

Two Patterns of /a/ and /o/ Alternation in Subanon

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Two patterns of alternation affect the phonemes /a/ and /o/ in Subanon, an underdocumented Austronesian language spoken in the southern Philippines. Under suffixation, /a/ becomes /o/ in the antepenult (Pattern 1), and /o/ becomes /a/ in the penult preceding a palatal glide (Pattern 2). Pattern 1 has no apparent synchronic motivation, but comparative evidence shows that Proto-Subanen *a weakened to schwa when placed in pretonic position through suffixation, and that schwa from any source then became Subanon /o/. Pattern 2 is similar to a Subanon process called “partial vowel harmony assimilation,” as well as to the alternation of final *-əy/-əw* with penultimate *-ay/-aw* in Western Bukidnon Manobo. However, in both cases, these processes turn out to be unrelated. In conclusion, Pattern 2 shows no clear synchronic and diachronic motivation, and we are left with a descriptive statement without an explanation.

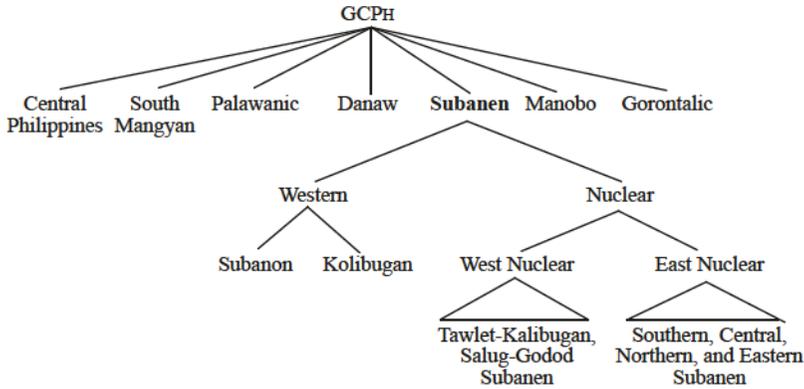
1. INTRODUCTION.¹ Western Subanon [ISO 639-3 *suc*] (henceforth, Subanon) is an indigenous minority language in the Philippines spoken by about 300,000 people in the southwestern part of the Zamboanga Peninsula of Mindanao. Subanon is one of a small subgroup of languages called Subanen, that belongs to the Greater Central Philippines (GCPH) branch of the Austronesian language family (Blust 1991, 2005; Lobel 2013; Simons and Fennig 2018). Figure 1 shows the position of Subanon in relation to the other Subanen languages.

Figure 1 reflects the fact that the Western subgroup of Proto-Subanen (PSUB) diverged prior to the breakup of the other Subanen languages. Additionally, it identifies the eight members of the Subanen subgroup divided into Western and Nuclear Subanen. The Western subgroup includes only Subanon and Western Kolibugan, while the Nuclear subgroup encompasses Tawlet-Kalibugan, Salug-Godod Subanen, Southern

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Abbreviations that may require explanation are: AV, Agent Voice; GCPH, Greater Central Philippines; IMP, imperative; GV, Goal Voice; PSM, Proto-Subanen-Manobo; PSUB, Proto-Subanen; PV, Patient Voice; WBM, Western Bukidnon Manobo; WSUB, Western Subanon.

FIGURE 1. THE LOCATION OF SUBANON IN THE GCPH†



† From Blust (1991), modified to accommodate Lobel's (2013) Subanen Subgrouping.

Subanen, Central Subanen, Northern Subanen, and Eastern Subanen (Lobel and Hall 2010, Lobel 2013).

All Subanen languages have a reflex of Proto-Subanen (PSUB) *ə. This reflex is /ə/ in most of these languages, but, in Subanon and Western Kolibugan schwa became /o/, as seen in the language names themselves.

Subanon exhibits two productive patterns of *a/o* alternation following affixation. In Pattern 1, the /a/ in a prepenultimate syllable changes to /o/ (Reid 1973; Brichoux 1977; Blust and Nielsen 2016:630).² In Pattern 2, the /o/ in a penultimate syllable changes to /a/ when it is followed by the palatal glide /y/, a phenomenon that is also observed in the Manobo languages, spoken in east-central Mindanao (Blust, pers. comm., April 30, 2017). However, although the Pattern 2 alternation that is observed in Subanon and in the Manobo languages superficially appear similar, they are fundamentally different. The purpose of this paper is to describe these alternations both synchronically and diachronically, addressing two questions in particular:

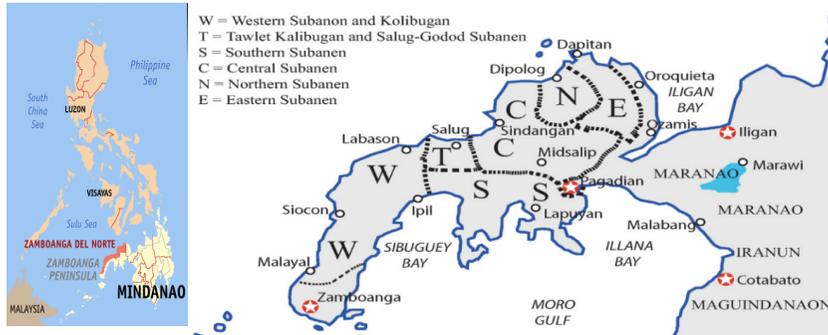
1. How can we account for the *a/o* alternation in prepenultimate syllables synchronically and diachronically?
2. What accounts for the penultimate *o/a* alternation before a palatal glide synchronically and diachronically?

2. SUBANON. Subanon is spoken primarily in the villages of Malayal, Lintangan, Lanuti, and Limpapa, in the district of Sibuco; and in parts of the municipalities of Siocon, Baligian, Labason, Surabaya, and Ipil—areas on the Zamboanga Peninsula, on Mindanao. The language has three distinguishable and mutually intelligible dialects: Siocon Subanon, Malayal Subanon (Simons and Fennig 2018), and Gotalac-Dicolom Subanon (Hall, pers. comm., October 12, 2016). The specific locations where the Subanon language and the neighboring Subanen languages are spoken are shown in map 1 (with the

2. I use *prepenultimate* or *antepenultimate* syllable to refer to the syllable immediately before the penultimate syllable, the typical primary stress location in Subanon.

Philippine map on the left side highlighting the position of the Zamboanga Peninsula in which the Subanen languages are found.

MAP 1. LOCATION OF SUBANON AND THE NEIGHBORING SUBANEN LANGUAGES (LOBEL 2013:321)



3. PREVIOUS STUDIES ON THE PHONOLOGY OF SUBANON.

Being an underdocumented language, there has been very little work done on the phonology of Subanon. Synchronic studies include phonemic analysis (Hall 1967, 1997), a description of the orthography (Hall 1972), and a description of the standardization of the orthography (Hall 2014). Only a few diachronic analyses of this language have been published. Banker (1958) is an investigation of the origin of the /gl/ cluster where the *g-* in the cluster is analyzed as deriving from the final *-g* of the case markers *og*, *nog*, and *sog*; Reid (1973) is an exploration of the evolution of the Philippine languages from the four-vowel system of Proto-Philippines; Lobel's (2013:318–59) historical-comparative work on Subanen languages producing “618 lexical reconstructions of Proto-Subanen” provides the major resource for analyzing the /a/ to /o/ alternation diachronically; and Blust and Nielsen (2016) shows that Proto-Austronesian *ma- ‘stative’ metathesized in Subanon only before base-initial *b-* and *p-* to avoid widespread dispreference for dissimilar labials as the onsets of successive syllables.

4. PHONOLOGY OF PROTO-SUBANEN AND SUBANON. In order to fully explain the *a/o* alternation, it will be useful to outline the Proto-Subanen and modern Subanon phoneme inventories. Lobel 2013:311) reconstructs for Proto-Subanen fifteen consonants and 4 vowels, as shown in table 1.

Modern Subanon has fifteen native consonants. Almost all of the PSUB consonants are retained in an unmodified form, except for PSUB *r, which shifted to /l/ in Subanon as in most other Subanen languages (Lobel 2013:311–12). There is an /r/ in Subanon, but it is only present in borrowed words such as *piritu* ‘fry’ (< Spanish). There is also a voiced palatal affricate [dʒ] as a result of borrowing, as in *dyalum* [dʒalum] ‘needle’ from Malay *jarum* (Blust, pers. comm., April 30, 2017). The consonant inventory is presented in table 2.³

TABLE 1. PHONEME INVENTORY OF PROTO-SUBANEN

Consonants			Vowels		
*p	*t	*k	*ʔ	*i	*u
*b	*d	*g		*ə	
	*s			*a	
*m	*n	*ŋ			
	*l				
	*r				
*w	*y				

Subanon has five phonemic vowels (Hall 1972). They are summarized in table 3. In general, the high vowels /i, u/ and mid vowels /e, o/ are lower than the cardinal values for these vowels, which is confirmed by William Hall (pers. comm., October 12, 2016).

TABLE 2. SUBANON CONSONANTS

	Bilabial	Dental/ Alveolar	Palatal	Labio- velar	Velar	Glottal
Stop	p b	t d			k g	ʔ
Fricative		s				h
Affricate			(dʒ)			
Nasal	m	n			ŋ	
Approximant		(r)	j	w		
Lateral		l				

TABLE 3. SUBANON VOWELS

	Front	Central	Back
High	i		u
Mid	e		o
Low		a	

4.1 PHONOTACTICS. A syllable in Subanon is a nucleus containing either an individual vowel or a diphthong, with an optional onset and coda. The examples in (1) show the syllable patterns in Subanon. Those in (1) are common, whereas those in (2) are less common.⁴

- | | | |
|-----------------|-----------|---|
| (1) COMMON | WORD | GLOSS |
| CV | sa.la | ‘one’ |
| V | a.mi | ‘1PL.EXCL’ |
| CVC | a.kon | ‘1SG’ |
| (2) LESS COMMON | WORD | GLOSS |
| VVC | ain | ‘where’ |
| CCV | gla.na | ‘oil’ |
| CCVC | glok.tang | ‘type of plant used for poisoning fish’ |

3. The orthographic representations of the consonants and vowels follow IPA convention except: *k* [q], ‘[ʔ], *dʒ* [dʒ], *ŋg* [ŋ], *y* [j], *e* [ɛ], and *o* [ɔ]. Parentheses indicate loan phonemes.

4. I represent Subanon forms using the practical orthography, and reserve slashes for instances where phonemic representation is relevant.

The only onset consonant cluster that occurs in Subanon is *g/-*, forming CCV and CCVC syllables. The syllable pattern containing the *g/-* cluster is a result of the case markers *og*, *nog*, *sog* being cliticized and subsequently reanalyzed as part of the onset of some nominals in this language (Banker 1958; Lobel 2013).

4.2 STRESS. Lobel (2013:287) suggests that some languages in the southern Philippines may have contrastive phonemic stress, as is the case of the northern and central Philippines (Blust 2013:251). However, primary stress in Subanon is on the penultimate syllable, just like Northern Subanon (Daguman 2013:33). My perception as a native speaker of Subanon is that stressed syllables in this language are characterized by being the loudest and having the highest pitch. Thus, in Subanon, penultimate stress is observed in disyllabic words as in (3a), trisyllabic words as in (3b), quadrisyllabic words as in (3c), as well as in five-syllable words as in (3d).⁵

(3)	GLOSS	WORD
a.	'child'	'ba.taʔ ⁶
	'to walk'	'pa.now
	'to observe'	'i.mot
	'to hit'	'sun.tuk
b.	'windy'	go.'lu.ʔan
	'to observe it'	i.'mo.ton
	'basket'	tong.'ka.lang
	'to spread a sleeping mat'	mog.'don.dam
c.	'butterfly'	.ko.lom.'ba.ngoy
	'or'	.o.ta.'wa.ka
	'to inform'	.mok.po.'sam.pot
	'house lizard'	.to.gi.'lok.tok
d.	'to spy'	mo.,no.lo.'gun.diʔ
	'to economize' (PV)	pog.,do.di.'no.wan
	'to make pretty or sexy'	po.,lo.li.'bu.non

5. PATTERN 1 ALTERNATION: /a/ CHANGES TO /o/

5.1 A SYNCHRONIC ANALYSIS. As already mentioned, /a/ and /o/ are distinct phonemes in Subanon. However, in prepenultimate syllables, /a/ changes to /o/ after affixation of the voice markers *-on*, *-an*, and *-oy*, but remains /a/ if the affix is a nominative pronoun such as *u* '1SG', *a* '2SG', and *ion* '3SG'. Synchronically, a possible way of describing this alternation is to posit a vowel raising process associated with stress, in which the low central vowel /a/ is raised to /o/ when it precedes a primary stressed syllable. However, this explanation has the disadvantage of lacking a clear phonetic motivation. This vowel raising process associated with stress placement is illustrated below:

5. In what follows, I use the diacritic ' to indicate primary stress, and , for secondary stress.

6. I use the phonetic symbol for the glottal stop [ʔ] to represent this sound in the examples instead of its orthographic representation (where an apostrophe ['] is used) to avoid confusing it with the primary stress symbol.

stress on the prepenultimate syllable in trisyllabic words in (4a), and in quadrisyllabic words in (4b).

(4) a.	GLOSS	STEM	+ -on/-an/-oy	GLOSS
	'to keep'	'tagu?	to'guʔ-on	'to place s.t.' (PV)
		'tagu?	to'guʔ-an	'to place s.t.' (GV)
		'tagu?	to'guʔ-oy	'used in imperative' (PV)
	'to buy'	'saluy	so'luy-on	'to buy s.t.' (PV)
		'saluy	so'luy-an	'to buy s.t.' (GV)
		'saluy	so'luy-oy	'used in imperative' (PV)
	'to remove'	'awa?	o'waʔ-on	'to remove s.t.' (PV)
		'awa?	o'waʔ-an	'to remove s.t.' (GV)
		'awa?	o'waʔ-oy	'used in imperative' (PV)
	'to carry'	'kayat	ko'yat-on	'to carry s.t. carelessly with one hand' (PV)
		'kayat	ko'yat-an	'to carry s.t. carelessly' (GV)
		'kayat	ko'yat-oy	'used in imperative' (PV)
b.	GLOSS	STEM	PREFIX+STEM + -on/-an/-oy	RESULTING WORD
	'to name'	'ngalan	i-ngolan-an	ingo'lanan
	'to take'	'alap	in-olap-an	ino'lapan
	'to demand a payback'	'abat	in-obat-an	ino'batan

The examples in (4) demonstrate that it is only after affixation with the voice-marking affixes *-on*, *-an*, and *-oy* that the /a/ in the prepenultimate syllable becomes /o/ regardless of whether the resulting word ends up having three or four syllables.

It is important to note that Pattern 1 alternation does not occur even if /a/ is in the prepenultimate position if a verb stem takes certain clitics such as the nominative pronouns *u* '1SG', *a* '2SG', and *ion* '3SG', as well as the plural marker *-anan*, as shown in (5).

(5) a.	GLOSS	STEM + SUFFIX	OBSERVED	NONOCCURRING
	'I swam'	l<um><in>a'nguy u	lu, mina'nguy u	**lu, mino'nguy u
	'you swam'	l<um><in>a'nguy a	lu, mina'nguy a	**lu, mino'nguy a
	's/he swam'	l<um><in>a'nguy ion	lu, mina'nguy ion	**lu, mino'nguy ion
b.	GLOSS	STEM + 2SG	OBSERVED	NONOCCURRING
	'swim!'	'languy a	la'nguy a	**lo'nguy a
	'ride!'	'sakoy a	sa'koy a	**so'koy a
c.	GLOSS	STEM + PLURAL	OBSERVED	NONOCCURRING
	'mouth'	'baba'ʔanan	,baba'ʔanan	** ,bobo'ʔanan
	'shoulder'	'bagaanan	,baga'anan	** ,bogo'anan

The examples in (4) and (5) show that the *a/o* alternation in prepenultimate position is triggered only by the voice marking suffixes, whereas none of the pronominals or the plural marker trigger it. Although I suggested a vowel raising process for this type of alternation, this is all we can say about it synchronically, for there is no clear phonological reason to account for this. Consequently, regardless of the number of syllables in a word, /a/ cannot occur in a prepenultimate syllable in Subanon, if a stem takes any of those

voice-marking affixes. The conditions that trigger the Pattern 1 alternation are summarized and illustrated in (6).

(6) a. **Triggers Pattern 1 alternation**

VOICE AFFIX	STEM	GLOSS	RESULTING FORM	GLOSS
-an	'tagu?	'put, place'	to'gu?an	'place s.t.' (GV)
-on	'tagu?	'put, place'	to'gu?on	'place s.t.' (PV)
-oy	'tagu?	'put, place'	to'gu?oy	'place s.t.' (IMP.GV)

b. **Does not trigger Pattern 1 alternation**

NOMINATIVE PRONOUN	STEM	GLOSS	RESULTING FORM	GLOSS
u	'panow	'walk'	mi-pa'now u	'I walked'
a	'panow	'walk'	mi-pa'now a	'you walked'
ion	'panow	'walk'	mi-pa'now ion	's/he walked'
PLURAL MARKER				
-anan	'baloy	'house'	balo'yanan	'houses'

Having outlined the synchronic explanation for the Pattern 1 alternation, let us now turn our attention to the diachronic analysis of this phenomenon, since this arose from a conditioned change (Lobel 2013; Blust and Nielsen 2016). I will begin by presenting the origin of these phonemes historically and their reconstructions, and then describe how they changed to their present forms in Subanon.

5.2 VOWEL REDUCTION PROCESS: A DIACHRONIC ANALYSIS.

This section is a diachronic analysis of the Pattern 1 alternation of /a/ to /o/, which is a process of vowel reduction. PSUB *ə became WSUB /o/ in all environments, as in (7).

(7)

GLOSS	PSUB	MODERN SUBANON
'pregnant'	*bədəs	'bədəs
'shark'	*bəgisan	bə'gisan
'spider'	*bəlɪŋkawa?	bəlɪŋ'kawa?

In addition, there are two environments where PSUB *a became WSUB /o/. The first is in prepenultimate position following affixation, as in (8).

(8)

GLOSS	PSUB	+PV	RESULTING WORD	MOD SUB	+PV	RESULTING WORD
'mouth'	*baba?	-ən	*bəba?ən	baba?	-on	bə'ba?on
'to fly'	*ləyug	-ən	*ləyugən	ləyug	-on	lə'yugon
'snake'	*mamak	-ən	*məmakən	mamak	-on	mə'makon

Given the examples in (7) and (8), we recognize that not every /o/ comes from the same PSUB source. That is, some were originally *ə and some were originally *a. Based on the reconstructions of Lobel (2013),⁷ PSUB *a became /o/ in any prepenultimate syllable. It can be hypothesized that this shift probably did not occur as a single step. Instead, *a became /ə/ in early Subanon before becoming /o/ in present-day Subanon in prepenultimate position.⁸ The examples in (9) demonstrate this.⁹

7. Lobel's reconstruction of Proto-Subanen does not include stress.

(9)	GLOSS	PSUB	EARLY SUB	MODERN SUBANON
	‘one’	*sarabuuk	sə'labuk	so'labuk
	‘cousin’	*gag[a]u[n]apu?	gə'guapu?	go'guapu?
	‘back’	*talikudan	təli'kudan	to'li'kudan
	‘day before yesterday’	*sarang-əndow	,səlo'ngondow	,solo'ngondow

The second environment in which PSUB *a became WSUB /o/ is where the sequences *ay and *aw occur in word-final position, as in (10) and (11). As shown in (9), PSUB *a is reflected as early Subanon *ə in a prepenultimate syllable and this can be analyzed as a vowel reduction process that occurs in an unstressed syllable, a common phonological change in the languages of the southern Philippines and western Indonesia (Blust 2013). Then [ə] from any source underwent an unconditioned sound change to /o/ in Subanon, as we have seen. At some point after the break-up of the Subanen protolanguage, *-ay and *-aw evidently became *-əy and *-əw prior to the change of schwa to /o/, as shown by the examples in (10) and (11).

(10)	GLOSS	PSUB	EARLY SUB	MODERN SUB
	‘house’	*balay	'baləy	'baloy
	‘firefly’	*g-lipətay	gli'potəy	gli'potoy
	‘to joke’	*gansay	'gansəy	'gansoy
(11)	GLOSS	PSUB	EARLY SUB	MODERN SUB
	‘to steal’	*'dakaw	'dakəw	'dakow
	‘to look out of a window’	*'dungaw	'dungəw	'dungow
	‘to walk’	*'panaw	'panəw	'panow

As with PSUB prepenultimate *a in (9), the /a/ in PSUB *-ay and *-aw first reduced to schwa before it became /o/, as shown in (10) and (11). However, nonfinal /ay/ and /aw/ do not change to /oy/ and /ow/, as evidenced by the examples in (12) and (13). This can be explained by the fact that these sequences of sounds are no longer tautosyllabic, meaning they are not in the same syllable.

(12)	GLOSS	PSUB	SUBANON
	‘to pay’	*ba.yad	ba.yad
	‘to continue’	*[pə-]da.yun	po.da.yun
(13)	GLOSS	PSUB	SUBANON
	‘to leave’	*a.wa?	a.wa?
	‘body’	*gla.was	gla.was

I have presented here a synchronic description and a diachronic analysis for the Pattern 1 alternation, where /a/ changes to /o/ in prepenultimate position. I suggest that vowel raising for this alternation in a synchronic explanation is not phonetically motivated, and that the diachronic evidence for a vowel reduction process provides a better analysis for

8. I use Pre-Subanon to refer to early Subanon, and present-day Subanon to mean modern Subanon.

9. Although Lobel (2013) reconstructs *a in the prepenultimate syllable, it is likely that this *a had already shifted to /ə/ in PSUB, based on the reflexes in the modern languages, in that no modern Subanen language has /a/ in this position.

this type of alternation. In sum, *a > ə / ___ CVCVC, and then *ə > o, allows us to explain how /a/ became /o/ in prepenultimate position historically.

6. PATTERN 2 ALTERNATION: /o/ CHANGES TO /a/. In the Pattern 2 alternation, the /o/ in *-oy* changes to /a/ in penultimate position preceding the goal voice (GV) suffix *-an*, as shown in (14). That is, the /o/ in word-final *-oy* becomes /a/ as it moves to the penultimate syllable, the typical position of primary stress in this language.

(14)	GLOSS	STEM	STEM+-an	RESULTING WORD	NONOCCURRING
	'to give'	'bogoy	bo'goy-an	bo'gayan	**bogoyan
	'house'	'baloy	bo'loy-an	bo'layan	**boloyan
	'death'	'patoy	po'toy-an	po'tayan	**potoyan

6.1 A SYNCHRONIC ANALYSIS. What could be a synchronic analysis for the Pattern 2 alternation? There is obviously a vowel lowering process taking place, since /o/ becomes /a/ in that context. It could be suggested that vowel lowering is conditioned by movement to a stressed syllable. However, this reasoning is questionable because vowel lowering in a stressed position is not phonetically motivated. Additionally, there are many counterexamples in which /o/ occupies the penultimate stressed position, but does not change to /a/ when a stem takes the GV marker *-an*, as in (15).

(15)	GLOSS	STEM	STEM+-an	RESULTING WORD	NONOCCURRING
	'to sew'	'sobot	so'bot-an	so'botan	**so'batan
	'soup'	'sabow	so'bow-an	so'bowan	**so'bawan
	'to run'	'gobok	go'bok-an	go'bokan	**go'bakan

Therefore, a synchronic vowel lowering process for the Pattern 2 alternation is not well motivated.

6.2 A DIACHRONIC ANALYSIS. Given the diachronic analysis for the Pattern 1 alternation, it is reasonable to ask whether there might be a diachronic explanation for the Pattern 2 alternation as well. Superficially, the Pattern 2 alternation resembles an assimilation process in which the vowels within a word agree in some feature values. However, it is only the vowel in *-oy* that appears to assimilate to the vowel of the GV suffix *-an*. As shown in *'bogoy + an > bo'gayan* 'to give', and in similar examples in (14), the last vowel of the affixed stem agrees with that of the suffix. I tentatively call this "partial" vowel assimilation, since the first stem vowel is unchanged. However, there are other contexts in which Pattern 2 alternation does not take place. One is if a stem has a syllable shape *CiCoy*, as shown in (16). Subanon speakers do not pronounce the forms listed in the nonoccurring column, an indication that *-an* 'GV' does not influence the other vowels in the stem if a stem has a high front vowel.

(16)	GLOSS	STEM	STEM+-an	GLOSS	NONOCCURRING
	'to bridge'	'titoy	ti'toyan	'bridge'	**ti'tayan
	'to look around at s.t.'	'liboy	li'boyan	'to look around at s.t.' (GV)	**li'bayan
	'to sit with extended legs'	'sikwoy	sik'woyan	'the place at the end of extended legs'	**sik'wayan

Another restriction for the Pattern 2 alternation is if the /o/ is followed by another consonant, as demonstrated in (17).

(17)	GLOSS	STEM	STEM+-an	RESULTING WORD	NONOCCURRING
	'to sew'	'sobot	so'bot-an	so'botan	**sobatan
	'soup'	'sabow	so'bow-an	so'bowan	**sobawan
	'to run'	'gobok	go'bok-an	go'bokan	**gobakan

Moreover, when a stem takes the voice suffixes *-on* 'PV' or *-oy* 'IMP PV', or any of the pronominals *u* '1SG', *a* '2SG', and *ion* '3SG', the penultimate /o/ is unchanged, as illustrated in (18)–(20). In (20), the gloss of the stem in each case is 'give'.

(18)	GLOSS	STEM	STEM+ -on	RESULTING WORD	GLOSS	NONOCCURRING
	'give'	'bogoy	bogoy-on	bo'goyon	'give it'	**bo'gayon
	'kill'	'patoy	potoy-on	po'toyon	'kill it'	**po'tayon
	'get'	'angoy	ongoy-on	o'ngoyon	'get it'	**o'ngayon
(19)	GLOSS	STEM	STEM+ -oy	RESULTING WORD	GLOSS	NONOCCURRING
	'give'	'bogoy	bogoy-oy	bo'goyoy	'give it'	**bo'gayoy
	'kill'	'patoy	potoy-oy	po'toyoy	'kill it'	**po'tayoy
	'get'	'angoy	ongoy-oy	o'ngoyoy	'go for it'	**o'ngayoy
(20)	STEM	PREFIX + STEM + PRON	RESULTING WORD	GLOSS	NONOCCURRING	
	'bogoy	mig-bogoy-u	migbo'goy u	'I gave'	**migbo'gay u	
	'bogoy	mig-bogoy-a	migbo'goy a	'you gave'	**migbo'gay a	
	'bogoy	mig-bogoy-ion	migbo'goy ion	's/he gave'	**migbo'gay ion	
	'bogoy	mig-bogoy-amu	migbo'goy amu	'you gave'	**migbo'gay amu	
	'bogoy	mig-bogoy-ami	migbo'goy ami	'we gave'	**migbo'gay ami	

Note also that the nucleus of *-ow* does not change to /a/ under suffixation with *-an*, as shown in (21).

(21)	GLOSS	STEM	STEM+-an	RESULTING WORD	NONOCCURRING
	'to cry'	'sogow	sogow-an	so'gowan	**so'gawan
	'to walk'	'panow	panow-an	pa'nowan	**pa'nawan
	'to make soup'	'sabow	sabow-an	sa'bowan	**sa'bawan

Thus, this /o/ > /a/ alternation only occurs if /o/ in the penultimate position is followed by a nonfinal palatal glide /y/. If the /o/ is pronounced in that environment, it gives a non-native-like sound as listed in the forms described as nonoccurring.

Given the examples in (16)–(21), we can schematize how the Pattern 2 alternation came about historically as in (22):

(22)	PSUB	PRE-SUBANON	SUBANON
phase 1:	*balay	> *baləy	> 'baloy
	*bəlay-an	> *bəlay-an	> bo'layan
phase 2:	*səgaw	> *səgəw	> 'sogow
	*səgaw	> *səgəw-an	> so'gowan

This illustration shows that the Pattern 2 alternation arose historically by a (phonetically unexplained) change *a > ə before a word-final *y, but not before a palatal glide that was followed by a vowel. This presents a puzzling phenomenon: why did a parallel sound change not occur with Subanon -ow? Since PSUB had *-ay and *-aw, and these became, respectively, *-əy and *-əw in pre-Subanon, we might expect the changes from pre-Subanon to modern Subanon to also be parallel. Given the data, however, we would have to assume that phase 1 happened only word-finally, while phase 2 happened before a labiovelar glide in any position.

There is still no phonetic explanation for either why *a > ə would occur only before a word-final palatal glide, or why it would not occur under the same conditions before a labiovelar glide. Nevertheless, the conditions for the Pattern 2 alternation are summarized in (23).

(23)	STEM	GLOSS	RESULTING	WORDGLOSS
a.	Triggers Pattern 2 alternation			
	SUFFIX			
1. -an	'baloy	'house'	bo'ləyan	'make a house for s.o.'
b.	Does not trigger Pattern 2 alternation			
	PRONOUN			
1. u	'matoy	'to die'	ma'toy u	'I will die'
2. amu	'matoy	'to die'	'matoy amu	'you (PL) will die'
3. ami	'matoy	'to die'	'matoy ami	'we (EXCL) will die'
	AFFIX			
4. -oy	'suloy	'try'	su'ləyoy	'try it'
5. -on	'soloy	'carry on the arm'	so'ləyon	'carry s.t. on the arm'
6. -anan	'baloy	'house'	,balə'yanan	'houses'
	CiCoy			
7.	'sikwoy	'extend feet'	sik'woyan	'place to extend the feet'
	STRESS			
8.	'sobot	'sew'	so'botan	'sew s.t. for s.o.'

6.3 WESTERN BUKIDNON MANOBO: A PARALLEL PHENOMENON?

A parallel phenomenon to this /o/ to /a/ alternation is found in another Philippine-type language, Western Bukidnon Manobo (WBM) [ISO 639-3 mbb], which was first mentioned in Blust and Nielsen (2016).

The alternation of the penultimate /o/ to /a/ in Subanon following affixation is parallel to the alternation of /ə/ to /a/ in Manobo languages, including Western Bukidnon Manobo, a Manobo language spoken in the southern part of the province of Bukidnon, on the island of Mindanao. In WBM, -əy and -əw change to -ay and -aw after affixation, as shown by the examples in (24).

(24)	WESTERN BUKIDNON MANOBO			
	GLOSS	STEM	AFFIX+STEM+AFFIX	GLOSS
	'to play'	baləy-valəy	bəl-vəlay-an	'a toy'
	'to die'	matəy	kə-mətay-an	'death'
	'straight, easy to follow'	me-tazəy	pəkə-təzay-an	'make s.t. clear or plain'
	'love, kindness'	gagəw	bəli-gəgaw-ən	'gracious'

‘unripe, uncooked’	hiləw	kə-hilaw-an	‘humanity’
‘to look out a window’	suləw	sulaw-aʔ	‘window’
‘to steal’	takəw	təkaw-ən	‘a thief’
‘to beat s.o. in a fight’	taləw	tələw-ən	‘cowardly’
‘to summon s.o.’	uməw	pəŋ-ʔum-ʔumaw-an	‘invoke a blessing on s.o.’
‘to look down on s.t.’	uŋəw	uŋaw-an	‘look down on s.o.’ (Elkins 1968)

We may compare the alternation in Manobo to the case of the Pattern 2 alternation in Western Subanon—/o/ > /a/ in penultimate syllables—which affects forms in *-oy* only. The Pattern 2 alternation is confined to Subanon and Kolibugan (that is, Western Subanen) and is not found in other Subanen languages (that is, Nuclear Subanen). For example, PSUB *bəgay ‘give’ is *bogoy* in Subanon and Kolibugan, which have the alternation, but it is *bəgay* in Nuclear Subanen, where the alternation does not occur. In the case of PSUB *aw, this Pattern 2 alternation does not occur, as illustrated in (21). For example, PSUB *sabaw ‘soup’ is reflected as *sabow* in Subanon and retains its /o/ with affixes that place it in the penult, such as with the Goal Voice suffix *-an* in *sobowan*.¹⁰ Compare this with Manobo forms that end in *-əw*, which do undergo alternation, as in (24).

Because the Pattern 2 alternation only occurs in Subanon, we can conclude that this innovation postdates the split of Subanon and Kolibugan from the other Subanen languages, as it affects only forms in that subgroup. This fact alone implies that this Pattern 2 alternation cannot be an innovation common to the Subanen and Manobo subgroups, so we must conclude that these alternations are parallel innovations that took place in Manobo and Subanen, and do not alone provide evidence that these two groups should belong to a larger subgroup.

7. DISCUSSION.

This section summarizes the findings of this study based on the two research questions.

First, how can we account for the *a/o* alternation in prepenultimate syllables synchronically and diachronically? As shown earlier, a synchronic analysis of vowel raising for the Pattern 1 alternation lacks good synchronic phonetic motivation. On the other hand, from a historical perspective, we suggest that there is good phonetic motivation because we were able to establish that there was an intermediate step between PSUB and modern Subanon where the *a became *ə in early Subanon, and this then later became /o/ in modern Subanon, which we refer to as a vowel reduction process. This is a phonetically motivated two-step historical change supporting the claims of Reid (1973), Brichoux (1977), Lobel (2013), and Blust and Nielsen (2016). However, given the fact that modern speakers of Subanon do not have access to the intermediate step, they simply treat the Pattern 1 alternation as a single-step process in which they habitually pronounce the /a/ as /o/ in those specific contexts. Thus, here we see the role of the diachronic point of view in revealing how this type of alternation came about.

10. Lobel (2013:352) gives the Subanon form as *sabaw*, which is the Cebuano form, while the native Subanon term is *sabow*.

To sum up, these are the rules that must have occurred in the past that motivated the alternation of PSUB *a to /o/ in modern Subanon:

1. all *a became /ə/ in prepenultimate syllables
2. *a became *ə before word-final glides
3. all *ə became /o/

Second, what accounts for the penultimate *o/a* alternation before a palatal glide synchronically and diachronically? As already illustrated, the Pattern 2 alternation does not have a synchronic explanation, since vowel lowering in a stressed position is not phonetically motivated. Similarly, there is no diachronic analysis for the Pattern 2 alternation even if it shows some vague similarities to a vowel harmony process. And even if the Pattern 2 alternation seems to be parallel with the /ə/ > /a/ alternation of WBM, they are independent changes and unrelated to each other. Thus, it cannot be suggested on this basis that these two languages have an immediate ancestor.

The synchronic and diachronic analyses for the Pattern 1 and 2 alternations are summarized in table 4.

TABLE 4. SUMMARY OF THE ANALYSES OF PATTERNS 1 AND 2 ALTERNATION

Type of analysis	Pattern 1: a > o (prepenultimate)	Pattern 2: o > a (penultimate)
Synchronic	Vowel raising process • No phonetic motivation	Vowel lowering process • No phonetic motivation
Diachronic	Vowel reduction process • Phonetically motivated	“Partial vowel assimilation” • No phonetic motivation

8. CONCLUSION. This paper attempts to explain the two types of alternations involving the phonemes /a/ and /o/ in Subanon, where following suffixation /a/ becomes /o/ in the prepenultimate syllable (Pattern 1), and /o/ becomes /a/ in the penult preceding a palatal glide (Pattern 2). Synchronically, there is no clear phonetic motivation for either pattern of alternation. However, historically, we can propose that there was a vowel reduction process that would account for the Pattern 1 alternation. In contrast, there is no diachronic explanation for the Pattern 2 alternation, since there is no obvious phonetic motivation for the /o/ to become /a/ when followed by a palatal glide.

A puzzling question remains unanswered: why did the Subanon *-ow* not undergo the same alternation as *-oy*, when PSUB *-ay and *-aw both became *əy and *əw in early Subanon? Further research should be done on this, as it seems not to be motivated by a purely diachronic phonological analysis.

Nevertheless, this investigation yields two significant results. First, the examination of the /a/ to /o/ alternation offers an explanation for a synchronic rule that lacked phonetic motivation by providing historical context. Second, it explains why /a/ cannot occur in the prepenultimate syllable of predicates following the use of certain affixes in Subanon. Therefore, the study shows the vital role of historical-comparative work in explaining phonological phenomena that are currently occurring in a particular language.

REFERENCES:

- Banker, John. 1958. The development of the cluster *gl* in Subanon language. Unpublished MS, SIL Philippines.
- Blust, Robert. 1991. The Greater Central Philippines hypothesis. *Oceanic Linguistics* 30:73–129.
- . 2005. The linguistic macrohistory of the Philippines: Some speculations. In *Current issues in Philippine linguistics and anthropology parangal kay Lawrence A. Reid*, ed. by Hsiu-chuan Liao and Carl R. Rubino, 31–68. Manila: Linguistic Society of the Philippines and Summer Institute of Linguistics.
- . 2013. *The Austronesian languages*. 2nd ed. Canberra: Pacific Linguistics.
- Blust, Robert, and Elizabeth Nielsen. 2016. Avoidance of dissimilar labial onsets: The case of Subanon. *Oceanic Linguistics* 55:620–33.
- Brichoux, Robert. 1977. Spelling Subanon style: A test of a phonemic-cultural orthography. *Studies in Philippine Linguistics* 1:151–62.
- Daguman, Josephine Sanicas. 2013. *A grammar of Northern Subanen*. Munich: Lincom Europa.
- Elkins, Richard E. 1968. *Manobo–English dictionary*. Oceanic Linguistics Special Publication No. 3. Honolulu: University of Hawai‘i Press.
- Hall, William C. 1967. Segmental phonemes of Siocon Subanon. Unpublished MS, SIL Philippines.
- . 1972. The orthography of Western Subanon. Unpublished MS, SIL Philippines.
- . 1973. An outline of Siocon Subanon sentence structure. *Philippine Journal of Linguistics* 4(5):1–22.
- . 1997. Western Subanon phonemics. Unpublished MS, SIL Philippines.
- . 2014. Presentation and short description of the standard orthography of the Subanon language. Unpublished MS, SIL Philippines.
- Lobel, Jason William. 2013. Philippine and North Bornean languages: Issues in description, subgrouping, and reconstruction. PhD diss., University of Hawai‘i.
- Lobel, Jason William, and William C. Hall. 2010. Southern Subanen aspiration. *Oceanic Linguistics* 49:319–38.
- Reid, Lawrence A. 1973. Diachronic typology of Philippine vowel systems. <https://scholarspace.manoa.hawaii.edu/bitstream/10125/32977/1/A13.1973.pdf>.
- Simons, Gary F., and Charles D. Fennig, eds. 2018. *Ethnologue: Languages of the world*, 21st ed. Dallas: SIL International. Online at <http://www.ethnologue.com>.