ILLUSTRATIONS OF THE IPA

Central Sama

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Central Sama (ISO code sml) is spoken in the Philippines throughout the Sulu Archipelago and the Sibuguey Gulf to the north, and in many scattered communities as far north as Manila Bay. In Sabah, Malaysia, it is spoken primarily in the districts of Semporna and Kunak. For more information regarding the classification of this language within Austronesian, see Gordon (2005).

'Central' is not an indigenous label for the language; it simply reflects the central position of the language relative to other members of the Sama-Bajaw subgroup. Most native speakers of the language identify themselves as Sama, and the language they speak as Sinama. They are also known by numerous other names, a fact that has given rise to some confusion both in regard to identity and demographic information. Among these names are: Sama Dilaut (meaning 'ocean-going Sama', some semi-nomadic); Sama Pala'u (meaning 'boat-based Sama', semi-nomadic); Sama Jengen (meaning 'house-boat Sama'), found in the Bongao district of the Philippines; Sama Lipid (meaning 'land-based Sama'), a culturally distinct group of Central Sama speakers found in the Siasi municipality of the Philippines; Sama Pagung and Sama Paosol (meaning 'floating Sama' and 'house-building Sama', respectively); Badjaw (a sometimes pejorative exonym in the Philippines for migrant Sama Dilaut, but a more positive one for Central Sama speakers in Sabah, Malaysia). In addition, many Central Sama, though few of them own or live on land, choose – like other Sama – to identify themselves by a place name. For example, Sama Siasi, Sama Sitangkai, Sama Kabinga'an, Sama Ubian, and Sama Olutangga.

In Sabah, Malaysia, in addition to the names above, these people are known as Bajau Laut, Sama Laut, Sama Mandelaut, and Bajau Pela'u. English terms used to refer to this people group include both Sea Bajau and Sea Gypsies. In the year 2000, population estimate for the Central Sama in Sabah was 15,000 (Soderberg forthcoming). Gordon (2005) estimates the population of Central Sama in the Philippines to be 90,000.

The 'North Wind and the Sun' text was translated and read by Ruth Biral, an unmarried female speaker of Central Sama, 29 years of age at the time of the recording. Ms Biral was born and raised in Siasi, a municipality of Sulu Province in the Philippines. Both her parents are Central Sama. Besides her native Sama, Ms Biral also speaks English, and the Philippine languages Cebuano, Tagalog, Tausug, and Ilonggo.

¹ Some of these designations are from Dunn (1980: 24).

Consonants

Central Sama has 17 consonant phonemes.

Plosive & affricate	Bilabial p b	Dental ţ	Alveolar d	Post- alveolar d3	Palatal	Velar k g	Glottal ?
Nasal	m		n		л	ŋ	
Fricative			S				h
Approximant	W				j		
Lateral			1				
approximant							

PHONEME	PHONETIC FORM	ORTHOGRAPHIC FORM	ENGLISH GLOSS
p	[ˈpat̪ʊkˀ]	patuk	'adze'
p b	[ˈbaβäg]	babag	'cross-piece'
m	[ˈmaɣä]	maga	'morning star'
W	[ˈwalʊʔ]	walu'	'eight'
ţ	[ˈt̪anäm]	tanam	'comfortable with'
d	[ˈdagmɪt̪ ˈ]	dagmit	'do briefly'
n	[ˈnadʒäʔ]	naja'	'disaster'
S	[ˈsapɪd]	sapid	'braid the hair'
1	[ˈlapɪs]	lapis	'layer'
n	[ˈɲat̞äʔ]	nyata'	'see'
d ₃	[ˈdʒalʊm]	jalum	'needle'
j	[ˈja]	ya	'which'
k	[ˈkap:äḷ]	kappal	'ship'
g	[ˈgaβʊn]	gabun	'cloud'
ŋ	[ˈŋa:?]	ngā'	'get, take'
?	[ˈkaʔäm]	ka'am	'you plural'
h	[ˈhapäḷ]	hapal	'clear sounding'

Central Sama has three voiced plosives /b d g/, each of which has a fricative allophone [β Γ γ] when it occurs between vowels, either within a word or at word boundaries.

PHONETIC FORM	PHONEMIC FORM	ENGLISH GLOSS
[ˈbaβäʔ]	/baba?/	'carry on the back'
[ˌbinäˈyarän]	/binayadan/	'paid'
[ˈpayäl̩]	/pagal/	'fish trap'
[ˈakʊ ru]	/aku du/	'I indeed'

It has three voiceless plosives /p t k/, which are unreleased as [p t k] in syllable-final position.

PHONETIC FORM	PHONEMIC FORM	ENGLISH GLOSS
[ˈsakäpʾ]	/sakap/	'prepared'
[ˈdagmɪt̪ ˈ]	/dagmit/	'do briefly'
[ˈpatukˈ]	/patuk/	'adze'

The lateral approximant /l/ has a retroflexed allophone []] before a pause or before a consonant other than [1].

PHONETIC FORM	PHONEMIC FORM	ENGLISH GLOSS
[ˈbul̞bʊl̞]	/bulbul/	'feather'
[ˈbulän]	/bulan/	'moon'

The phonemes /j/ and /n/ are uncommon in word-initial position. Out of a corpus of 10,000 words, only five begin with /j/ and six with /n/. The phoneme /j/ occurs frequently wordmedially and word-finally.

Geminate consonants

This section includes notes on the status of the 13 lengthened consonants of Central Sama, in response to suggestions from a colleague that the observed length might be conditioned by a preceding schwa, and therefore not phonemic.

All consonants other than /h? n w/ occur as geminate clusters, word-medially in both stressed and unstressed syllables. They form the coda of the foregoing syllable and the onset of the following one, and are represented orthographically as sequences of two identical consonants.

In the examples below, the schwa is not written orthographically when it occurs wordinitially, this being the preference of native speakers. We interpret the cluster [dd₃] in ['buddʒän] 'maiden' as a geminate, with the fricative component lost between the two plosives, perhaps for articulatory reasons. The orthographic representation of the word as budjang is the preference of native speakers.

Geminate consonant examples:

	PHONETIC	PHONEMIC	ORTHOGRAPHIC	
PHONEME	FORM	FORM	FORM	ENGLISH GLOSS
p	[ˈpːäk]	/əppak/	ppak	'seagull'
	[ˈkupːä	/kuppa/	kuppa	'jump down'
	[ˈkəpːäŋ]	/kəppang/	k'ppang	'lie flat'
b	[ˈbːʊŋ]	/əbbuŋ/	bbung	'porpoise'
d ₃	[ˈbuddʒäŋ]	/budʒdʒaŋ/	budjang	'maiden'
m	[ˈkamːʊt̪ˈ]	/kammut/	kammut	'gnat'
t	[ˈt̪ːäpˀ]	/əttap/	ttap	'open and close lips
				repeatedly'
d	[ˈbidːäʔ]	/bidda?/	bidda'	'difference'
n	[ˈn:ä?]	/ənna?/	nna'	'place inside'
1	[ˈlːäw]	/əllaw/	llaw	'day, sun'
S	[1's:ä]	/ləssa/	l'ssa	'taste something'
k	[ˈkːät̪ ᠯ]	/əkkat/	kkat	'to separate'
g	[ˈgːäkʾ]	/əggak/	ggak	'belch'
ŋ	[ˈŋ:ɪk [¬]]	/əŋŋik/	ngngik	'to squeak, as a
				mouse'
j	[ˈkujːäʔ]	/kujja?/	kuyya'	'monkey'

We interpret these lengthened consonants as true phonemic geminates for the following reasons:

(i) They occur after each of the six phonemic vowels, not merely after schwa.

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	PHONETIC	ORTHOGRAPHIC	
PHONEME	FORM	FORM	ENGLISH GLOSS
ə	[ˈtəpːa]	t'ppa	'to pound rice'
e	[ˈabːʊ]	abbu	'pride'
	['bel:e?]	belle'	'sea hawk'
i	[ˈbidːäʔ]	bidda'	'be different from'
0	['bok:o?]	bokko'	'green turtle'
u	[ˈbudːɪ]	buddi	'keep in mind, especially of a
			debt of gratitude'

(ii) The lengthened consonant is retained even in those Sama-Bajaw languages which have replaced the reconstructed schwa of Proto Sama-Bajaw with a different vowel. The examples in the following table are phonemic representations. Geminate consonants in Sama-Bajaw languages:

Proto	CENTRAL		ABAKNON	SOUTHERN	ENGLISH
Sama-Bajau	SAMA	YAKAN	SAMA	SAMA	GLOSS
*kakkal	/kakkal/	/kakkal/			'permanent'
*həlla	/həlla/	/hella/	/alla/	/halla/	'husband'
*təll y n	/təllon/	/tellen/	/tallun/		'to swallow'
*lappas	/lappas/	/lappas/	/lappas/		'abalone'

- (iii) Geminate clusters are consistent with (a) the occurrence of consonant clusters at syllable boundaries, e.g. /dag.mit/ 'do briefly', /bul.bul/ 'feather', /am.bat/ 'do completely', /anak.bi/ 'your (plural) child'; and (b) the occurrence of /ə/ preceding consonant clusters other than the proposed geminates, e.g. /kəmbal/ 'twin', /dənda/ 'woman', /səŋggal/ 'wedge'; /tənton/ 'fishing technique' /pənsot/ 'navel'.
- (iv) Minimal and near-minimal pairs display a contrast between lengthened consonants and those of normal length, e.g. /agal-agal/ 'seaweed' and /aggal/ 'reluctant'; /bida/ 'to pull' and /bidda?/ 'difference'; /kasa?/ 'shroud-cloth' and /kassa?/ 'glass'; /sabut/ understand' and /sabbut/ 'invoke by name'; /tagal/ 'excuse' and /taggal/ 'support'.
- (v) There appears to be no set of phonological phenomenon conditioning all the lengthened consonants.

Vowels

Central Sama has six vowel phonemes, /i e ə a o u/.

	Front	Central	Back
High	i		u
Mid	e	Э	0
Low		a	

	PHONETIC	PHONEMIC	ORTHOGRAPHIC	
P HONEME	FORM	FORM	FORM	ENGLISH GLOSS
i	[ˈt̪ ipɪd]	/tipid/	tipid	'on the edge of'
e	[ˈt̪epo]	/tepo/	tepo	'mat'
Э	[ˈt̪əp:ɪʔ]	/təppi?/	t'ppi'	'approach'
a	[ˈt̪apä]	/tapa/	tapa	'to roast'
u	[ˈt̪upäs]	/tupas/	tupas	'side dish'
0	[ˈt̪opäd]	/topad/	topad	'same age'

Three of these vowels, /i a u/, exhibit allophonic variation: the tense allophone occurs in stressed syllables, while the lax allophone occurs in unstressed syllables. Vowels displaying allophonic variation:

	STRESSED	ENGLISH GLOSS	Unstressed	ENGLISH GLOSS
/a/	[ˈt̪apä]	'to roast'	[täˈpahun]	'roast it'
/i/	[ˈsikʊ]	'elbow'	[sɪˈkukʊ]	'my elbow'
/u/	[ˈbalʊt̪ ʾ]	'to hold'	[bäˈlut̞ɪn]	'hold it'

All vowels except /ə/ have a lengthened counterpart. We interpret these as sequences of two syllabic vowels because minimal and near-minimal pairs show a semantic contrast between lengthened and unlengthened vowels. Examples:

PHONETIC	PHONEMIC	ORTHOGRAPHIC	
FORM	FORM	FORM	ENGLISH GLOSS
[äˈtaː]	/ataa/	atā	'distant'
[ˈatä]	/ata/	ata	'slave'
[sɪˈɣaː]	/sigaa/	sigā	'they (two)'
[ˈsiɣä]	/siga/	siga	'cigarette'
[pinäˈteːʔ]	/pinatee?/	pinatē'	'made to count as important'
[pɪˈnateʔ]	/pinate?/	pinate'	'broken off'
[päˈkoːḷ]	/pakool/	pakōl	'cause to agree to'
[ˈpakoḷ]	/pakol/	pakol	'riding saddle'
[päˈtiːg]	/patiig/	patīg	'to tilt sideways'
[ˈpatɪg]	/patig/	patig	'heavy cloth'
[bɪˈniːt̪]	/biniit/	binīt	'lashed in place'
[ˈpinɪt̪]	/pinit/	pinit	'house lizard'
[ˈbuːkʊ]	/buuku/	būku	'my hair'
[ˈbukʊ]	/buku/	buku	'button'

Central Sama phonology demonstrates harmony between front and back vowels in bisyllabic roots. If one vowel is closed, both will be closed, as the examples below demonstrate. Front and back vowel harmony:

CENTRAL SAMA	ENGLISH GLOSS	CENTRAL SAMA	ENGLISH GLOSS
/kuwit/	ʻskin'	/kowet/	'umbilical cord'
/igut/	'coccyx'	/egot/	'do relentlessly'
/sipit/	'clip together'	/sepet/	'spatter'
/butu?/	'eat like an animal'	/boto?/	'penis'

Stress

Primary stress in Central Sama is not phonemic and falls on the penultimate syllable. When a stem is suffixed, the primary stress shifts so that penultimate stress is maintained, as in the examples below. In words of four syllables or more, secondary stress falls on the syllable two syllables prior to the penultimate. In this section of the paper and in the phonetic transcription which follows, primary stress is marked with [1] while secondary stress is marked with [1]. Structural pauses are marked with /.

PHONETIC FORM ENGLISH GLOSS

['anäk'] 'child'

[ä'nakbı] 'your (plural) child'

[käˈlitän] 'shark'

[ˌkälɪ'tanän] 'shark-infested' [ˈbaɣɪd] 'matches' [bäˈɣidnä] 'his matches'

['base?] 'wet'

[mäg,bäse'?anän] 'getting wet'

Recorded passage

Phonetic transcription

na dā'kaju? 'l:āw māg,kālu'kas:ā si hā'bayāṭ' 'makā si 'l:āw / ja pāg,kālukā's:ahān 'sɪyā:m baŋ saɪ 'kono? ā'kosog mɪn 'siya:m ˌkāru'waŋān / pā'salṭā? ā'nijā? dā'kaju? ˌbijā'hero ˌmaɪ'na?ān 'aŋkān 'sɪya:m māg'suluṭ baŋ saɪ 'kono? ˌmākāpāhu'rusān 'səm:ek ˌbijā'hero ɪ'na:n / 'ijā ja ˌäŋān'da?ug / mān'jarī pā'rā'hu: na si hā'bayāṭ' ˌämā'luwās ko'sognā bo? 'ijā ā'nijup pā'kosog / ˌpɪnus'pusan ṭo?'oŋān 'he?nā ko'sognā 'sayo? 'jampā na 'ijā ā'nijup pā'kosog gom 'pa?ın na ɪ'sa:b āŋ'əm:os 'dinā ˌbijā'hero 'ina:n / na 'pagkā 'halām ˌkāhu'rusān e? si hā'bayāṭ 'səm:ek ˌbijā'hero ɪ'na:n / ˌpɪnā'səl:e? 'e?nā si 'l:āw ˌāma'luwās ko'sognā / na pā'silāk māg'ṭu:j si 'l:āw ˌāmus'pusān pā'su?nā / 'landu? ṭo?'oŋān ā'pasu? 'sampāj 'mbal ṭā'sandāl e? ˌbijā'hero ɪ'na:n 'aŋkān 'ijā ˌäŋu'rusān 'səm:eknā 'ɪnuṭ' / mā kāˌṭāpu'sannā 'pagkā mbāl na ˌkāsān'dalān 'pasu? ɪ'na:n / ā'nanṭāŋ ˌbija'hero ɪ'tu: bo? pā'kuppā ni 'tigbāw ja baj ˌmār'na?ān ā'sa:l ma lā'bajān / hā'ṭinā ā'ha:p 'layı? 'kiṭā ˌähā'nunut' min ā'moyos

The current orthography is a work in progress, with the full impact of Tagalog (effectively the national language) and growing literacy yet to be felt. We acknowledge that the use of the symbol ['] for both glottal stop and schwa is not an elegant solution to the problem of representing two non-standard phonemes without resorting to the use of diacritics. In its defence as an interim orthography, however, we note that native speakers of Central Sama who have been previously taught to read Tagalog and English, read material in this orthography with no further instruction.

Orthographic transcription

Na, dakayu' llaw, magkalukassa si Habagat maka si Llaw. Ya pagkalukassahan sigām bang sai kono' akosog min sigām karuwangan. Pasalta' aniya' dakayu' biyahero maina'an angkan sigām magsulut bang sai kono' makapahurusan s'mmek biyahero inān, iya ya anganda'ug. Manjari parahū na si Habagat amaluwas kosogna bo' iya aniyup pakosog. Pinuspusan to'ongan he'na kosogna sago' yampa na iya aniyup pakosog, gom pa'in na isab ang'mmos di-na biyahero inān. Na, pagka halam kahurusan e' si Habagat s'mmek biyahero inān, pinas'lle' e'na si Llaw amaluwas kosogna. Na, pasilak magtūy si Llaw, amuspusan pasu'na. Landu' to'ongan apasu' sampay mbal tasandal e' biyahero inān.

Angkan iya angurusan s'mmekna inut-inut. Ma katapusanna, pagka mbal na kasandalan pasu' inān, anantang biyahero itū bo' pakuppa ni tigbaw ya bay maina'an asal ma labayan. Hatina, ahāp lagi' kita ahanunut min amogos.

Acknowledgements

We wish to thank David Mead, Steve Parker, Pete Unseth, Scott Youngman and two anonymous reviewers for helpful comments and suggestions. All errors are our responsibility.

References

- Dunn, Phyllis A. 1980. Sabah peoples' who's who: A glossary of the terms used for the people and languages of Sabah, East Malaysia. Sabah Museum Annals 2, 19-61.
- Gordon, Raymond G., Jr. (ed.). 2005. Ethnologue: Languages of the world, 15th edn. Dallas, TX: SIL International. [Online version: http://www.ethnologue.com/]
- Soderberg, Craig. Forthcoming. Intelligibility prediction models applied to the coastal languages of Sabah, Malaysia. Ms., Boston, MA.