

SUMMER INSTITUTE OF LINGUISTICS PUBLICATIONS
IN
LINGUISTICS AND RELATED FIELDS

PUBLICATION NUMBER 35

EDITOR

Irvine Davis

ASSISTANT EDITORS

Alan C. Wares

Iris M. Wares

CONSULTING EDITORS

Doris Bartholomew

Eugene Loos

Robert E. Longacre

William R. Merrifield

Kenneth L. Pike

PUBLISHER

Benjamin F. Elson

LANGUAGES OF THE GUIANAS

Edited by Joseph E. Grimes

A Publication of the
SUMMER INSTITUTE OF LINGUISTICS
OF THE
UNIVERSITY OF OKLAHOMA
Norman

© Summer Institute of Linguistics 1972
Abril, 1972 primera edición
Esta edición consta en 550 ejemplares
Derechos reservados
por el
Instituto Lingüístico de Verano, A.C.
Hidalgo 166, Tlalpan, México 22, D.F.
Printed in Mexico Impreso en México
5.5C 1-072

CONTENTS

Preface	vii
---------------	-----

Creole Languages

Notes on Djuka Phonology	1
George L. and Mary L. Huttar	
A Comparative Word List for Djuka	12
George L. Huttar	
The Phonological Structure of Stems in Saramaccan	22
S. Catherine Rountree	
Role Structure in Saramaccan Verbs	28
Naomi Glock	

Cariban and Arawakan Languages

Carib Phonology	35
Edward T. Peasgood	
Trio Phonology	42
Morgan W. Jones	
A Wayana Grammar	47
Walter S. Jackson	
Wapishana Phonology	78
Frances V. Tracy	

Orthographies

Writing Systems for the Interior of Surinam	85
Joseph E. Grimes	

PREFACE

Team research is well established in science. A coordinated effort is often the best way to do the job where there is much ground to be covered, since nowhere in the world are there ever enough trained people to cover it.

In the Summer Institute of Linguistics we have worked out a pattern for field investigation of little known languages that makes use of the team concept. Usually two people are given the primary responsibility for field work in a language. They learn to speak it by living in a community where it is the main language spoken. They interact with members of the society that speaks that language in everyday life and function as mediators of information from the outside. Along with using the language they are trained to organize information on its phonology, grammar, and semantics for linguistic analysis.

The work of the field investigators is, however, supplemented by that of linguistic consultants who periodically go over the conclusions arrived at in the field with the people who made them. They criticize the work that has been done and help the field worker lay out lines of investigation to follow from that point. They also give assistance in the mundane matters of organization of field notes and presentation of conclusions. Sometimes a consultant works at a field location with the investigators for a period of time. In recent years, since there is usually only one senior consultant available for about every ten field projects of the Institute, it has become common for several investigators and their informants to meet for two to three months in a place that is removed from the ordinary interruptions of life in the bush. In such a field seminar or workshop it is possible to accomplish much.

Most of the papers in this volume came out of such a joint effort. The field work of the Summer Institute of Linguistics in Surinam got under way in the latter part of 1968, under an agreement between the Institute and the Government of Surinam. In February and March of 1969, about the time people had their feet thoroughly wet in their field work, the director of the Institute in Surinam, Joel D. Warkentin, arranged for the editor to conduct a workshop. George and Mary Huttar, Edward and Joyce Peasgood, Naomi Glock, and Catherine Rountree, all members of the Summer Institute of Linguistics, took part. Frances Tracy of the Unevangelized Fields Mission, who had begun the study of Wapishana in Guyana at about the same time

as the Surinam group began their work, was able to participate as well. Hubert and Joanne Traugh of the Pilgrim Holiness Mission in Guyana, working on Guyanese Carib, participated for the first few weeks. Morgan Jones, Ivan Schoen, and others of the Surinam Interior Fellowship of the West Indies Mission, who have made studies of the Cariban languages of the interior of Surinam, were present for a week. The papers by Jones and by Schoen's colleague Jackson were already near final form before the workshop began and were simply gone over for details during the brief time available (which even included some editorial checking by radio after Jones had to return to the Tapanahonij). All the other papers, though based mainly on observations and hypotheses made in the field before the workshop, took their present form during the workshop and include material that was elicited from informants during that period.

Special recognition for excellent handling of the logistic details of having so many people working intensively in one place goes to John and Shirley Larson of the Summer Institute of Linguistics, who took care of everything from visas to baby sitting and thereby made it possible for the participants to devote full time to the seminar. I am also indebted to George Huttar for sharing the consultation with me.

There are four layers of languages in the Guianas. First are the Cariban and Arawakan languages of the aboriginal peoples of the area, represented here by Carib, Trio, Wayana, and Wapishana. Second are the creole languages that came into prominence during that sad epoch when people from various parts of West Africa were forcibly uprooted and brought to the new world as slaves. These were the languages around which the societies of escaped slaves in the interior, represented here by Djuka and Saramaccan, crystallized; others like Sranan and the patois of French Guiana became the informal means of communication in the city-oriented societies of the coast. Third are the languages brought from Asia by contract laborers a century ago after the slaves were emancipated: Javanese, Chinese, and dialects related to Hindi and Urdu. None of this group is represented in this volume, though the changes in each since their transplanting certainly merit special study. Finally there are the languages of commerce and government, of education and wider communication: Dutch, French, English, and to a lesser extent Portuguese, Spanish, and Lebanese Arabic.

This collection is a step toward understanding that linguistic complexity. Further studies are already under way to complete the documentation of the languages on which work has just begun. The Summer Institute of Linguistics also plans to allocate teams of field workers to languages that are not yet being studied, thereby broadening the coverage.

Two of the papers in this volume cover the same area as work done on Saramaccan by Voorhoeve and on Carib by Hoff. Rather than being duplications, however, they build on the earlier studies in a significant way.

First, they give an independent corroboration of most of what the earlier authors said. Second, they call attention to parts of the earlier studies that really needed further work: the relationships among vocoids in the high to mid range, and certain restrictions on segment sequences, in Saramaccan, and the whole question of underlying versus surface phonological form in Carib. In this sense they constitute a healthy critique of the work that has gone before, confirming most of it. Other papers, like the Huttars' evidence on tone in Djuka and Glock's work on semantic relationships in Saramaccan, break new ground.

As a result of the workshop the team of field investigators have also developed a perspective on the pace of their work and on where they need to concentrate their efforts at different phases of it. This should increase the efficiency of their time in the field. Inasmuch as all of them have in mind applied linguistic projects, the teamwork approach they have worked out will help them toward those goals as well.

Joseph E. Grimes
Paramaribo, 30 March 1969

WAPISHANA PHONOLOGY

Frances V. Tracy

Unevangelized Fields Mission

1. **Introduction.** Wapishana is an Arawakan language spoken by Amerindians who live in the savannah regions of southern Guyana and farther to the west in Brazil. Estimates as to the number of speakers of Wapishana vary from 4000 to 9000. Noble (1965) classifies Wapishana as an independent subgroup of the Maipuran group of Arawakan languages.

Field work for this paper was done from January 1968 to March 1969 under the auspices of the Unevangelized Fields Mission. The principal informant was Ronald Michael of the village of Aishalton in the southern part of the Rupununi District.

This paper presents a phonemic analysis of Wapishana that goes beyond a strict taxonomy, which would require additional phonological borders to be recognized. This analysis is slanted toward an eventual systematic phonology that, by taking grammar into account, provides for the adequate description of these borders. The section on morphophonemics is not comprehensive, but points toward the full complexity of the morphophonemic phenomena.

2. **Phonemes.** To facilitate the statement of morphophonemic relationships, in grouping the phonemes greater consideration is given to morphophonemic similarities than to phonetic similarities. Manners of articulation are glottalized, aspirated, voiced, fricative, nasal, and flap. Positions of articulation are bilabial, alveolar, postalveolar, and back. The glottalized series has members at each point of articulation: /b, d, z, ʔ/. The aspirated series has members at each point of articulation: /p, t, ch, k/. The voiced series is bilabial, alveolar, and back: /w, dh, g/. The fricative series is alveolar, postalveolar, and back: /s, sh, h/. The flap is alveolar: /r/. The nasal series is bilabial and postalveolar: /m, n/.

The glottalized phonemes /b, d/ have glottal constriction as an integral part of the phoneme. This constriction is distinct from that of the back glottal phoneme /ʔ/ in that it does not permit the echoing effect that is discussed at the end of this section. The sequence /ʔd/ is realized

phonetically as [ʔy] by most speakers when the sequence occurs within a stem. For example: /dikiu/ [d ik iu] is used after another noun to name a specific mountain--/tamariu dikiu/ 'Bat Mountain'. An unnamed mountain, however, is designated by /imiʔ/ 'dirt, earth' compounded with /dikiu/. This results in the sequence /ʔd/, which is [ʔy] phonetically, giving the compound stem /miʔdikiu/ [miʔyik iu]. Due to the influence of reading and writing in English, native speakers usually prefer to write the combination as ʔy wherever it occurs.

The phonemes /d, dh/ and the phonemic sequences /ʔd, ʔdh/ are all distinct: /ipaidan/ 'he put something in a hollow container', /izaidhan/ 'he rode', /miʔdikiu/ 'mountain', /ipuiʔdhin/ 'he got drunk'.

The glottalized phoneme /z/ has glottal constriction as an integral part when it occurs in foot initial position; elsewhere the constriction is absent. /z/ is always articulated with the tongue in retroflex position.

The glottalized phonemes /b, d, z/ are devoiced in foot final position. The phonemes in the voiced series are not. /amazad/ [amazatʰ] 'world', /tapiʔiz/ [tʰapʰiʔis] 'cow' in contour final position, but [amazadʰ] and [tʰapʰiʔiz] elsewhere. /ʔidh/ [ʔid] 'by means of' has only one allophone which is always voiced.

The voiced phoneme /w/ never occurs in syllable final position.

The fricative phoneme /h/ occurs only in ideophones and in place of the morpheme -p 'continuing action' in fast speech.

The palatal phonemes /ch, sh/ are almost in complementary distribution with their counterparts /k, s/. /ch, sh/ tend to occur more frequently than /k, s/ in stem final position and less frequently in stem initial position or at syllable borders which form consonant clusters.

The postalveolar phonemes /z, n/ are the only consonants that form consonant clusters within a syllable, occurring as the second members in a cluster initiated by /ʔ/.

All consonants except /ch, sh/ are palatalized immediately following /i/ or /i/ within the same foot. In slow or deliberate speech this palatalization may disappear. Some speakers never palatalize. (This also means they never use the [ɛ] allophone of /a/, mentioned below.) There is a dialect correlation, not yet defined, between non-palatalization, fronted articulation of /i/, and replacement of morpheme -p by -h as mentioned above. Some speakers labialize /g/ immediately following /ü/ in the same foot.

Four oral vowels are divided into low and high. The single low vowel /a/ has two allophones. [ɛ] occurs immediately following the palatalized

allophone of any consonant in the same foot, [a] occurs elsewhere. The high vowels are front, central, and back /i, i, u/. /u/ always has rounding of the lips; /i, i/ never do. The articulation of /u/ fluctuates freely between [u] and [o]. The point of articulation of /i/ is considerably fronted in the speech of some speakers. Some articulate /i/ so far forward that auditorily it is almost the same as /i/. /i/, however, never produces the palatalization of consonants mentioned above regardless of the speaker's position for articulation. Some speakers use [g] as an intervocalic allophone of syllable final /i/ in the sequences /-aia-/ and /-iia-/. These sequences have the timing characteristics of two syllables, the first containing a complex nucleus (see below) and the second consisting of a single vowel.

All of the vowels have nasalized counterparts. In addition, a nasalized vowel phoneme produces nasalization of vowels following it. The spreading of nasalization is considered in the section on morphophonemics (7.7).

Any vowel becomes slightly retroflexed immediately preceding /z/ in the same foot.

Any vowel in a CV or V syllable in stem final position has extremely lenis articulation (7.2, 7.6).

In foot medial position, syllable final glottal stop is followed by an echo vocoid of the same quality as the vowel preceding the stop. This echo vocoid does not constitute a separate syllable as far as foot rhythm is concerned. It is more pronounced in fast speech than in slow speech. The vowels of the prefixes do not exhibit this echoing effect.

3. Syllable. The nucleus of a syllable is simple or complex. A simple nucleus consists of a single vowel. There are two kinds of complex nuclei: /a/ followed by some other vowel, *aizii* 'now', *kabain* 'house', *daunaiur* 'man', and a phonetically long nucleus that can be regarded as any of the four vowels followed by itself, *kiwiin* 'first', *tiibiz* 'large', *isuukpan* 'he is resting', *itaan* 'he gave'. The phonetically long complex nucleus usually occurs as the last syllable of a morpheme, but not always.

Complex nuclei have a longer duration than simple nuclei, although the duration is not as long as that of two vowels in separate syllables. The complex nuclei that consist of phonetically long vowels have a slightly longer duration than those that consist of diverse vowels. Differences in timing among the simple nuclei and the two kinds of complex nuclei are more pronounced in stressed syllables than elsewhere.

A syllable has a vocalic nucleus with optional borders of single consonants that precede, follow, or both. A consonant cluster consisting of a glottal stop followed by /z/ or /n/, i.e., ^ʔz or ^ʔn, is also permitted as the initial border of a morpheme. This glottal stop permits a preceding vowel within the same foot to echo unless that vowel ends a pronominal prefix.

All the possible syllable types occur, with the exception of VVC, a complex nucleus followed by a consonant when there is no preceding consonantal border.

In order to maintain the permitted syllable patterns when several suffixes are added to a stem, vowels are added where needed, as described in section 7.5.

4. **Foot.** Every morpheme that consists of more than one syllable has one predictable stress. Morphemes that consist only of one or two consonants do not have stress. Stress falls on the final syllable of a morpheme that has at least one vowel unless that syllable is V or CV, in which case stress falls on the penultimate syllable; if there is no penultimate syllable, a V or CV morpheme is not stressed.

A foot consists of from one to eight (and possibly more) morphemes, including those that carry stress and those that do not. Epenthetic vowels are added according to rule, as outlined below in the section on morphophonemics, in order to shape the string of morphemes into permitted syllable patterns. The foot has a single primary stress, more pronounced than morpheme stress, which falls on the final syllable unless that syllable is V or CV, in which case stress falls on the penultimate syllable.

In foot medial position a sequence of no more than two consonants is permitted, with the one exception of $n^?n$. At the final border of a foot no sequence of consonants is permitted. The final border is either a single consonant or any permissible combination of vowels. Up to three (and possibly more) syllables containing only vowels may occur contiguously within a foot, as in $u.i.a.^?u$ 'the bad one' (periods mark syllable boundaries). Vowel sequences that cannot form complex nuclei are in successive syllables. Vowel sequences that can form complex nuclei are in the same syllable, except that when the concatenation of prestem with stem elements would result in a complex nucleus, the vowels are kept in separate syllables.

Morphophonemic rules operate within the boundaries of a foot. These include phonologically determined allomorphs, palatalization, final lenition, cluster reduction, epenthesis, stress placement, stem final vowel reduction, and spreading of nasalization. The rules require a distinction to be made among prestem, stem, and poststem elements. Prestem elements include pronominal prefixes and perhaps stem formatives such as *ma-* 'opposite' and *ka-* 'intensifier'. There are nominal, verbal, temporal, and locational stems. Poststem elements include suffixes and clitics for categories of tense, aspect, number, location, relation, and other things.

5. **Contour.** A contour consists of from one to four feet, possibly more. It groups together feet that have syntactic relationships. The contour is initiated by a sharp crescendo over one or two syllables. This is followed by

a gradual decrescendo to the end of the contour. There is sometimes a slight pause at the final border. The pitch of the contour is comparatively even until the final stressed syllable which may rise, drop, or remain even, possibly reflecting the attitude of the speaker. A speaker generally uses the same pitch pattern for a number of successive contours.

6. **Phonological clause.** A phonological clause consists of from one to five contours and carries meaningful intonation. There are nonfinal and final phonological clauses. The nonfinal phonological clause carries a rising or falling pitch pattern that is superimposed upon the contour pitch but rises or falls farther than the contour pitch. The phonological clause is followed by a pause that breaks up the flow of speech. The intonation of the nonfinal clause serves to hold together several contours which form a grammatical unit such as a time clause or a clause in a series that is related grammatically or semantically to adjacent clauses. The intonation thereby reduces the possibilities for ambiguity. It also indicates that there is more information coming, since the content of a nonfinal clause can be the same as that of a final clause, although this is not necessarily so.

The final phonological clause has as its final border definite pause. This clause carries meaningful intonation, differentiating among statement, question, imperative, surprise, and other things. In addition to pause and intonation, there is heavy clause stress, more pronounced than contour stress, that usually falls on one of the last six syllables of the final clause. A specific clause intonation requires the final clause stress to fall on a specific syllable, counting from the end of the clause. This stress coincides with the beginning of the meaningful intonation contour, which usually covers the last six syllables of the clause, occasionally more.

7. **Morphophonemics.** All the morphophonemic rules operate within the boundaries of a foot. They involve addition, change, and subtraction of phonemes. Most of the rules must be performed in the order in which they are presented below, or the correct foot will not be generated.

As an example of the morphophonemic rules, take the form *imākonkannii* 'they will go planning to return', whose morphemic components in their base form are *i-māko-n-ʔk-n-nii* with the stem *māko* 'go'.

7.1 **PHONOLOGICALLY DETERMINED ALLOMORPHS.** The prefix 'he, his, it, its' is *i-* when /i/ is the first vowel of the stem, *i-* elsewhere. The prefix 'you, your (singular)' is *pu* when the first phoneme of the stem is bilabial; otherwise it is *pu* when /u/ is the first vowel of the stem, *pi-* when /i/ is the first vowel of the stem, and *pī-* elsewhere. The verbal suffix 'repeatedly' is *-in* when it immediately precedes /n ʔn ʔz/ and *-ii* elsewhere. In the example this rule gives the prefix the form *i*.

7.2 PALATALIZATION. Palatalization as described in Section 1 is ordered next because a consonant palatalized following /i/ retains its palatalization even though the /i/ is dropped as the result of a later rule. The stem initial *m* of the example is not palatalized because the prefix vowel is *i*.

7.3 FINAL LENITION. The final vowel of a CV or V syllable at the end of a morpheme becomes extremely lenis. This applies to the stem final *o* to give *mākO*.

7.4 FIRST STRESS RULE. Morphemes are stressed as indicated in Section 4, giving *i-mākO-n-ʔk-n-nii*.

7.5 CLUSTER REDUCTION. If at a morpheme boundary two glottal stops come together, they reduce to a single glottal stop. The morpheme *-ʔk* 'completed action' drops the glottal when it immediately follows *n*, giving the sequence *nk*. If a morpheme, either stem or suffix, has a final syllable with a complex nucleus consisting of identical vowels, the second vowel drops when another morpheme follows it in the same foot. In the example *-ʔk* reduces to give *i-mākO-n-k-n-nii*.

7.6 EPENTHESIS. The string of suffixes and clitics following a stem consists of formatives whose underlying representations are generally single consonants. Consonants, however, cannot occur in sequences of more than two (except for *nʔn*). Therefore vowels are added in such a way as to give permitted consonant sequences within a foot and a single consonant at the end of a foot. Starting from the right end of the string of morphemes, place a vowel wherever necessary to avoid a final CC cluster or a medial CCC cluster (except *nʔn*). Where available, a lenis vowel is reconstituted to full value; otherwise following glottal the vowel that precedes the glottal is repeated; otherwise a *i* is added. This gives *imākonkannii* by reconstituting the lenis *O* and splitting the remaining string of consonants with a.

For the purpose of placing vowels according to the epenthesis rule, the complex syllable nuclei *ai*, *ai*, and *au* are treated as VC when in stem final position, as VV elsewhere.

7.7 SECOND STRESS RULE. Every syllable formed under the preceding rule by reconstituting a lenis or echo vowel or by adding /a/ receives a stress. Then all the stresses in the foot except the last are reduced. This rule takes the example through two stages *imākónkannii*, *imākonkannii*. The two stages have to be separated because when the last vowel in a form is epenthetic it takes the stress.

7.8 STEM FINAL VOWEL REDUCTION. A lenis vowel remaining after epenthesis (7.6) in a CV or V syllable at the end of a stem drops, except after obstruents. The particular sequence of suffixes in the example renders this rule inoperative, since the lenis vowel was reconstituted by the epenthesis rule.

7.9 NASALIZATION. Nasalization spreads to the right from a nasal vowel, carrying through *m*, *n*, and *w*, but stopping just before any other consonant or before epenthetic *a*. The spread of nasalization crosses the border between prestem and stem. The final form of the example is *imäkonkannii*.

8. Practical Orthography. Since most Wapishanas live in English speaking Guyana, the letters for writing Wapishana have been chosen to conform to English as closely as possible while still maintaining the integrity of the linguistic analysis, along with some consideration for Portuguese speakers. The digraphs *sh* and *ch* are used for the phonemes that are somewhat similar in sound to English. Because both English and Portuguese *c* represent more than one sound, *k* is used for the back aspirated consonant. Since Wapishana has two sounds that are similar to English *d*, the more common glottalized stop is symbolized by *d* and the less common voiced one by *dh*. Technically the [y] allophone of *d* after ʔ should not be written as a separate letter. However, reaction of Wapishanas literate in English makes it desirable to write *y*. Glottal stop is symbolized by an apostrophe. The use of *z* has been questioned since earlier attempts to write Wapishana that were not based on a linguistic analysis used *r*. However, this symbol has been preempted for the flap. Furthermore, /z/ is articulated in much the same way as English *z* except that the tip of the tongue is curled, giving the sound a quality a little like that of English *r*. Unless native reaction is exceedingly resistant, *z* appears to be the better choice, both from the standpoint of Wapishana speakers themselves and of others wanting to read and write Wapishana.

As for the vowels, since the high back phoneme /u/ is often articulated as [o], *o* is the symbol used in the orthography. The printing of *i* offers difficulties; so *u* is used for the high central vowel. The high front vowel /i/ remains *i* as in English *machine*, and as in Portuguese. A tilde over a vowel is used for nasalization.

These considerations lead to a Wapishana alphabet as follows: *a*, *b*, *ch*, *d*, *dh*, *g*, *h*, *i*, *k*, ʔ, *m*, *n*, *o*, *p*, *r*, *s*, *sh*, *t*, *u*, *w*, *y*, *z*.

FOOTNOTE

¹A voiced postalveolar phoneme /j/ is used by a few speakers in place of /dh/ in some morphemes, e.g., /idaʔan, ijaʔan/ 'by means of'.

REFERENCE

Noble, G. Kingsley. 1965. Proto-Arawakan and its descendants. (Publications of the Research Center in Anthropology, Folklore, and Linguistics, Number 38.) Bloomington, Indiana University.