

CARIB PHONOLOGY

Edward T. Peasgood

1. **The Carib Language.** Carib (Ahlbrinck 1931, De Goeje 1946, Hoff 1968) is a language of the Cariban family spoken by approximately 6,000 Amerindians who live in the north of South America from the Orinoco River in Venezuela to the Oyapok River in Brazil. There are two main dialects. The eastern dialect is spoken by 250 to 500 inhabitants of Brazil,¹ by 1,200 in French Guiana, and in the Marowijne River area of northeastern Surinam. The western dialect is spoken in the center and west of Surinam (2,400 speakers of both dialects in Surinam), in Guyana by 450 people, and in Venezuela by 1,500 people. The western dialect contains two subdialects: one in central and western Surinam, and another in Guyana and Venezuela.

This study is based on field work carried out from September 1968 to January 1969 among western dialect speakers in the village of Bigi Poika, fifteen miles west of the Saramacca River in north central Surinam. The principal language helper there was Mr. E. Paranawari. From January 1969 until the end of March, investigation continued in Paramaribo with Mr. A. Vanderbos.

2. **Foot.** A foot in Carib consists of from one to four (and possibly more) syllables. In feet of more than one syllable there is a point where the pitch rises markedly from one syllable to the next. The syllable after this rise is considered to bear a pitch accent; it is symbolized here with a circumflex instead of the dieresis over *i* as in *ki:ri* 'younger brother', and with an acute accent over other vowels, as in *pe:rú* 'dog'. If there is no marked pitch rise within the foot, then the pitch accent is considered to fall on the first syllable of the foot. This occurs only in interjections like *só:* 'so'. The boundary between the end of one foot and the beginning of another involves a slight decrease in speed and decrease in loudness of the voice at that point. Within the foot it is possible for the accent to fall on the foot final syllable as in *are:pá* 'cassava bread', *tuku:maú* 'variety of *awa:rá* palm tree (*Astrocaryum segregatum*)', or on the prefinal syllable as in *ja:kóno* 'friend', *ihpo:riri* 'creek'. Apparent cases of earlier accent may correspond to grammatical words that consist of more than one rhythmic foot; these have not been investigated yet. In feet consisting of only two syllables, however, the pitch accent always falls on the final syllable as in *pe:rú* 'dog'.

3. **Syllable.** The syllable patterns are V, VC, CV, CVC, where C represents a consonant and V represents a single vowel or a diphthong. The following examples include all these patterns. A dot in the examples indicates syllable boundary. a.re:pá 'cassava bread', ih.mé 'my son', ru:po.tá:e 'I am becoming tired', noh.póh.ko 'old woman', aj:ma.rá 'anjoemara fish (*Hoplia macrophthalmus*)', maj.náh.wa 'to the garden', and kajh.ku.sí 'any variety of bush tiger including jaguar and ocelot'.

Long and short syllables are distinct in the rhythmic pattern of feet except before pause, where all syllables are short. Long syllables include syllables that contain a lengthener (:) with either a vowel or a diphthong and syllables that end in h or a nasal following a vowel or a diphthong.

Three-syllable words in which the second syllable begins with a resonant and the third syllable begins with an obstruent show vowel length contrast. L represents a long syllable and S represents a short syllable. Forms are cited as they occur nonfinally in phrases. ye.rutí: (LSL) 'woman's sister-in-law', kare.tá: (SSL) 'paper', ware.sá: (SLL) 'pot for brewing kasiri', are:pá (SLS) 'cassava bread'. Although not completely satisfactory, aj:ma.rá (LSS) 'anjoemara fish' and kujjahkén (SLL) 'white-throated toucan (*Ramphastos tucanus*)', are at present the best evidence available to show contrasting length with diphthongs. pehtokó (LSS) 'kiskadee flycatcher (*Pitangus sulphatus*)', kajhkusi (LSS) 'bush tiger' and samburá (LSS) 'drum' illustrate long syllables of the kind that end with h and nasals.

4. **Phonemes.** Syllable initial consonants are divided into two groups: obstruents and resonants. The obstruents are voiceless stops p, t, k (labial, coronal, dorsal), voiced stops b, d, g (also labial, coronal, dorsal), and fricative s. The resonants are nasals m, n (labial, coronal), liquid r, and semivowels w, j, h. h occurs in syllable initial position only in interjections.

These distinctions are illustrated in foot initial position by pa:mí [pa:mí] 'brother-in-law', ta:mí [ta:mí] 'cigarette', kami:sá [kami:Isá] 'cloth', bani:rí [bani:rí] 'bush vine with edible fruit', dán [dán] 'then', guruntú [guruntú] 'vegetable', sa:nó [sa:nó] 'mother', mata:pi [ma'ta:'pi] 'cassava squeezer', na:pi [na:'pi] 'napi tuber (*Dioscorea trifida*)', re:ré [re:ré] 'bat', wahwá [wa'wá] 'older sister', ja:kóno [ya:'kó'no] 'friend', hén [héñ] 'oh'.

In foot medial position they are illustrated by pa:pá 'father', mata:pí 'cassava squeezer', ja:kóno 'friend', ara:bó 'eel-like fish (*Gymnotus carapo*, *Ramphichthys rostratus*, and *Sternopygus macrurus*)', wo:dí 'girl', pa:siwa 'hand broom', amo:ró 'you (singular)', sa:nó 'mother', porí:ri 'branch', awa:sí 'corn (*Zea mais*)', kojo:wá 'greater ani (*Crotaphaga ani*)', a:há '(interjection) all right; here, take it!'. k and g do not contrast medially.

Each consonant has a palatal allophone which occurs when i or a diphthong that ends in j precedes it and a vowel other than i follows (s

palatalizes when it is both preceded and followed by i). i does not affect h or a nasal occurring before a consonant, but palatalizes the following consonant. The palatalized counterpart of j, [j], has a more fronted tongue position than the nonpalatal allophone [y] and has slight friction. [y] or [j] are written after consonants in the examples that follow to indicate consonant palatalization with no friction or with friction respectively. **mari:pá** [mari:ʔpyá] 'maripa palm (Maximiliana maripa)', **majhpurí** [maip̄pyulí] 'tapir (Tapirus terrestris)', **ihtángo** [ixtjángo˘] 'you must go', **pi:tó** [pi:ʔtjé˘] 'little brother, little fellow', **ni:kái** [ni:ʔkjái˘] 'he pulled it out', **kaihkusí** [kaixkjuxsí] 'bush tiger', **pari:bin** [pari:byiñ] 'strong man', **simboká:e** [simbye˘ʔká:e˘] 'I loosen it', **indo:ké** [indjé˘ʔké˘] 'therefore' ~ **iro:ké** [i:dje˘ʔké˘], **ingáhna** [ingjá:ʔna] 'behind him', **pojngó** [po˘ingjé˘] 'white-lipped peccary (Dicotyles pecari)' (g never occurs except after ŋ), **pisu:rú** [pixsu:rú] 'white snipe (Leucophoyx candidissima)', **pihpisí** [pixpixxi] 'little bird named after its call', **simó** [si:myé˘] 'bush vine', **ihmémbó** [iʔmyémbó˘] 'little one', **ehkijñí** [exkiiñi] 'smoke', **karihná** [kariʔñá] 'Carib, person', **irómbó** [i:rjé˘mbo˘ ~ i:djé˘mbo˘] ([i:dzé˘mbo˘] in Guyana) 'then, next'. (d and r, however, contrast elsewhere: **wo:dí** [bo˘dí] 'girl' and **pori:rí** [pori:rji] 'branch'. [dj] after in could be considered an allophone of d, and an allophone of r in other palatalizing environments: **indo:ké** [indjo˘ʔké˘] 'therefore' ~ **iro:ké** [i:djo˘ʔké˘].) **pa:siwa** [pa:hsíbya ~ pa:hsivya] 'hand broom', **ihwá** [iʔbyá ~ iʔvyá] 'to or for him', **iju:kú** [iju:ʔkú] 'large black ant', **kujjahkén** [kuijaxkékñ] 'white-throated toucan'.

In words that begin with i in a short initial syllable, the i may fuse with the following palatalized consonant. **ine:kú** [iñe˘ʔkú ~ ñe˘ʔkú] 'poisonous root for fishing (Lonchocarpus spec.)', **ipo:tírí** [iʔpye˘ʔtíri ~ pye˘ʔtíri] 'his lip', **itu:bírí** [iʔtju:bíri ~ tju:bíri] 'woman', **ima:ró** [imja:ró˘ ~ mja:ró˘] 'with him'. However, fusing does not occur when r follows initial i: **iro:mí** [irjé˘:mí] 'dry season'.

The nonpalatal allophones of the consonants are [p, t, k, b, d, g, s, m, n, y, h], as in the first set of examples given.

r is an alveolar tap following e or preceded by and followed by i: **e:ró** [e˘:ró˘] 'this', **kasi:rí** [kaAsi:rí] 'kasiri, alcoholic drink made from cassava root'. r after u, o, i, and a is a reverse flap [ř] varying freely with a flap having slight lateral opening [l]. **pahporó** [pappo˘řó˘ ~ pappo˘ló˘] 'all', **kí:rí** [ki:ři ~ ki:lí] 'older brother', **ara:bó** [ařa:bó˘ ~ ala:bó˘] 'eel-like fish'.

Allophones of t, k, s are backed when they follow the back allophones of nonfront vowels: [t̄], [k̄], and [s̄]. **pi:tí** [pi:ʔtí] 'wife', **iju:kú** [iju:ʔkú] 'large black ant', **tuhkusí** [tux̄kux̄xi] 'one-headed arrow'.

Automatic glottal constriction in medial position of vocoids that precede syllable initial voiceless stops gives the allophones [ʔp], [ʔt], [ʔk]. In vocoids preceding voiceless stops the glottis constricts, and before the following stop is articulated, a very brief pause occurs while the glottis is closed. **kono:pó**

[kôno˘:ʔpó˘] 'rain', ta:tá [ta:ʔtá] 'mother', apu:kúj:ta [aʔpu:ʔkúi:ʔtja] 'paddle' where [ʔ] indicates glottal constriction of the preceding vocoid.

Automatic devoicing in medial position of vocoids that precede syllable initial *s*, and automatic devoicing in medial position of nasals that precede syllable initial voiceless obstruents, parallel glottal constriction of vocoids. *s* has additional allophones represented by [Vs], where V is the devoiced counterpart of the preceding vocoid. kîno:sán [kîno˘:O˘sán] 'he is coming', pisu:rú [piIsu:rú] 'white snipe', ku:sá [ku:Usá] 'crab (Brachyura)'. Similarly, voiceless obstruents have additional allophones represented by [NO], where N is the devoiced counterpart of the preceding nasal and O is the voiceless obstruent. tampóhko [tamMpóʔkɔ] 'old man', ya:mekuntá:no [ya:mɛʔkunNtá:no] 'wrist band', tansi [tanNsi] 'grandfather'. (*k* never occurs after nasals.)

Two allophones of *w*, [b] and [v], are in free variation. wa:nó [ba:nó ~ va:nó] 'bee', pa:siwa [pa:Asiɓya ~ pa:Asivya] 'hand broom'.

Glottal constriction separates contiguous vowels. However, when the accent of a word is on a long open syllable, and that syllable precedes a vowel, glottal constriction does not intervene. One exception to this is a:i [a:i] 'old grandmother', ká:e [ká:e˘] 'I say', a:á [a:ʔá] 'yes', ko:i [ko˘:ʔi] 'quickly', sajmá:e [saimyá:e˘] 'I smoke', nepu:i [nɛʔpu:ʔi] 'it is grown', ru:potá:e [ru:ʔpo˘ʔtá:e˘] 'I am becoming tired', kape:seú [kaʔpe˘:E˘seʔú] 'wasp', ara:ári [ara:ʔári] 'black-necked aracari (toucan: Pterolossus aracari)'.

Syllable nuclei include the vowels *i*, *e*, *u*, *o*, *ï*, *a*. They contrast word initially: i:ró 'this one, this thing', e:ró 'this', u:pi 'to look for', o:po:nó 'black-bellied tree duck (Dendrocygna autumnalis)', ï:ra:pá 'bow', a:ró 'to bring along'.

Word medially: pi:tó 'little brother', pe:rú 'dog', mu:tú 'bill-crowned motmot (Momotus momota)', wo:tó 'fish', pi:tí 'wife', pa:ri 'brother-in-law'.

Word finally: aku:ri 'agouti (Dasyprocta cayanus)', aka:ré 'alligator, cayman', ï:murú 'my son', tono:ró 'any large bird', je:míiri 'my daughter', samburá 'drum'.

The other seven syllable nuclei are diphthongs. They consist of vowels followed by the semivowels *j* and *w*: *ej*, *uj*, *oj*, *ij*, *aj*, *ow*, and *aw*. With reference to rhythmic patterns they behave like the single vowels. Only three of the diphthongs contrast word initially: *ijj* 'my husband', *aj:mará* 'anjoemara fish', *awhtó* 'house'. Elsewhere they all contrast: *awejhni* 'honey', *apu:kúj:ta* 'paddle', *pojhtó* 'nice, beautiful', *paj:ri* 'older sister', *kînowroján* 'he (dog) barks specifically at something', *kînowroján* 'he (dog) barks (general)', *pï:yéj* 'shaman', *ï:rúj* 'older brother', *na:pój* 'napoj tuber', *wo:rij* 'woman', *ongáj* 'comb', *sa:káw* 'sand'. There is no known final occurrence of *ow*.

The contrastive features of the vowels are height, frontness, and rounding. Rounding is distinctive for only the nonfront vowels. Although the traditional contrastive system (Hoff 1968) distinguishes front, central, back, and high, mid, low, this is redundant for Carib. The proposed contrastive system reflects the vowel contrasts adequately, it is useful for the morphophonemics, and reflects the allophonic variations more realistically, since *i* is central only in the environments in which *u* and *o* are also central.

High front *i* has the allophone [i]. It is a tense vocoid in close high front position. *pi:tó* [pi:ʔtjé˘] 'little brother'.

Nonhigh front *e* has as allophones [e˘], [ɛ], and [ɪ]. Lax [ɛ] and [ɪ] vary freely in closed syllables: *uwémbó* 'stomach' [ubémbó˘ ~ ubɪmbo˘], *kujjahkén* 'white-throated toucan (*Ramphastos tucanus*)', [kuijahkéŋ ~ kuijahkɪŋ]. [ɛ] also occurs in short open syllables: *nepu:i* [nɛʔpu:ʔi] 'it grew', and in diphthongs: *pí:jéj* [pi:yéi] 'shaman'. *e* is tense in long vowels and is articulated just below mid tongue position: *we:wé* [bɛ˘:bé˘] 'wood, tree'.

High nonfront rounded *u* has as allophones back rounded [u] and central rounded [ʊ]. [ʊ] occurs only after palatalized consonants: *itu:bíri* [iʔtju:bíri]. Otherwise it is [u]: *tu:ná* [tu:ná] 'water'. Slight lip rounding varies freely with moderate rounding in *u*. It is never extreme at any time.

Nonhigh nonfront rounded *o* has as allophones back rounded [o˘] and central rounded [ə˘]. [ə˘] occurs after palatalized consonants: *sihkójmá:e* [sɪxkʲjə˘imjá:e˘] 'I mix it'. Elsewhere *o* is a little lower than mid tongue position: *opo:nó* [o˘ʔpo˘:νό˘] 'black-bellied tree duck'. Slight lip rounding also varies freely with moderate lip rounding.

High nonfront unrounded *i* has the allophones high back unrounded [i̠] and high central unrounded [i]. [i̠] occurs after palatalized consonants: *exkiñi* [ɛxkiñi̠] 'smoke'.

Nonhigh nonfront unrounded *a* has one allophone [a]. It is articulated approximately half way between mid and low tongue positions and just forward of the central tongue position: *pa:mî* [pa:mî] 'brother-in-law'.

Syllable final consonants are *h* and the nasals *m*, *n*, *ŋ*. *n* is prevelar before pause: [ŋ̠]. The three nasals contrast only before pause and following a phoneme other than *i* or *j*: *ám* [ám] 'some', *awrán* [auráŋ] 'language, speech', *ruhmánj* [ruʔmánj] 'a weak person'. Before consonants there is no contrast among nasals; they assimilate to the point of articulation of the following consonant: *uwémbó* [ubémbó˘] 'his stomach', *sirandú* [sirjandú] 'rat', and *ongáj* [o˘ŋgái] 'comb'. There are two words in which the nasal is in free variation with lengthening of the preceding vowel: *sumbará* ~ *su:bará* 'machete, cutlass', and *indo:ké* ~ *i:ro:ké* 'therefore'.

In word final position [n] never occurs, but [ŋ] does. Because there is only a two-way contrast of nasals in syllable initial position (see discussion of initial m and n above), no contrast at the end of syllables in word medial position, and a three-way contrast in word final position, initial [n] and final [ŋ] can be considered allophones of [n].

In final position after i only the prevelar nasal [ŋ] occurs: *ohwín* [oʷʔbɪŋ] 'one'. Because n has the prevelar allophone [ŋ] word finally, after i the same phone is also considered an allophone of n even though there is no contrast there with other nasals.

In syllable final position glottal constriction and devoicing of vocoids occur. Glottal constriction before the resonants r, m, n, w, j, and vowel devoicing before the voiceless stops p, t, k are in complementation. hC has the manifestations [hK] and [ʔR] where K stands for a voiceless stop and R for a resonant. Glottal constriction before resonants contrasts with its absence: *suhwí* [su:ʔbɪ] 'younger sister', *su:wí* [su:bi] 'little tinamou (Cryptuellus)', *sahrombó* [sa:ʔroʷmbóʷ] 'leaf', *aró* [a:roʷ] 'to bring along', *sehmosá* [seʔmoʷOʷsá] 'I swallow', *se:mosá* [seʷ:moʷOʷsá] 'I send him', *ahná* [aʔná] 'we (exclusive)', *na:ná* [na:ná] 'pineapple (Bromeliaceae)', *juhjóndi* [yu:ʔyoʷndi] 'woman's head cloth', *kuju:wí* [kuyu:bi] 'bush turkey (Penelope marail)'. Devoicing before voiceless stops contrasts with glottal constriction: *konohpó* [koʷnoʷppóʷ] 'button', *kono:pó* [koʷnoʷ:ʔpóʷ] 'rain', *ih tá* [ixtjá] 'you must go', *itá* [i:ʔtjá] 'in it', *enéhko* [enéhkoʷ] 'you must bring it', and *ené:ko* [ené:ʔkoʷ] 'you must look at it'. Since [ʔR] contrasts with [R], and its counterpart [hK] contrasts with [ʔK], it is possible to interpret [ʔR, hK] as hR, hK and [R, ʔK] as R, K. Devoicing of vocoids, symbolized by [h], always occurs before medial s, and devoicing of nasals, [N], always occurs before medial p, t, s; since this devoicing is automatic, [hs], [Np], [Nt], and [Ns] are phonemically the single consonants s, p, and t. This analysis is needed to make the morphophonemics come out consistently.

h before p, t, and k does not devoice all at once at the onset of the [h], but does devoice before the stop is articulated. It may be fricative with the point of articulation of the following stop in free variation with purely vocoidal devoicing, producing [p̥, θ, x̥, x, ɣ̥]. Besides the examples above: *nohpóhko* [noʷppóʷxkoʷ ~ noʷOʷpóʷOʷkoʷ] 'old woman', *awhtó* [auθtóʷ ~ auUtóʷ] 'house', and *parahká* [paraxká ~ paraAká] 'little chachalaca (Ortalis motmot)'.

FOOTNOTES

¹The Carib population estimates, except for Venezuela, are from the Summer Institute of Linguistics, 1968. Hoff (1968) gives the estimate for Venezuela based on data from Helmut Fuchs and Johannes Wilbert.