denote plurality or further plurality, specifically three or more, applied to nouns: *mag.ka.ra.MANG.hod* (3 or more siblings) from *mag.ka.mang.HOD* (2 siblings); *ka.u.RU.pod* (3 or more companions) from *ka.u.POD* (a companion); applied to verbs: *da.RA.non* (3 or more people helping each other) from *DA.non* (2 people helping each other); *ma.ba.RA.tog* (2 or more will start doing something) from *ma.BA.tog* (1 or 2 will start doing something); applied to adjectives: *ma.ra.RA.mok* (2 or more messy people or animals) from *ma.ra.MOK* (a messy person or animal); *sa.rag.DAY* (small ones) from *sag.DAY* (small one).

Moreover, the alveolar-flap /r/ is typically used to replace the alveolar-liquid /l/ typical of the standard Bikol. Some examples are the following: *si.RA* (sila/they), *ni.RA* (nila/them), *ma.a.RA.man* (malaman/to know), *PA.ray* (palay/rice grain with husk), *wa.RA* (wala/none, nothing), *pas.YA.ran* (pasyalan/sightseeing), *mag.ka.RI.go* (to take a bath).

Scanty evidence of gliding consonants was present in the corpus analyzed. They are nasal alveolar /n/ and the high unrounded /y/ as in *nyan* from *NI.yan* (now, today, presently); the bilabial /p/ and /y/ in *LIM.pya* (to clean); and the plosive voiced alveolar /d/ and /y/ in *ka.DYUT* from *ka.Di.yut* (small one).

Generally, in terms of accent, when the native speakers from Bulan speak with the accent at the last syllable, they sound a bit loud or angry and might be misinterpreted by the non-speakers of Sso dialect. This might be the reason why some students in Legazpi City (meeting point for people

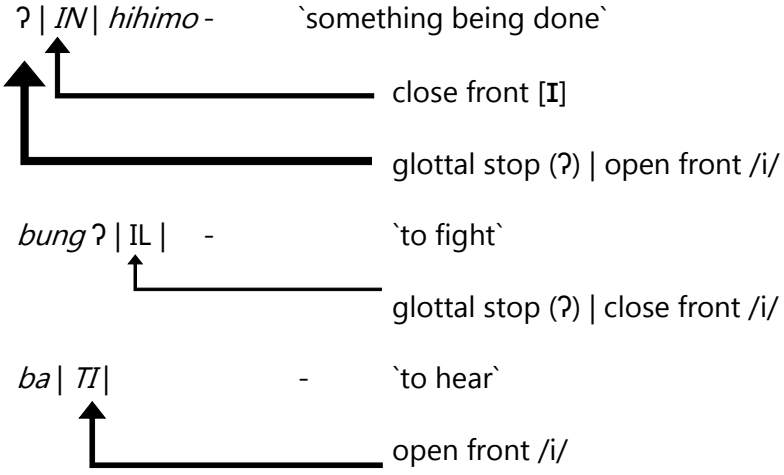
from different parts of the Bicol region), whose mother tongue is Sso dialect, sound louder and more assertive compared to other Bikolano speakers.

4.2. Segmental sounds of the Sso dialect

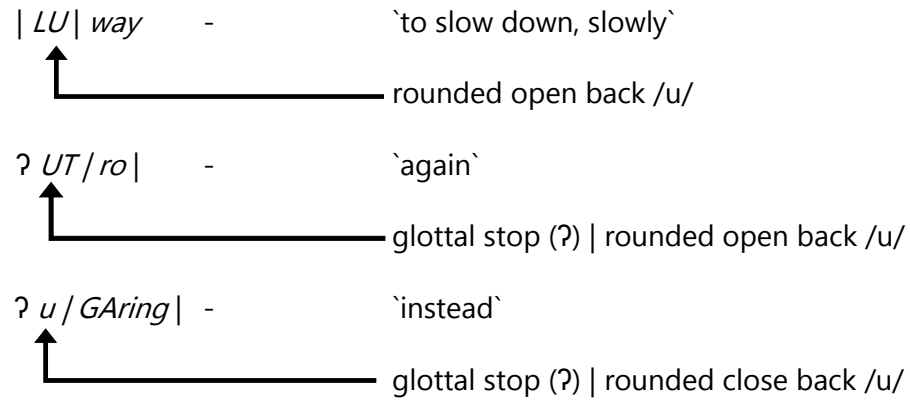
Focus is placed on segmental sounds, vowels, and consonants in order to determine the nucleus slots for vowels and the margin slots for consonants. This study goes into further detail on accents, which are based on one sound overlaid on another. When the accent is placed with open syllables, it combines stress and length, whereas it merely combines stress elsewhere.

There are four (4) vowels with unique vowel lengths, /a, i, u, ʊ/, fourteen (14) consonants with the following pronunciations: /p, t, k, q, b, d, g, m, n, ng, s, l, r, h/, and two semiconsonants /w, y/. This is due to the wide range of phonemic and allophonic variances. The segmental sounds of the Sso dialect are shown in the samples below.

Vowel [i]: unrounded high front vowel with a tense variant in open syllables /i/ or when preceded with a glottal stop (ʔ), and a lax variant in closed syllables /**ɪ**/. Below are some examples.



Vowel [u]: rounded high back vowel with tense variants in both open and closed syllables depending on the point of articulation and emphasis. Below are some examples.



Vowel /ʊ/: rounded high back vowel with lax variants from **/ʊ/** to /ɔ/ in both open and closed syllables depending on the point of articulation and emphasis. And because of those variations, /ɔ/ becomes the allophone of **/ʊ/** or vice versa. Many Sso dialect words uttered by the informants (native speakers) can be pronounced with either the**/ʊ/** or /ɔ/ sound but the meaning remains the same. Below are some examples.

ʔ *a* | *LOG* | - `to fetch water`
rounded close back /ʊ/

pan ʔ | *O* | - `how, why`
rounded open back /ʊ/

may ʔ | *ON* | - `there is `
rounded close back /ɔ/

magkad | *TO* | - `to go (there/over there)`
rounded open back /ɔ/

Vowel /a/: unrounded central vowel sound in open and closed syllables. There are tokens with semi-open or semi-closed syllable due to the glottal stop. There are rare tokens that end in an open syllable /a/. Below are the examples.

taLI | *nga* | - `ear`
open syllable /a/

ka | *Apin* | - `ally, friend`
closed syllable /a/

tu | *NGA* | ʔ - `half`
semi-closed or semi-open syllable /a/

u | *NGA* | ʔ - `a (baby) new born`s cry)
semi-closed or semi-open syllable /a/

Velar stops [g]: the soft palate and back of the tongue are raised at the time of articulation of this vocal sound, holding the airway and the vocal cords firmly enough to avoid vibration. It generates by guiding the airstream along the tongue's middle.

Examples: /g/ - *gin.ha.ha.DOK* `being scared`
/g/ - g*u.ru.RANG* `old people`

Velar stops [k]: This voiceless sound is produced without the vocal cords vibrating and is articulated by pushing the air out of the mouth with the back of the tongue at the soft palate.

Examples:	/k/ - *KANG.got*	`to extract coconut wine`
	/k/ - *pa.ra.ka.WAT*	`thief`

Bilabial stops [p] and [b]: [p] except when it serves as the starting margin of a stressed syllable, it is voiceless and unaspirated; [b] voiced and unaspirated.

Examples	/p/ - *IN.pa.ngi.so.gan*	`told off`
	/p/ - *pa.yag-PA.yag*	`shanty`
	/b/ - *ba.GUL*	`coconut shell`
	/b/ - *ma.bu.GA.son*	`very happy`

Dental stops [t] and [d]: the point of articulation, where the tongue blocks the airflow at the rear of the upper front teeth: [t] voiceless, occasionally be heard as the initial sound of a stressed syllable, in which case it is often unaspirated or just slightly aspirated; [d] generated voiced sound at the instant of articulation by blocking the airflow between the tongue and the ridge of upper teeth and the vocal cords` vibration.

Examples	/t/ - *TA.wo*	`human`
	/t/ - *a.TA.bon*	`very early`
	/d/ - *di.a.NI.son*	`good (condition)`
	/d/ - *dug.HAN*	`chest`

Bilabial nasal [m]: articulation occurs when the airflow in the vocal tract is restricted and directed into the nose. Along with articulating both lips, it also causes the vocal cords to vibrate.

Examples	/m/ - *ma.ka.ngi.NGI.rit*	`funny`
	/m/ - *LIM.pya*	`to clean`

Alveolar nasal [n]: The point of articulation while restricting the vocal tract's airflow and allows air to escape through the nose. During articulation, the vocal cords vibrate in addition to the tongue's blade or tip rubbing on the alveolar ridge.

Examples	/n/ - *nag.su.sug.NA*	`cooking rice`
	/n/ - *na.LI.li.bo.ngan*	`confused`

Voiceless alveolar fricative [s]: a hissing sound is produced while articulating this fricative consonant by brushing the tongue's blade or tip on the alveolar ridge behind the teeth.

Examples	/s/ - *SI.yak*	`to shout`
	/s/ - *ka.u.ro.GOS*	`people close to you or friends`

Voiceless glottal fricative [h]: the wordless sound that causes the throat or mouth to push air through.

Examples	/h/ - *HAN.tak*	`string beans`
	/h/ - *ka.HI.ran*	`enemy`

Voiced dental-alveolar [l]: sound created by contracting the vocal tract at the point of articulation and lifting the tongue slightly toward the centre of the blade at the ridge of the alveolar behind the upper teeth. The articulation also causes the voice chords to vibrate.

Examples	/l/ - *lo.HO*	`hole`
	/l/ - *nag.A.a.ra.log*	`fetching water` (plural)

Alveolar-liquid [r]: produced by moving the tip of the tongue upwards and backwards and touching the top of the mouth. The tongue curls slightly while breathing out and letting the air escape the mouth causing the vocal cords to vibrate.

Examples	/r/ - *a.rik.DIK*	`dandruff`
	/r/ - *si.RA*	`they`

Voiced palatal semiconsonant [y]: generated by bringing the tongue up to the roof of the mouth until its sides contact the upper teeth. The voice cords vibrate when the tongue, which must be tight, glides downward and lowers the jaw while expelling air.

Examples /y/ - YA.di `this`
/y/ - *yad.TO* `that`

Voiced bilabial semiconsonant [w]: produced by drawing the tongue back without contacting any other parts of the mouth and drawing the lips into a tight circle. The vocal cords vibrate as the lips are opened fast, the tongue is advanced, and the air is forced out of the mouth.

Examples /w/ - *ha.la.WIG* `long
/w/ - *HI.wa* `mouth`

Voiced velar nasal [ŋ]: articulated by contacting the soft palate with the back of the tongue, allowing air to exit the nose and causing the vocal cords to vibrate.

Examples /ŋ/ - *na.ngi.NGI.sog* `gets angry`
/ŋ/ - *man.la.ing.LA.ing* `various kinds`

Voiceless glottal stop [ʔ]: velar nasal consonant produced by toching the soft palate with teh back of the tongue letting the air flow out of the nose and causing the vocal cords to vibrate.

Examples /ʔ/ - *GING.ʔot* `grass`
/ʔ/ - *na.SIN.ʔo* `enchanted`

In presenting, vowels occupy the syllabic nucleus slots while consonants occupy the syllabic margin spaces. The explanation is strengthened by the following images.

Examples: 1. *IN.pug.ku.tan* `was lighted`

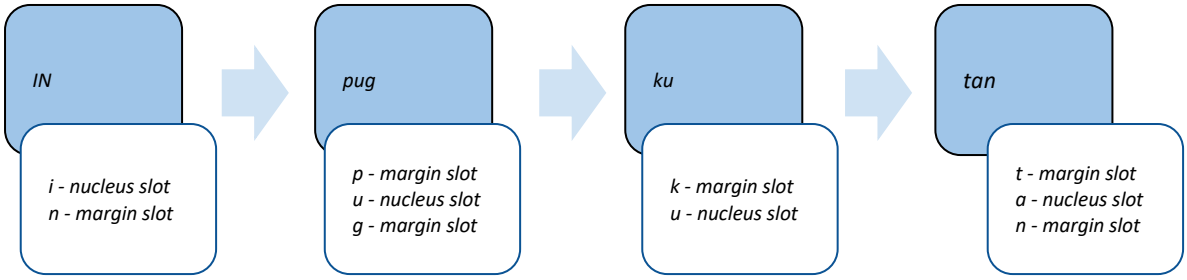


Figure 1. (Pilar, 2023)

2. *hu.mi.NGA.yad* `to behave well, to be good`

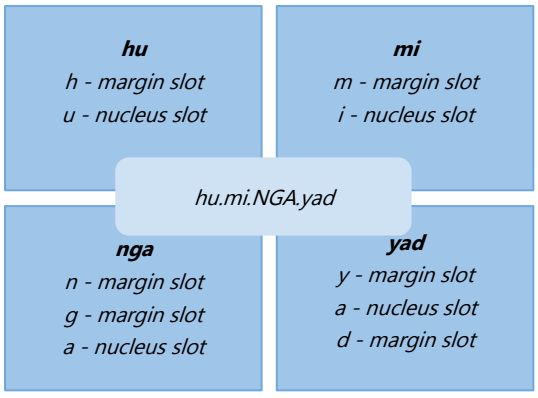


Figure 2. (Pilar, 2023)

Table 2. Consonant chart sounds of Sso dialect

	Bilabial		**Labiodental**		**Interdental**		**Alveolar**		**Palatal**		**Velar**		**Glottal**	
	v	vls	v	vls	v	vls	v	vls	v	vls	v	vls	v	vls
Stop/Plosive	b	p					d	t			g	k		ʔ
Fricative								s						h
Affricate														
Nasal	m						n				ŋ			
Flap							r							
Liquid							l							
Glide	w								y					

Note: v - voiced sounds, vls - voiceless sounds (Pilar, 2023)

The Sso dialect's phonetic characteristics are shown in Table 2's consonant chart, which has 14 consonants, including [b], [p], [m], [d], [t], [s], [n], [r], [l], [g], [k], [ŋ], [ʔ], [h] and two (2) semiconsonants, [w], [y]. Because native speakers' tongues have been used to the typical sounds used in local speech, some consonants may not be present in their speech.

Notably absent were voiced alveolar-fricative [z], labiodental [v], [f], interdental [ð], [θ], palatal-fricative [ʒ], [ʃ], post alveolar fricative consonant [sh], and palatal-affricate [ʤ], [tʃ]. The researcher notices that the absence of consonants results in less impact from surrounding regions. A closer look reveals that the absence of the aforementioned consonants is alien in origin. The native speakers' tongues may sound these consonants as [b] for [v]; [p] for [f]; [s] for [z], and there is no analogous sound for interdental, palatal-fricative, or palatal-affricate. Even in mainstream or standard Bikol, the language is restricted to borrowed terms, particularly when it comes to palatal-fricative [ʃ], labiodental [v], and palatal-affricate [tʃ] like *familia* (pamilya), *dificil* (difficult), *convento* (convent), *cheque* (tseke) (Mintz, 1971). Native speakers are therefore used to what they hear and learn from their parents in everyday speech. It is impossible to thoroughly investigate the other sound variations and similar sounds of the loan words due to the lack of sufficient data and the dynamic feature of a language that brings further linguistic variation and diversity in many ways (Guy & Hinskens, 2016). To evaluate the findings of this study, more research including more informants and tokens of each target sound may be conducted.

Table 3. Vowel plotting sounds of Sso dialect

	Front		**Central**		**Back**	
	tense	lax	tense	lax	tense	lax
Close	i	ɪ			u	ʊ/ɔ
Open				a		

The four vowel sounds used in the Sso dialect are presented in Table 3. They are [i], [a], [u], and [ʊ]. Although the [i], with [ɪ] lax variant, usually occurs in closed syllables especially when it is preceded by a glottal stop (ʔ), it can also be articulated in an open syllable, particularly if it bears the stressed syllable in a token. The researcher observed that the informant distinguished the sounds of [u] from [ʊ] when words were uttered several times to correct their pronunciation. The researcher found it difficult to differentiate the sounds of [ʊ] and [ɔ] since they sound the same and produce the same meaning when a token was pronounced with either of them. Hence, [ɔ] is treated in this paper as the allophone of **/ʊ/** or vice versa. Further investigation is therefore needed to establish a clear distinction between [ʊ] and [ɔ].

In general, the frequency of these vowel sounds [a], [i], [u], and [ʊ] may vary depending on the native speakers' points of articulation, which may sound the same upon first listening to the digital recording of the native speakers' (informants') utterances. However, a deeper look reveals that occasionally these four vowel sounds might vary throughout the course of a dialogue. Nevertheless, further study into these sounds may be done in the future by specialists in the subject.

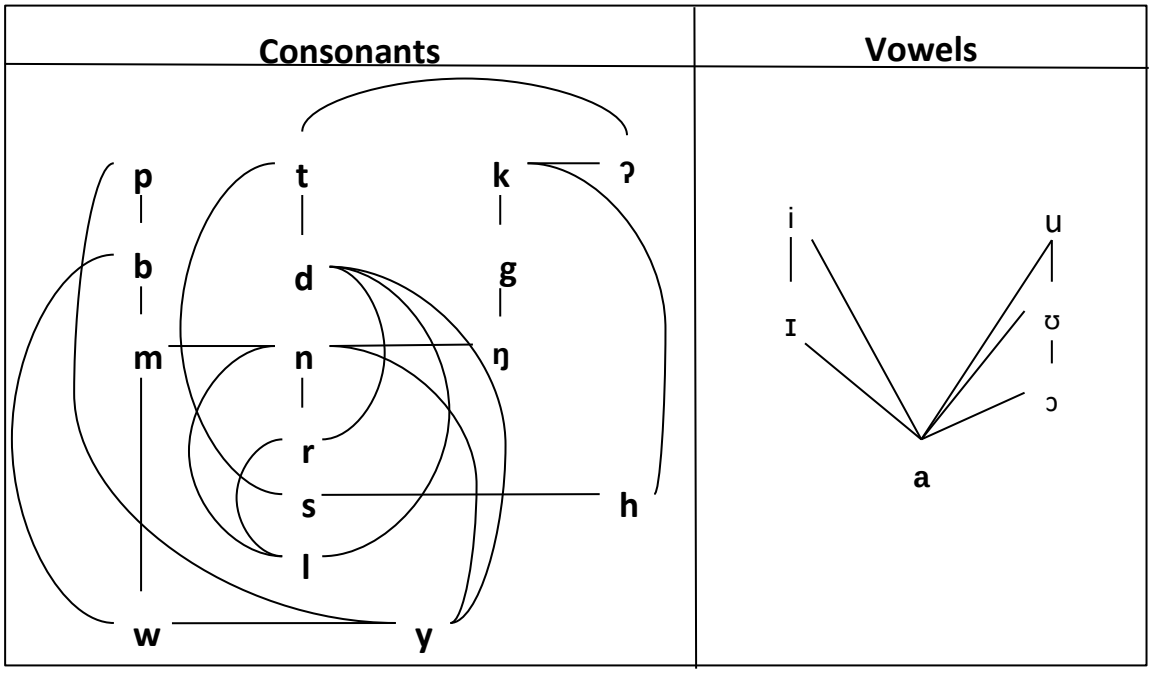


Figure 3. Articulation of the Sso consonants and vowels. Modified from Pilar (2023).

The Sso consonants and vowels are illustrated in the figure 3 above. The vowels and consonants are phonetically linked and gliding with other consonants. It is clear that native speakers of the Sso dialect pronounce words with two consonant letters that glide over one another, such as *nyan* (now, today, currently), *LIM.pya* (to clean), and *ka.DYUT* (lesser in amount). The researcher does not assume that there is a missing vowel between the two gliding consonant letters since this occurrence creates the distinct sound of each consonant. In Kawayan dialect in Southern Negros, Philippines, the occurrences of /w/ and /y/ glides are evident among the native speakers (Pilar, 2022) the same is true in the Sso dialect but typically glides with /y/. The manifestations are minimal and further investigations are required to provide more tokens as evidence of the gliding consonants.

In vowel sounds, native speakers vary between /ʊ/ and /ɔ/ when pronouncing vowels, although occasionally certain informants may pronouce /u/ instead. However, /ʊ/ and /ɔ/ are lexically similar in writing by using [o]. This distinction of /u/ and /ʊ/ as two different vowel sounds warrant further analysis to be considered final. Burquest (2006) asserts that allophones are more complex than evenly defined segments based on phonemic analysis because linguistic processes can occasionally be involved in language change. Thus, a thorough examination of the segmentability of speech must be done to establish the linguistic features that genuinely reflect the dialect under study (Gussmann, 2002).

5. Conclusion

The phonological traits of the Sso dialect were demonstrated in this study. The second to last syllable is identified as the location of the stress. With many words with an accent at the last syllable, the native speakers in Bulan sound a bit loud or angry and might be misinterpreted by the non-speakers of the Sso dialect. Mixed with other speakers of the Bikol variety, the native speakers from Bulan sound louder and more assertive compared to others. Moreover, the lexical meaning changes easily by changing the placement of the accent and by adding different suffixes.

Based on the native speakers' utterances, there were four vowels, 14 consonants, and two semiconsonants. Other features detected were the gliding consonants, the widespread use of /r/ for further plurality, the suffix /-on/ for exaggerations, and lexical variations for emphatic expressions and even angry registers. The list of vocabulary in the dialect, therefore, displays the distinctiveness and variety of certain terms in the dialect. However, non-existent were voiced alveolar-fricative [z], labiodental [v], [f], interdental [ð], [θ], palatal-fricative [ʒ], [ʃ], post alveolar fricative consonant [sh], and palatal-affricate [ʤ], [tʃ].

Native speakers fossilized their languages based on what they heard and learned from their parents and the group to which they belonged, making the absent sounds seem strange by nature. But unless further investigation and observation are done on the phonetic and lexical forms of analysis utilizing other contemporary and hybrid methodologies, it remains inconclusive. Hence, further investigation is recommended to confirm the findings.

The Sso dialect's linguistic coherence and connections to other Bikol dialects were supported by this study. Nonetheless, since the phonological features of the Sso dialect focused on sound, lexicons, and their meanings, this study is a milestone toward a lexicostatistical database of the said dialect, a collection of vocabularies. It could also serve as one of the references in the ongoing implementation of the Department of Education's mother-tongue-based education in the first three years of basic education in the country. Lastly, it contributes to the literature concerned with documenting, preserving, and enriching the Sso dialect and its potential to be included in the languages available for machine translation.

Declaration of Conflicts of Interests

The authors declared no potential conflicts of interest.

References

Arora, A., Farris, A., Basu, S., & Kolichala, S. (2022). Computational historical linguistics and language diversity in South Asia. https://doi.org/10.48550/arXiv.2203.12524

Blair, F. (1990). *Survey on a shoestring*. Summer Institute of Linguistics and The University of Texas at Arlington.

Burquest, D. A. (2006). *Phonological analysis: A functional approach*. SIL International.

Christiansen, M. H., & Chater, N. (2016). *Creating language: Integrating evolution, acquisition, and processing*. MIT Press.

Creswell, J. (2009). Research design: Qualitative, quantitative, and mixed method approaches (3rd ed.). Sage Publications, Inc.

Creswell, J. (2013). *Qualitative inquiry and research design: Choosing among five approaches* (3rd ed.). Sage Publications, Inc.

de la Torre, R. G., & Gonong, G. O. (2020). A phono-lexicostatistical analysis of Bikol-Sorsogon varieties. *The Normal Lights*, *14*(2). https://po.pnuresearchportal.org/ejournal/index.php/normallights/article/view/1655/468

Dio, R., & Jamora, M.J.A. (2014). Variations of Sorsogon dialects as mother tongue-based medium of instruction in grade school Mathematics. *Asia Pacific Journal of Education, Arts and Sciences*, *1*(4), 119-116.

Gussmann, E. (2002). *Phonology: Analysis and theory*. Cambridge University Press.

Guy, G.R., & Hinskens, F. (2016). Linguistic coherence: Systems, repertoires and speech communities. *Lingua*, *172*(173), 1-9.

Hoff, E. (2006). How social contexts support and shape language development. *Developmental Review*, *26*(1), 55-88. https://doi.org/10.1016/j.dr.2005.11.002

Hassan, M. (2022). *Textual Analysis – Types, Examples and Guide*. https://researchmethod.net/textual-analysis-research-method/

Heggarty, P., Shimelman, A., Abete, G., Anderson, C., Sadowsky, S., Paschen, L., Maguire, W., Jocz, L., Aninao, M. J., Wägerle, L., Dërmaku-Appelganz, D., do Couto e Silva, A. P., Lawyer, L. C., Suelly Arruda Câmara Cabral, A., Walworth, M., Michalsky, J., Koile, E., Runge, J., & Bibiko, H-J. (2019). Sound comparisons: A new resource for exploring phonetic diversity across language families of the world. In S. Calhoun, P. Escudero, M. Tabain, & P. Warren (Eds.), *Proceedings of the 19th International Congress of Phonetic Sciences, Melbourne, Australia 2019* (pp. 280-284). Australasian Speech Science and Technology Association Inc.. https://assta.org/proceedings/ICPhS2019/papers/ICPhS_329.pdf

Klamer, M. (2019). The dispersal of Austronesian languages in Island South East Asia: Current findings and debates. *Language and Linguistics Compass*, *13*(4), e12325. https://doi.org/10.1111/lnc3.12325

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. SAGE Publications, Inc.

List, J.M., Forkel, R., Greenhill, S.J., Rzymski, C., Englisch, J., & Gray, R.D. (2022). Lexibank, A public repository of standardized wordlists with computed phonological and lexical features. *Scientific Data*, *9* (1), 316. https://www.nature.com/articles/s41597-022-01432-0

Llamzon, T. A., & Anceaux, J. C. (1969). Phonology. In *A Subgrouping of Nine Philippine Languages* (Vol. 58, pp. 13–26). Brill. http://www.jstor.org/stable/10.1163/j.ctvbqs817.6

Lobel, J. W., & Tria, W. S. (2000). *An satuyang tataramon: A study of the Bikol language*. Lobel and Tria Partnership, Co.

Lorenzana, A. (2018). Phonological, Lexical, and Morphological Analysis of the Philippine East Miraya Bikol-Pilar Dialect: Angela E. Lorenzana. *Bicol University R & D Journal*, *21*(1).

Mann, N. W. (2005). Syllostatistics (Unpublished manuscript). Retrieved from https://surveywiki.info/index.php/Syllostatistics

Mattes, V. (2014). Types of reduplication: A case study of Bikol. Berlin, Boston: De Gruyter Mouton. https://doi.org/10.1353/lan.2015.0064

McFarland, C.D. (2004). The Philippine language situation. *World Englishes*, *23*(1), 59-75. https://doi.org/10.1111/j.1467-971X.2004.00335.x

McFarland, C. D. (1974). *The Dialects of the Bikol Area* (PDF) (Ph.D. thesis). Yale University. Archived from the original (PDF) on 2020-10-31.

https://web.archive.org/web/20201031122206/https://zorc.net/RDZorc/McFarland=BIKOL/Mcfarland-1974_Bikol_Dialects%5BPhD%5D.pdf

Merriam, S., & Tisdell, E. (2016). *Qualitative research: A guide to design and implementation* (4th ed). John Wiley & Sons, Inc.

Mesthrie, R. (2009). *Introducing sociolinguistics* (2nd ed.). John Benjamins Publishing Inc.

Mintz, M. W. (1971). Sounds which have entered the bikol sound system through the general usage of foreign words. In *Bikol Text* (pp. 23–26). University of Hawai'i Press. https://doi.org/10.2307/j.ctv9hvsdg.8

Moustakas, C. (1994). *Phenomenological research methods*. Sage Publications, Inc.

Oco, N., Syliongka, L. R., Allman, T., & Roxas, R. E. (2016, October). Resources for Philippine languages: Collection, annotation, and modeling. In *Proceedings of the 30th Pacific Asia Conference on Language, Information, and Computation* (pp. 433-438). https://aclanthology.org/Y16-3015.pdf

Pike, K. L. (1967). *Language in relation to a unified theory of the structure of human behavior*. Vol. 32 in *Janua Linguarum, Series Maior*. The Hague: Mouton.

Pilar, JGA (2022). Phonological Idiosyncrasy of Kawayan Dialect of Southern Negros, Philippines. *Resmilitaris* , *12*(6), 245-259.

Pilar, J.G.P. (2023). "Segmental Sounds of Kawayan Dialect. Copyright Registration No. 2023-01167-A. Taguig, Philippines: Intellectual Property Office of the Philippines (IPOPHL)

Poythress, V. (2018). A simple traffic-light semiotic model for tagmemic theory. *Semiotica*, *2018*(225), 253-267. https://doi.org/10.1515/sem-2017-0025

Selkirk, E.O. (1981). On the nature of phonological representation. In *Advances in psychology,* 7, 379-388. North-Holland. https://doi.org/10.1016/S0166-4115(08)60213-7

van Driem, G. (2006). Endangered languages of South Asia. *TRENDS IN LINGUISTICS STUDIES AND MONOGRAPHS*, *181*, 303 https://doi.org/10.1515/9783110197129

Dominic Bryan S. San Jose is a candidate for Doctor of Education in English Language Teaching at the University of Negros Occidental-Recoletos, Philippines. His research interests: Sociolinguistics, Local Languages, Bikol Culture, Educational Pedagogy, Philosophy of Language, and Values Education.

Dr. John Gerald A. Pilar is an Associate Professor and a graduate of Applied Linguistics. He is teaching undergraduate, master's, and doctorate degrees. His research interests: Sociolinguistics, Psycholinguistics, Discourse Analysis, Stylistics, Literary Criticism, Forensic Linguistics, Local Languages, Hiligaynon Grammar, and Educational Pedagogy.