The Pronunciation of Dusun

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Abstract

Dusun is one of the officially-recognised indigenous languages of Brunei, though its continued existence is threatened by the dominance of Malay in the country. This paper describes the eighteen consonants and four vowels of Dusun, based on the reading of word lists and also the *North Wind and the Sun* passage translated into Dusun and read by a 54-year-old male speaker of the language.

Introduction

Dusun is spoken by the Dusun people, one of the seven officially-recognised ethnic groups (*Puak Jati* 'native people' in Malay, or *Sang Jati* in Dusun) in Brunei Darussalam (Noor Azam, McLellan & Deterding, 2016). A related language is spoken by the Kadazan in Sabah, Malaysia (Aini, 2012). However, the languages of the Dusun in Brunei and the Kadazan in Sabah are quite distinct in terms of pronunciation and lexis (Yabit, 1994). In an early study, Clayre (1966) provided a description of several dialects of Dusun across Sabah and showed that, while there are considerable differences in pronunciation, most of the varieties have a high percentage of shared lexis.

Martin & Poedjosoedarmo (1996) classify Dusun and Bisaya as the 'Dusunic languages' of Brunei, but the two groups are officially considered as separate ethnic groups. According to Nothofer (1991), Dusun and Bisaya are "mutually intelligible dialects" with a shared lexical cognate level of 82% (p. 155). Yabit (1994) further asserts that the phonology of both varieties is similar. Nothofer (1991) briefly states that there are dialectal differences in the Dusun speaking areas, giving the example of the realisation of 'r' as an alveolar trill /r/ in coastal areas and a velar fricative /ɣ/ in inland areas. A velar fricative is used by the informant in the current study.

Out of the estimated total population of Brunei, which currently stands at about 434,000 (World Population Review, 2018), Minority Rights Group International (2018) reports that the Dusun people account for about 6.3%, although exact figures are difficult to obtain (Bernstein, 1997). A majority of the Dusun people live in the Tutong District (Asiyah, 2016), although some can also be found in several areas of the Belait District (Aini, 2007).

Kershaw (1994) notes that many Dusun speakers have shifted to using Brunei Malay, while recent studies (e.g. Fatimah & Najib, 2015) confirm that Brunei Malay seems to be increasingly popular among the Dusun community. This is not surprising as Brunei Malay is generally used as the lingua franca between the various ethnic groups in Brunei (Martin, 1996), and nearly fifty years ago Brown (1970, p. 4) observed that there was an on-going process of the minority ethnic groups in Brunei decreasing in numbers "through the movement of their members to classification as Malays". There is a growing concern about the Dusun language gradually becoming extinct as younger Dusun speakers often have poor competence in the language (Fatimah & Najib, 2015), and, on a scale of 0 to 6, Noor Azam and Siti Ajeerah (2016) estimate the 'vitality rating' of Dusun to be just 2. Indeed, Brunei's once linguistically diverse community is experiencing a transition towards homogeneity (Noor Azam & Siti Ajeerah, 2016). Universiti Brunei Darussalam (UBD) now offers courses on the Dusun language to students and also to the public in an effort to revive and maintain the Dusun culture and language (Najib & McLellan, 2018). It remains to be seen how effective such efforts will be in preserving the Dusun language.

The consultant

The recordings of the North Wind and Sun passage and the word lists were made by a 54-year-old male native speaker of Dusun who is from Batang Mitus village, about 20 km from the coast in Tutong District. He grew up speaking Dusun exclusively and only learned to speak Malay in primary school. He now speaks Dusun with family members and friends, but not with his wife (who is not Dusun) or children with whom he always speaks English.

Consonants

Dusun has the 18 consonants shown in Table 1. As is usual in consonant charts, the voiceless consonants are on the left of each cell while the voiced ones are on the right.

	Bilabial	Alveolar	Palatal	Velar	Glottal
Plosive	p b	t d		k g	ʔ
Affricate			ʧ ʤ		
Fricative		s		ɣ	
Nasal	m	n	ɲ	ŋ	
Approximant	w		j		
Lateral approximant		l			

Table 1. The consonants of Dusun

This inventory is adapted from Aini (2007, p. 12), though she additionally includes /h/. Jalin (1990) includes /h/ but excludes the glottal stop /ʔ/, while Yabit (1994) excludes /h/ but includes /ʔ/. It is important to include either /h/ or /ʔ/ in the inventory of phonemes, in order to distinguish between minimal pairs such as *bulu* ('fur') [bulu] which has an open final syllable that some analysts regard as ending with [h], and *bulu'* ('bamboo') [buluʔ] with final [ʔ]. (In Standard Malay and Brunei Malay, these two words are the other way round, as *buluh* 'bamboo' has final /h/ but *bulu* 'fur' has none.) The consultant insists that final [h] rarely occurs, but the glottal stop can sometimes be quite salient (especially in slow speech), so here we prefer the analysis that includes /ʔ/ but excludes /h/.

Unfortunately, the distinction between *bulu* ('fur') and *bulu'* ('bamboo') is not reflected in the orthography provided in the 7-dialect comparative wordlist published by the Brunei Language and Literature Bureau (DBP, 2011, p. 46) which gives the spelling of both words as *bulu* even though the pronunciation is shown differently: [buluʰ] versus [buluʔ]. To differentiate between words such as these, we deviate from the orthography suggested by DBP (2011) and use ' at the end *bulu'* to indicate a final /ʔ/, but we omit final 'h' in the orthography, even for borrowed words such as juba ('cloak') in the North Wind and the Sun passage which in Standard Malay is *jubah*.

The consonants are illustrated in the word list below, with the orthographic versions shown in italics. DBP (2011, p. 178) lists *dila* ('tongue') as a Bisaya word and gives the Dusun equivalent as *jila* [ʤila]. However, the consultant insists that *dila'* is the traditional word in Dusun while many younger speakers prefer *jila'*, so it seems that the contrast between *dila'* and *jila'* is not just a difference between Dusun and Bisaya as suggested by DBP (2011).

/p/	/palad/	*palad*	'palm (of the hand)'	/m/	/mato/	*mato*	'eye'
/b/	/bolow/	*bolou*	'blind'	/n/	/nubuɣ/	*nubur*	'rice
/t/	/tulaŋ/	*tulang*	'bone'	/ɲ/	/ɲaman/	*nyaman*	'delicious'
/d/	/dilaʔ/	*dila'*	'tongue'	/ŋ/	/ŋkajaw/	*ngkayau*	'liver'
/k/	/kadat/	*kadat*	'forehead'	/s/	/siku/	*siku*	'elbow'
/g/	/giɣak/	*girak*	'to laugh'	/j/	/jatim/	*yatim*	'orphan'
/ʧ/	/inʧan/	*incan*	'cousin'	/w/	/waluʔ/	*walu'*	'nine'
/ʤ/	/ʤaɣi/	*jari*	'finger'	/l/	/liaw/	*liau*	'neck'
/ɣ/	/ɣabas/	*rabas*	'face'	/ʔ/	/buluʔ/	*bulu'*	'bamboo'

All consonants listed in the inventory can occur in initial position with the exception of /ʔ/ which only occurs in final position. Unlike in Malay, in which voiced plosives only occur in final position in borrowed words (Clynes & Deterding, 2011), in Dusun /b, d, g/ often occur in final position, such as in *kaniab* ('yesterday'), *talid* ('sprouting branch'), and *aig* ('water').

In initial position, /p, t, k/ are generally unaspirated, though sometimes /k/ can have some aspiration. In the word list above, the /k/ in *kadat* ('forehead') has Voice Onset Time (VOT) of 32 msec, but there is minimal aspiration on the initial consonant of *palad* ('palm') and *tulang* ('bone'). In the North Wind and the Sun passage, the average VOT for initial /p/ is 8 msec, for /t/ it is 17 msec, and for /k/ it is 20 msec, confirming the /p/ < /t/ < /k/ ranking for VOT found in English (Docherty, 1992), Chinese (Deterding & Nolan, 2007) and Brunei Malay (Deterding & Ishamina, 2017). However, in Dusun the VOT for /k/ is quite variable, ranging from 6 msec to 49 msec for the /k/ in the eight tokens of *kuat* ('strong') in the passage. The boxplot in Figure 1 shows the range of VOT for initial /p, t, k/, with the median for each consonant shown as a thick line. It can be seen that the median for /k/ (14 msec) is actually lower than that for /t/ (18 msec), but the range for /k/ is substantially greater than for the other two voiceless plosives. The standard deviation of the VOT for these three consonants is 3 msec for /p/, 3 msec for /t/, and 24 msec for /k/.
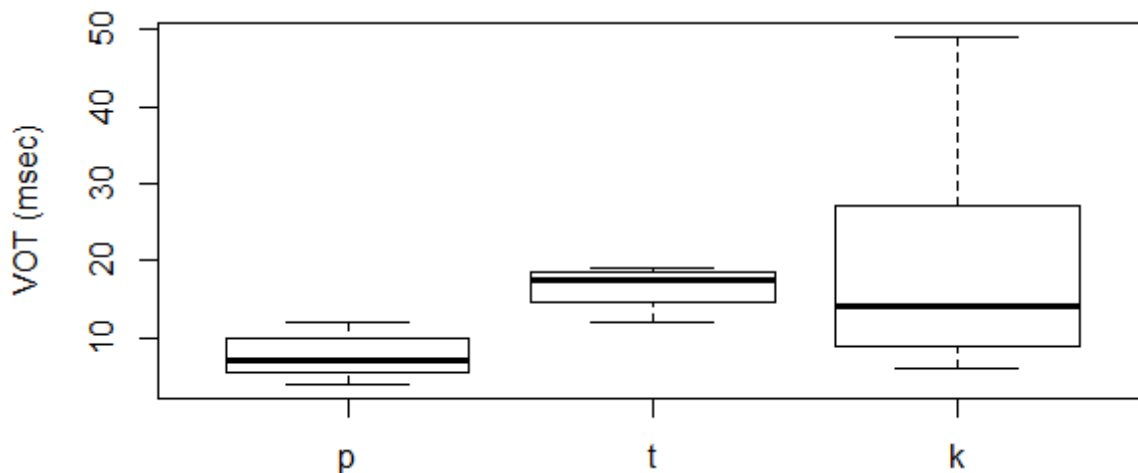

Figure 1. VOT for initial /p, t, k/ in the North Wind and the Sun passage

In final position, /p/, /t/ and /k/ are generally unreleased, and /k/ in final position is hard to differentiate from a glottal stop. DBP (2011, p. 154) gives the pronunciation of *girak* ('laugh') as /giɣaʔ/, but here we prefer to represent it as /giɣak/ and note that the /k/ is generally unreleased. In the recording of the North Wind and the Sun passage, the first word *mpak* ('when') is pronounced as [mpak˺].

Vowels

There are four vowels in Dusun: /i a o u/ (Yabit, 1994; Aini, 2007, p. 11; 2012, p. 639). Their quality is shown in the vowel quadrilateral in Figure 2.
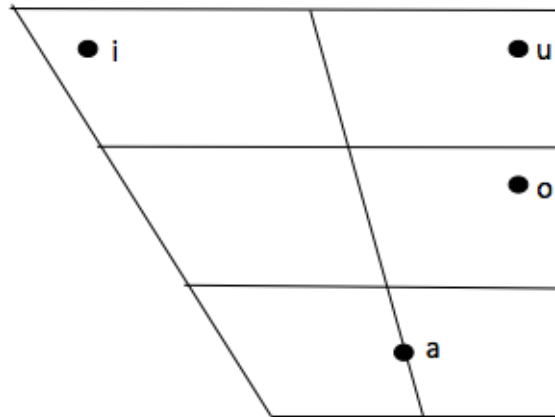

Figure 2. The four vowels of Dusun

These four vowels are illustrated in the following words:

/i/	/inan/	*inan*	'body'
/u/	/ulu/	*ulu*	'head'
/a/	/abuk/	*abuk*	'hair'
/o/	/mato/	*mato*	'eye'

The quality of all the tokens of the four vowels in reading of the North Wind and the Sun passage is shown in the plot of the first two formants in Figure 3. The frequency of the formants was measured using Praat (Boersma & Weenink, 2016), and the values have been converted to a Bark scale using the formula suggested by Traunmüller (1990). Ellipses have been drawn to enclose about 68% of the tokens using the vowel-plotting utilities developed by McCloy (2012).
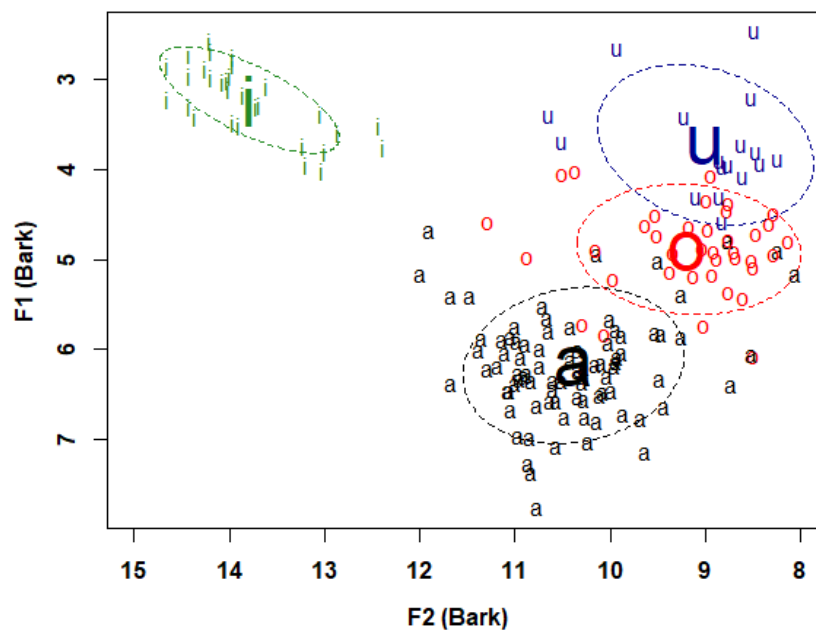

Figure 3. Plot of the first two formants (F1 and F2) of all the vowels in the North Wind and the Sun Passage

It can be seen that, while the close front vowel /i/ is quite distinct from the other three vowels, there is some overlap between /a/, /o/ and /u/. Some of the tokens of /a/ with a relatively non-open quality occur in the first syllable of *pangambara* ('traveller'), and in the phonetic transcription, the quality of this vowel is shown as [ə] in three out of four of the tokens of this word. It is probable that the quality of this vowel is influenced by its quality in Standard Malay, where the word is *pengambara* (with /ə/ in the first syllable).

Diphthongs?

It is sometimes claimed that Dusun has diphthongs such as /ai/ and /ou/ (Yabit, 1994; Aini, 2007, p. 11; 2012, p. 639). Such diphthongs only occur in word final position so, just as with Standard Malay (Clynes & Deterding, 2011) and Brunei Malay (Deterding & Ishamina, 2016), they can be regarded phonologically as a monophthong followed by a glide, /j/ or /w/. We prefer this analysis and therefore claim that phonologically Dusun has no diphthongs. The following word-final monophthong-plus-glide combinations occur:

/aw/	/pulaw/	*pulau*	'island'
/ow/	/omow/	*omou*	'oil'
/aj/	/anaj/	*anai*	'white ants'
/oj/	/bosoj/	*bosoi*	'waterfall'
/uj/	/sikuj/	*sikui*	'watermelon

Syllable structure

Dusun can have word-initial clusters with a nasal followed by a plosive, such as *mputid* ('tadpole'), *mbulo* ('to start'), *ntalun* ('jungle'), *ndaki* (*Albizia saponaria*, a small tree, the bark of which is used for soap), and *ngkayau* ('liver'). The structure of the syllable is therefore (N)(C)V(C), where the initial clusters can only be a nasal followed by a homorganic plosive.

Aini (2012, p. 639) notes that words which in Standard Malay have a medial /h/ have no /h/ in Dusun, so Malay *jahat* ('cruel') is *raat* [ɣaːt], and in the North Wind and the Sun passage, the Malay *tahan* ('to last') is *taan* [taːn]. DBP (2011, pp. 115 & 278) gives the orthography of these two words as *rat* and *tan* respectively, but this fails to indicate that the word has a long vowel. The existence of words such as *raat* [ɣaːt] reflects the existence of long vowels, but phonologically a long vowel can be regarded as bisyllabic, so *raat* is /ɣaat/ and *taan* is /taan/. Other words with long vowels are *raa'* ('blood'), *raan* ('branch'), *roo* ('chin') and *duu'* ('there').

Orthographic version of 'The North Wind and the Sun'

Mpak i Longos Utara' maya' i Matoadau batangkar pasal isoi yang lagi kuat, aro no jalama' pangambara' nikot. Rodo' satuju' isoi yang kalap nanggal juba pangambara' ino, iyo no yang paling kuat. I Longos Utara' pun nigi' kuat-kuat no, tapi makin kuat iyo nigi', makin no pulang pangambara' ino nikom bonor-bonor juba no. I Longos Utara' pun ngala. Suda no i Matoadau lagi mancar kuat-kuat saboi pangambara' ino andi taan, tarus iyo muka' juba no. Jadi, i Longos Utara' pun paksa' ngakun i Matoadau lagi kuat tob diso.

Phonemic transcription of 'The North Wind and the Sun'

mpak i loŋos utaɣaʔ maJaʔ i matoadaw bataŋkaɣ pasal isoj jaŋ lagi kuat ‖ aɣo no dʒalamaʔ paŋambaɣaʔ nikot ‖ ɣodo satudʒuʔ isoj jaŋ kalap naŋgal dʒuba paŋambaɣaʔ ino ijo no jaŋ paliŋ kuat ‖ i loŋos utaɣaʔ pun nigiʔ kuat kuat no ‖ tapi makin kuat ijo nigiʔ makin no pulaŋ paŋambaɣaʔ ino nikom bonoɣ bonoɣ dʒuba no ‖ i loŋos utaɣaʔ pun ŋala ‖ suda no i matoadaw lagi mantʃaɣ kuat kuat saboj paŋambaɣaʔ ino andi taan ‖ taɣus ijo mukaʔ dʒuba no ‖ dʒadi i loŋos utaɣaʔ pun paksaʔ ŋakun i matoadaw lagi kuat tob diso

Phonetic transcription of 'The North Wind and the Sun'

mpakˀ i loŋos utaɣaʔ ↗ | maJaʔ i matoʷadau ↗ | bətaŋkaɣ ↗ ‖
pasal isoi jaŋ lagi kwatˀ ↗ ‖
aɣo no dʒəlamaʔ ↗ | pəŋambaɣaʔ nikotˀ ↘ ‖
ʁodo studʒʊʔ ↘ | isoi jaŋ kalap naŋgal ↗ ‖
dʒuba paŋambaɣa ino ↘ | jo no jaŋ paliŋ kuatˀ ↘ ‖
i loŋos utaɣa pun nigɪʔ ↘ | kwatˀ kwatˀ no ↘ ‖
tapi makin kwatˀ ↗ | ijo nigɪʔ ↗ | makin no pulaŋ pəŋambaɣa
ino ↗ | nikom ↘ | bonoʁ bonoʁ ↘ | dʒuba no ↘ ‖
i loŋos utaɣaʔ pun ↗ | ŋalaˀ ↘ ‖
suda no ↗ | i matoʷadau lagi mantʃaɣ ↗ | kwatˀ kwatˀ ↗ |
saboi pəŋambaɣa ino ↗ | andi taːn ↘ ‖
taɣus ijo mukaʔ ↗ | dʒuba no ↘ ‖
dʒadi i loŋos utaɣaʔ pun ↗ | paksaʔ ŋakun ↗ | i matoʷadau
lagi ↗ | kwatˀ tob diso ↘

Notes on the phonetic transcription

- *pangambara'* ('traveller') is shown as ending with a glottal stop in the orthography. In the reading of the passage, the first token clearly ends with a glottal stop, but it is hard to hear a glottal stop at the end of the subsequent three tokens. This pronunciation of the word may be influenced by the Standard Malay *pengambara* which has no final glottal stop, as the word is a borrowed word.

- *ngala* ('to give up') should have no final glottal stop; but the consultant produced it with a final glottal stop. He subsequently suggested this might be an error. It illustrates some degree of uncertainty regarding words ending with glottal stop.

- The initial /ɣ/ on *rodo* ('they') and the final /ɣ/ in *bonor-bonor* ('really') is hard to hear, but the consultant insists it is there. Here it is shown as [ʁ].

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