# TUPI STUDIES I

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## PARINTINTIN PHONOLOGY

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- 1. Consonants
- 2. Vowe1s
- 3. Syllables
- 4. Nasalization
- 5. Higher Level Features
- 6. Text
- 0. The purpose of this paper is to describe the phonology of Parintintin with special focus on the phenomenon of nasalization.

### 1. Consonants.

	Bilabial	Alveolar	Alveo- palatal	Velar	Labio- Velar	Glottal
Stops	p	t	č	k	k۳	?
Nasals	m	n	ñ	ŋ	٥w	
Fricativ	es v					h
Flap		r				

The consonant system consists of fourteen phonemes which contrast at six points of articulation. There are further contrasts with respect to manner of articulation at each of the six points. These are labeled on the chart for convenience as stop, nasal, fricative, and flap articulations. However, these terms do not fully describe the phonetic variants, and further details are given below.

The stops contrast at bilabial, alveolar, alveopalatal, velar, labio-velar, and glottal points of articulation. The nasals contrast at the same points of articulation, except that a glottal member does not occur in the nasal series. The fricatives contrast at bilabial and glottal points of articulation.

The following are examples of the consonants:

Flap

```
Stops
 /p/
     pira 'fish'
                            /t/ tata 'fire'
 /১/
      čã?ã
            'okay'
                                 ka?a
                                       'leaf'
                            /k/
 /kw/ kwara 'sun'
                            /?/ a?a 'I fall'
Nasa1s
                             /n/ nãhã 'thus'
 /m /
      mãhã
            'where is'
                             /ŋ/ ŋãhã 'they'
 /ñ/
      ñane 'we inclusive'
  /nw/ nwãºã 'he mocks'
Fricatives
  /v/ ovava 'it shakes' /h/ haha
                                       'stalk of
                                        bananas!
```

The stops are voiceless and unaspirated. Except for velar palatalization, which is described later, they have no variant forms. The alveopalatal member of the series, /č/ as in čabe?e 'old man', is affricated: [tš].

The nasal series has the following variants:

/r/ rañi?i 'long ago'

- (1) Nasal continuants [m n ñ  $_{0}$   $_{0}$  $^{\text{w}}$ ] occur utterance initially preceding a nasal vowel and utterance medially between nasal vowels: tupahāmā [tupahāmē] 'cord', nāhā [nāhā] 'thus', kūñā [kūñā] 'woman', õmõ  $_{0}$ īta [õmõ  $_{0}$ īta] 'he converses', kā  $_{0}$  $^{\text{w}}$ ī [kā  $_{0}$  $^{\text{w}}$ ī] 'coffee'.
- (2) Prenasalized voiced stops [mb, nd, ny, ng, ngw] occur following a nasal vowel and preceding an oral vowel:  $\[ \[ \] \] \] \] 'he cooks', \[ \] \[ \] \] 'spider', ot \[ \] \[ \] \] 'he ties right away', <math>\[ \] \] \] 'nga] 'house', \[ \] \[ \] \] 'weeds'. The bilabial and alveolar members of the series also occur in utterance-initial position preceding an oral vowel: maraka' \[ \] \[ \] \] 'ocelot', nehe [ndehe] 'you singular'.$
- (3) Voiced stops [ $\check{J}$  g g<sup>w</sup>] occur between oral vowels and in utterance-initial position preceding an oral vowel:

ñihi [jihi] 'I', i?aŋahi [i?agahi] 'it stinks', ŋʷɨraʔi [gwɨraʔi] 'bird'.

(4) The phoneme /ñ/ has additional variants. [ỹ] fluctuates freely with [y], and [ñ] with [ỹ] utterance medially in unstressed syllables: muñuhu [mbuyuhu] or [mbuyuhu] 'frog', mököñāte'i [mököñāte'i] or [mököyāte'i] 'a few'.

Members of the fricative series are respectively a voiced bilabial fricative, /v/, and a voiceless glottal fricative, /h/. Except for palatalization of the glottal fricative, described later, there are no major variants.

The flap is alveolar and has no variant forms.

Palatalization of the consonants /k n h/ may occur following a high front vowel with or without an intervening syllable-final glottal stop. This does not occur, however, preceding another high front vowel. ikatu [ik atu] 'it is pretty', akitī no [akitī ng yo] 'I soap down', õmoñihe a [õmbojih e a] 'he mixes'.

## 2. Vowels.

	front		central		back	
0	ral	nasal	oral	nasal	oral	nasa1
high	i	ĩ	i	Ĩ	u	α
low	е	ẽ	a	ã	0	ð

The vowel system consists of twelve phonemes, which contrast with respect to oral and nasal quality; front, central, and back tongue positions; and relatively high and low tongue positions.

The following examples illustrate contrasts within the oral and the nasal vowel series:

/i/	ðmðmi	'he stops'	/ <b>î</b> /	ðmÎ	'he hides'
/e/	ŏmŏme	'he makes cakes'	/ĕ/	ohë	'he leaves'
/ <b>i</b> /	ðmõm <b>i</b>	'he fastens'	/ <b>¥</b> /	ot≇	'he plants'
/a/	õmõma.	'he kills a lot'	/a/	om <b>ä</b>	'he grabs'

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/u/ \tilde{o}m\tilde{o}mu 'he pierces' /\tilde{u}/ \tilde{o}m\tilde{u} 'he spits out' /o/ \tilde{o}m\tilde{o}mo 'he throws' /\tilde{o}/ \tilde{o}m\tilde{o} 'he sticks'
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The following examples show contrasts between oral and nasal vowels:

```
/i/ opi 'it stops'
                            /a/
                                 oka 'it breaks'
/ĩ/
        'he cuts close'
    opĩ
                            /ã/
                                 ikã 'he is strong'
        'people'
/e/
    ahe
                             /u/ akutu 'I puncture'
                            /ũ/ ahetũ 'I smell'
/ẽ/ ahẽ
        'I leave'
/i/ oti 'it catches'
                            /o/ onehe?o 'he cries'
/¥/ ot¥ 'he plants'
                            /õ/ opehe?õ
                                          'he halves'
```

The 'low front' and 'low back' vowels vary in tongue height from mid open  $[\epsilon \ \ \ \ \ \ \ ]$  to mid close  $[e \ \ \ \ \ \ \ \ \ \ ]$ . The front mid close variant is heard only immediately preceding a high front vowel /i/. The back mid open variant tends to occur more frequently between bilabial and alveolar nasals. The 'low central' vowel is normally low open in tongue position, and the 'high' vowels are always high close.

All vowels have voiceless variants which may occur at the end of a phonological sentence (see 5.2). The vowels /a/ and  $/\tilde{a}$ / have variant forms with generally lax and lenis articulation, in which the tongue is in mid central position. These variants are never stressed.

3. Syllables. Parintintin syllables consist of a nucleus of one or two vowels with an optional initial and/or final consonant. The following patterns have been recorded:

V	ohi 'he falls	CV	ñihi 'I'	
VC	i?ŋwava 'table'	CVC	ka?ŋ₩ira	'bush'
VV	aivu 'near'	CVV	aheakãŋã	'person's head'

Syllables of patterns VC and CVC do not occur in utterance final position.

3.1. Complex Segments. A number of sequences of two consonantal sounds are interpreted as single consonants, since nonsuspect syllable patterns allow for no consonant clusters except across syllable boundaries. Complex segments so interpreted include the affricate /č/ (phonetically [tš]), which occurs in single C slots as in čaho 'let's go'; the [j] (i.e., [dž]) variant of the /ñ/ phoneme; and the prenasalized stops described in Section 1 as allophones of the nasal series.

Sequences of a consonantal sound plus a nonsyllabic high vocoid are likewise interpreted as single consonants. To interpret the vocoid element as a vowel would result in the recognition of a sequence of three vowels in one syllable (as in [ik'ai] 'it burns'), a pattern that does not otherwise occur. Complex segments of this type include the labio-velar phonemes  $/k^{\omega}$   $\eta^{\omega}/$  and the palatalized variants of /k  $\eta$  h/ previously described.

Sequences of a consonant plus lenis [e], and of a consonant plus a voiceless vocalic release are interpreted as CV on the basis of the most economical analysis. Lenis [e] is recognized as a submember of the phoneme /a/ (see 2), while voicelessness is recognized as a feature of the termination of the phonological sentence (see 5.2). This results in a more economical analysis than the alternative of setting up additional variant forms for all the consonants which may occur with lenis [e] or vocalic release, as in the examples tupava [tupabe] 'hammock' and ahereveka [ahere bekA] 'belly'.

Sequences of a vowel plus a nonsyllabic high vocoid are interpreted as two vowels because there are examples of other two-vowel sequences occurring in comparable positions in the syllable patterns:

aheakāṇā 'a person's head' ŋʷãĩvĩhĩ 'old woman' ñuitaraga 'frog'

All such sequences are analyzed as comprising a single syllable nucleus because they have only one syllabic pulse, and the first of the two vowels is always the more prominent.

Sequences of a syllabic vowel plus a nonsyllabic high front vocoid plus a syllabic vowel are interpreted as VCV because there are otherwise no examples of a three-vowel sequence: muñuhu [mbuyuhu] 'frog'.

3.2. Distribution. Within the syllable, all of the consonant phonemes occur in initial position, but only the glottal stop occurs finally.

There are apparently certain restrictions in permitted vowel-consonant and consonant-vowel sequences. No velars have been found following a low front vowel, nor labiovelar stops preceding a back or a high central vowel. The alveopalatal stop has not been found preceding a front, a high central, or a low back vowel; and has been found preceded only by a high back vowel.

Consonant clusters across syllable boundaries always involve a glottal stop as the first member. The glottal stop precedes any of the voiced consonants, but only two cases have been found in which it precedes a voiceless consonant (once preceding a bilabial stop and once an alveolar stop).

Vowel clusters of nearly every possible combination have been recorded. The first vowel in the cluster is always the more prominent one, and, except in the case of morpheme reduplication, clusters are always entirely oral or entirely nasal:

ipohii 'he is heavy' ñĩĩmĩãnã 'I am an old person'
An example of morpheme reduplication is:

ñĩã miã mi 'I have a runny nose'

4. Nasalization. Nasalization is a pervasive feature of Parintintin phonology, as may be seen from the list of phonemes and their variants. This feature is of special interest because it is possible to predict the occurrence of the allophones of the nasal series of consonants from their phonological environment, and the nasalization of vowels is predictable in some, but not all, environments. The occurrence of nasalization with both vowels and consonants will now be more fully described, and an attempt made to account for the partial predictability of the phenomenon by the recognition of phonemes as (1) inherently oral, (2) potentially nasal, or (3) inherently nasal.

The following symbols will be used in the present discussion to achieve maximum generality of statement in a concise form:

- V any oral vowel
- V any nasal vowel
- 0 consonants having only oral forms and variants  $(p, t, \xi, k, k^w, \gamma, v, h, r)$
- N consonants having only nasal forms and variants (m and n)
- G consonants having oral and nasal forms and variants  $(\tilde{n}, \eta, \eta^w)$
- n and η consonantal variants of N and G which are wholly nasal (m, n; ñ, η, η)
- nd and  $\eta g$  consonantal variants of N and G which are prenasalized ( ${}^{m}b$ ,  ${}^{n}d$ ;  ${}^{n}y$ ,  ${}^{\eta}g$ ,  ${}^{\eta}g$ w)
- g consonantal variants of G which are wholly oral (j, g, gw)
- # pause
- 4.1. Nasalization of Contiguous Elements. Nasal vowels may occur preceding or following any consonant, but oral vowels do not occur preceding N or n. Variant forms of all consonants of the nasal series (N and G) are predictable in terms of contiguous vowels.

The following chart lists all theoretically possible environments and shows patterns and restrictions in co-occurrence of the forms. The chart is to be read as follows: when N is preceded by pause and followed by a nasal vowel, it is articulated as [m] or [n], etc.

Vocalic Environment	Conson N	antal G	Variant O
# - $\tilde{V}$	n	ů.	0
$\tilde{v}$ - $\tilde{v}$	n	ŋ	0
$\tilde{V}$ - $V$	nd	υg	0
# - V	nd	g	0

Vocalic Environment	Consonantal N G		Variant O
v - v	_	g	0
v - v	-	_	0

In two-vowel sequences only VV and  $\tilde{VV}$  occur, except in the case of reduplicated morphemes (see 3.2).

The patterns and restrictions of co-occurrence shown above are herewith summarized. Nasal vowels precede both nasal and prenasalized, but not oral, variants of N and G; and they follow only their nasal variants. Oral vowels follow both oral and prenasalized, but not nasal, variants of N and G; and they precede only the oral variants. Prenasalized variants of N occur only before oral vowels, and nasal variants occur elsewhere. Oral variants of G occur when there is no contiguous nasal vowel; nasal variants occur when there is no contiguous oral vowel; and prenasalized variants occur following a nasal and before an oral vowel.

Categories and rules may therefore be set up to account for patterns of co-occurrence between contiguous elements. N and  $\tilde{V}$  are inherently nasal, and never have oral variants. G and V are potentially nasal but occur as oral variants except when influenced by a contiguous nasal form.  $\tilde{V}$  is inherently oral, and never represents nasal variants.  $\tilde{V}$  exerts a nasalizing influence, progressively and regressively, upon contiguous N and G, resulting in the selection of nasal or prenasalized variants (the latter when an oral vowel follows). It also regressively nasalizes a contiguous vowel. V exerts an oralizing influence, regressively, upon contiguous N and G, resulting in the selection of prenasalized variants when they follow  $\tilde{V}$ . N and  $\tilde{\eta}$  exert a nasalizing influence, regressively, upon contiguous vowels, resulting in the selection of nasal forms.

# 4.2. <u>Nasalization of Noncontiguous Elements</u>.

(1) Nasalization across glottal stop. Sequences of two vowels separated by a glottal stop are always either both oral or both nasal, e.g.,  $k \tilde{\gamma} \tilde{\gamma}$  'porcupine'.

When a nasal vowel is followed by a sequence of ?N or ?G the nasal or prenasalized variants of N or G always occur:

n and  $\eta$  before nasal vowels and nd and  $\eta g$  before oral ones, e.g., mãrã $^{\eta}\eta u$  [mãrã $^{\eta}gu$ ] 'who knows if'. Sequences of  $^{\gamma}N$  and  $^{\gamma}\eta$  are always preceded by nasal vowels, e.g., okã $^{\gamma}\tilde{n}$  [okã $^{\gamma}\tilde{n}$ ] 'he forgets'.

- $\tilde{V}$ , N, and  $\eta$  may therefore be said to exert a nasalizing influence on phonemes within the same morpheme which are separated from them by only a glottal stop, just as if they were contiguous.
- (2) Regressive nasalization within the word. Any syllable which begins with N or G is fully nasal when it precedes an inherently nasal element in the same grammatical word, i.e., the vowel in that syllable is nasal and the consonant occurs in its nasal variant n or 9. Examples are: ña?ŋwara [ja?gware] 'jaguar' plus -pĩnĩmã [-pĩnĩmã] 'spotted' becomes ñãŋwãpĩnĩmã [ñãŋwãpĩnĩmã] 'spotted jaguar'; ñi [ji] 'I' plus -pirivutũ [-piributũ] 'brown skinned' becomes ñĩpirivutũ [ñĩpiributũ] 'I am brown skinned'.

This phenomenon may be accounted for by the following additional rule: an inherently nasal element exerts a regressive nasalizing influence upon any syllable preceding it within the same grammatical word which contains N or G.

(3) Progressive nasalization within the word. Certain suffixes may be regarded as potentially nasalized and others as inherently oral, because the former occur with nasal vowels following syllables with nasal vowels, while the latter always occur with oral vowels. This may be stated as a type of progressive nasalization, the operation of which is restricted to certain suffixes, e.g., na/nan-[na/nan-] 'like this' plus -uhu [-uhu] 'augmentative' becomes nanûhû [nanûhû] 'really like this', while na/nan- plus -ve'e [-be'e] 'thing' becomes nave'e [nabe'e] 'a thing like this'.

Some suffixes are frequently, but not invariably, nasalized or may be nasalized only on the first syllable, e.g., õñĩ?ĩŋ- [ỡñĩ?ĩŋ-] 'he talks' plus -ahɨ [-ahɨ] 'forcefully' becomes ỡñĩ?ĩŋāhɨ [ỡñĩ?ĩŋāhɨ] 'he scolds'.

4.3. An Alternative Analysis to that presented here is also possible; nasalization may be treated on a level higher than that of the syllable. Although the phenomena are not entirely parallel, a detailed discussion of this problem may be seen in the paper by Harrison and Taylor which also appears in this volume.

It should be noted that there is some free variation in the degree of nasalization which occurs, differing according to both occasion and speaker. Inherently nasal vowels are generally more nasalized than potentially nasal ones.

- 5. <u>Higher Level Features</u>. The higher level features of Parintintin have not yet been fully analyzed; the following, however, is presented as a tentative analysis.
- 5.1. Phonological Phrase. A phonological phrase is postulated to account for certain features of stress, pitch, and length which are commonly associated with groups of syllables. The phonological phrase is composed of one or more syllables, generally more than one. In a series of syllables comprising a phonological phrase one syllable occurs with higher pitch and with more stress than the others. This is termed 'phrase stress'.

Stress. Phrase stress generally occurs on the first syllable of the phrase except in initial phrases in a sentence, in which case one or two unstressed syllables may precede the stressed syllable (see Sentence 5 of the text in Section 6).

Pitch. Although the pitch normally drops following the phrase stress, it is sometimes not noticeably higher on the phrase stressed syllable than on the other syllables of the phrase. The last phrase in a phonological sentence ends on a low pitch unless it carries sentence stress (see below). A sentence-medial phrase may also end on a low pitch or on a pitch which is slightly rising, leading up to the phrase stress of the following phrase. In a sentence-initial phrase the syllables preceding the stressed syllable normally occur with a pitch lower than that of the stressed syllable, but some have been found with a higher pitch.

Length. Stressed syllables tend to be slightly lengthened. When a CV or V syllable is followed by a syllable beginning with the phoneme h, the h may drop and the surrounding vowels fuse into one slightly lengthened syllable, e.g.,  $\tilde{\text{e}}$  muhu may be pronounced  $[\tilde{\text{e}}^{\text{m}}\text{bu}\cdot]$ . This reduction may even occur across phrase boundaries.

5.2. Phonological Sentence. The phonological sentence is set up to account for certain features of stress, intonation, voicelessness, and pause commonly associated with groups of phrases. The phonological sentence consists

of one or more phonological phrases, generally more than one.

Stress. The heaviest stress of the phonological sentence is termed 'sentence stress', and the syllable on which it occurs has the highest pitch. Sentence stress falls on a phrase stressed syllable, and may occur initially, medially, or finally in the sentence, depending upon what part of the grammatical construction seems to be in focus. In an interrogative sentence containing a question word or phrase, for example, the sentence stress normally occurs on that word or phrase (see Sentence 11 in the text, Section 6). The sentence stress most often occurs on one of the first three phrases of the sentence.

In some sentences heavy stress occurs at two points. The second of these is always on the last or next to last syllable of the sentence and does not necessarily coincide with phrase stress. In such cases, the second stress appears to mark the addition of a construction to a sentence which would be grammatically complete without it. This added element frequently serves to clarify or add to information already given in the preceding part of the sentence. This is illustrated in Sentences 1 and 3 of the text.

Intonation. The most common intonation pattern for the sentence is a gradual rise in pitch to the sentence stress followed by a gradual drop in pitch. Thus, each phrase preceding the one containing the sentence stress is successively higher in pitch than the one before, while each phrase following it is successively lower.

<u>Voicelessness</u>. Vowels may be voiceless at the end of phonological sentences, and this voicelessness includes at times as many as the last three syllables. When this is the case, words with the consonants v, r, or the [g] allophone of  $\mathfrak q$  in an unstressed final syllable generally occur in variant forms in which these consonants are replaced by  $\mathfrak p$ ,  $\mathfrak t$ , and  $\mathfrak k$ , respectively.

Pause. Phonological sentences are normally followed by pause. Occasionally, two phonological sentences may be juxtaposed with normal intonation on each and no pause separating them. This is considered a complex sentence, of which Sentence 5 of the text is an example.

Emphasis. Emphasis may also occur in a sentence and is

marked by extra stress and higher pitch on one syllable, plus one or more of the features described below. An emphasized syllable always has the sentence stress, and the phrase containing it will be referred to as the stressed phrase.

- (1) A sharp drop in pitch may occur over one or two of the first syllables of the stressed phrase and/or over the entire phrase immediately preceding it. This pitch drop has been found to occur on each of two phrases immediately preceding a stressed phrase with cases of morpheme reduplication.
- (2) A glottal stop may be introduced at the end of the phrase preceding the stressed phrase, e.g., Sentence 6 in the text. The glottal stop may separate the syllables of a morpheme.
- (3) Lengthening may occur on the final vowel or glottal stop of phrases with lowered pitch preceding the stressed phrase, or on the first consonant of the stressed phrase, e.g., Sentence 6. Some cases of lengthening of the final vowel of the stressed phrase have also been observed.
- 6. Text. The following transcription consists of two excerpts from a tape recording made by Catarina, the chief's wife at Canavial. It gives a brief account of the pacification that took place years ago of the Jupá Indians, a group related to the Parintintin who were living on the Machado River at that time.

The text is written phonemically, except for the indication of voicelessness and length which are significant to the sentence. The following symbols are use: / indicates phrase division; // pause; ' phrase stress; " sentence stress; V progressive devoicing of the preceding vowel; A, E, etc. voiceless vowels; · lengthened vowels or consonants. The phonological sentences are numbered consecutively. The numbering within each sentence of the text correlates with the numbers of the free translation. Words in parentheses in the free translation are added to give sense to the English.

1.  $\tilde{a}\tilde{e}''\tilde{r}\tilde{e}_1$   $\tilde{g}\tilde{a}_2$   $\tilde{h}oi_3/$  ' $\tilde{n}upa_4$   $\tilde{g}\tilde{a}_4/$  ' $\tilde{p}iri_5$   $\tilde{h}ako_6$  / ' $\tilde{n}ire_7$  " $\tilde{g}\tilde{a}_8$  // 2. ' $\tilde{n}ire_1$  / ' $\tilde{g}\tilde{a}_2$   $\tilde{n}\tilde{a}$ /' $\tilde{e}_3$  ko<sub>1</sub> o /' $\tilde{h}o_4$   $\tilde{g}\tilde{a}_5$  /

'piri6 ha/'koV7 // 3. he'''ii1 na2 o/'nwovo3 nã4 / 'piri5 ei6 nã7 / 'nã8 ne/'piakA9 // 4. 'kiro1 ore2 / "ruri3 pe4 mõñĩ/'rõmõ5 ei6 / 'nãV7 // 5. oro1 've2 na3 / 'ĩmõ/"mori4 nwe/'revi5 ei6 / 'nã7 / 'čave8 / "na8 po õmõ/'mo9 nwerevi10 / nã11 nehe12 raka/'eV13 // 6. 'teremõ?·/"mori1 ei2 ore3 nã4 / 'pe5 ei6 // 7. 'po1 ahe2 ore3 nu/"ka4 te5 ei6 nã7 // 8. 'noro/"koi1 ko1 / 'ore2 / 'pe3 ne/'he4 e5 po / 'ñire6 / 'kA6 // 9. ei1 "ñi2 ei3 / 'ñire4 / 'naV4 // 10. 'noro/"koi1 ore2 / 'pe3ne/'he4 // 11. mõ"mē1 pe2 ne/'koi3 ei4 // 12. pai"vo1 o/'re2 re/'koiV3 // 13. 'ore1 rero/"ho2 õ/'na3 pe4 hE/'tE5 // 14. 'torohe/"pia1 peña/'piña2 ei3 o'rE4 //

Translation of the Text. (The word po has only been translated in Sentence7. It indicates a certain degree of indefiniteness or uncertainty with regard to the particular thing in question.)

1. After this they went to be with the Jupás, a long time ago 6--Jiré, and the others (went). 2. Jiré and the others went first to be with them, long ago 7. 3. "A lot of them went to be with them, "they said, "to see them." 4. "Now, we have come to tame, you, "they said then, he almost threw, arrow)," they said then, he almost threw, arrow)," they said them, long ago, "the old man, almost threw, an arrow) on 12 them, long ago, "they aren't fighting, with, you, "they aren't fighting, with, you, "Jiré said, 9. "I said, (it)," Jiré, said, 10. "We aren't fighting, with, you, "Ill. "Where, do you, live, "

(he) said<sub>4</sub>. 12. "We<sub>2</sub> live<sub>3</sub> a long ways away<sub>1</sub>." 13. "Take<sub>2</sub> us<sub>1</sub> right<sub>5</sub> to<sub>4</sub> the houses<sub>3</sub>. 14. We want to see<sub>1</sub> your houses<sub>2</sub>," we said<sub>3</sub>.

### FOOTNOTES

¹The Parintintin language is spoken by approximately one hundred and fifty Indians living principally in the State of Amazonas, Brazil. There are groups living at three places on the Ipixuna River, a tributary of the Madeira; others are living in the area of Três Casas; and a group of some seventy Indians are near the headwaters of the Marmelos River. The family group living at Canavial, one of the above-mentioned locations on the Ipixuna River, consists of the chief, Paulino Neves; his immediate family; and his sons-in-law.

Most of the data for this paper were collected during two field trips to Canavial. The first visit extended from February through April, 1961, and the second from July, 1961 through January, 1962. Assisting steadily as informants were Catarina, the chief's wife, and Ida, his married daughter. Their approximate ages were forty-five and twenty-seven respectively.

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 $^2\mathrm{This}$  regressive nasalization does not occur on certain common morphemes which would be rendered homophonous with other morphemes if nasalized, e.g.,  $\mathfrak{ga}$  [ga] 'he' contrasts with  $\mathfrak{ga}$  [ $\mathfrak{ga}$ ] 'they'. Both of these may be prefixed with similar grammatical functions.