

THE PHONEMES OF KAMANO

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Symbols

Stress is symbolized on words by an acute accent over the vowel of the syllable. Stress patterns are symbolized by an apostrophe to symbolize stress and a dash to show no stress. For example
'- means stress no stress.

Glottal is symbolized by an apostrophe.

The voiced alveolar sibilant (z) is symbolized by (y) because in other dialects and a related language this sound is a fricative (y).

Flapped ř is symbolized by r.

The Phonemes of Kamano

0. Introduction

The purpose of this paper is to present the phonemes of Kamano.

1. Consonantal Contrasts

There are nineteen consonants: /p, t, k, ʔ, g, ^mp, ⁿt, ^ŋk, b, ɾ/ /f, s, h, y, m, n, ^ʔm ^ʔn, ^ʔy/.

These contrast as follows:

/^mp/ /p/ /f/ /v/ /m/

^mpo^mporiya peas

pópo hunoʔ she beat the earth

kyópa possum

yo^mpa wooden bowl

mopa earth

mófaʔ girl

pró hia its spurts

fró flee

fénone goods

véneʔne man

háve stove

káfe a place name

/ʔm/ /m/

afúʔmo pig-agent

kúmoʔ smoke-agent

/t/ /ⁿt/ /r/ /n/

ntá'amo'	<u>her mother</u>
tatá'amo'	<u>her grandmother</u>
ra	<u>big</u>
kóra	<u>blood</u>
kotá	<u>splinter</u>
hó ⁿ to	<u>jews harp</u>
n ^t á	<u>you put (it)</u>
k ⁿ tío	<u>shut your eyes</u>
hrío	<u>shoo (pigs, etc.)</u>
htío	<u>sew</u>
nó	<u>eat!</u>
ntó	<u>put (it)!</u>
ro huó	<u>peel (it)!</u>
tófo	<u>a lady's name</u>

/k/ /ⁿk/ /g/

vutákeno'	<u>you two having gone he....</u>
vutá ⁿ keno'	<u>you having gone he.....</u>
vutagéno'	<u>they having gone he.....</u>

/k/ /' /

háke	<u>pitpit</u>
há'e	<u>that is all</u>

/ʔ/ /#/

kuʔ string bagku smokevue I govuʔe We two go

/n/ /ʔn/

nénea he is eatingnéʔnea he ate

/m/ /ʔm/

áma thatmaʔma dogTrihuʔme a namehume nevia while doing he went

/s/ /y/

ngéya small of my backngésa my ear

/y/ /ʔy/

túya axe handletúʔya tongs

/h/ /k/

háve

stove

káve

food

2. Consonantal Variants

The voiceless stops /p/ /t/ and /k/ have preglottalized variants word medially, /p/ /t/ and /k/ occurring initially.

pasá'

bamboo comb

[há'pa]

mud

kana

road

[ha'ke]

pitpit

[ta'ta'amo']

his grandmother

The phoneme /f/ occurs in free fluctuation with [p].

All other consonant phonemes are manifested only by their phonemic norm.

3. Vocalic Contrasts

/i/ /e/

krí'nea

she planted

kré'nea

she cooked

/u/ /o/

móna

sky

mína

girl

/a/ /o/

vu'náne

you went

vu'nóne

we all went

4. Vocalic Variants

All vowels have allophones differing by length. The longer allophone occurs in the nuclear syllable of the word (the stressed syllable.)

The close vowels /i/ /u/ /o/ have open variants occurring in free fluctuation.

The vowel /e/ has a close variant which occurs word finally while the open variant occurs word initially or medially.

[fɛnone]

goods

/a/ has a short mid variant [ʌ] which is morphologically defined.

It occurs initially and is the third person pronoun prefix.

5. Distribution of Phonemes

Distribution is described in relation to the syllable. The syllable is defined as a unit of potential stress placement.

The following CV patterns are found:

V o yes, VV ue I come, CV ku smoke,

CVV via he goes, CCV kfa rat, CCGV ftgo

straight, CCCVV ftgoa straight, CCCCVV knmrea he

is recovered, VC a' Woman CVC ku' string bag,

CCVC yfo' sugar cane.

Glottal stop is the only consonant which closes a syllable.

The single C slot which occurs syllable initially may be filled by any consonant.

In clusters of two consonants any consonant may occur in first or second position. In clusters of three consonants the first position may be filled by any consonant except the pre-nasalized stops, the second by any consonant except the velars k, h, and ⁿk. The third slot may be filled by any consonant except p, t, nt, ⁿk, s or f.

For more detailed treatment of vowels and co-occurrence restrictions see "A Distribution Statement of Kamano Phonemes" by A. M. Payne.

6. Phonological Word

The phonological word has been defined as the smallest unit which can occur in isolation. It has a nucleus of pertinent stress placement. This may fall on the first, second or third syllable.

7. Stress

Stress is shown by length and intensity. A stressed syllable is usually accompanied by higher pitch. There is one pertinent stress per phonological word from which others may be predicted. Non-pertinent stresses radiate on alternate syllables preceding and succeeding the pertinent stress. A stress preceding the pertinent stress tends to be as strong as the pertinent stress whereas a

succeeding stress is much lighter and may be imperceptible but has the rhythm of alternate stress.

The following are the stress patterns found on two, three and four syllable words:

'-, -', '—, -', —', '—, -', —'.

'- nóya' fish, -' pasá' bamboo comb, '— nórya
fish, -'— tonára shelter, —' keginá fence,
 '— nágisaro' specific arrow, -'— konímenta specific
sweet potato, —'— kokorénta specific sweet potato.

There are a few four and five syllable morphological words which are being interpreted as two phonological words as they have a '—' stress pattern.

iyévi-nontána a being in the forest
 súrara'-énta a specific sweet potato

The plural pronoun suffix when suffixed to two syllable words with initial stress makes a '—' pattern.

mópa-yiní their two ground
 túsi-yimí their (plural) pumpkin

Morphophonemics

Verbs

Pertinent stress falls on the penultimate syllable of verbs except when certain morphemes are present in which case the pertinent stress falls on the syllable in which they occur.

névue I am going neváne You are going vutegéno' having
first gone-he vúno' having gone-he

Pertinent stress falls on the following morphemes even when they are not the penultimate syllable.

(a) The tentative future maker in the medial verbs (-su-) and the tentative future marker (-s-) in the final verbs.

vutegéno' having first gone-he BUT vutesúgeno' suppose
I go then he mní'nea he is BUT mnisía will he be.

(b) Second person singular, first and second/third dual and first person plural 'final pronouns' when present in the medial verb.

('Final pronouns' for the want of a better name, final as opposed to 'preview pronouns').

vu-'n-o-gé-no'	<u>go-past-I-change-he I having gone he</u>
vu-'n-á-nke-no'	<u>go-past-you-change-he you having gone he</u>
vu-'n-e-gé-no'	<u>go-past-he-change-he he having first gone he</u>
vu-'n-ó-ke-no'	<u>go-past-we- 2-change-he we two having first gone he</u>
vu-'n-á-ke-no'	<u>go-past-those 2-change-he those two having first</u> <u>gone he</u>
vu-'n-ó-nke-no'	<u>go-past-we all-change-he we all having first</u> <u>gone he</u>
vu-'n-a-gé-no'	<u>go-past-they all-change-he they all having</u> <u>first gone he</u>

It is interesting to note that when these pronouns are only followed by the mood marker in final verbs these stressed pronouns are the penultimate syllable.

vu'mue I went vu'náne you went vu'nea he went
 vu'nóne we all went.

(c) Stress falls on several final syllables:

1. The syllable which contains the Imperative marker.

enó you come ehó you all come

2. The third person plural final pronoun takes stress on the final syllable.

vu'nayé they all went vyé they all go

3. Stress falls on the final syllable -na but.

huaná I do but.. vu'neaná he went but...

4. The hortatory forms of the verb are irregular as far as stress is concerned. Hortatory first person: the stress falls on the first syllable.

vugeta'a let us (we two) go frégeta'a let us flee (dual)

The plural first person hortatory pertinent stress fall on the penultimate syllable except for the verb to go.

vinkéro let us go (pl) frenkéro let us flee (pl)

There are certain syllables upon which stress does not fall. The radiating predictable stress jumps right over these morpheme syllables to the next syllable and makes a '—' pattern.

Stress does not fall on the object pronoun prefixes or the -ga- of the future tense marker.

Examples of '—' pattern:

móve kafána blue door móve pasára blue comb

Although stress is contrastive there are very few stress minimal pairs so we expect that it need not be symbolized orthographically.

8. Phonological Phrase

The phonological phrase is a potential pause group which has phrase stress and intonational pitch. The phrase stress, which is semantically determined, coincides with the lexical stress.

Intonemes

There are two contour points¹ in a phrase. The first is the phrase nucleus. The pitch gradually rises to this point and gradually falls away. Contrastive intonemes are manifested from the second contour point which is the last stressed syllable in the phrase.

Four phonemic registers are pertinent for the intonation system. "Very high" is symbolized by 1, "high" by 2, "mid" by 3, and "low" by 4.

The "continuity morpheme" is manifested by a slight downglide on the final syllable of the phrase.

Interrogation is shown in several ways. The interrogative word pí, which can follow nouns, verbs or adjectives, has a very high pitch with a slight downglide. In nouns the stress is perturbed to the final syllable which contains the interrogative suffix and takes high pitch. In verbs the stress is not perturbed but

the pitch of the stressed syllable becomes "very high".

The imperative morpheme is manifested by -o plus stress on that syllable plus ³⁻⁴ glide intoneme.

Listing intonation is manifested by a level ³ pitch.

"Hesitation intonation" is manifested by a slight down-up glide plus pause and optional laryngealization on the final syllable.

Reported speech. That which is reported has a normal intonation, but he said, has a high pitch with slight downglide.

Sentence final intonation is manifested by a ²⁻⁴ glide on the "final" verb in which the final vowel becomes voiceless.

A very high pitch and length on the vowel, may occur on the syllable which carries the pertinent stress of the phrase or word, to denote intensity. For example, distance and size may be intensified in this way.

There are two intonation patterns in which the contour points are not obvious. The first is "explanation or added information" which is manifested by a falling intonation over the whole phrase. The second is "in parenthesis intonation" in which the whole phrase is said on relatively lower pitches.

Footnotes.

1. See "The Intonation of American English" by Kenneth L. Pike, p. 26.
2. Intonation has not been fully analysed but this is the tentative analysis.

I was especially helped in my intonation analysis by the article "Tonemic and Intonemic Correlation in Mazahua" by Eunice Pike in the International Journal of American Linguistics, Vol. 17.

Kamano is spoken in the Kainantu and Henganofi sub-districts of the Eastern Highlands of New Guinea. The people number approximately 24,000. They are bounded by Bena Bena, Kanite, Usarufa, Gadsup and Agarabi speaking peoples. The language was studied in the village of Knampa, on the Goroka road, ten miles from Kainantu. Many informants were used over a period of $2\frac{1}{2}$ years.