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A beginning sketch of the Huastec noun phrase

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EVIDENCE FOR A YAGUAN-ZAPAROAN CONNECTION*

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1 Introduction

This paper examines preliminary evidence regarding the type of relationship obtaining between Peba-Yaguan and Zaparoan languages. My tentative conclusions are that certain features shared by the Peba-Yaguan and Zaparoan families may be due to a genetic connection, though independent origin cannot be ruled completely out. These features include phonological phenomena, certain transitivity-related verbal suffixes, and postpositional counterparts of some such suffixes. Other shared features appear to be areal characteristics, pointing to extensive contact between a number of languages prior to recorded history. These features include noun classification systems and movement and locational verbal morphology. Other features which may or may not be indicative of a (western) Amazon linguistic area, and for which I simply lack adequate data on the Zaparoan family, include use of nouns as descriptive modifiers rather than a syntactically distinct class of adjectives or stative verbs, verb-initial plus postpositional structure, infrequent use of any noun phrases in discourse, and verbal morphological organization which does not easily lend itself to a position-class approach. The entire picture is confounded by apparent lack of significant shared lexicon between Peba-Yaguan and Zaparoan, either from a single genetic origin, or via borrowing. However, since no attempts at reconstruction within either language family have ever been made, the lexical question must remain open for the present. The preliminary nature of the conclusions drawn in this paper is emphasized.

By way of general introduction to the situation, Greenberg (1960) proposes two major phyla for most of South America: Andean-Equatorial, and Ge-Pano-Carib. The Zaparoan family, along with Cahuapanan, are claimed to constitute one of the five major subgroupings which make up the Andean division of the Andean-Equatorial phylum. Other Andean-Equatorial representatives in the area include Tucanoan, Tupi-Guaraní, and Arawakan languages, all members of the Equatorial division. Peba-Yaguan is supposedly one of the major branches of Macro-Carib, along with Witotoan and Carib. Macro-Carib is in turn a member of the Ge-Pano-Carib phylum. In this paper I will not take it for granted that Greenberg is correct. But even if there should prove to be no genetic relationship between Peba-Yaguan and Zaparoan, we are still challenged to find an explanation for the perceived similarities.

Zaparoan languages include Iquito, Andoa (also referred to as Shimigae), Arabela, Záparo, Cahuarana, and the now-extinct Coronado. For the most part these languages are located in northwestern Peru, but some extend into southeastern Ecuador as well. It has been hypothesized that Taushiro is also Zaparoan (Natalia Alicea, personal communication), but if so, it is quite divergent from the others. Greenberg (1960) suggests that Waurani or Auca (Ecuador) and Omurano (Peru) are Zaparoan, but he provides no evidence for this relationship. Costales (1975) also claims that Auca is Zaparoan, but Catherine Peeke (personal communication) sees little or no evidence for this. In this paper, I will restrict discussion of the Zaparoan languages to Iquito, Andoa, Arabela, and Záparo.
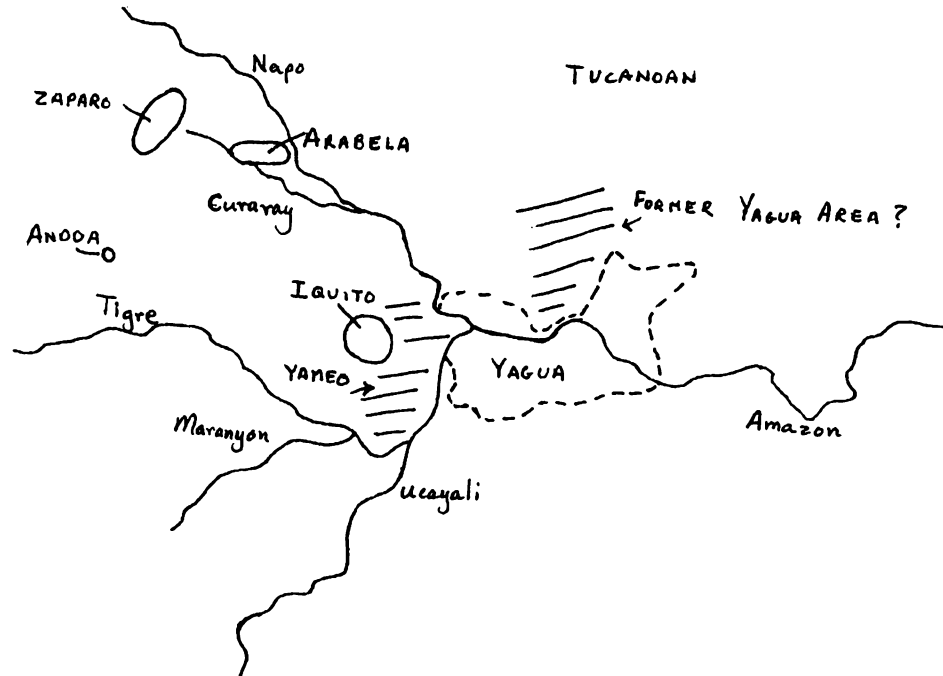
Costales (1975) suggests that, around the end of the seventeenth and beginning of the eighteenth centuries, there were some 98,500 speakers of Zaparoan languages. Today there are almost certainly less than 500 (Iquito ca. 100-200, Cahuarana ca. 4, Arabela ca. 150, Andoa-Shimigae 1 or 2, Záparo ca. 200, Taushiro 6--if indeed it is Zaparoan). This dramatic decrease in population is due to to at least two factors: harassment and decimation by colonial powers, and inter-tribal conflict. The following information from Roland Rich (personal communication) concerning the Arabelas is suggestive of their history:

'Around the turn of the century (1900), the Arabelas were subjected to much harassment and were captured and forced to work rubber for Ecuadorians. They escaped a number of times, but always in the general area between the Arabela river, the south side of the Curaray, and (northwest of there). Evidence for this is that Alcides, a man perhaps in his sixties, immediately recognized pictures of Aucas (Waurani) as **mococori**, said with awe and fear. The Mococori had attacked his ancestors, killing without mercy even women and children. Evidence for very long residence in the general area they are still in is from the fact that the other three languages of the Zaparoan language family are on three sides of them: the Shimigae, or Andoas group, are on the Pastaza at Andoas to the southwest by west... The Zaparos lived on the Cononaco to the northwest, and the Iquitos [lived] on the Nanay headwaters (Pintoyacu) to the southeast... The Arabela contact with outsiders was with Quechua speakers from the very beginning... the Arabelas learned Quechua quite well, but knew practically no Spanish when we arrived November 1, 1954.'

Based on conservative linguistic features, Stark (1976) suggests that the original seat of the Zaparoan family was further to the southeast towards the present-day city of Iquitos:

'Al comparar los idiomas que se hablan cotidiana podemos concluir que Iquitos y Cahuarana, los que comparten más semejanzas entre sí que entre los otros idiomas Záparos, representan una rama más o menos conservadora de la familia lingüística Zápara. Estos datos dan a entender que la familia emanaba de la región de Iquitos, donde hoy día

encontramos las lenguas Iquitos y Cahuarana. Esta
idea se sustenta en los cuentos folklóricos que
indican que los antepasados de los záparos
provenían de las márgenes del Marañon. Hablantes
del idioma se difundieron desde esta área iquiteña
hacia el noroeste por el río Tigre estableciéndose
en concentraciones en los alrededores de la
cabecera, donde todavía existen pocas personas que
hablan Andoa-Shimigae y Arabela aun hoy día.'

The Peba-Yaguan family earlier consisted of at least
three languages: Peba, Yagua, and Yameo, of which Peba and
Yameo are now almost certainly extinct. Chaumeil (1981)
documents migrations of the Pebas and Yaguas from the end of
the seventeenth century. Based on Jesuit documents, he
suggests that the original home area of the Pebas extended
from north to south between the Putumayo and Amazon Rivers,
and from east to west between the present-day town of Pebas
and the Ampiyacu River. The Yaguas (also called Yavas) were
probably north of the Pebas region, overlapping
significantly with the area presently occupied by the Boras
(purportedly Witotoan). Thus, the original home area of both
the Pebas and Yaguas was east of the original home area of
the Zaparoan family. However, colonial records dating from
the 1600's (cf. Espinosa 1955), indicate that the Yameos
were located west of the Amazon just upriver from Iquitos.
Thus, the Yameos were roughly in the same area as, or
possibly bordering on, the Iquito (Zaparoan) region.
Based on personal field work probably in the 1940's,
Espinosa (1955) reported a group of less than 50 Yameo
speakers still located between the confluence of the Marañon
and Ucayali Rivers, and the city of Iquitos.

Colonial sources (cf. citations in Espinosa 1955 and
Chaumeil 1981) report that migration of the Peba-Yaguas
during the seventeenth and eighteenth centuries occurred
under the influence of inter-tribal wars, movements to and
from Jesuit missions, and epidemics. During this period,
conflict between Portugal and Spain spilled over into
Portugese attacks on Spanish missions in the New World,
particularly affecting groups along the Amazon River. The
Omaguas and Yurimaguas (Tupí-Guaraní) were practically
decimated. The Yaguas were affected to a much lesser extent,
as they kept to the forests rather than the larger rivers
where the missions were located. However, as with the
Arabelas and other Zaparoan groups, during the nineteenth
and twentieth centuries the Yaguas experienced significant
migrations as they sought to escape **patrones** who wanted
(often forced) labor for cutting lumber and extracting

rubber. As a result, today the Yaguas are found scattered between the border of Peru with Colombia on the east, and the city of Iquitos on the west. It appears that their extension to the area of Iquitos is relatively recent. In this paper, Yagua data comes from three dialect areas: San José de Loretoyacu, near the Colombian border; Cahocuma, east of Pebas near the Amazon river; and Vainilla, closer to Iquitos at the confluence of the Napo and Amazon rivers.

2 Shared lexicon

Based on mass vocabulary comparison, Rivet (1911a) suggests that Peba-Yagua is part of the Carib grouping. This claim is founded on the discovery of some 47 lexical items which could be construed as cognates with lexical items from Carib languages, including 12 terms for body parts, 5 kinship terms, and 10 terms for ´eléments et nature´. His count is not based on lexical items from any one Carib language, but from 38 languages (cf. Rivet 1911b). In contrast, he finds only 21 lexical items which could be construed as cognates with Zaparoan terms, including six terms for body parts, two kinship terms, and four terms for ´eléments et nature´. More recently, Paul Powlison (personal communication) has dismissed the possibility of a genetic relationship between the two families, apparently based on lack of significant, obvious cognates. However, there are some lexical similarities, as perusal of Zaparoan data found in Eastman and Eastman (1963), Peeke (1959), Rich (1963), Stark (1976), and my personal field notes on Yagua indicate. The following list is not based on careful nor extensive study of the materials available, and is merely suggestive. (Nothing resembling a dictionary or word list is currently available for Andoa, Iquito, or Arabela.) **-ki**, **-ka**, **-nu**, **-ni**, and **-no** endings on Zaparoan words are generally suffixes. **j** = /h/.

	Andoa	Iquito	Arabela	Záparo	Yagua
'above, high'				náwka	nąąwáy
'another'		taana			taa(ra)
					taa(nɥ)
'bathe'	naana		nana		jɥnąnąy
'before'		taarnɨyaa	tari		tąąriy
'blow'	náuta		nooniu		nuu
'breast'				kítiaja	
'milk'					jɨtyąją
'bird'				píšiaka	wičiy
'bite (chew)'	sakɨ		saiy/soko	tsáynu	suuy
'blood'				nánaka	nuna
'canoe'		íímina			jumɥñɥ
'carry'			poonu		pɥɥchiy
'cold'	sina		siinɨ		sɨɨnora
'come'	jɥniy				ninɨɥ
'daughter'				niyátu	neetu
'to drink'	rato		ratu	ratúnu	jatu
'ear'				táwerekau	tuwą́ą́y
'eat'			miakenu		jimyɨy
'to feed'				mwítinu	
'hammock'		inɨɨsi			jńɨy
'lie down, sleep'	oma	maa			
				makwínu	mąąy
'manioc'		asúraaja			jásuučee
'morning'		taríki		tarakááki	tąąrimyɥsiy
'tomorrow'				tareká	tąąrimyɥsiy
'new'		sáámina		tsámika	sámɨrya
'one'		núúkiika		núkaki	tá kɨɨ
'to plant'		naanáta (3pl)			nɥtá
'run away'	masi		masi	asínu	mąąsiy
'flee'				masínu	
'rain'			maru	úmaru	rúmąra
'road'				nuukáma	nɥ́ɥ́
'shoulder'				nématu	nɥmɥtǫ́
'son'				niyánu	neenɥ
'star'				nárikia	naričíy
'to stick'			rupohonu		rúpa
'throw, to spear'			jia	ajátanu	jay-siy
'tree, pole'		nan			nɨnɥ
'tucan'	núpa				nɥ́wa
'very'		júúra			jááryiy
'want'	pani				wąąta
'1plural/ dual'	p-, pay-	pui-, pa-	pa-		wɥɥy-, wuuy-
'3rd person'	na-, n-	nuu			níɨ́, sa-

Critical study of sound correspondences has not yet been undertaken for the Zaparoan or Peba-Yaguan families, much less investigation of consistent correspondences between them. Initially, there is some suggestion of a regular sound change between Yagua /w/ and Zaparoan /p/, as in the items for ´bird´, ´toucan´, ´want´, and the first person plural or (Zaparoan) dual prefixes. Pending research of this sort, we cannot definitively claim that lexical correspondences do not exist. However, the number of obvious potential cognates is small and accidental correspondence cannot (yet) be ruled out. Additionally, study is necessary to show that lexical similarities are not due to mutual borrowing from Omagua, Cocama, or other languages of the area. The only possible Quechua cognate in the above list is that for ´bird´ which corresponds to Quechua **pisko** (David Weber, personal communication).

3 Phonology

There are striking phonological similarities between Yagua and the Zaparoan languages. Paul Powlison (personal communication) anecdotally reports that upon one occasion a number of Arabela and Yagua speakers had opportunity to be together. They felt they should be able to understand one another since the languages ´sounded´ so much alike. They soon found, however, that they could not. There are at least four features accounting for such perceived similarity. The first concerns intonational and pitch phenomena. In the speech of some Yaguas and consistently in Arabela, Iquito, and Andoa, there is a strong phrase-final high pitch accompanied by a phrase-final glottal closure. Exact placement interacts with lexical pitch or tone. Arabela has a rather complicated pitch-accent system (F. Rich 1981), and Yagua falls somewhere between a classical two-tone register tone system and a pitch-accent system. Iquito (Eastman and Eastman 1963) is described as a two-tone system, although it very well may be a pitch-accent system. I do not have information on Záparo. It is important to note, however, that many other western Amazon languages also have pitch-accent systems.

Secondly, phonological inventories are strikingly similar. Stark (1976), Eastman and Eastman (1963), and F. Rich (1963) give the following consonant inventories for Záparo, Iquito, and Arabela. The Yagua list is based on Powlison (1962).

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Záparo:  /p, t, k, s, tˢ,        š, č, m, n, r, w, y, x/
Iquito:  /p, t, k, s,               m, n, r, w, y, h/
Arabela: /p, t, k, s [tˢ ?],  š,    m, n, r, w, y, h/
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Yagua: /p, t, k, s [tˢ],   ǯ, m, n, r, w, y, h/

Ruhlen (1976) lists /tˢ/ as a phoneme separate from /s/ for
Arabela but F. Rich does not do so. Peeke's early field
notes (1953) show that Andoa [tˢ] corresponds to Arabela
/s/. In Yagua /s/ is phonetically [tˢ]. Although I do not
have extensive data on all languages of the area, /tˢ/ or
[tˢ] is found areally south of the Yagua and Zaparoan region
in Pre-Andine Maipuran Arawakan (Campa) and Panoan languages
(e.g. Capanahua, Cashinawa, Cashibo). It apparently does not
occur in Ticuna, Witotoan, and Tucanoan languages. I do not
have data on Omagua and Cocama, both Tupí-Guaraní languages.
Ruhlen (1976) indicates that Witoto, Ticuna, and Tucanoan
(Acaricuara) all have a series of voiced stops /b, d, g/, as
well as other divergent sounds: Witoto (Murui) /ɟ, ɵ, ʐ, β,
ñ/, Witoto (Muinani) /ˀb, ˀd, ñ, ɟ, ʐ/, Ticuna /kʷ, j, f,
ñ/. The consonant system of Ocaina is quite distinctive: /p,
t, c, k, b, ɟ, g, tˢ, dᶻ, ɟ, ʐ, s, š, x, ʒ, β, m, m̄, n, n̄,
ñ, ñ̄, r, h, ʔ/. In Yagua and Arabela combination of /w/ and
/y/ results in [β]. However, Peter Landerman (personal
communication) reports that [β] is found areally.

Zaparoan and Yagua vowel inventories are also similar.
Zaparo has /i, ɨ, a, o/, Arabela has /i, ɨ, a, u, o/ (my
personal field notes), and Yagua has /i, ɨ, e, a, u [ʊ] and
o [ɔ] /, but /e/ and /o/ are infrequent. In all three
languages vowels are both long and short, and in at least
Arabela and Yagua, vowels are nasal as well as oral.

A third characteristic feature of both families is
metathesis of /y/ and any contiguous word-internal
consonant. This results in a series of palatalized
consonants and extensive vowel changes. In the Zaparoan
languages, a similar metathesis of /w/ with any following
word-internal consonant occurs. In Yagua, there is little if
any (synchronic) evidence that syllables terminate in /w/,
though /m/ and /p/ are frequently labialized
syllable-initially when not preceded by a /y/.

Fourth, there is an association between /h/ and
nasalization. In Arabela, F. Rich (1963) reports that /h/
has a nasal quality and that all vowels are predictably
nasalized following /h/. (However, personal field work,
confirmed by Roland Rich, shows that there are at least some
lexical items where an oral vowel follows the /h/.)
According to Ruhlen (1976) /h/ is nasal in Iquito. In Yagua,
deletion of a morpheme-initial /h/ between two short oral
vowels results in nasalization of the vowel sequence, or
oralization of a nasal sequence. Word-initial /h/'s
preceding vowels other than /a/ are characteristically

nasalized, accompanied by deletion of the following vowel.
Matisoff (1975) reports the phenomena of ´rhinoglottophilia´
for Arabic, Tai, Tibeto-Burman, and other languages.
Preliminary work by Aryon Rodrigues suggests that this
phenomenon may be found throughout the Amazon area, though
the actual extent is as yet unknown (Daniel Everett and
Desmond Derbyshire, personal communication). Thus,
independent origin of an association between /h/ and
nasalization cannot be ruled out.

To summarize this section, there are phonological
similarities between the Zaparoan and Yaguan languages.
These similarities might be due to contact. But if so, we
might expect more evidence of lexical borrowing between the
languages. There is nothing particularly odd about the
phonological systems, and independent origin cannot be ruled
out.

4 Noun classification

A second shared feature concerns noun classification.
As reported in Payne (to appear a), Yagua has an extensive
system of some 40 noun classifiers. Classifiers (CF) are
suffixed to demonstrative roots, and infixed to numerals.
There is a native system for counting up to 1,000.[1]

(1)   jiñu   vánu
         jiy-nu
         demo-CF:anim:SG man
         ´this man´

(2)   dá-juu-jyy   siivada
         two-CF:egg-two 3SG:egg
         ´two eggs (possessed, e.g. by a chicken)´

Classifiers are potentially suffixed to descriptive
modifiers, showing concord with the head noun of a noun
phrase. However, the neutral classifier **-ra** most commonly
occurs on descriptive modifiers when the head noun is
present in the noun phrase.

(3)   sújay mii-jay
         cloth dirty-CF:skin:like:item
         ´dirty cloth´

(4)   jąą   púúrya
                púúy-ra
         water rot-CF:neutral
         ´putrid water´

(5)   cf. púújya̧ɟ́
        púúy-ja̧ɟ́
        rot-CF:liquid
        ´putrid liquid (possibly water)´

Classifiers potentially occur in predicate nominal
constructions to show concord between the predicate noun and
the subject noun, as is the case with **-jay** in (6):

(6)   Néé jáámu-jay   jirya   tiryǫ́ǫ́-jay.
                         jiy-ra
        neg big-CF:cloth demo-CF:neutral lie:down-CF:cloth
        ´This sleeping mat is not a big one´.

        The Arabela system does not match up
morpheme-for-morpheme with the Yagua system in terms of
number of classifiers (see Appendix). Arabela classifiers
are not affixed to numbers (there are only three native
number terms). They are not used in demonstratives or
predicate nominals. They may be used in noun phrases to
indicate concord between a descriptive modifier and the head
noun, though in a noun phrase where the head noun is
present, the ending **-ka** is much more likely on the
descriptive modifier than is a specific classifier.

        In both Yagua and Arabela, a primary function of
classifiers is indication of anaphoric reference within the
scope of discourse. The following is a Yagua example,
though Furne Rich (personal communication) reports that
classifiers are similarly employed in Arabela, suffixed to
descriptive modifiers when the head noun is not immediately
present in the same clause as the modifier. (**tį́įkii**
apparently derives historically from the proto-form of
tá-nu-kii, one-CF:singular:animate-one.)

(7)   Pun! Sa-duu-níí   nu-ntiy,   nu-ntiy.
             3SG-blow-3SG another-also another-also

        Tį́įkiidee   baayásityée.
        tį́įkii-dee   baay-jásiy-tée
        one:CF:SG:anim-diminuitive escape-PROX1-emphatic

        ´"Pun!" He blew him (shot him with a blowgun),
        another also, another also. Only one little
        (animal) escaped´.

Additionally, as illustrated for Yagua in (6) above where
-jay derives a noun from the verb **tiryǫǫ** ´lie down´, Arabela
classifiers also have a nominalizing function when suffixed

to verb roots (Furne Rich, personal communication). This feature is apparently an areal phenomenon, also characteristic of noun class systems in Tucanoan languages, Preandine Maipuran Arawakan, possibly Bora (Thiessen 1957), and Waurani (classification uncertain, Peeke 1973). As in Yagua, infixation of classifiers to numbers is also found in Bora (which also has native number terms up to 1,000), and in at least some Preandine Arawakan languages (which have only three native number terms). In sum, noun classification appears to be a wider areal phenomenon. It is not found, however, in the Tupí-Guaraní and Panoan languages which intervene between the Preandine Arawakan languages in southern Peru, and the other noun class languages which extend northward from the Amazon river.[2]

Although not clearly part of the noun classification system in Zaparoan or Yagua, **-tu** and **-ryy** are feminine endings in Yagua, and **-tu** and **-ru** are feminine endings in Arabela. **-nu** is a masculine and/or animate singular classifier in Yagua. This corresponds to a **-nu** masculine ending and **-nu** nominalizer in Arabela.

5 Constituent order

According to Greenberg (1966), Hawkins (1983), and others, verb-initial constituent order coupled with postpositional phrases is supposedly a typologically rare combination. As discussed in Payne (to appear, c), however, there are a number of languages in the Amazon area which evidence this combination, including Guajajara (Tupi-Guaraní), Taushiro (classification uncertain, but possibly Zaparoan), Matsiguenga, Nomatsiguenga, Asheninca, Caquinte, Amueshua (all Preandine Arawakan), and Yagua.

To my knowledge, no critical study of constituent order in Zaparoan languages has been undertaken. Identification of basic order of subject, object, and verb in Zaparoan is not straightforward, as variation does occur, and critical study is required to determine what order is most pragmatically neutral and most frequent. Nevertheless, Furne Rich (personal communication) suggests that SOV is basic for Arabela. Eastman and Eastman (1963:158-9) cite SVO as basic for Iquito. However, most of their examples show that the preverbal subject reference is not a free noun or noun phrase, but a bound form on the verb. Many examples of preverbal subjects are negated or appear to be contrastive. They also state that 'subject may occur [after the verb] to highlight the sentence as an important one, as when the chief character of a narrative is introduced'. Although they

do not state that objects can occur preverbally, they in fact provide examples of this.

One interesting feature of Iquito not discussed by Eastman and Eastman is apparent placement of direct object clitics or pronouns finally in the clause, following oblique or indirect objects:

(8)   kímasɨ̵tɨ̵ɨyaa seis sóles núú.
        I:sell   six soles it
        'I sell it (for) six soles'.

(9)   nuumiitɨ̵ɨyaa siyuuyáána núú
        he:is:giving fisherman it
        'He is giving it to the fisherman'.

When the direct object is nominal, however, it precedes oblique objects:

(10)   nuɨ́ɨnii   kánuu inɨ̵ɨsi-íɪra
        she:is:twisting fiber hammock-for
        'She is twisting fiber for a hammock'.

This appears to be entirely parallel to placement of Yagua direct objects and object clitics. When expressed by a nominal, the direct object normally precedes the oblique object. When expressed only by a clitic, however, the clitic attaches to the final element of the clause:

(11)   Rachøønáásiy   jɨ̵ɨtanɨ̵ɨ nurutu
        Ray-søønə-jásiy jɨ̵ɨta-nɨ̵ɨ
        1SG-lift-PROX1 PROG-3SG alligator

        mɥñɥviimɥ́jɥ.
        mɥ§u-viimɥ-jɥ
        canoe-inside-allative

        'I lifted the alligator into the canoe'.

(12) Rachøønáásiy   jɨ̵ɨta mɥñɥviimɥ́jɥnɨ̵ɨ.
     Ray-søønə-jásiy   mɥ§u-viimɥ-jɥ-nɨ̵ɨ
     1SG-lift-PROX1   PROG canoe-inside-allative-3SG
     'I lifted him into the canoe'.

In sum, basic order of subject, object and verb among Zaparoan languages is not clear, but a significant amount of variation is observed. There may be a pattern of moving direct object clitics or pronouns towards the end of the clause. I do not have sufficient data on any of the Zaparoan languages to make any claims regarding the basic

order of descriptive modifiers. It is clear, however, that the languages are postpositional and that the genitive noun precedes the head noun.

6 Verbal morphology

Another shared similarity is the presence of verbal affixes indicating location or direction of action, and type of movement accompanying action. This morphology has aspectual meanings as well. Such morphology is found in at least the Arawakan languages, as well as Peba-Yaguan and Zaparoan. Here I give examples of such morphology from Arabela, Iquito, and Yagua.

Eastman and Eastman (1963:180-1) describe the organization of Iquito verbal morphology following the verb stem as:

+ Stem +/- Neg +/- Aspect + Tense +/- Reportative

Their term ´aspect´ subsumes a number of suffixes which indicate not only aspectual meanings such as:

áárɨɨ ~ yáárɨɨ ´inceptive´
aa ~ yaa ´progressive´
rɨɨ ´cessative´

but also location and movement:

wɨɨ ´up, upriver´
kuaa ´down, downriver´
kuwɨɨ ´returning´
sawɨɨ ´arriving´

The Eastmans´ term ´tense´ really applies to a tense/aspect category comprised of:

kɨ ~ ṛa ´present, done today´
kura ´past´
rikɨ ~ kɨaakɨ ´ancient past´
rɨ ´incomplete, continuous´
kuma ´far distant future´

No discussion is provided of co-occurrence restrictions or possible order variation among ´aspect´ and ´tense´ categories.

R. Rich (1975) lists the following verbal morphology for Arabela:

-ya ~ -a ~ -o 'repetitive' or 'returning' (distributive?)
-ré ~ -ri ~ -ro 'punctual' or 'completed'
-sé ~ -si ~-su 'go and do (?)'
-ma ~ -mia ~ -mo 'stop and do on the way'
-ko ~ -kio 'do while going', 'do in an inwards direction',
                or 'upriver'
-rikiaa ~ rikioo 'incomplete past' or 'interrupted'
-kee 'punctual' or 'suddenly'
-rukua 'downriver' or 'recent past'
-kiaa 'habitual'

In Payne and Payne (in progress), organization of Yagua verbal morphology following the root is described informally in terms of general syntactico-semantic 'regions' of the verb as follows:[3]

ROOT DERIVATION LOCATION ITERATION PERFECTIVITY MOVEMENT TENSE

There are a number of co-occurrence and order restrictions between specific affixes of the different categories such that the above schema only gives an approximation of how any one verb might be organized. It should also be kept in mind that location and movement suffixes are not devoid of aspectual meanings. Locational/directional affixes include:

-imų 'down, downriver'
-sa 'up, upriver'
-ja 'across (land or water)'

Iteration affixes include:

-yaa ~ yąą 'distributive'
-jayąą 'iterative'
-jaa 'iterative movement to some other place'
-janapųųryįį 'suddenly' or perhaps 'semelfactive'

Perfectivity affixes include:

-mų 'completive'
-nųųy 'imperfective'
-jaanca 'continuative'
-sara 'habitual'

Movement affixes include:

-títyiiy 'going along directly towards some destination'
-nąyąą 'going all over with no particular destination in mind'
-rįį 'stopping enroute to do something, but then continuing on'

-nʉwḭḭ ´to do on arrival at the point of reference´
-nʉwee ´to do on arrival at a location away from the point of reference´.

There are five tense formatives in Yagua (not including the future/irrealis auxiliary):

-jásiy ´proximate 1´ (a few hours ago, or future)
-jáy ´proximate 2´ (one day ago, or future)
-siy ´a few weeks ago´
-tíy ´a few months-year ago´
-janʉ/-jana ´distant past´

Evaluation of the significance of similarities in these languages relative to both the presence and organization of movement, location, aspectual, and tense formatives should be witheld, pending study of verb organization in other languages of the area. It seems clear that Yagua has a more sharply defined tense system separate from location/movement/aspect formatives than do the Zaparoan languages.

A second similarity concerns the ´infinitive´ endings. In Zaparoan these are **-nu** (Arabela), **-no** (Andoa), or **-ni** (Iquito). In Yagua the infinitive/participial endings are **-janʉ** (or **-anʉ**, **-ąnʉ**, **-onʉ**, **-ǫnʉ**, **-enʉ**, **-ęnʉ**) in the Cahocuma dialect, or **-jana** (with parallel allomorphs) in the Vainilla dialect. Paul Powlison (personal communication) has pointed out that although one can see similarities of form and meaning here, one could just as well argue for a relationship between the Yagua suffixes and Spanish **-ando** or **-ado/-ada**, etc.

The passive morpheme in all the Zaparoan languages is **-sa** or **-tˢa**. In Peeke´s Andoa field notes this is consistently written as [tˢ] , and it seems there is some indeterminacy regarding the /s/-/tˢ/ phoneme distinction in the Zaparoan family. There is no productive passive morpheme in Yagua, but there is a series of ´passive nominalizers´ which derive a nominal referring to the understood object of a transitive verb. These nominalizers consist of the formative **-sa-** [-tˢ-] plus a suffix **-ra** ´inanimate or animate´, **-ḭ** ´animate singular´, **-nʉʉy** ´animate dual´, **-vay** ´animate plural´. Thus, for example, **nąyąą** indicates ´stomp´, but **nąyąąsara** ´a stomped thing´, **nąyąąsḭ** ´a stomped one (animate)´. Thus, it may be that Yagua **-sa-** has etymological associations with a passive. Functionally

parallel nominalizers are found in the Zaparoan languages, but without distinctions for animacy and number: Arabela **-sanu** as in **powata** ´tell´ versus **powatasánu** ´what is told´, Andoa **-sano** as in **asa** ´eat´ versus **asasano** ´what is eaten´.

Perhaps the most intriguing similarity between Zaparoan and Yaguan languages concerns transitivity-related derivational morphology. It is especially tantalizing in the face of little obviously shared lexicon. In Yagua there is a valence-decreasing formative **-y**. This formative is lexically restricted, but can be applied to a fairly large subclass of verb roots (Payne, to appear b). (´Third singular´ is arbitrarily translated as ´he´, ´him´, or ´his´, though the Yagua forms are neutral for masculine versus feminine gender.)

(1) Sa-nǫǫtá-ra.
   3SG-knock:down-inanimate
   ´He knocks it down´.

(2) Sa-nǫǫta-y.
   3SG-knock:down-detransitive
   ´He falls down´.

For Arabela, R. Rich (1975) lists **-ji, -je, -e,** and **-ai** as allomorphs of a detransitivizing suffix.

There are several transitivizing suffixes in Yagua. These include **-sa, -siy, -su, -na, -niy,** and **-nu,** all of which are lexically restricted. It is possible that some of these suffixes are etymologically related to postpositions, such as **-niy** ´in´ (Payne, to appear b). R. Rich lists **-n** and **-ni** among the valence increasing suffixes of Arabela. I do not have information on the productivity of the Arabela morphemes.

The most striking parallel in the transitivizing morphology is the formative **-ta**. In Yagua, at least, this is not lexically restricted. As discussed in Payne and Payne (in progress) there may be two **-ta** transitivizing morphemes. This is suggested by pairs such as the following, where the inherent tone features of **-ta** seem to have an effect on the tone of the preceding morpheme:

(3) Sa-nikyéé-ta-títyiiy.
   3SG-talk-TA-going:directly
   ´He talks (with someone) while going along´.

(4) Sa-nįkyee-ta-títyiiy,
    3SG-talk-TA-going:directly
    'He talks/calls (to someone) while going along',

With some verb roots use of **-ta** conveys a greater sense of volition or intensity than the verb without **-ta**:

(5) Sψψnψ́ψ́y,
    sa-jψnψ́ψ́y
    3SG-see
    'He sees',

(6) sψψnψ́ψ́tyanįį,
    sa-jψnψ́ψ́y-ta-nįį
    3SG-see-TA-3SG
    'He watches/cares for him',

In other pairs, use of **-ta** indicates that the syntactic direct object is a semantic instrument or item which accompanies the subject of the clause:

(7) Sa-tiryǫǫ,
    3SG-lie:down
    'He lies down (one's self)',

(8) Sa-tiryǫ́ǫ́-ta-ra,
    3SG-lie:down-TA-inanimate
    'He lies down with it (e,g, a book)'

    If there are indeed two homophonous transitivizing **-ta** formatives, at least one (if not both) clearly correspond to the postposition **-ta** 'instrument' or 'comitative':

(9) Sa-ya   sa-wátará-ta,
    3SG-go 3SG-woman-TA
    'He went with his (someone else's) wife',

(10) Sįįčitiy   kííčityanįį
     sa-jįčitiy kííčiy-ta-nįį
     3SG-poke   knife-TA-3SG:anim
     'He pokes him with a knife'

(11) Sįįčitítyara
     sa-jįčitiy-ta-ra
     3SG-poke-TA-inanimate
     'He pokes with it',
     (*'He pokes it',)

When the instrument or comitative participant is not

expressed by means of an overt noun, **-ta** may simply occur as a verbal suffix, following other derivational suffixes but preceding iteration, aspect, movement, tense, and other verbal suffixes:

(12) Sįįčitítyajayąąsarára.
     sa-jįčitiy-ta-jayąą-sara-ra
     3SG-poke-TA-continuative-habitual-inanimate
     ´He always pokes with it´.

In the Zaparoan languages there are likewise possibly two verbal suffixes **-ta** which have a transitivizing effect. R. Rich (1975) writes ´El sufijo **-ta ~ -tia** indica que hay un "aspecto acompañante" al sujeto de un verbo intransitivo. No es el mismo sufijo **-ta** con que se forma el verbo transitivo con ciertas raíces´. Similarly, there is also a postposition **-ta** ´instrument´ or ´comitative´. Rich adds: ´Aunque el sufijo en el sustantivo [i.e. a postposition] parece iqual al **-ta** "aspecto accompañante" [i.e. the verbal suffix] , se diferencia por su distribución´.

Peeke (1959) indicates that **-ta** is the instrumental postposition in Andoa: **amáka-ta** ´stick-with´. Peeke (1953) also lists **-ta** as a verbal transitivizing suffix: **nana-ta** ´to bathe another´ versus **nana** ´to bathe one´s self´ (compare Yagua **sa-nąnąy** ´he bathes (himself)´ versus **sa-nąnąy-ta(-nįį)** ´he bathes (someone else)´). Its position within the verb is after certain other derivational suffixes and before movement, aspectual, and tense suffixes.

This postposition probably reconstructs as **-ta** for Peba-Yaguan. The only form found in present-day Yagua is **-ta**. Rivet (1911a) gives **-ta** for Yameo, apparently drawing on colonial catechismal sources. He provides examples of **-ta** suffixed both to pronominal forms as a postposition, and examples of **-ta** suffixed to verbs: **-hoe-ta** ´you-with´, **za-lequeala-ta** ´with his speech´ (or possibly ´he speaks with someone?--cf. the Yagua examples in (15) and (16) above). No information is available for Peba.¹ The postposition probably reconstructs as **-ta** or **-jata** for the Zaparoan family: Iquito **-jata**, Andoa **-ta**, Arabela **-ta**.

1 Conclusions

As discussed in Sections 3 through 6, there are a number of similarities between Peba-Yaguan and Zaparoan languages. Relative to phonology these include almost identical consonant systems, an association between [tˢ] and [s] or /s/, pitch and intonational phenomena, metathesis of /y/ with following consonants accompanied by consonant and

vowel changes, and an association between /h/ and nasalization. Information on Zaparoan constituent order is sketchy, but it appears there may be a tendency to move object pronouns or clitics to the end of the clause in both Iquito and Yagua. With regard to verbal morphology, in both language families there are possibly two **-ta** transitivizing morphemes, corresponding to an instrumental/comitative postposition **-ta** or **-jata.** As a verbal suffix, **-ta** occurs close to the root preceding aspectual, movement, and tense formatives. It follows other derivational formatives, and at least in Yagua, it is highly productive.

If borrowing should prove to be the source of all these shared features, we might expect to find stronger similarities between Iquito and Yameo, since from what we presently know, the Peba and Yagua languages have not been in significant contact with any Zaparoan group throughout the past three centuries. Unfortunately little data are available on Yameo, and throughout this paper documentation of similarities has been based primarily on Yagua within the Peba-Yaguan family. If the shared features are due to borrowing, contact and subsequent migration must have been significantly prior to the seventeenth century.

It is widely assumed that the easiest and first features to be borrowed in a language contact situation are lexical items. Following this, phonological features and derivational affixes may be borrowed. Borrowing of morphology like **-ta** and the gender endings like **-nu, -tu,** and **-ru** or **-ryy,** purportedly would not occur unless there had first been significant lexical borrowing. However, the list of lexical items in Section 2 does not in itself suggest a high enough level of borrowing to account for almost identical phonological systems and these morphological similarities.

If we tentatively rule out borrowing as a source of these shared phonological, order, and morphological features, this leaves independent origin and genetic relationship as possibilities. At present I would maintain that independent origin cannot be ruled out. Movement of given information towards the end of the clause, such as the Yagua and Iquito object clitics/pronouns may be a general tendency in verb-initial languages (though as noted above, constituent order in Zaparoan is basically unstudied). Relative to the **-ta** postpositional -- transitivizing suffixes, Nichols (in progress) shows that an identical hopping of instrumental/comitative adpositions next to the verb root is found in Chechen, Ingush, and Abkhaz. And as noted in Section 3, there may be a phonetically natural

association between (h) and nasalization, and the consonant systems are not in anyway odd.

Nevertheless, the similarities are intriguing and we may have an instance of Sapir's 'submerged features' remaining as the primary evidence of a genetic link (cf. Campbell and Mithun, 1979:55). But if there is such a link, lack of lexical cognates is indeed a problem. Here, I would first of all reiterate that sound correspondences and solid reconstruction have never been given a critical look. Secondly, as Campbell and Mithun (1979:54) remind us, 'basic vocabulary ... may perhaps suffer radical replacement under varying socio-cultural conditions'. Li (1984) argues that for Hui, replacement of Altaic lexicon with Chinese lexicon accounts for what looks like a Chinese language with some vowel harmony, non-Chinese phonetic segments, suffixal cases, postpositions, and SOV constituent order. That is, Hui may be a case of an immigrant group coming into contact with a superstrate Chinese dialect. Substratal Altaic features remained even though massive vocabulary and some syntactic features were acquired from Chinese. In the Yaguan-Zaparoan situation, conceivably the two families extended from a single genetic source. But under some unknown social or political pressure, one group suffered massive, if not total, lexical replacement due to contact with a non-Yaguan-Zaparoan superstrate language. The superstrate language group under which this occurred then itself disappeared or became sufficiently integrated with the contact substrate group such that by the colonial period, the superstrate and substrate languages were indistinguishable.

Whatever the correct analysis of the data should be, the entire western Amazon region deserves serious study relative to features which may identify it as a linguistic area in the technical sense. In the light of such research, we should be able to more clearly evaluate the nature of the Yaguan-Zaparoan connection.

Appendix: Comparison of Arabela and Yagua Classifiers

Yagua classifiers as given here represent the San José de Loretoyacu dialect, spoken near the border of Peru with Colombia. Question marks indicate that the classifier is used for the item indicated, but that I do not have sufficient data to know what else the classifier might represent.

ARABELA		YAGUA	
-kua/kuasi	'people, male'	-nɥ	'animate singular'
		-nɥɥy	'animate dual'
		-vay	'animate plural'
-ka/-kua	'general'	-ra	'neutral'
	'medium sized round object'	-siy	'sweet potato'
		-kạy	'(empty) **totuma** gourd'
		-tu	'**totuma** gourd'
-ko	'empty containers including houses	-nɥ	'clay water jug'
		roore	'house'
-kojua	'hand, finger'	jadnạạ	'finger'
		jomọttu	'hand'
-kujua	'leg'		
-i-hue/-hua	?'roots, manioc'	-kạạ	'manioc'
-huana	'long, thick item'	-mɥ	'**chambira** trunk'
		-na/-nạ	'banana trunk'
		-nɥ	'tree'
		-nɨɨ	'canoe'
-naja	'items which also take **-huana**		
-jaaka	'seeds (plural)'		
-jajau	'small round item'	-ju	'egg'
		-siy	'small round item'
-maka	?'long thin item'	-mɨɨ	'flowers, sprouts'
		-nuu	'flute, bone, cane'
		-puu	'house pole'
		-wuu	'house pole'
		-roo	'dart, needle, spear'
		-dasiy	'blowgun, shotgun'
		-nakye	'tongue'
		-nɥne	'cultivated field'
-mo	'stream'		
-mue	?'feather'	-mɥɥ	'feather, stream'
-muejaru/-naka	?'hair'	-jasiy	'hair'
-naku	?'liquid'	-jạạ	'liquid'
-neka	?'arm'		
-nee	?'instruments'	-jɨ	'oar'
		-ra/-nay	'knife, machete, scissors'

		-vɨ	'paper, leaf'
-nikiaka	?'face'		
-nokua	?'foot'	nɏmɏttu	'foot'
-nu	'hammock'	-kǫǫ	'hammock'
-ojuaru	?'tail'		
-ke	'cloth'	-jay	'skin, cloth'
		-juu	'net'
		-kuuy	'bags, pants'
-kera	'native woven item, material used for weaving'	-rąą	'**chambira** fiber'
		-koo	'palm fiber clothing'
		-soo	'palm fiber clothing'
		-tu	'woven palm leaves'
-raki	?'roll of cloth, soap'	-panyey	'flat, thick item'
-rikiaja	?'neck'		
-ru/-tu	?'feminine'	(**-rɏɏy** and **-tu** are Yagua feminine endings, but are not truly classifiers)	
-ru	?'basket'		
-si	?'pot, shiny white item, scar'	-tǫǫ	'cooking pot'
-soкua	?'firewood, split log'	-puu/-ray	'firewood, split log'
-su	?'item composed of small pieces, pieces of such an item'		
-yokua	'rope, vine, long item'	-jɏɏ	'long tieable item'

Notes

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[1] Abbreviations used in this paper are: anim = animate, PROX1 = first proximate tense (usually interpreted as one day ago), PROG = progression along the major event or theme line (**jį́įta** is also used in certain marked constructions to signal pragmatically marked information), SG = singular, CF = classifier, demo = demonstrative root, neg = negative. Nasal consonants preceding oral vowels have an oral release, which in other linguistic papers and in the practical orthography have been represented with **d** and **b**, rather than **n** and **m**. In this paper I use a more phonemic representation in order to facilitate cross-language comparison.

[2] Although I do not have extensive information on Panoan (or Tupí-Guaraní) languages, there appear to be other basic typological differences between these and the language families bordering them on the north and south. In particular, the Panoan languages are SOV switch-reference languages with ergative/absolutive verbal morphology. The differences suggest that they might be a later intrusion into this area.

[3] A similar approach has been suggested for Preandine Arawakan languages (David Payne 1978; Wise, to appear).

[4] Although the formative **-ta** is also found in Quechua, it does not correspond to the Yagua-Zaparoan **-ta** in either distribution or meaning. In Quechua **-ta** is a direct object case marker and does not have any clear connotations of 'instrumental' or 'comitative'.

References

Campbell, Lyle, and Marianne Mithun (eds.). 1979. The Languages of Native America: Historical and Comparative Assessment. Austin: University of Texas Press.

Costales, Piedad y Alfredo. 1975. La familia etno-lingüística Zápara. Ethos 1.3-33. (Quito, Ecuador).

Chaumeil, J. P. 1981. Historia y Migraciones de los Yagua de finales del Siglo XVII Hasta Nuestros Días. Lima: Centro Amazonico de Antropología y Aplicación Práctica.

Eastman, Robert, and Elizabeth Eastman. 1963. Iquito Syntax. Benajmin Elson (ed.), Studies in Peruvian Indian Languages: I, 145-92. Norman: Summer Institute of Linguistics and University of Oklahoma.

Espinosa, L. 1955. Contribuciones Linguísticas y Etnográficas Sobre Algunos Pueblos Indígenas del Amazonía Peruana. Madrid: Instituto Bernardino de Sahagún.

Greenberg, Joseph. 1960. The general classification of Central and South American languages. Anthony Wallace (ed.), Men and Cultures: Selected Papers of the Fifth International Congress of Anthropological and Ethnological Sciences, 791-4. Philadelphia: University of Pennsylvania Press.

Hawkins, John. 1983. Word Order Universals. New York: Academic Press.

Li, Charles. 1984. From verb-medial analytic language to verb-final synthetic language: A case of typological change. Berkeley Linguistic Society 10.

Matisoff, James. 1975. Rhinoglottophilia: The mysterious connection between nasality and glottality. In Charles Ferguson, Larry Hyman, and John Ohala (eds.), The Nasalfest, 265-287. Stanford: Stanford University Press.

Nichols, Johanna. In progress. Head marking and dependent marking grammar.

Payne, David. 1978. Phonology and Morphology of Axininca (Apurucayali Campa). Doctoral dissertation, University of Texas at Austin.

Payne, Doris. To appear a. Noun classification in Yagua. Collette Craig (ed.), Noun Classes and Categorization. Amsterdam: J. Benjamins.

Payne, Doris. To appear b. Degrees of inherent transitivity in Yagua verbs. IJAL (1985).

Payne, Doris. To appear c. Basic constituent order in Yagua: Implications for word order universals. Desmond Derbyshire and Geoffrey Pullum (eds.), Handbook of Amazonian Languages, 1. The Hague: Mouton.

Payne, Doris and Thomas Payne. In progress. A grammatical sketch of Yagua. Desmond Derbyshire and Geoffrey Pullum (eds.), Handbook of Amazonian Languages, 2. The Hague: Mouton.

Peeke, Catherine. 1953. Análisis tentativo de la morfología andoa. Información de Campo No. 32-c. Peru: Instituto Lingüístico de Verano.

Peeke, Catherine. 1959. Shimigae, idioma que se extingue. Estudios Acerca de las Lenguas Huarani (Auca), Shimigae y Zápara, 18-28. Quito: Instituto Lingüístico de Verano.

Peeke, Catherine. 1973. Preliminary Grammar of Auca. (Summer Institute of Linguistics Publications in Linguistics 39.) Norman, Oklahoma: Summer Institute of Linguistics and University of Oklahoma.

Powlison, Paul. 1962. Palatalization portmanteaus in Yagua (Peba-Yaguan). Word 18.280-99.

Rich, Furne. 1963. Arabela phonemes and high-level phonology. Benjamin Elson (ed.), Studies in Peruvian Indian Languages: 1, 193-206. Norman: Summer Institute of Linguistics and University of Oklahoma.

Rich, Furne. 1981. Arabela phonology and orthography. MS.

Rich, Roland. 1975. Sufijos verbales y apuntes gramaticales sobre el idioma arabela. Datos Etno-lingüísticos No. 18. Peru: Instituto Lingüístico de Verano

Rivet, P. 1911a. La famille linguistique Peba. Journal de la Societé des Américanistes 8.172-206.

Rivet, P. 1911b. Affinités du Miránya. Journal de la Societé des Américanistes 8.117-

Ruhlen, Merritt. 1976. A Guide to the Languages of the World. Stanford: Stanford University.

Stark, Luisa. 1976. La lengua zápara del Ecuador. Ambato, Tungurahua: Instituto Inter-Andino de Desarrollo. MS.

Thiessen, Wesley. 1957. The number system of Bora. Datos Etno-lingüísticos No. 1. Peru: Instituto Lingüístico de Verano.

Wise, Mary Ruth. To appear. Grammatical characteristics of Preandine Arawakan Languages. In Desmond Derbyshire and Geoffrey Pullum (eds.), Handbook of Amazonian Languages, 1. The Hague: Mouton.