

A Phonemic Analysis of Guajajara

Preliminary Version

By
David Bendor-Samuel

Associação Internacional de Linguística - SIL Brasil
Anápolis – GO
2009*

* The original version of this paper was made available in 1963 as No. 028 of the Arquivo Linguístico (Summer Institute of Linguistics, Brasília, DF). This is an edited version, modified in various ways to make it more readable and clearer; but the original data and analyses have been faithfully maintained.

0. Introduction

The data upon which this analysis is based consist of the elicited and spontaneous speech of some of the residents of the village of Centro de Manoel Viana. This is a small, entirely Indian village close to the Pôsto Indígena Gonçalves Dias, on the river Pindaré in the state of Maranhão. The Indians living in this area are generally known by the name "Guajajara", as are their fellow-tribesmen living on the rivers Grajaú and Mearim. Another group of Indians, who speak what is apparently the same language, lives on the river Gurupi. The latter are generally known by the name "Tembé".¹ These groups, and the language which they speak, are also known by the name "Tenetehara". The language is a member of the Tupi family, and the total number of speakers is about four thousand.

The forty or more Indians of the village of Centro de Manoel Viana vary considerably in their ability to speak the Portuguese language. Although many of the men are able to converse freely on various subjects in Portuguese, this language is used by very few of the women. The following persons served as informants:

Maria Viana, a girl of about seventeen, who has a considerable command of Guajajara and who is a fluent speaker of the local variety of Portuguese.

Manoel Viana, a man of about seventy, who normally speaks Guajajara but who is also fluent in a sub-standard variety of Portuguese.

Manoel Luis, a man about forty years old, having about the same knowledge of the two languages as Manoel Viana.

The study of the Guajajara language was undertaken under the auspices of the Museu Nacional of Rio de Janeiro and the Summer Institute of Linguistics. The courtesy and cooperation of the Serviço de Proteção aos Índios is also gratefully acknowledged. The author resided in the village a total of thirty-three weeks between July 1960 and April 1961.

1. Chart of Phonemes

Consonants

| | Labial | Alveolar | Velar | Labialized Velar | Glottal |
|-------------|--------|----------|-------|---------------------|---------|
| Stops | p | t | k | k ^w | ' |
| Affricate | | c | | | |
| Nasals | m | n | ŋ | ŋ ^w | |
| Continuants | w | z | | | h |
| Flap | | r | | | |

Vowels

| | Front | Central | Back |
|------|-------|---------|------|
| High | i | ɨ | u |
| Mid | | ə | |
| Low | e | a | o |

2. Description of Phonemes

Consonants

Consonants occurring in word-final position before a pause or before another consonant tend to have a vocalic release. This is most pronounced in the case of /r/, which is generally recorded as [r̥^ə] in this position.

The vocalic release following stops in this position has been recorded as aspiration.

Stops are normally voiceless and unaspirated, although a word-medial stop may be lightly voiced.

- /p/ [p] Bilabial stop. [paḵó] /pako/ 'banana', [ɨpé] /ɨpe/ 'trough'.
- /t/ [t] Fronted alveolar stop. [tatá] /tata/ 'fire', [katú] /katu/ 'good', [zapat^h] /zapat/ 'shoe'.
- /k/ [k] Velar stop. The point of articulation varies from a front to a back velar position depending on the quality of the succeeding vowel, or, in the case of a final /k/, of the preceding vowel. [ḵurɨ] /kurɨ/ 'now', [aḵitší] /akici/ 'I cut it', [ḵók^h] /kok/ 'basket'.
- /k^w/ [k^w] Velar stop with labial release. The point of articulation varies as for /k/. [k^wařahɨ] /k^warahɨ/ 'sun', [to'ok^wéř^ə] /to'ok^wer/ 'flesh'.
- /'/ ['] Glottal stop. [a'é] /a'e/ 'he', [u'ú] /u'u/ 'he eats it'
- /c/ [tš] Alveolar stop with alveo-palatal grooved fricative release. Occurs before /i/ and, in free variation with ts, after /i/ or contiguous to /e/. [itší] /ici/ 'his nose', [etšé] or [etsé] /ece/ 'enter!'
- [ts] Alveolar stop with alveolar grooved fricative release. Occurs in other environments. [tsú] /cu/ 'thorn'.
- /m/ [m] Bilabial nasal. [móy] /moz/ 'snake', [ame'éŋ] /ame'eŋ/ 'I sell', [piním] /pinim/ 'spotted'.
- /n/ [n] Alveolar nasal. [nahaiméy] /nahaimenz/ 'dull', [piná] /pina/ 'fish-hook', [hemén] /hemen/ 'my husband'.

- /ŋ/ [ŋ] Velar nasal, with tongue position varying according to the position of the succeeding vowel, or, in the case of a final /ŋ/, according to the preceding vowel. [aŋuzá] /aŋuza/ 'rat', [ame 'éŋ] /ame 'eŋ/ 'I sell'.
- /ŋ^w/ [ŋ^w] Velar nasal with labial release. [kaŋ^wéř^ə] /kaŋ^wer/ 'bone'.
- /w/ [ɸ] Voiced bilabial fricative. Occurs in free variation with [w] before a stressed front vowel. [meɸé] or [mewé] /mewe/ 'slowly', [peɸí] or [pewí] /pewi/ 'from there'.
- [w] Voiced bilabial semi-vowel. Occurs in other environments. [wiřəhú] /wirəhu/ 'hawk', [əwə] /əwə/ 'comrade', [mukáw] /mukaw/ 'gun'.
- /z/ [y] Voiced palatal semi-vowel. Occurs preceding a consonant or a pause. [nařáy ru'ú] /naraz ru'u/ 'an orange perhaps', [móy] /moz/ 'snake'.
- [z] Voiced retroflexed alveolar grooved fricative. Occurs preceding a vowel. [zəpehé] /zepehe/ 'griddle', [akažú] /akazu/ 'cashew', [nažáz aipó] /naraz aipo/ 'an orange probably'.
- /h/ [h] Voiceless vocoid of the same quality as the succeeding vowel. [EeAá] /heha/ 'his eye', [pinaUú] /pinahu/ 'big fish hook'.
- /r/ [ř] Voiced alveolar flap varying at times to a laterally released flap, [ĭ]. [řu'ú] /ru'u/ 'perhaps', [k^wařah±] or [k^waĭah±] /kwarah±/ 'sun', [zawář^ə] /zawar/ 'dog'.

Vowels

Before a pause all vowels tend to be lengthened and to glide toward a mid central position. In normal speech vowels are always voiced.

- /i/ [ɪ] High open front unrounded vocoid. Occurs before a word-final nasal. [tšín(ŋ)] /ciniŋ/ 'dry'.
It also occurs in free variation with i after velar consonants. [aḵɪtší] or [aḵitší] /akici/ 'I cut it'.
- [i] High close front unrounded vocoid. Occurs in other environments. [i'í] /i'í/ 'he says', [wiřəmiří] /wirəmiri/ 'bird'.
- /e/ [e] Mid open front unrounded vocoid. [eré] /ere/ 'O.K!', [zəpé] /zepe/ 'in vain', [ukéř^ə] /uker/ 'he sleeps'.
- /a/ [a] Low open fronted central unrounded vocoid. [ařapuhá] /arapuha/ 'deer', [tatá] /tata/ 'fire', [aetsák^h] /aetsak/ 'I see it'.
- /ə/ [ʌ] Low open central unrounded vocoid. Occurs before a word-final nasal. [əmán] /əmən/ 'rain', [pənám] /pənəm/ 'butterfly'.

- [ə] Mid open central unrounded vocoid. Occurs in other environments.
[əwé/] /əwə/ 'comrade', [ukə 'əřupé] /ukə 'ərupə/ 'he makes a roça',
[təté] /tətə/ 'tough'.
- /ɨ/ [ɨ] High close central to back unrounded vocoid, tending to vary according to the
~ point of articulation of the preceding consonant. [tɨ<] /tɨ/ 'youth',
[i] [tažɨ] /tažɨ/ 'axe', [amořaukí/] /amoraukɨ/ 'I work'.
- /u/ [u] High open back rounded vocoid. [uřu 'ú] /uru 'u/ 'we (excl.) eat',
[upupúřə] /upupur/ 'it boils'.
- /o/ [o] Low open back rounded vocoid. [ořohó] /oroho/ 'we (excl.) go',
[omowók^h] /omowok/ 'he splits it'.

3. Stress

Stressed syllables, marked in the phonetic transcription with an acute accent, are characterized by a combination of higher pitch, greater length and increased forcefulness as compared with unstressed syllables. Stress falls regularly on the last syllable of a word and is not indicated in the phonemic transcription.

| | | | | | |
|-----------|-----------|--------|--------------------------------|-------------------------------|----------|
| [mó] | /mo/ | 'yes' | [tatá] | /tata/ | 'fire' |
| [temi 'ú] | /temi 'u/ | 'food' | [kók ^h] | /kok/ | 'basket' |
| [mukáw] | /mukaw/ | 'gun' | [ma 'eřo 'ok ^{wéřə}] | /ma 'ero 'ok ^{wer} / | 'flesh' |

4. Syllable Patterns

The following syllable patterns occur:

V CV VC CVC

Morphemes generally consist of from one to three syllables. With fuller knowledge of the language, the few examples of sequences of more than three syllables that appear to be single morphemes will probably be found to consist of more than one morpheme.

Words generally consist of from one to five syllables, although words of up to eight syllables have been recorded.

There are no restrictions on the ordering of syllables within the word, except that syllables of the types VC and CVC occur only in word-final position, and those of types V and VC never stand alone as a complete word. Examples are given below of the four syllable patterns occurring in various combinations. Syllable divisions are indicated by a period in the phonetic transcription.

| | | | | | |
|-----------------------------|------------------------|-------------|---------------------|--------|---------------|
| [mó] | /mo/ | 'yes' | [kók ^h] | /kok/ | 'basket' |
| [ɛ̃.a.ú] | /ɛ̃au/ | 'sauva ant' | [ɛ̃.'á] | /ɛ̃'a/ | 'gourd' |
| [i.záɾ ^ə] | /izar/ | 'its owner' | [hi.é] | /hie/ | 'his belly' |
| [mi.áɾ ^ə] | /miar/ | 'game' | [tə.té] | /tətə/ | 'tough' |
| [mo.tso.tsók ^h] | /moco ^h ok/ | | | | 'burr' |
| [wa.ɰu.ɾi.'ó] | /wakuri'ə/ | | | | 'palm heart' |
| [u.zɛ.ɰu.tɛ̃.áɾə] | /uzekutɛ̃ar/ | | | | 'he visits' |
| [u.zɛ.mu.tɛ̃.ɾɛ̃.'ɛ̃m] | /uzemutɛ̃rɛ̃'ɛ̃m/ | | | | 'he quarrels' |

5. Distribution of the Phonemes

Each of the consonantal phonemes occurs as the initial C in CV and CVC syllables, while each of the vowels occurs as the nucleus in the four syllable patterns.

Any phoneme of the class /t k m n ŋ w z r/ may occur in the syllable and word final C position. Thus /p k^w c ŋ^w ' h/ are limited in their distribution in that they do not occur in the final C position. Similarly, /ŋ ŋ^w/ have a somewhat limited distribution in that they never occur word-initially.

There are certain limitations in specific phoneme sequences within the word. Consonants occur only singularly, never in clusters. While a wide variety of vowel clusters are found, there are certain types of sequences lacking. Geminate clusters, for instance, do not occur, nor do sequences of two back vowels, or a high central and a mid central vowel, or a mid central and a low central vowel. Most consonant-vowel sequences are found. The labialized velar consonants, however, occur only before /e a ə/. Also /t/ does not occur preceding /i/, nor /c/ preceding /ə ɛ̃/. Other limitations are confined to word-final -VC sequences. In this position, /a/ has not been found to precede a nasal consonant, /ə o u/ have not been found before /w/, nor /i ə/ before /z/.

6. Vocabulary

| | | |
|----------------------------|-------------------------|------------|
| a, em | [pe] | /pe/ |
| água | ['ɛ̃] | /'ɛ̃/ |
| aguentar, pegar, sustentar | [pɛ̃hɛ̃k ^h] | /-pɛ̃hɛ̃k/ |
| aí | [wi] | /wi/ |
| alguns | [omó] | /omo/ |
| amarelo | [izuahɛ̃] | /izuahɛ̃/ |
| andar | [atá] | /-ata/ |
| animal, bicho | [zawáɾ ^ə] | /zawar/ |

| | | |
|-------------------|-------------------------|------------------------|
| ano | [k ^w ařahí] | /k ^w arahí/ |
| anta | [tapi'íř°] | /tapi'ir/ |
| apertar | [mumíkh] | /-mumík/ |
| aquêle | [k ^w éy] | /k ^w ez/ |
| aqui | [tsé] | /ce/ |
| arco | [wiřapař°] | /wiřapar/ |
| areia | [íwíťš'íŋ] | /íwíciŋ/ |
| arremessar, jogar | [momóř°] | /-momor/ |
| árvore | [íwířá] | /íwíra/ |
| asa | [pépó] | /pepo/ |
| atar, amarrar | [zəpítš'í] | /-zəpici/ |
| ave, pássaro | [wiřəmiří] | /wiřəmiri/ |
| barriga | [híé] | /híe/ * |
| beber | [í'ú] | /-í'u/ |
| bôca | [zūřú] | /zuru/ |
| boiar | [íář°] | /-íar/ |
| bom | [katú] | /katu/ |
| bosque, mato | [ka'á] | /ka'a/ |
| branco | [ťš'íŋ] | /ciŋ/ |
| brincar | [zəmuaráy] | /-zəmuaraz/ |
| cabeça | [əkáŋ) | /əkəŋ/ |
| cabelo | ['áw] | /-'aw/ |
| caçar | [ekář°] | /-ekar/ |
| cachorro | [zawář°] | /zawar/ |
| cair | ['ář°] | /-'ar/ |
| caminho | [pé] | /pe/ |
| canoa | [íář°] | /íar/ |
| cantar | [zəŋář°] | /-zəŋar/ |
| carne | [ho'ó] | /ho'o/ * |
| casa | [hípiy] | /hípiz/ * |
| casca | [apek ^w éř°] | /apek ^w er/ |

| | | |
|------------------|-------------------------|------------------------|
| cavar | [wɨkɨy] | /-wɨkɨz/ |
| céu | [ɨwák ^h] | /ɨwak/ |
| cheio | [póř°] | /-por/ |
| cheirar | [etún] | /-etun/ |
| chifre | ['ák ^h] | /-'ak/ |
| chupar | [pɨtéř°] | /-pɨter/ |
| chuva | [əmán] | /əmən/ |
| cinza | [tanimúk ^h] | /tanimuk/ |
| cobra | [móy] | /moz/ |
| com | [hehe] | /hehe/ * |
| comer | ['ú] | /-'u/ |
| como | [məřəzəwé] | /məřəzəwe/ |
| comprido | [pukú] | /puku/ |
| contar | [papář°] | /-papar/ |
| coração | [zə 'é] | /-zə 'ə/ |
| corda | [hám] | /-həm/ |
| correr (água) | [ɨřɨk ^h] | /-ɨrɨk/ |
| correto, certo | [əzəhářomo] | /azeharomo/ |
| cortante, afiado | [haimé] | /haime/ * |
| cortar | [kɨtší] | /-kici/ |
| coser, costurar | [mɨwɨk ^h] | /-mɨwɨk/ |
| costas | [kupéř°] | /kuper/ |
| curto | [iaik ^w éř°] | /iaik ^w er/ |
| dar | [múř°] | /-mur/ |
| delgado, fino | [pu 'í] | /pu 'i/ |
| dente | [hɨy] | /hɨz/ * |
| dia | ['ář°] | / 'ar/ |
| direito | [awɨzəhář°] | /awɨzəhar/ |
| dizer, falar | [mume 'ú] | /mume 'u/ |
| dois | [mokóy] | /mokoz/ |
| dormir | [kéř°] | /-ker/ |
| êle | [a 'é] | /a 'e/ |

| | | |
|-------------------------------|------------------------|------------------------|
| em | [pupe] | /pupe/ |
| embotado, cega (faca) | [nahaiméy] | /nahaiméz/ |
| empurrar | [muzán] | /-muzən/ |
| entranhas, tripas, intestinos | [hîé] | /hîe/ * |
| erva, capim, grama | [ka'api'í] | /ka'api'i/ |
| esfregar | [kítík ^h] | /-kítík/ |
| espesso, grosso | [puhú] | /-puhu/ |
| espôsa | [hemireko] | /hemireko/ * |
| esquerda | [ahúř°] | /-ahur/ |
| estar deitado | ['áw] | /-'aw/ |
| estar em pé | [pu'ám] | /-pu'əm/ |
| estar sentado | [apík ^h] | /-apík/ |
| êste | [kó] | /ko/ |
| estreito, apertado | [ikaŋiahî] | /ikaŋiahî/ |
| estrêla | [zahítatá] | /zahítata/ |
| eu | [ihé] | /ihe/ |
| falar, dizer | [ze'én] | /-ze'eŋ/ |
| fígado | [pî'á] | /-pî'a/ |
| flecha | [hu'îw] | /hu'îw/ * |
| flôr | [putîr°] | /-putîr/ |
| fogo | [hatá] | /hata/ * |
| fôlha | [huéř°] | /huer/ * |
| frio | [huitsán] | /huicəŋ/ * |
| fruta | ['á] | /-'a/ |
| fumaça | [hətətšín] | /hətəcin/ * |
| fumo, tabaco | [petîpiář°] | /petîpiar/ |
| furar | [kutúk ^h] | /-kutuk/ |
| garra, unha | [pîapé] | /pîape/ |
| golpear, bater | [řuk ^w ár°] | /-ruk ^w ar/ |
| gorduras, banha | [káv] | /-kaw/ |
| grande | [uhú] | /uhu/ |
| homem | [awá] | /awa/ |

| | | |
|------------------------|-------------------------------------|-----------------------|
| inchar | [hezún] | /hezun/ * |
| jacaré | [zakařé] | /zakare/ |
| lagoa | [ĩpáw] | /ĩpaw/ |
| largo, amplo | [pupiřuhú] | /-pupiruhu/ |
| lavar | [zuhéy] | /-zuhez/ |
| limpar | [zuhĩw] | /-zuhĩw/ |
| língua | [apekú] | /-apeku/ |
| liso | [hím] | /-hĩm/ |
| longe | [moité] | /moite/ |
| lua | [zahĩ] | /zahĩ/ |
| lutar, brigar | [zəmutĩřĩ'ĩm] | /-zəmutĩřĩ'ĩm/ |
| macaco | [ka'í] | /ka'i/ |
| machado | [itazĩ] | /itazĩ/ |
| mãe | [hĩ] | /-hĩ/ |
| mandioca | [mani'ók ^h] | /mani'ok/ |
| mão | [pó] | /po/ |
| mar | [ĩřĩhú] | /ĩřĩhu/ |
| marido | [mén] | /-men/ |
| matar | [zuká] | /zuka/ |
| mau | [na'ikatúy] | /na'ikatuz/ |
| menino, criança | [k ^w ařéř ^o] | /k ^w arer/ |
| milho | [awatší] | /awaci/ |
| montanha, monte, morro | [ĩwĩtĩř ^o] | /ĩwĩtĩř/ |
| morder | [tši'ú] | /-ci'u/ |
| morno, quente | [haķú] | /haku/ * |
| morrer | [mənó] | /-məno/ |
| muito | [hetá] | /heta/ * |
| mulher | [ķuzə] | /kuzə/ |
| nadar | ['ĩtáw] | /-'ĩtaw/ |
| não | [nán] | /nən/ |
| nariz | [tší] | /-ci/ |
| negro, prêto | [pihún] | /pihun/ |

| | | |
|-------------------|--------------------------|-------------------------|
| nevoeiro | [ʒuiří] | /zuirí/ |
| noite | [pítún] | /pítun/ |
| nome | [héř°] | /her/ * |
| nós (incl.) | [ʒané] | /zane/ |
| nós (excl.) | [uřé] | /ure/ |
| novo | [píahú] | /píahu/ |
| nuvem | [íwatšín̄] | /íwaciŋ/ |
| olho | [hehá] | /heha/* |
| onça | [ʒəwəřuhú] | /zəwəruhu/ |
| onde | [ma'á pe] | /ma'a pe/ |
| o que | [ma'é] | /ma'e/ |
| orelha | [namí] | /-nami/ |
| ôso | [káln] | /kəŋ/ |
| outro | [omó] | /omo/ |
| ouvir | [enú] | /-enu/ |
| ôvo | [hupi'á] | /hupi'a/ * |
| pai | [tú] | /tu/ |
| panela (de barro) | [kamutší] | /kamuci/ |
| papagaio | [ažuřú] | /azuru/ |
| pau, pauzinho | [íwířá] | /íwíra/ |
| pé | [pí] | /-pí/ |
| pedra | [itá] | /ita/ |
| peito | [káln] | /kəm/ |
| peixe | [ipiřá] | /ipira/ |
| pele | [piřéř°] | /-pirer/ |
| pena, pluma | [pepok ^w éř°] | /pepok ^w er/ |
| pensar | [ʒemupí'á] | /-zemupí'a/ |
| pequeno | [pitšík ^h] | /picik/ |
| perna | [hetímé] | /hetímə/ * |
| perto | [tseřáln] | /cerən/ |
| pesado | [puhíy] | /puhíz/ |
| pescoço | [ažu'íw] | /azu'íw/ |

| | | |
|------------------|------------------------|------------------------|
| peessoa, gente | [tenetehář°] | /tenetehar/ |
| piolho | [kíw] | /kíw/ |
| pó, poeira | [íw± tšimořéř°] | /íw± cimorer/ |
| podre, estragado | [apuǰá] | /-apuǰa/ |
| porque | [ta'é] | /ta'e/ |
| poucos | [piteiteí] | /piteitei/ |
| puxar | [mutík ^h] | /-mutík/ |
| quando | [ma'é mehe] | /ma'e mehe/ |
| queimar | [káy] | /-kaz/ |
| quem | [mó] | /mo/ |
| rabo | [huáy] | /huaz/ * |
| rachar | [mu'í] | /-mu'i/ |
| raiz | [hapó] | /hapo/ |
| raspar, coçar | [kəřóy] | /-kəřəz/ |
| redondo | [iapu'á] | /iapu'a/ |
| respirar | [p±tuhém] | /-p±tuhem/ |
| reto | [hə'íŋateté] | /hə'íŋatete/ * |
| rio | [i'íw] | /i'íw/ |
| rir | [puká] | /-puka/ |
| saber | [k ^w áw] | /-k ^w aw/ |
| sal | [zúkíř°] | /zúkír/ |
| saliva | [hen±] | /hen±/ * |
| sangue | [hu±] | /hu±/ |
| se | [azé] | /aze/ |
| sêco | [tšiníŋ] | /ciniŋ/ |
| semente | [h±'áy] | /h±'íz/ * |
| sol | [k ^w ařah±] | /k ^w arah±/ |
| soprar | [p±] | /-p±/ |
| sujo | [ipíw] | /-ipiw/ |
| temer, ter medo | [kížé] | /-kíže/ |
| terra | [íw±] | /íw±/ |
| todos | [páw] | /paw/ |

| | | |
|-------------------|---------------------------|--------------------------|
| tu (você) | [né] | /ne/ |
| um | [pitéi] | /pítei/ |
| úmido, molhado | [əkím] | /-əkím/ |
| velho | [k ^w ehearéř°] | /k ^w ehearer/ |
| vento | [íwítú] | /íwítu/ |
| ver | [etsák ^h] | /-ecak/ |
| verde | [huíahí] | /huíahí/ * |
| verme, minhoca | [amu'á] | /amu'a/ |
| vermelho | [piřálŋ] | /pirəŋ/ |
| vir | [zúr°] | /-zur/ |
| viver | [ikó] | /-iko/ |
| voar | [ewéw] | /-ewew/ |
| voltar, dar volta | [zewíř°] | /-zewír/ |
| vomitar | [huhúk ^h] | /-huhuk/ |
| vós (vocês) | [pé] | /pe/ |

* Words marked with an asterisk are subject to the following morphophonemics changes:
The prefix h- (third person possessive) is replaced by:

- r- after the prefixes he-, ne-, zane-, ure- (first person and second person singular, and first person plural inclusive and exclusive respectively).
- n- after the prefixes pe- and wa- (second and third person plural).
- zero after the prefixes u-, t-, and puru- (third person identical with subject, unspecified possessor and unspecified object respectively).
- r- is also used when the object is possessed by a specified third person, named in the same phrase.

1. Charles Wagley and Eduardo Galvão, "The Tenetehara Indians of Brazil: a culture in transition" (Columbia University Press, 1949)