Revista
Brasileira de

Linguística Antropológica

Volume 17 – 2025

e-ISSN: 2317-1375

R454 Revista Brasileira de Linguística Antropológica / Ana Suelly Arruda Câmara Cabral, Editora – v. 17 (2025) – Brasília, DF: Laboratório de Línguas e Literaturas Indígenas, Instituto de Letras, Universidade de Brasília, 2025.

Anual
e-ISSN: 2317-1375
Publicação *on-line*: https://periodicos.unb.br/index.php/ling/

1. Linguística antropológica. 2. Línguas e culturas indígenas – Américas. 3. Linguística histórica. 4. Tipologia linguística. I. Cabral, Ana Suelly Arruda Câmara.

CDU 81'27

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https://periodicos.unb.br/index.php/ling/

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Some Phonological Aspects of South American Indian Languages

Alguns aspectos fonológicos das línguas indígenas sul-americanas

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DOI: https://doi.org/10.26512/rbla.v17i1.61013
Recebido em janeiro/2025 e aceito em fevereiro/2025.

Conferência realizada no Summer Colloquium in Linguistics, da University of Oregon.

Este manuscrito insere-se no conjunto de conferências de Aryon Dall'Igna Rodrigues, quando ele lecionava na UNICAMP (1973-1988), agora publicado na RBLA. O manuscrito integra o acervo Aryon Dall'Igna Rodrigues do Instituto Aryon Dall'Igna Rodrigues.

UNIVERSITY OF OREGON

SUMMER COLLOQUIUM IN LINGUISTICS

Sponsored by:
The Department of Linguistics and
the Summer Institute of Linguistics

Eighth Session

Date: Wednesday, August 19, 2:30-4:00 p.m.
Place: Straub 142

Lecturer:

Prof. Dr. Aryon Rodrigues
Universidade Estadual de Campinas, Brazil

Title:

SOME PHONOLOGICAL ASPECTS OF SOUTH AMERICAN INDIAN LANGUAGES

Some phonological aspects of SA languages

1. SA as an isolated area; time depth of peoplement; one-way migrations.
2. Variety of languages; & today about 300, formerly x2 at le
3. Highland and lowland:

~~Highland is apparently~~

Lgs. of the Highland ~~are~~ have probably entered S.A. in more recent times than Lowland lgs.: (1)

① ~~there~~ the few clues so far discovered in the search for genetic relationships of SA lgs with lgs. outside of SA ~~be~~ are pointing to more likely ~~relationship~~ of ~~people~~ affinities ~~with~~ of Mesо-American (i.e. Central American and Mexican) ~~affinity~~ lgs with Highland SA lgs ~~that of~~ and not with Lowland lgs.;

(2) the phonological systems of Highland SA ~~are~~ contrast clearly with those of the Lowland, but ~~appear~~ resemble more the systems found in Mesо-America:

~~Andean Kechua, for instance~~

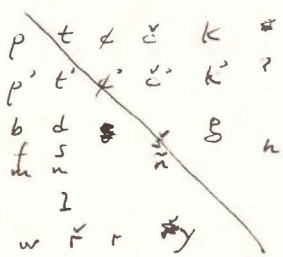
Some dialects of Andean Kechua (in Southern Peru, in Bolivia) have two long series of stops, a plain one and a glottalized one:

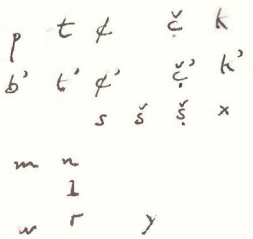
p t ȼ č k q
p' t' ȼ' č' k' q'

to which are added front nasals, fricatives and liquids plus the vocalic glides:

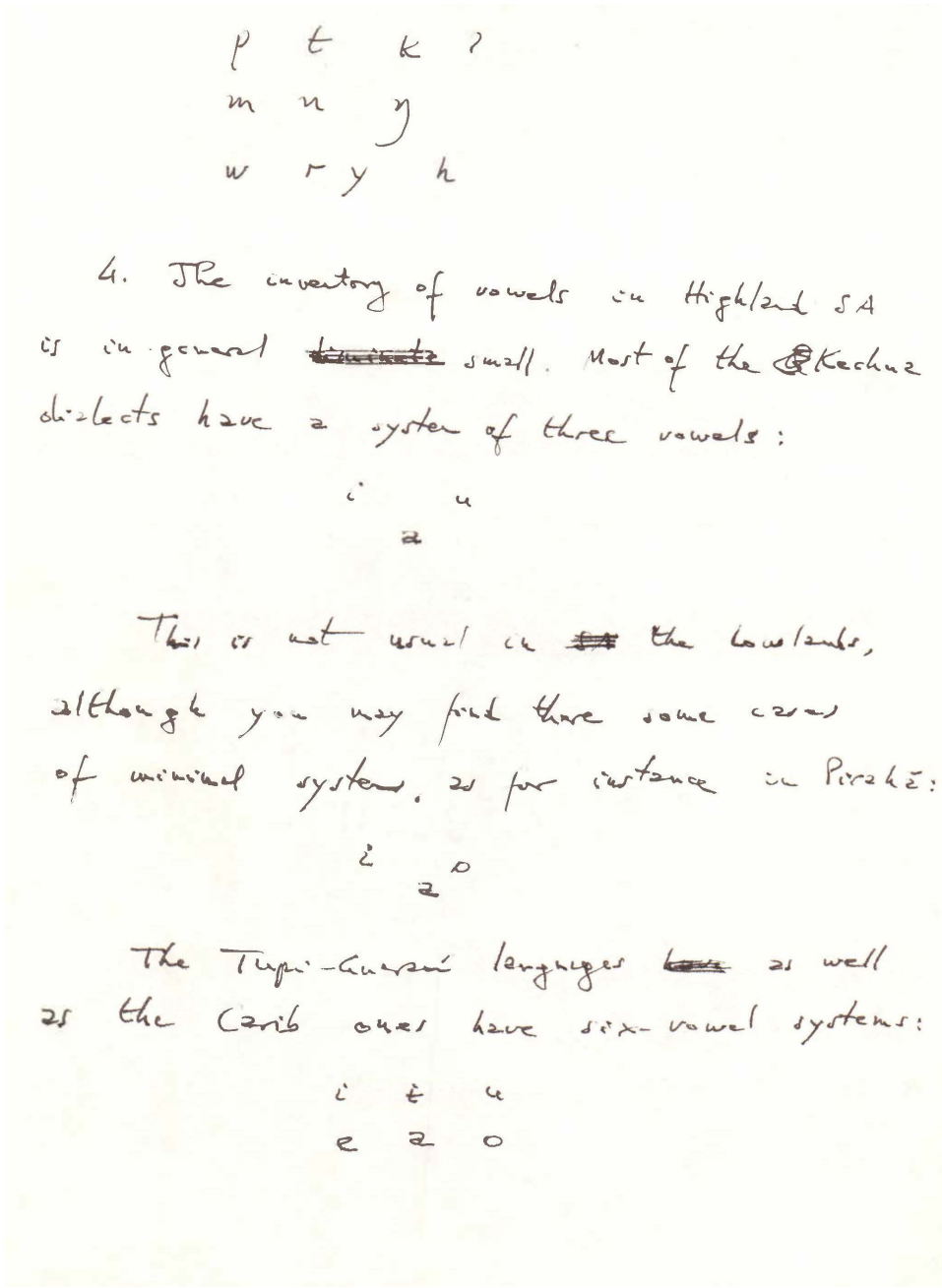
m n ñ
l ʎ
w r y

Compare this with Acatec, a Mayan language of ~~Central Mayas of Southern Mexico~~ Guatemala:





In lowland SA ~~the~~ series of glottalized ~~stops~~ consonants are unusual. Typical for the Tupí-Guaraní languages, which spread from French Guyana to northeastern Argentina and from western Peru to eastern Brazil, is the following set of consonantal phonems:


p t k ʔ
m n ŋ
w r y h
4. The inventory of vowels in Highland SA is in general small. Most of the Quechua dialects have a syster of three vowels:
i u
a
This is not usual in the lowlands, although you may find there some cases of minimal systems, as for instance in Pirahã:
i o
a
The Tupi-Guarani languages as well as the Carib ones have six-vowel systems:
i ɨ u
e a o

Most of the Carib languages have only oral vowels, whereas the Tupi-Guarani ones have a feature of nasalization, which may be viewed as a suprasegmental, which may affect all the vowels, producing a duplication of the six-elements set:

ĩ ɛ̃ ɨ̃
ɐ̃ ã õ

Other language families in Lowland SA present more complex vocalic systems. So the Jê languages in Brazil, whose vocalic inventories vary from 14 to 17 vowels, as in Canela:

oral			nasal		
i	ɨ	u	ĩ	ɨ̃	ũ
e	ɤ	o			
ɛ	ʌ	ɔ	ɛ̃	ʌ̃	ɔ̃
	a			ã	

In lowland SA we find also what is probably one of the largest vocalic inventories in the world. Natëb, a language of the Makú family in northwestern Amazonia, Brazil, has exactly the same system of 10 oral vowels as Canela, ~~but to these it adds to this besides~~ 2nd six nasal vowels, but it has also a long counterpart ~~for~~ to each oral and each nasal vowel ~~and~~ as well as a laryngealized counterpart to each of the preceding, be they plain, nasal or long. All in all there are 74 vowels, as follows:

Plain oral

i	ɨ	u
e	ə	o
ɛ	ʌ	ɔ
	a	

Plain nasal

ĩ	ɨ̃	ũ
ɛ̃	ə̃	õ
	ã	

Long oral

i:	ɨ:	u:
e:	ə:	o:
ɛ:	ʌ:	ɔ:
	a:	

Long nasal

ĩ:	ɨ̃:	ũ:
ɛ̃:	ã:	õ:

Laryngealized oral

ʔi ʔɨ ʔu
ʔe ʔə ʔo
ʔɛ ʔʌ ʔɔ
ʔa

Laryngealized nasal

ʔĩ ʔɨ̃ ʔũ
ʔẽ ʔə̃ ʔõ
ʔɛ̃ ʔʌ̃ ʔɔ̃

Long laryngealized oral

ʔi: ʔɨ: ʔu:
ʔe: ʔə: ʔo:
ʔɛ: ʔʌ: ʔɔ:
ʔa:

Long laryngealized nasal

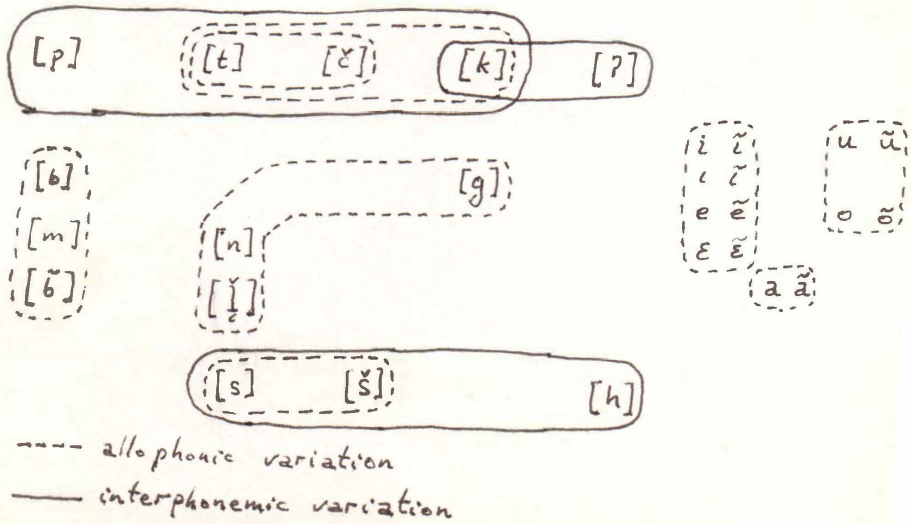
ʔĩ: ʔɨ̃: ʔũ:
ʔẽ: ʔə̃: ʔõ:
ʔɛ̃: ʔʌ̃: ʔɔ̃:

We do not have yet a definitive analysis of this complex vowel system. There is some doubt ~~as to~~ on whether the phonetic difference between mid and low vowels is purely allophonic or phonemic. Laryngealization could perhaps be treated as a supra-segmental feature derived from tone, since it appears to correlate with tone in another language of the same family.

5. In Lowland S.A. is spoken also what may be the language with the smallest phonemic inventory known: Pirahã of Brazilian Amazonia, which has the following seven consonants and three vowels:

p	t	ʔ			
b	g		i	a	o
	s	h			

As you know, phonemic simplicity does not mean phonetic simplicity. Pirahã has an intricate allophonic and interphonemic interplay:



Pirahã has also two level toners, high and low.

6. One of the most prominent phonetic phenomena with phonological consequences in Lowland S.A. is nasalization. ~~Beside~~ You are certainly acquainted with intrinsic nasality, as a specific feature of nasal consonants and of nasal vowels that do not depend on their phonological environment, and you know nasalization of vowels and glides due to the neighborhood of a nasal consonant or vowel. Every textbook of phonetics or phonology offers you examples of such phenomena. What the phonetic textbooks do not include yet is the existence of nasalization due to other sources than the presence of an intrinsically nasal sound.

In S. A. three new sources of nasalization have been discovered: (a) silence, (b) vowel compactation, and (c) adjacency to glides.

In several South American languages oral sounds, both consonantal and vocalic, become nasal at the the beginning or at the end of utterances or of words, that is to say at the points of transition from or into silence. If you reflect a little on the phonetic nature of silence, you can observe that, although it is acoustically null, from the articulatory point of view it is comparable to the nasal sounds in so far as during silence the velum is lowered (for enabling free breathing) and so behaves as during the production of nasal sounds. In order to emit an utterance beginning with an oral sound the first thing to do for a speaker is to raise the velum; conversely, when

he or she finishes an utterance with a final oral sound, the first thing to do is to lower the velum in order to resume the normal silent respiratory activity. Any slight desynchronization in the movement of the velum would introduce a bit of nasalization at the beginning or at the end of utterances. In general such a desynchronization is too slight to be noted by the speaker and the hearer and even by the linguist. When it is more pronounced, it is accounted for as a failure in performance.

What has happened in SA is that many languages have apparently made systematic what is accidental in other languages and have phonologized the resulting nasalization.

Cayapa (Ecuador)

/bíšu/ ['bišu] ~ [ᵐbišu]

/dázanu/ ['dazanu] ~ [ⁿdázanu]

Maxakalí (Brazil)

/kokod/ → kokõn

/bajod/ → mãjõn

/dɨgɨb/ → nɨ̃yɨ̃m

Pirahã (Brazil)

		Utterance medially	Utterance initially
/baí/	'rain'	[baí]	[maí]
/gí'ai/	'you'	[gí'ai]	[ní'ai]
/peboe baí/		[peboebaí]	'much rain'
/peboe... baí/		[peboe / maí]	'much... rain'

Xetá (Brazil)

*yu → ño 'thorn'

*yuyé → ñója 'a palm tree'

*yawér → ñágᵛa 'jaguar'

*wèrapár → yᵛarápa 'bow'

*wèrá → yᵛéra 'bird'

*e+yúr → éǰo 'come!'

*i+yéβá → iǰtwa 'his arm'

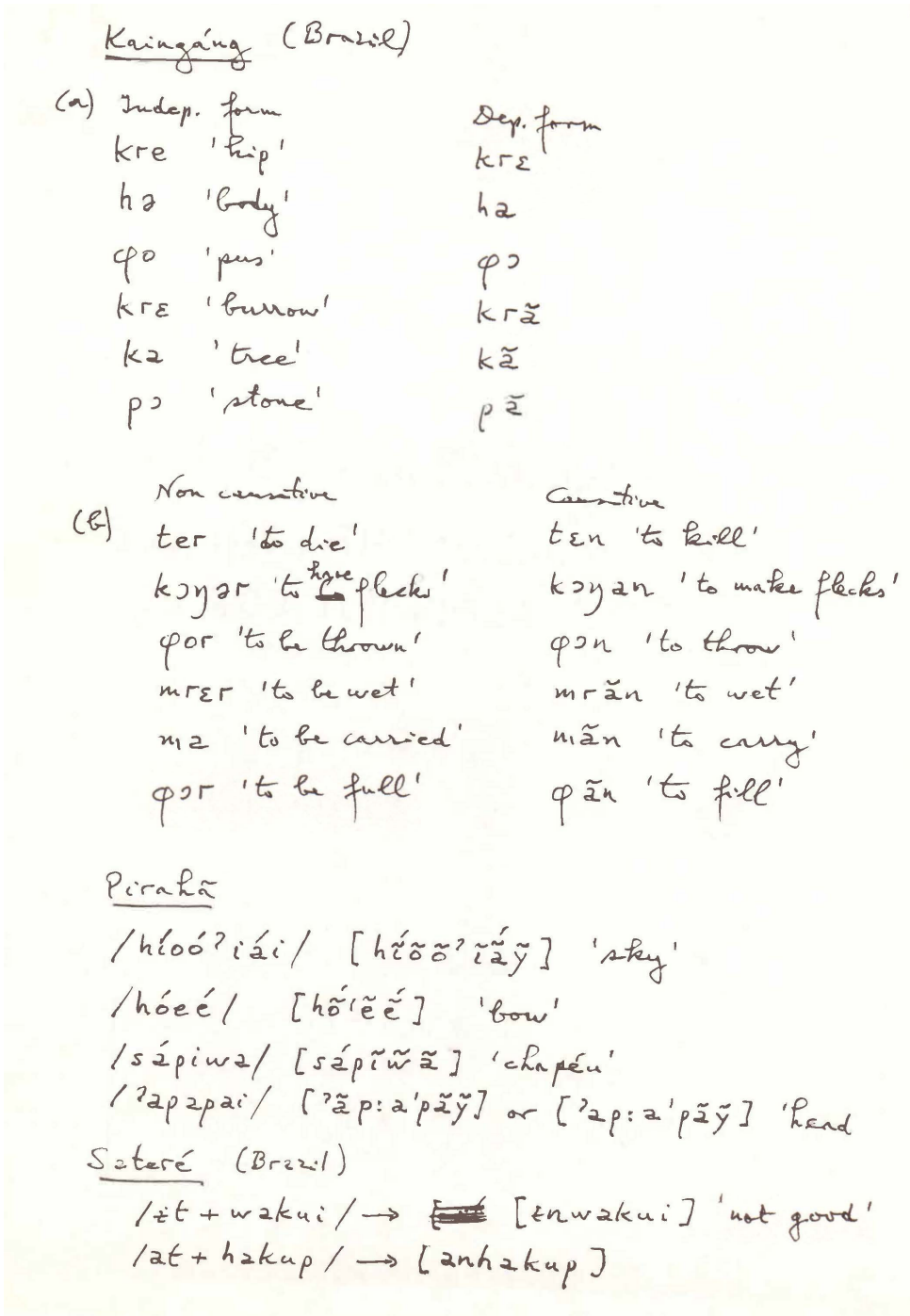
*o+wéβ → +páβ → ogᵛépa 'the fire went out'

Asuriní (Brazil)

*opáβ → ópam 'it finished'

*okér → óken 'he slept'

*opák → ópay 'he woke up'



Kaingáng (Brazil)

(a)

Indep. form		Dep. form
kre	'hip'	krɛ
hɔ	'body'	hɔ
φo	'pus'	φɔ
krɛ	'burrow'	krɛ̃
kɔ	'tree'	kɛ̃
pɔ	'stone'	pɛ̃

(b)

Non causative		Causative
ter	'to die'	tɛn 'to kill'
kɔŋɔr	'to have flecks'	kɔŋan 'to make flecks'
φor	'to be thrown'	φɔn 'to throw'
mrɛr	'to be wet'	mrãn 'to wet'
mɔ	'to be carried'	mãn 'to carry'
φɔr	'to be full'	φãn 'to fill'

Pirahã

/híoó?iái/ [hĩõõ'ĩãỹ] 'sky'

/hóeé/ [hõ'ẽẽ] 'bow'

/sápiwɔ/ [sápĩw̃ɛ̃] 'chapéu'

/?ɔpɔpai/ ['ɛ̃p:ɔ'pãỹ] or ['ɔp:ɔ'pãỹ] 'head'

Sateré (Brazil)

/ɨt + wakui/ → [tnwakui] 'not good'

/at + hakup/ → [anhakup]