

A Geolinguistic Study on the Manobo Language in Surigao del Sur

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Abstract

This research studied the phonetic variation of the Manobo language spoken in Surigao del Sur, Philippines using Foulkes' Sociophonetic Variation Theory based on the notion that geographical and social background are sources of phonological variability. Geolinguistics as an approach was used as bases for examining sound patterns of the Manobo language used between two Manobo tribal communities, which are geographically distanced from each other. In-depth interviews using a stimulus material with 12 cultural bearers were conducted to collect linguistic samples. Findings of the segmental analysis revealed that the Manobo language spoken in the province is comprised of 19 consonants / b d k g h z dʒ ʒ l m n ŋ ɾ ps t w j ʔ /, 10 vowels / a e e æ i ɪ o u ʊ ə /, and four diphthongs / ou oi ai ʊi /. However between the two study sites, the consonant <J>, which has three phonetic realizations [z dʒ ʒ], was found to be exclusive in Barangay Cabangahan, while the consonant <D> /d/ was found as the variety used in Sitio Simuwao in the absence of <J>. On the other hand, the suprasegmental features revealed that variation in duration or phone length resulted in vowel lengthening and gemination or consonant lengthening, which were also found as determinants of sociophonetic variation. Manobo tribal communities in Surigao del Sur and IP-related agencies can use findings of this study in curricular and cultural planning for the continuous learning, documentation, and protection the linguistic diversity of the Manobo language.

Keywords: Geolinguistics, Indigenous Languages, Manobo Language, Sociophonetic Variation, Phonology

1. Introduction

The Manobo language spoken in Surigao del Sur is gradually declining, with its slowly disappearing use in many domains of communication in preference for a more dominant language (Robiego et al. 40; Lagman and Plaza 22; Jamera, Manning, et al. 49; Nuñez 299). Despite culturally relevant legislation (e.g., IPRA, UNDRIP), Indigenous communities continuously fall short in preserving their culture, which ultimately affects the efforts of maintaining and preserving their language (Robiego et al. 38; Hirai 64-66). In addition, the negative impacts of government development initiatives and peoples' desire for equality and improved opportunities have led to large-scale migration (Cutillas et al., 137-147; Cutillas, 91-93; Lagman and Plaza 25-28). Purse, Tamminga, and White (44) argued that people speaking the same language cannot be treated as uniform because when environmental changes occur (e.g., modernization, migration), the culture adapts to

meet new challenges. The changing values, views, priorities, and opportunities that become available to a group of people can have an important impact on which a language evolves (Lagman and Plaza 26; Nuñez 301).

Geolinguistics examines spatial variation and language use patterns across different regions or territories (Jagessar 5; Jordan 33; Sangavi et al. 59-60). Geographical and social background are obvious sources of phonological variability because speakers learn the dialects of the community where they are raised (Foulkes 411; Jordan 33-35). This notion of variability entails that accents of a particular community are shaped by various factors like geography, culture, history, and other social interactions among its members; people living in different locations may have distinct pronunciation patterns owing to the unique linguistic features of their region or area. Hence, studying language about geographical space not only says something about the phonological aspects of a language, but it also says a lot about its speakers, their culture, and the language itself. In terms of phonetic variation, the Manobo language was studied according to Foulke's (2006) theory on sociophonetic variation. According to this theory, speech is socially conditioned: this means that even though specific sounds are represented by specific phonemes in a language, these sounds can be produced differently depending on factors like accent, regional variation, and individual idiosyncrasies (Celata and Nagy 2; Foulkes 416; Journal of Phonetics 405).

Kendall and Fridland (3) and Foulkes (415) argued that sociophonetics is an interdisciplinary field that combines the study of phonetics with sociolinguistics to investigate how speakers use language in social contexts that can provide a more nuanced understanding of the rich diversity of human communication. Hence, this research aimed to find out how the Manobo language vary in terms of phonetic quality as spoken by *Manuvus* in Surigao del Sur.

2. Methods

2.1. Research Design

This study is qualitative in nature, which makes use of an interdisciplinary approach to research, including geolinguistics (Jagessar 5; Jordan 33; Sangavi et al. 59-60) and semi-ethnography (Cutillas et al. 89; Hall-Lew 31). The semi-ethnography interviews-only approach (Hall-Lew 32) and the traditional Labovian interview approach (33) were adopted. The former allowed the researcher to produce 'greater amounts of speech data from the participants in a short amount of time.' While the latter approach aimed to elicit authentic responses using the participants' vernacular language. Thus, assuming a neutral position during the procedures was vital to allow participants to express their responses naturally. Also, the researcher was responsible for organizing meetings and interview sessions with participants.

2.2. Research Participants

A total of 12 cultural bearers were involved in this research. Six cultural bearers from each study site were selected as language data sources. They were selected based on the following inclusion criteria: (a) a full-blooded *Manuvu*, born and raised in the identified tribal community; (b) an active user of the tribal language in the community; (c) a highly recommended bearer by the tribal chief/ council, entrusted to represent and account for the knowledge of the tribal language. A gatekeeper was needed to identify the participants who fit the participant criteria selection. According to Andoh-Arthur (2019), gatekeepers act as intermediaries between researchers and the research population; they are considered invaluable due to their knowledge,

connections, or membership. Only *Manuvus* born from both *Manuvu* parents from the identified study sites were considered participants in the interviews. The inclusion and exclusion criteria for participant selection were explained to the gatekeepers to ensure that only those entrusted by the tribe and voluntarily consenting participants were involved.

2.3. Data Gathering Procedure

An elicitation technique, labeled by Weise (3) as Language Situations, was the main activity in collecting linguistic samples of the Manobo repertoire used as data for the analysis of the variation of the Manobo language. The Picture Identification Task with an illustrated material was the language situation activity chosen for this procedure. The Expanded Philippine Word List of Manobo Words compiled by SIL International-Philippines through the language assessment conducted by Lightworth (1976) was used as a reference for developing the material and was used as a stimulus source of the Manobo repertoire to elicit language samples. Each illustration was identified by the cultural bearers and named according to how they are used in the community. To elicit responses, participants were asked to use the phrase: "*an (pulong) sa Minanubo kay (an pulong sa Minanubo)*" to queue each item and repeat each term twice.

2.4. Ethical Considerations

The ethical execution of the procedures of this research is aligned with the provisions of Republic Act 10173, also known as the Data Privacy Act of 2012; and that the research has satisfied ethical requirements in terms of (a) voluntary participation, (b) privacy and confidentiality (c) recruitment, (d) risks, (e) benefits, (f) plagiarism, (g) fabrication, (h) falsification, (i) conflict of interest, (j) participant identification, (k) deceit, (l) observation, (m) permission from the local community, (n) technology issues, and (o) authorship. Moreover, this research has satisfied standard procedures and requirements in the acquisition of permits and Free and Prior Informed Consent from the involved communities based on the guidelines provisioned in NCIP Administrative Order No. 1, series of 2012, otherwise known as the Indigenous Knowledge Systems and Practices (IKSPs) and Customary Laws (CLs) Research and Documentation Guidelines of 2012.

3. Results and Discussion

3.1 Segmental Inventory of the Manobo Language in Surigao del Sur

Table 1 summarizes the segmental inventory of the Manobo language spoken in Surigao del Sur; both the sounds that exist and do not exist in each tribal community. Generally, the analysis of the sound segments revealed 19 consonants / b d k g h z ɖʒ ʒ l m n ŋ ɾ p s t w j ʔ /, 10 vowels / a e e æ i i o u ʊ ə/ʌ /, and four diphthongs [ou, oi, ai, ʊi]. It can be gleaned from the table that both communities share the same vowel and diphthong inventory. In terms of consonants, it was found that [z] [ɖʒ] and [ʒ] phonetically behave like that of an allophone as phonetic realizations of the consonant <j>, which are used as alternate pronunciations. Also, a notable observation between the studied sound inventories is that the consonant <j> and its phonetic realizations, [z] [ɖʒ] and [ʒ], is used exclusively in study site A and therefore do not appear in the sound inventory in study site B.

For the purpose of presentation of the phonetic transcriptions, the symbols used are based on the International Phonetic Alphabet (IPA 2020). Chevrons or angle brackets < > are used to represent the letters in the Manobo orthography, virgules / / are used to represent the phonemes or the speech sound, while square

brackets [] are used to represent the phonetic transcriptions. Diacritical markers are used for the purpose of representing suprasegmental qualities found in the data. Modeling Young et al. (33), a high vertical line (ˈ) is used to represent a primary stress mark, while the low vertical line (ˌ) is used to represent a secondary stress mark: both of these symbols are placed before a phoneme to mark the stressed syllable. The triangular colon (ː) is used to mark longer vowel length; the upper-right corner diacritic (ˑ), which is placed after the consonant letter, is used to mark consonants with no audible release; finally, the h superscript on the right upper corner of the phoneme (e.g.,/d^h/) is used to mark aspirated consonants.

Table 1. Segmental Inventory of the Manobo Language in Surigao del Sur

Barangay Cabangahan (Study Site A)			Sitio Simuwao (Study Site B)	
Vowels		<a>	/a/	/ə/
		<e>	/ɛ/	
		<ae>	/æ/	
		<i> <iy>	/i/	/ɪ/
		<o><ow>	/o/	
		<u>	/u/	/ʊ/
Diphthongs		<ow>	/oʊ/	
		<oy>	/oɪ/	
		<ay>	/aɪ/	
		<uy>	/ʊɪ/	
Consonants		/b/		/b/
	<d>	/d/	<d>	/d/
	<k>	/k/	<k>	/k/
	<g>	/g/	<g>	/g/
	<h>	/h/	<h>	/h/
	<j>	/dʒ/ [dʒ]		
		[z]		
		[ʒ]		
	<l>	/l/	<l>	/l/
	<m>	/m/	<m>	/m/
	<n>	/n/	<n>	/n/
	<ng>	/ŋ/	<ng>	/ŋ/
	<r>	/r/	<r>	/r/
	<p>	/p/	<p>	/p/
	<s>	/s/	<s>	/s/
	<t>	/t/	<t>	/t/
	<w>	/w/	<w>	/w/
	<y>	/j/	<y>	/j/
	(ʔ)	/ʔ/	(ʔ)	/ʔ/

The Manobos of Surigao del Sur are descendants of the tribe whose origins can be traced back to the Manobo Agusan of the Agusan River Valley, who went on a hunting expedition and found new settlements in the province (Tomaquin 3). Blanco-Palmera (45) cited that the phonetic structure of the Manobo Agusan, according to the study of Gelacio, Kwook Long, Schumacher in 2010, includes seven vowels / a æ e i o u ue /,

two additional vowels /ey iy/, 16 consonants / b d g h j k l m n ŋ p r s t w y /, and a glottal stop /ʔ/. In terms of sound inventory between the Manobo Agusan and the Minanubo spoken in Surigao del Sur, the phonetic structure of the Manobo language in Cabangahan has six more sounds than Manobo Agusan. The consonant <j> has three phonetic realizations [z dʒ ʒ] and hence is treated as additional consonant sounds in the segmental inventory of the Manobo language in Surigao del Sur. However, they are not viewed as different phonemes but as allophones used as alternate pronunciations of the same word. While Sitio Simuwao has three fewer sounds than the Minanubo spoken in Cabangahan, with /z dʒ ʒ/ being exclusive sounds present in Cabangahan but not in Sitio Simuwao.

Findings also confirm that the retroflex /ɭ/ instead of the lateral /l/, which, according to the Guide for Teaching the Manobo Language (12), is exclusive to the Minanubo of Surigao del Sur because the same sound segment emerged in the studied repertoires. Similarly, the trilled /ɾ/ was found as the phonetic realization of the consonant <r> instead of the /r/, which is rather common in English. On the other hand, the use of the Manobo vowel, which, according to the Guide for Teaching the Manobo Language, is represented as a Umlaut /ü/, is no longer used by many Manobos but rather uses the sounds /u/ or /ʊ/. The same was observed in the studied data; the use of this vowel sound did not emerge in the analysis; thus, was not included in the inventory.

3.2. <j> and <d> Sociophonetic Variation

Free variation between phonemes happen when these phones may be used in place of each other without changing the meaning of a word (Mompean 25; Ali Khan 519; Youseff 4), and the phones in free variation are called free variants. The analysis also revealed that a phonological free variation between the consonants J and D exists between Barangay Cabangahan and Sitio Simuwao. While the language learning material, *Og Anad Ki* Guide for Teaching Manobo Language (13), recognizes an existing difference in terms of usage between the consonants <d> and <j> depending on the area where the group is located in the province (13), it does not provide further information which areas and Manobo tribal communities in Surigao del Sur uses what kind of variety. Thus, findings of this study offers insights in terms of how the variation occurs in the language between communities and which communities are actively using the varieties.

The following examples below exhibit the presence and absence of the consonant <j> and its phonetic realizations [z] [dʒ] and [ʒ] in the repertoires of the Manobo speakers in study site A. Whereas, the substitution of the consonant <d> was found in the repertoires of the Manobo languagea speakers in study site B in the absence of the consonant <j> and its phonetic realizations,

	(Study Site A)		(Study Site B)	
	Minanubo	Phonetic Transcription	Minanubo	Phonetic Transcription
fire	kaeju	['kæ.ʒʊ]	kaedu	['kæ:ɖ̪dʊ]
kill	himatajan	[,himə'ta:ʒən]	himatadan	[,himəɾ'ta:dan]
trail	bajaan	[,bəɖ̪ʒə'ʔa:nən]	badaanan	[,bəɖ̪ə'ʔa:nən]
good	madjow	['məɖ̪ʒo]	madudow	['məɖ̪dʊdo]

Between the two study sites, <j> is an exclusive consonant for study site A, which means that this consonant and its corresponding sound does not occur or used by speakers in Sitio Simuwao. Ali Khan (519) argued that populations that are correlated with geographic distance contributes to phonological variance,

which means that geographically close languages show less variation in phonemes; conversely, increased distance increases phonemic difference also increased between languages (519). Hence, it can be argued that the geographic distance between Barangay Cabangahan and Sitio Simuwao contributes to the phonetic behavior of the consonant <j> which causes sociophonetic variance between the two Manobo speech communities.

3.3. Vowel Lengthening

The phonological analysis of this research revealed that duration not only contributes to varying lengths at which the studied repertoires are articulated but also changes the quality of the vowel. According to Fromkin et al (246) and Palmera-Blanco (47) vowel quality is dependent on the shape of the vocal tract as air passes through the mouth. A vowel can be categorized according to tongue height and position and lip rounding. At the suprasegmental level, vowels can carry pitch and loudness and may be produced in shorter or longer duration (Fromkin et al. 246). The changes in vowel quality also entailed differences in how the Manobo vowels appear in phonetic transcriptions at the segmental level.

In terms of vowel production, it was observed as a common pattern that the repertoires of Cabangahan were articulated in shorter duration mostly containing, short and lax vowels. Meanwhile, syllables in the repertoires of Sitio Simuwao contain tense and more stretched vowels that result to prolonged articulations. Take for instance the contrast of /æ/ and /ɛ/ in aedow ‘day’ from a previous discussion. Figure 1 shows the difference in duration in the articulation of the first syllable.

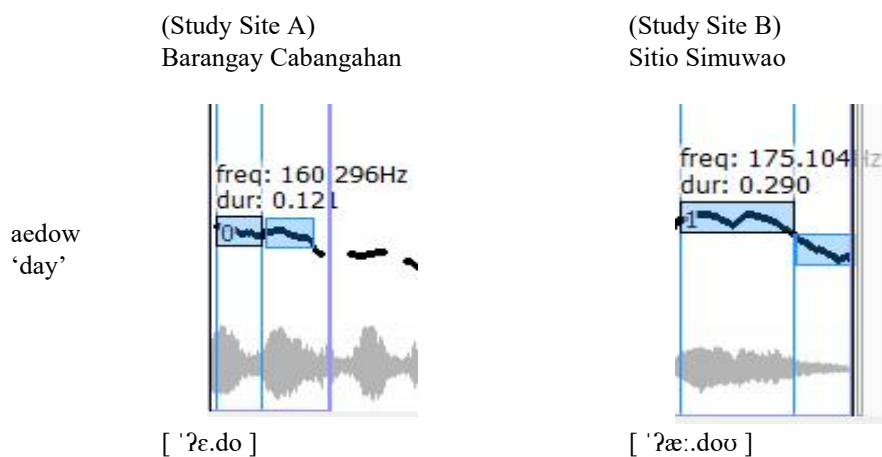


Figure 1. Variation of /æ/ and /ɛ/ in the initial word position

According to the Og Anad Ki Guide for Teaching Manobo Language, <ae> of the Manobo language is pronounced like the English word cat (14). Notice that the exhibit shows that stress is placed in the same initial position in both transcriptions, but different vowels categories are used to capture the difference in length. Measured in seconds, <ae> in study site B is pronounced with a lowered jaw and is prolonged twice the number of milliseconds (0.290 sec.) than the stressed syllable in study site A (0.121sec.).

Loakes, Clothier, Hajek & Fletcher (1-2) argued that the phonetic variations (e.g. /ɛ/-/æ/) is caused by an ambiguity with vowel height as a result of the prelateral merger through the mid-vowel lowering. Notice that

/æ/ and /ɛ/ are both front vowels; however, they have distinct qualities because /æ/ is produced with lowered jaw where the front part of the tongue is low in the mouth behind the teeth, while the mid-front-lax /ɛ/ is produced with a slightly higher tongue position than /æ/. Thus, a slight difference or overlap in the mid-raising and mid-lowering of the tongue causes differences in the quality of vowels that are produced in actual speech, which result in variation between vowels.

The examples relating to the differences in vowel categories exhibit variance between /ɛ/-/æ/ and /ɛ-/i/, including between diphthongs /oi/-/oi/ in the same syllable stress positions. These differences are attributed as sociophonetic variation in the Manobo vowels because speakers are using the same phonological systems but with phonetic differences (Loakes, Clothier, Hajek & Fletcher 3). It is crucial to note that these differences between /ɛ/-/æ/, /ɛ-/i/, and /oi/-/oi/ only affect a few sets of words in the data such as those repertoires exhibited below,

			(Study Site A)	(Study Site B)
			Phonetic Transcription	Phonetic Transcription
'rattan'	<i>baegon</i>	/ɛ/ - /æ/	['bɛːgən]	['bæːˌgɒn]
'deaf'	<i>bunge</i>	/ɛ/ - /i/	[,bʊˈŋɛ]	[,bʊˈŋiː]
'old person'	<i>manigaud</i>	/ə/ - /a/	[,mənɪ.gəˈʔud]	[,manɪ.gaˈʔud]
'house'	<i>bayoy</i>	/oi/ - /oi/	['baːˌjoi]	['baːˌjoi]

Furthermore, duration was also observed to affect not only differences in vowel categorization but at the same time causes shifts stress syllable position. Stress shift is a common observation in many languages when affixation occurs (Katalbas & Bernardo 112); however, data shows that stress shifts as a result of the sociophonetic variation. Notice that the phonetic transcriptions contain the same number of syllables and the same number of phones, but differ sociophonetically differ in one vowel at the third syllable [kə] [bʊ] and [kaː] [bu]. Continue to notice that syllable stress, as exhibited on the phonetic transcriptions under study site A, is directed towards the final syllables. Meanwhile, a stress shifts to the left can be observed in the phonetic transcriptions under study site B, which entails that stress is projected towards syllables before the final syllable.

		(Study Site A)	(Study Site B)
		Barangay Cabangahan	Sitio Simuwao
		Phonetic Transcription	Phonetic Transcription
'shameful'	<i>kasikawan</i>	[kəsɪˌkəˈwan]	[kəsɪˈkaːˌwan]
'to dry'	<i>og-buyad</i>	[ʊgˌbʊˈjad]	[ʊgˈbuˌjad]
'scar'	<i>butiyog</i>	[bʊˌtɪˈjog]	[bʊˈtiːˌjog]
'full'	<i>napuno</i>	[,nəpʊˈnʊʔ]	[nəˈpuˌnʊʔ]

Patterns reveal that prominence or syllable stress were not solely dependent on the increase of pitch but more on which syllables are stretched compared to other surrounding syllables. Among polysyllabic words, when the first syllable with a reduced vowel [ə] is followed by a syllable with a short or closed nucleus, they (the first and second syllable) becomes less prominent (secondary) or weak (unstressed) altogether, and stress is assigned to the next syllable containing an open, mid-open or tensed vowel. For instance in *kasikawan* 'shameful,' [kə] in study site A contains a reduced, centralized vowel /ə/ as nucleus, which becomes part of a streak of weak syllables [kə] [sɪ] [kə]; hence, syllable stress is assigned to the final syllable containing an

open nucleus [wan]. In contrast for study site B, stress is assigned to the third syllable [ka:], which contains an open-front and lengthened vowel /a/ where length is marked by a triangular colon (:). Hence, duration determines which syllables are prominent according to the length of its articulation. Therefore in terms of variation, the differences in vowel length constitutes sociophonetic differences in vowel categories accounts for the differences in syllable stress.

3.4. Gemination

This section discusses how duration, as a suprasegmental feature, produces lengthened consonants, which in turn contributes to sociophonetic variations in the Manobo language spoken in Surigao del Sur. According to Fromkin et al. (252), consonant lengthening happens by prolonging the closure or obstruction of air. However, unlike Japanese, Finnish and Italian (252) lengthened consonants do not produce semantic contrasts in the Manobo language, and are thus therefore like the phonetic variations in the Manobo vowels non-phonemic. Young et al. (32) defines the phonological process of consonant lengthening as ‘gemination,’ which occurs when a consonant sound is “doubled” (Young et al. 32). Geminates were also found in the Manobo language spoken in Davao Occidental, wherein duration in consonantal phones are realized as gemination (Palmera-Blanco 53). However, unlike her findings gemination in the context of the Manobo language in Surigao del Sur, gemination was determined only in phonetic transcriptions of the repertoires of Sitio Simuwao.

		(Study Site A)	(Study Site B)
		Phonetic Transcription	Phonetic Transcription
‘bite’	<i>kagat</i>	['ka ,gat]	['ka:g̊ ,gat]
‘afternoon’	<i>mahapun</i>	[mə 'ha ,pən]	[mə 'ha:p̊ ,pən]
‘give’	<i>bugoy</i>	[,bū 'goi]	[,bəg̊ 'goi]
‘skinny’	<i>(adj.) magasa</i>	['ju: ,kəs]	['ju:k̊ ,kəs]
‘floor’	<i>pantow</i>	['pan ,to]	['pan̊ ,to]
‘unhusked rice’	<i>humoy</i>	[,hū 'moi]	[,hūm̊ 'moi]

The examples exhibit sociophonetic variation between consonants and their geminated variants: [g] - [g̊g], [p] - [p̊p], [t] - [t̊t], [k] - [k̊k]. When a vowel is lengthened a triangular colon (:) marks the lengthened vowel, meanwhile, lengthened consonants are captured in phonetic transcriptions by duplicating them as in ['ka:g̊ ,gat]. In effect, by writing them in succession transforms the consonant as syllable boundaries of the preceding (_#) and the succeeding syllable (#_). Palmera-Blanco (53) described that the first consonant of the geminate is followed by an air obstruction, and then the second syllable begins with a regained force, releasing the initially obstructed air across the syllable boundary realized, which then assimilates with the next speech sound. The same phonetic behavior can be said about the geminates found in the repertoires of Sitio Simuwao, wherein the obstruction of air is prolonged by doubling the consonant.

Notice that in the phonetic transcription of the geminates, the upper-right corner diacritic () is placed (on the upper-right corner) of the first contour of the geminate in order to capture the hold or closure of the vocal tract. The obstruction of airflow shortens or weakens the articulation of the consonant, which is then followed by an audible release in the second geminate. Thus this diacritical mark indicates a an inaudible release of the first consonant.

4. Conclusion

Indeed, the same language used by speakers cannot be viewed as invariant because social indicators marked by multiple factors, including geography, affect the way a language develops and the kind of innovations that speakers make in the language based on what is useful and relevant in their immediate environments. A language variety says a lot about the kind of languages or dialects or other varieties that are spoken surrounding a speech community, and that it is not because of some random coincidence how a variation in sound or lexicon turned out to be. Take, for instance the Manobo term for chest, *dagaeha*; it may be perceived with a totally different set of sounds from the common Bisaya term *dub-dub*, but it does sound almost like the Kinamayo term *dagarha*. A language variety also reflects the kind of languages that speakers of that variety come into contact with through a seemingly unconscious but gradual language innovation and integration of basic linguistic features in daily speech. The study of the phonological features of the Manobo language in Surigao del Sur opens many possibilities for linguistic research in terms of morphology and syntax, including how words are transformed when they are chained together in speech.

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