

FOUR CONSONANTAL PATTERNS IN NORTHERN ARAWAKAN

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DOMINICA, BRITISH WEST INDIES

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1. *Kernel* and *extract*
2. Guajiro mergers and splits in correspondences
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0. Nobody can peruse the available word lists of both Arawakan and Cariban languages without being struck by the great phonological as well as lexical diversity among most members of the former, even such as are said to be of the same subgroup, compared with the relative homogeneity of those belonging to the

Hildebrandt,¹ but replaced parenthetical symbols by others (see table 1).

1. In his two-volume dictionary, *Caraiibe-François* (Auxerre, 1665) and *François-Caraiibe* (Auxerre, 1666), Raymond Breton lists: "eukê, *noyau, et tout autre chose qui a une enveloppe*" and "*noyau, ou quoy que ce soit qui aye une enveloppe, eukê.*" But this definition fits only about half of the references attributed to "eukê" in Breton's examples of its use in various contexts, both with and without possessive prefixes such as *t-her*; *its*, *h* his, *kA-* having, and *mA-* without. And among such examples we find:

TABLE 1

<i>Arawak</i> : p t k b d th kh f sh m n l r a e i i o
<i>Dominican Island-Carib</i> : p t k ph th kh sh m n nh l r a e i i o
<i>Central American Island-Carib</i> : b d g p t c k f sh m n l r a e i i u
<i>Guajiro</i> : p t c(ch) k ʔ(') s š(sh) h(j) m n ñ l r w y a e i i u o

latter family. Here, I examine four consonantal patterns belonging to languages of the Northern Maipuran subgroup of Arawakan (two of them being different dialects of the same language) in an attempt to find a common basis from which all could have evolved. Except for listing them, I have left the vowels aside; for only when it will be possible to bring into the picture other closely related languages (e.g., Achagua? Baré? Piapoco?) can one begin to speak of reconstruction.

Segmental unit phonemes are those resulting from my own analyses, except in the case of Guajiro, where I have followed

teukê oubáo (with oubáo island) *valuable things such as gold, silver, talc produced and contained in the earth*; téukê crabou (with crabou iron, borrowed from Sp. clavo) *rust*; téukê chibóuli (with chibóuli a boil) *pus*; nácou eúkê (with nácou my eye) *the pupil of my eye*; boulat' eukê (with boulati protruding) *everything that protrudes from its envelope "comme un bouton de rose"*; eúkêheu (with -heu, an absolute suffix) *flour of manioc, starch*; huéhue heukê (with huéhue wood; tree) *resin; gum of a tree*; lehuéra eukê óra (with lehuéra his penis and óra skin) *his foreskin*; leúkê *the end of his penis*; teúkê *her genitals*;

¹ M. Hildebrandt, *Diccionario Guajiro-Español* (Caracas, 1963).

keuketi *it has a lining*, and makeuti *it has no framework* (in reference to the Island-Caribs' double baskets).

The fault lay, not in Breton's definition of Island-Carib "eukê," phonologically /iki/, but in his failure to recognize and record a relevant distinction between unaspirated and aspirated stops, between /tiki/ *tread down, compress*, /~~(th)~~iki/ (*her/its*) *kernel*, and (th)ikhi- (*its*) *extract* (to employ a comprehensive gloss). This pattern appears to have been retained in the Dominican dialect (DIC) until its extinction about 1920. But in the Vincen-tian dialect (VIC) and its Central American offshoot (CAIC) it evolved by way of allophonic variation until the unaspirated stops became distinctively voiced, the hitherto aspirated apical stop became voiceless /t/, and the aspirated bilabial and dorsal stops were spirantized, becoming /f/ and /x/ respectively, the latter then falling together with previously existing /h/: p > b (usually though nondistinctively already voiced in the Dominican dialect), t > d, k > g, ph > f, th > t, and kh > x > h.²

In Arawak, which is the living language

² Like most basically possessed nouns of Island-Carib and of Arawak, DIC iki and ikhi (CAIC igi and ihi) take the absolute suffix -hV (whose vowel is usually identical with that of stem-final, but may be /i/ when the latter is /a/) if no possessor is mentioned: DIC ikhihi and CAIC ihihî *extract (in general); manioc starch*. Otherwise, the possessor may be indicated by a preceding noun (uéue ikhi *tree extract = resin*), by a possessive prefix (thíkhi *its extract*), or by a combination of prefix and following noun (thíkhi sipúli *its extract boil = pus*). Some nouns also take possessive suffixes, as in CAIC talán guríara *its bench canoe = the boat's thwart*, whose absolute form is hála(h)i *bench*.

The aspirated stops /ph/, /th/, /kh/ are unit phonemes; /i/ is a high back unrounded vowel. Island-Carib of either dialect and Arawak alike have only one back rounded vowel, [u] ~ [o], written /u/ in the former, but /o/ in the latter language.

most, closely related to Island-Carib, /ph/ has already passed to /f/, but /th/ is still opposed to /t/ (thórodon *to open* but tórodon *to lie down*, thidin *to sting* but tidin *to escape or get away from*), and /kh/ to /k/ (khidin *to chase off or away* but kidin *to bathe*, both transitive verbs). Moreover, A(rawak) ikhi(hi) *resin* (or any fatty substance from a tree); *semen* is evidently cognate with DIC ikhi(hi) and CAIC ihi(hi) *extract, etc.* And though I have been unable to find an Arawak cognate of DIC iki(hi) and CAIC igi(hi) *kernel*, Guajiro, another related language, provides cognates for both members of this Island-Carib minimal pair: G(uajiro) ahî *resin; thick sap or juice; pus*, and a²i *kernel; seed*. Compare G hiéri *woman; female* + -²i *kernel* = eéri²i *vulva*.

2. These correspondences are regular, as are those seen in: G sahápi:A thikhábo: DIC thúkhapu:CAIC túhabu *her hand*, G sipúli:A thókóti:thukúti:CAIC tugúdi *her foot*, G lapí:A tobón *a dream*, G matína-:A madína-:DIC marina-:CAIC marina- *without arms/wings*, and G pacé²e:A badíke: DIC paríkae:CAIC barígai *your ear(s)*.³ The glottal stop of Guajiro usually corresponds to the unaspirated velar stop of Arawak when intervocalic. Elsewhere, A /k/ usually corresponds to zero or to /k/ in Guajiro:A káthi:G kaší *moon*, but A káma, dakáman *tapir, my tapir*:G amá, ta²amáin *horse, my horse* (despite semantic divergence; Guajiro having borrowed Sp. danta as G lantta *tapir*), A dónkon:G atúnkaa:CAIC arúmuga *to sleep*, A híki(hi):G skí *fire*. Intervocalic correspondence of G /k/:A /k/ is rare, but it

³ The correspondence of G pacé²e:A badíke *your ear(s)* is here called regular because it is assumed that the present Guajiro form arose from an earlier G *patí²e with automatic (non-distinctive) palatalization of the apical stop (such as occurs in Arawak today), and later assimilation of the second to the third vowel.

also occurs, as in G ekáa:A ikin, -eke-: CAIC áiga *to eat* and G asíkka:A ihika *to copulate*. But quite unsystematic are the seeming correspondences of G /k/ and G /p/ to A /s/, as seen in G eki(w)i:A isi(hi) *head* and in G e'íci:A isiri(hi) *nose*, as are also those of G /t/ (instead of /s/; see tables 2-5) to A /th/ in the Guajiro demonstratives tii *this*, tirá *that*, tisá *yon* and their Arawak equivalents, thó(h)o, thóra(h)a, thókotha(h)a.

TABLE 2

A:G	A:G	A:G
p : p	t : l, c	k : k, ?
b : p	d : t, c	—
—	th : s, š	kh : h
f : h	s : s, š, h	h : h, s
—	l : l, c	—
—	r : r, l, c	—
m : m	n : n, ñ	—

TABLE 3

A: DIC	A: DIC	A: DIC
p : p	t : t	k : k
b : p	d : r	—
— ph	th : th	kh : kh
f : —	s : s	h : h
—	l : l	—
—	r : r	—
m : m	n : n, nh	—

TABLE 4

A: CAIC	A: CAIC	A: CAIC
p : p	t : d	k : g, k
b : b	d : r	—
—	th : t	kh : h
f : f	s : s, c	h : h
—	l : l	—
—	r : r	—
m : m	n : n, h	—

TABLE 5

DIC	CAIC	ARA.	GUA.
p	{p b}	{p b}	p
ph	f	f	h
m	m	m	m
t	d	t}	l, c
l	l	l}	—
r	r	{d r}	t, c r
th	t	th}	s, š
s	s	s}	—
n	n}	n	n, ñ
nh	h}	—	—
k	g, k	k	k, ?
kh}	h	kh}	h
h}	—	h}	—

Unlike A [s] and [š], which are allophones of A /s/, G /s/ and /š/ are distinctive, as in G asáa:A (a)than, (a)thin:CAIC áta *to drink*, but G asáa:A íthi(hi):CAIC íta(hi) *blood*, G šinii:A thóno *a cold* (catarrh). These Guajiro phonemes correspond also, though rarely, to A and IC /s/, as in G isíra:IC, sísira *a rattle* and G išisi:A sife-:DIC siphe- *bitter*. And in the words shown in table 6, and a very few other words, G /s/ corresponds to A /h/ and (or) to DIC and CAIC /l/.

Guajiro /h/ corresponds, not only to A and DIC /kh/ (G hayápa:A kháiaba:DIC kháiapa *flea*, G ahítaa:A (a)khidin *to chase off or away*, G haúha:A hálikha *when?*), but also to A /f/ (G hucí:A fódí *sp. of monkey*, G ahátaa:A (a)fáthadin *to slap*, v.t.), to A /s/ (G hemet-:A semee- *good tasting, sweet*, G hipá:A síba *stone*), and to A /h/ (G hapílee:A hábori *shame*, G haší:A háthi *capsicum*, G haíši:A hálithi *sweet potato*, G híeri:A híaro:IC híaru *woman; female*, G huyá:IC húia *rain*).

Guajiro /r/ corresponds only to A and IC /r/; but G /l/ corresponds to /l/, /r/, or /t/ of the other languages. For example: G

TABLE 6

Guajiro	Arawak	CAIC	Gloss
pisíci	bíhíri	búliri	<i>bat (zool.)</i>
asápi	ahábo	—	<i>backbone</i>
asíri	—	ilíru	<i>a catch (of game, etc.)</i>
sisíi	—	tilíue	<i>its blossom</i>
sisí	thíhi	tilí	<i>its tail</i>
asíkaa	ihíka	alíagua	<i>to copulate</i>
skí	híkí(hi)	—	<i>fire</i>

karíliia *to have a knife*: A karólin *to have a stone ax*, G širá: A thíra: CAIC tíra *its juice*, G sulú'u: A thólóko: CAIC túrgu *in (or during or in accordance with) her/it*, G suúliia: A thoria: CAIC tuária *from her/it*, G pí'ílii: A bikíri: CAIC bagíri *your husband's mother* (and also, in Guajiro and in Island-Carib, *your son's wife*), G aliítaa: A (a)tidin *to escape or get loose from*, and G aliíma: A itíima(hi): IC itiuma(hi) *whiskers* (iti- *hair* and -iuma *mouth* being clearly contained in the Island-Carib word).⁴

Investigators of Guajiro and Arawak have experienced difficulty in distinguishing the /l/ and /r/ phonemes of these languages; though agreeing in both cases that they are distinctive.⁵ But the corre-

⁴ Grammatical differences hinder even closer comparison such as would be that of A thitidin *its escaping* with G siliítiiñ *it escaped*. A number of transparent compounds of Island-Carib have Arawak and (or) Guajiro equivalents whose status as compounds is far from clear; thus: CAIC tágu ira *her eye-juice = her tears*: A thikíra: G siwíira *her tears*. All three languages have ira(hi) *juice*; but corresponding to DIC áku and CAIC águ *eye(s)* are A (a)kósi and G o'ú, which may be but are not clearly present in these languages' words for *tears*. And similarly, while DIC thuriira and A thidióra *her milk* clearly contain DIC thúri and A thidio *her breast*, G ácirá *breast*; *milk* is today unanalyzable.

⁵ In my own Arawak fieldwork, I found /l/ and /r/ to be distinctive in most morphemes (as in A dadínaloko *in my arms* vs. dadínaroko *my armpit*), but apparently interchangeable in some

spondence of G /l/ to A /t/ as well as to A /l/ and /r/ cannot be imputed to error on the investigator's part; and as this merger occurs in only one of the four dialects considered, it may most plausibly be explained as having resulted from the loss of an apical consonant. The same may be said of the correspondence of G /s/ and /š/ to A /th/ as well as, in part, to A /s/; Guajiro having but one apical stop (/t/) compared to Arawak's three (/d/, /t/, and /th/) and Island-Carib's two (DIC /t/ and /th/, CAIC /d/ and /t/). For the rare correspondence of G /s/: A /h/: IC /l/, I cannot, unfortunately, offer any explanation, although it might be important to find one.

There is some evidence, though I am not prepared to discuss it here, that G /c/, /ñ/, and /š/ arose as phonemes not so very long ago from what had been palatalized allophones of G /t/ or /l/ on the one hand, of G /n/ and /s/ on the other. For example, G tacé'e (from *tati'e): A dadike *my ear(s)*, and G cíi, círá, císa (from *líi, lírá, lísa): A líi, líraa, líkithaa (*masculine*) *this, that, you*.

The phonological status of G /ñ/ is not clear, since it does not occur in cognates of Island-Carib forms having presumably contained it either phonetically or phonologically. So, G ayée *tongue* corresponds to

others (as in daréroko as well as daléroko *my mouth*).

Breton's Dominican "inigne" and CAIC *iéie* with the same meaning, and G *hiéri* *woman, female* corresponds to Breton's "inharou" and CAIC *hjáru*, also with the same meaning. Whether Breton's intervocalic "nh" and "gn" represented the same phone or not, both indicated some kind of nasalization which was unstable, as we see by his "itigne, nítiem" *check, my cheeks*, which has given CAIC (n)idjé for both.

The only indication of a sibilant split is in the morphology, where the possessive prefix of third-person nonmasculine singular is, in Guajiro, š- before /i/, but s- before other vowels.

Pairs of words showing these phonemes in minimal opposition seem to be very scarce; as they also are in the case of G /k/ and /ʔ/, for which the nearest I can find is akátalaa *separar, aislar* versus aʔatálaa *espantar, hacer alejar*.

Most of the correspondences between Guajiro and Arawak (and/or Island-Carib) have been given above; but there are some others like G /k/ and /ʔ/:A /s/ that apparently come from dialect mixture rather than from sound change, as they are not systematic and are found in only one or two words where they may be compared to such morpheme alternants within Guajiro as G *wáima* or *máima* *much, many* and *miici* or *piici* *house*. Examples showing G /k/ and G /ʔ/:A /s/ have been given above, G /w/:A /b/ is seen in G *tawála*:A *dabára* *my hair*, and G /p/:A /m/ in G *palátaa*:A *máladin* *to flow*.

I have ignored the Guajiro semiconsonants /w/ and /y/, which usually correspond to A /o/, IC /u/ and to A and IC /i/, respectively. Such alternants as G *iwána* and *yuána* *iguana*, which occur also in Arawak and in Island-Carib (*ioána* or *iuána*), are explained in the prosody of these languages.

The loan word, G *piitpila* *gunpowder*,

borrowed from Sp. *pólvora*, exemplifies a rule according to which G /l/ or /r/ is replaced by /t/ when brought into contact with a following occlusive; so that G *ayúlu* *pubic hair* becomes *ayútku* when contracted, G *polú ax* + -kat (described as a suffixed article) = *potkat* *the ax*, and G *hiéri* *woman* + -kat = *hiétkat* *the woman*.

3. Turning now to the other languages, we see that Dominican Island-Carib had three unaspirated and three aspirated stops, /p t k/ and /ph th kh/; the former having voiced and voiceless allophones, and the latter having stop and affricate allophones. But with this difference: /p/ was commonly voiced in all positions (though occasionally voiceless when word-initial), /k/ was frequently voiced when intervocalic (but only in that position), and /t/ was hardly ever voiced at all. Thus Breton wrote "biráiti" for /piráithi/ *thy husband* and "piáni" for /piáni/ *thy wife*, both of which contain the prefix of second-person singular, /p-/. And in reference to the aspirated bilabial stop he says, "poupouli, *les autres disent* pfoupfouli."⁶ Moreover, his spelling of Spanish loan words shows that native speakers of Dominican Island-Carib made the same mistake in reverse: "bourbrê" (> CAIC *búriburi*) *gunpowder*, from Sp. *pólvora*, "bouírocou" (> CAIC *buiruhu*) *pig*, from Sp. *puerco*, but "pantira" (> CAIC *fanidira*) *flag*, from Sp. *bandera*.

Though recordings of this dialect's most recent stage are not reliable or numerous enough for us to be sure how much of this

⁶ Under F in his dictionary, Breton says (I translate): "I have not found any F in the Carib language. I think that they confuse it with P; for when we say *file villain*, they say *phi*, . . ." And he continues: "for they thrust and stop the tongue against the lower teeth, close the lips to form the p, then reopen them as if in blowing and form the f."

pattern survived, the following observations may be of some interest. Voiceless variants of /p/ and voiced variants of /k/ became scarcer, though they did not completely disappear. Aspirated /ph/ and /kh/ usually remained occlusive; but their affricated variants became more frequent and tended, especially following a loud-stressed vowel, to become spirantized as bilabial [f] and velar [x]. Thus, the same word might be heard, when spoken by the same informant in different contexts, as [i'rufūti] or [iro'phəōti], meaning *it is good*.

Apparently peculiar to the Dominican dialect both early and recent, since not reported for Vincentian, was a word-initial phoneme (or cluster?), nh-, described as an aspirated nasal, and occurring only in morphemes referring to third-person animate plural, as in DIC nháku *their eye(s)*, where it shows minimal opposition to náku *my eye(s)* and háku *your(pl.) eye(s)*. Its place is taken in the Central American dialect by /h/ (CAIC hágu *their eyes* being homophonous with hágu *your eyes*), and in Arawak by /n/ (A nakósi *their eyes* producing no homonymic clash, as *my eyes* is A dakósi).

The Central American dialect of Island-Carib has two stops in addition to those already mentioned (/b/, /d/, /g/, and /t/), voiceless bilabial /p/ and velar /k/, each of which occurs as word-initial only in some half-dozen inherited morphemes, and is found elsewhere only in recent loan words with neutralization of the p/b and k/g oppositions. Examples are: páta *prickly pear* but báta *you drank*, káuíri *whose machete?* but gáuíri *having a machete*.

It also contains a palatal affricate, /c/, first recorded in nineteenth-century St. Vincent, where what had been the only sibilant of common Island-Carib was split into sibilant /s/ and assibilant /c/. This change facilitated the distinction of a few

hitherto homonymous pairs like Breton's "chába nítibouri *tond, rase moy!*" (nítibouri *my hair*) and "chába noucouñni *estoupe les fentes de mon canot, . . . calfatele!* (noucouñni *my canoe*); which became, respectively, sá-ba . . . *trim/shave!* and cá-ba *stop up/caulk!* But it did not take place in Dominica; and I have been unable to discover the factors which brought about the Vincentian change from /s/ to /c/ in some words such as simára > cimára (*archer's bow*, ebési > ebéci *payment, price*, nísiri > níciri *my nose*, and ísira > ícira *to leave*, while leaving /s/ unchanged in others such as sísira (*shaman's rattle*, sibári *stingray*, sígai *porpoise*, and auási *maize*.

And the Central American dialect, which inherited the new phoneme from Vincentian, has further complicated matters, replacing /c/ with /g/ in /ci/ and /ce/ sequences except where these are immediately preceded or followed in the same word by a syllable in /gV/; thus Dominica and common IC anísi > VIC aníci > CAIC anígi *heart, mind*, but DIC anísiku > VIC anícigu > CAIC anícigu *wisdom, common sense*. Dominican isíuna *neck* and isíki ~ isíki *head* are transparent compounds containing is(i)- *head, top, peak* and, respectively, -iuna *stem* or -(i)ki *kernel*; but these components are obscured if not lost in the modern CAIC reflexes of the same words: igína, and icígi ~ icígi. Occurrences of /s/ which "survived" the Vincentian split into /s/ and /c/ have been maintained in Central America, as in CAIC tisíguse *her eyebrows*, auási *maize*, mísię *disagreeable* (contrast DIC hįsi > VIC hįci > CAIC hįgi *stinking*). Compare CAIC ci / gi < VIC /c/ (see table 7).

The most significant difference between the consonantal patterns of Island-Carib, of any place or period, and that of Arawak is the former's lack of an opposition corresponding to A d/r and G t/r, paralleling

TABLE 7
CAIC /c/ AND VIC /c/

anícigu	wisdom	anígi	heart, mind	gimára	bow
acíga	to dig	lárígi	after him/it	gíua	sea snail
íciga	to give/put	ígira	to leave	gífe	bitter
nicígi ~ nicígi	my head	nígiri	my nose	ígífigi-ira	bile
núguci	my father	tebégi	its price	mígife	long
		bigíbu	your face	égei	shoulder; grater
		bigína	your neck	nígeru	my child's spouse's parent

TABLE 8

Taino	Island-Carib	Arawak	Guajiro	Gloss
guarocoel	uárukuthi	oadókothi	watúuši	our grandfather
guariquen	uaríkae	oadíke	wacé?e	our ears
yari	jari, jari	iédi	—	necklace
dita	rita	—	—	drinking cup
daca, dacha	—	dái < dakia	tayá	I, me
duhu	—	—	tulú	Indian bench

Guajiro's lack of oppositions corresponding to A /t/l, th/s and IC /t/l, th/s, and resulting in such homophony as, for example, IC *mára*:A *mára* without juice and IC *mára*:A *máda* without skin. For taken together, these differences and concordances suggest that all three oppositions and the six phonemes that constitute them were common to an earlier stage of the same languages. And it is not unlikely that Ineri (or pre-Carib Island-Carib) should have had a phoneme *d with d-like and r-like allophones (such as the Warao language has at the present time); and that the latter variant became generalized, falling together with /r/ through the influence of invaders, whose Carib (Karina) language had no distinctively voiced phoneme as recently as the mid-seventeenth century.

⁷ This is clear from Pelleprat's and Biet's contemporary accounts of the Karina language. And even today, according to Berend Hoff (*The Carib Language* [The Hague, 1968], p. 44): "There is reason to assume that the opposition voiced:voiceless stops is marginal in Carib."

Some slight support for this hypothesis may be found in another related language, Taino, despite the poverty of its recorded data, in which "d" is always and "r" never word-initial. Compare the forms in table 8. Intervocalic -h- of Taino seems to correspond in almost all cases to /l/ or /r/ of the other languages, as in T(aino) *duhu* bench (see above) and in T *bahaua*:A *baráa*:IC *baráua*, *baráná*:G *paláa* sea, T *mahici*:A and IC *máris* maize, T *mahite*:A and IC *mári*(the) without teeth ("desdentado"); although there appears to be an exception in the case of T *nahe*:A *náheli*:IC *néhene* a paddle.

Another remarkable difference in the patterns of these languages concerns the bilabial stops. In his *Grammaire. Caraïbe*, Breton tells us on page 12 that: "Où les

Most instances of the Karina voiced stops' occurrence are found in loan words and in proper names. The nearest approach to a minimal pair involving a voiced stop is K *wo:di* little girl (expressing affection) and *wo:rii* woman, from which *wo:di* was probably derived.

Caraïbes de terre ferme disent *p*, et *r*, ceux des Isles le changent souvent en *b*, et *l*. . . où les Espagnols disent *la plata*, argent, & les François, *du plessi*, les Insulaires disent *láboulàta*, *du boulèssi*." But on page 27 of the same work, after telling us that *n*- and *b*- are prefixes marking first and second person respectively, he says: "En quelques mots ils changent le *b* en *p*: comme *poucounoucou*, ton ouÿe, —."

From this, it might seem justified to conclude that the language Breton was describing had no opposition of voiced to voiceless bilabial stops; as we know to have been the case in Karina, the language of the Carib invaders of the Lesser Antilles. On the other hand, Breton's own record contains a number of apparently minimal pairs such as his "boutuúba!" *gather!* versus "poutuúba!" *pierce!* and "abouúcacha" *to chase away* versus "apouúcacha" *to lay (eggs)*. Here, Breton's "p" represents, as it usually did, aspirated /ph/, which later became A /f/ and CAIC /f/. But in the form cited in the preceding paragraph and in Breton's: "catába pebéchoua?" *what will become of you?* "p" is a rather uncommon variant of the phoneme elsewhere represented by Breton's "b" (because usually voiced), but which, in the absence of any other regularly voiced stop, was aligned with /t/ and /k/ in the series of unaspirated stops, /p/, /t/, /k/.

4. The oldest records of Arawak, Robert Dudley's and Captain Wyatt's word lists collected in Trinidad 1594-95, already show the opposition between voiced and voiceless apical stops in such forms as "dabodda" *my (finger)nails* and "dacutti" *my feet* (modern A /dabáda/ and /dakóti/). Forms whose modern reflexes contain the aspirated stop /th/ were not differentiated from the latter by Dudley, who wrote "cattie" *moon* for modern /káthi/. The sixteenth-century record also

distinguishes voiced and voiceless bilabial stops, as in "barudda" (modern /bárida/ DIC /puléra/) *a comb* and "perota" (modern /piráta/) *silver* (from Sp. plata); but forms containing "p" are either loan words or, like De Laet's "pilplii" *father*, without known reflexes in modern Arawak.

Two hundred years later, in the anonymous *Arawakisch-Deutsches Wörterbuch*,⁸ we find listed without distinction under "P" a number of inherited forms that now begin with /f/, and a number of loan words only that still begin with voiceless unaspirated /p/. Thus with "búddehi" *fishhook* of the eighteenth-century record (modern /bódehe/), we may compare "púddi" *sp. of monkey*, modern /fódi/, and "péru" *dog*, modern /péero/ (from Sp. perro). Today, A /p/ occurs as in péero, dapéron *dog, my dog*, showing nearly minimal opposition to inherited bāro, dabáron *ax, my ax*. (Guajiro yeri or eri *dog* might come from the same source, unless it should be a cognate of Taino aon and IC áuli, which also mean *dog*.)

The Arawak phoneme /ph/, which passed to /f/ during the course of the nineteenth century, is well attested by such common words as: farán *to fight*, fárin *to kill; to strike*, fáta *how much/many*, fírotho *big*, fúlidin *to undo; to take off*, and by the suffix of future tense (a provisional label), -fa. In this last morpheme, however, and perhaps elsewhere, it is often replaced by /h/ (lósíha = lósífa *he will go*, thándíha = thándífa *she will come*); although informants always restore the /f/ when questioned or if using careful speech for any other reason. Further instances of how the spirants of these languages may sometimes be confused are the frequently heard pronunciation among the Black Caribs of CAIC arúhuda (DIC arúkhuta) *to show as*

⁸ This *Wörterbuch* was published in volume 8 of the *Bibliothèque Linguistique Américaine* (Paris, 1882).

TABLE 9
PARTIAL INVENTORIES

	Arawak I	DIC
voiceless unaspirated	(p) t k	unaspirated p t k
voiced	b d —	
aspirated	ph th kh	aspirated ph th kh
spirant	— s h	spirant — s h

	Arawak II	CAIC
voiceless unaspirated	(p) t k	voiced b d g
voiced	b d —	
aspirated	— th kh	voiceless (p) t (k)
spirant	f s h	spirant f s h

arúfuda and such dialectal divergence within Guajiro' as may be exemplified by Arribero G humáa or himáa in place of Central G simáa (cf. A thóma and CAIC túma) *together with her/it*.

I think we may conclude that, at the time when the *Wörterbuch* was compiled, Arawak had three aspirated stops, /ph/, /th/, /kh/, three unaspirated voiceless stops, /p/, /t/, /k/, and two voiced stops, /b/ and /d/. This differs from the Dominican Island-Carib pattern in having a correlation of voice as well as aspiration. On the other hand, voiceless unaspirated A /p/, apparently found only or mainly in loan words, may be a borrowed phoneme, adopted because of its ready integration into the voiceless unaspirated series.

No borrowing was, at all events, required in the case of unaspirated DIC /p/. The overwhelming preponderance of its voiced variants over the voiceless—compared with the virtual absence of the former in the case of /t/ and the sporadic character and limitation to intervocalic position in the case of /k/—can be explained only by assuming that this bilabial stop once had been distinctively voiced, like its Arawak homophone, /b/. This assumption makes more probable the earlier existence of a voiced series containing my hypothetical Ineri phoneme *d

(see 3 above). It is surprising not that native speakers of Karina (who continued to arrive in small numbers from the mainland until 1680 if not later) should have failed to distinguish voiced and voiceless stops, but that they should have employed the voiceless variant of the unaspirated bilabial stop as little as was apparently the case: only in word-initial, and infrequently even there. Table 9 gives partial inventories (phonemes in parentheses have a restricted distribution).

In Dominican Island-Carib, there was no phoneme more particularly employed with loan words, as A /p/ and CAIC /p/ seem to be. In loan words from Karina, DIC /p/, /t/, /k/ and CAIC /b/, /d/, /g/ regularly replace /p/, /t/, /k/ of the model, and the aspirated stops DIC /ph/, /th/, /kh/, corresponding to CAIC /f/, /s/, /h/ regularly replace the Karina clusters /xp/, /xt/, /xk/, as shown in table 10.

TABLE 10

Karina	DIC	CAIC	Gloss
wá:pi	uípu	uíbu	mountain
tú:na	túna	dúna	water
wóki:ri	uikiri	uigiri	man
ixpe	-íphe	-ife	arrow
waxto	uáthu	uátu	fire
-táxkari	-tíkhari	-díhari	fear

But in loan words from languages having a correlation of voice, there was much confusion. Spanish *palma* and *bandera* both got DIC /ph/ and CAIC /f/ for word-initial (CAIC *fáluma* *coconut* and *fanídira* *flag*), while Spanish *vela* and *pólvora* both got initial DIC /p/ and

CAIC /b/ (CAIC *bíra* *sail* and *búriburi* *gunpowder*). Naturally, this did not happen in Arawak, which has *bandéro* *flag* for Spanish *bandera*; although, as there is no voiced counterpart of A /k/, Spanish *cabra* and *gallina* are given the same initial, A *kábara* *goat* and *karína* *hen*.

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