A few thoughts regarding high tone in Amahuaca

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(Algunas observaciones sobre el tono alto en amahuaca)

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"A FEW THOUGHTS REGARDING HIGH TONE IN AMAHUACA"

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Foreward

The field work done for the following paper has been done in the communities of Jatitza, located on the upper Ucayali River midway between Bolegnesi and Chicosa, both on the same river; in the community of Sajino, on the upper Inuya river, and in the community of Sabalo, on the upper Mapuya River. Also several native speakers of Amahuaca were brought to the center of the Summer Institute of Linguistics in Yarinacocha, near Pucallpa, Perú.

Work on this paper started in March 1972, and the last tape recordings referred to in the paper were made in Feb. 1975, at Yarinacocha. An interesting experiment was done with some of the Amahuacas who are literate. Some of the published writings in Amahuaca were rewritten with the tone marks left off, and the same material was read with the high tone marked. It didn't seem to make much difference in the reading of the material.

Credit for the grammatical theory involved in this paper goes to Eugene Loos, who has given invaluable help in the writing of this paper.

Tone inAmahuaca has been described in an unpublished paper written by Robert and Delores Russell under the auspices of the Summer Institute of Linguistics[1]. In this paper they have posited two phonemic tones with two submembers in each class. /Syntactotonemics in Amahuaca (Pano) / Thus they have a high toneXXXX ˥ / ˦ / marked over the vowel, with low tone being unmarked /v/. High tone has two submembers, / 1 & 2/, with low tone having two submembers / 3 & 4/.[2] "(2Russell. Syntactotonemics, section 1/ (hereafter all the footnotes that cite Russell refer to this Syntactonemics paper)" In this section they cite two examples to show that tone is phonemic and therefore unpredictable /h'a$_3$te$_3$ p'a$_3$e$_3$ t'e$_1$a$_3$?/ 'their big shellfish', ~~(hatę páó tó?a?)~~; and /h'a$_3$te$_3$ p'a$_1$e$_1$t'e$_1$?a$_3$/ (hatę páó tó?a?) 'their big holes in their earlobes'.[2] /Russell, section 1/. In working with the ~~author~~ language there has been registered a different notation of tone, and vowel length comes into play on 'shellfish.' /h'a$_2$te$_3$ pa2ee$_3$ t'e$_1$?a$_3$/ (háte páee tó?a) 'their big shellfish'; /h'a$_2$te$_3$ p'a$_1$e$_3$ t'e$_1$?a$_3$/ (háte páe tó?a) 'the big holes in their earlobes'. In the isolation tone there is a further distinction between these two words: /pa$_1$ee/ (páee) 'shellfish', and /pa$_3$e$_1$?/ (paé?) 'big hole in the earlobe'. After seeing this and further work it is assumed that consonant-vowel relationships come into play in setting the primary rules for tone. It will be seen that geminate vowels in second syllables, or consonants closing the second syllable will apply in the secondary rules and shift the tone to the first syllable.

To determine the tone we decided to start with the two syllable words in isolation and write them down as they are uttered. It should be noted that these words are not roots, and this takes out many of the two syllable verb roots, (?oroki , wunaki , hiriki, hiri?i, etc.) This was done to give a frame into all of the words that are two syllables in length and can be uttered by themselves can be ux

(Insert the following before the final paragraph on p. 1)

To define tone and how it worked, Russell had two tone classes and frames to determine class membership.[fn] /fn. See "SYNTACTOTONEMICS IN AMAHUACA (PANO)" Robert and Delores Russell, Summer Institute of Linguistics. (an unpublished paper)/ In the frame a monosyllable is used to show the tone pattern, /?á/.[fn] /fn. Note the difference in what was originally written in the above paper. This monosyllable was written there as /á / without the glottal. Robert and Delores Russell have since changed the orthography so the glottals are written word initial when they are immediatly before a vowel. With this new writeup you never see a word start with a fowel initial. The glottals that come immediatly on the end of a word following a vowel, or open syllable, are not now written. (ex. /honí/ not /honí?/) 'man'. This change in orthography will be made in the references and examples to Russell's paper for the sake of uniformity./ When a word of the cvcv shape has high tone on the second syllable using the frame /?á cvcv/ it would be in Russell's tone class I, /?á ?iné/ 'mi perro'. An example of a class II word would be/?á tá?á/.[fn] /fn. Russell, p. 2/. To find the tone class of words other than this you have to test them in paralell enviornments. When two dissyllable words of class I are combined, you notice that the tone changes from the second syllable of the second word to the first syllable /?ine/ plus /waká/ combine to make /?iné wáká/ 'cría de perro'. When a class I dissyllable combines with a class II following, you observe a different tone pattern, /?ise/ 'maquisapa', with /waká/ 'criatura', you get /?isé waká/ 'cria de maquisapa'. Notice the high tone on the first syllable of /waká/ with a class I word, and on the second with a class II.[fn] /fn. Russell, p.4./ This frame is postulated as a paralell enviornment for testing words with shapes other than cvcv, or ones that cannot be posessed. To determine the tone of /tapa/ 'plataforma', and /xopa/ 'secana'; these words have to be put into a frame with a cvcv word following. /tapa tóro/ 'plataforma corto' shows that /tapa/ is a class I word, /xopa toró/ 'secana corto' shows that /xopa/ 'secana' is a class II word.[fn] /fn. Russell, pp. 6-8./ This follows since /?á tapa/ 'mi plataforma' shows this is a class I word; with /?á xópa/ 'mi secana' patterning as a class II word.[fn] /Russell pp. 6-8/ The other criteria for determining word classes for trisyllable words determined if they patterened with the high tone on the first and third syllables, or had

high tone only on the third syllable. To illustrate [illegible] /ʔí máníʔá/ 'mi seda/platano', is a class I word. And [illegible] /ʔí wímaná/ 'mi cara' is a class II word. Any trisyllabic words, with the exception of those ending in geminate vowel clusters, without high tone on the ultima are class II words.[fn] /fn Russell p. 8/

It is interesting to see that in the paper, Russell had an insight that will be quite common in the secondary tone rules for one and two syllable words. "Trisyllables ending in a geminate vowel cluster pattern like dissylabes ending in a nasalized vowel."[fn] /fn. Russell, p. 9/. In this he observed a secondary tone rule that will move high tone off of the final syllable or vowel to the preceeding one if the final vowel is a geminate cluster or is a nasal vowel. This will be illustrated below.

A hint for listening for vowel length on the final syllable of a word, when there is no consonant closure present, is to listen for the glottal. If that final open oral syllable is short the glottal will be quite noticible. If it is a geminate cluster, or long vowel, the glottal will be quite a bit fainter or not present. A long syllable on the initial syllable of a multsyllable word has not yet been observed. There are a few words that have what looks like a geminate cluster, but the tone and stress pattern make them look like a trisyllable, [illegible] /'píl'kí/ ($\text{'pí}_1\text{l}_3\text{'kí}_2$) 'cargar en la espalda'. This is a trisyllabic word with the stress on the first syllable followed by the highest of the two high tones, then the highest of the two low tones on the second syllable, then the transitive verb ending with the lowest of the two high tones on this last syllable. It is also noticed that on words three or more syllables with two high tones present, that the stress and the highest submember of the high tones always go together. The other occurance of a high tone will be the lowest of the high tones.

recorded as they are spoken.

The one syllable words follow, with the cvv pattern. It should be noted here that the two vowels in this case are not the same vowels. The tone rule is as follows: v -

$v_2 \rightarrow$ [high tone] / #cv_1__ #

haá	'¿como?'	taá	'hiel'
háó	'sapo'	táó	'lagartija'
maí	'tierra'	waí	'chacra'
naá	'purma'	woá	'soga de monte'
naí	'cielo'	wáá	'canción'
paó	'concha'	xaá	'motelo'
náó	'barro'	xaó	'hueso'

From the above it can be seen that all but the high front vowel /i/ occurrs as the first vowel. Also that when there are two dissimilar vowels following a consonant, the high tone falls on the second vowel. All of the above words are of the shape / #$cv_1\acute{v}_2$?#/. It should be noted that the glottal always follows a vowel word final, when there is no consonant closure. This will come into the formulation of the phrase boundary rules later.

When there is a word of the above shape, with /i/ in the iniital syllable, you have the /y/ insertion rule. cíV - ciyV . The following words illustrate this point.

piyá	'flecha'	šiyá	'gusano'
wiyá	'desagradable'	?iyá	'pesado'
čiyá	'flecha'	šiyó	'mosca'
miyá	'tuyo,	?iyá	'a mí'
niyá	'viento'		

The words of the shape cv_1v_1 are hard to hear tone on, since for the purposes set forth there has to be two or more syllables to show the contrast. Those marked with the high tone are heard

higher than those not marked. (see attached sheet). The second division in the one syllable words also shows an interesting feature. To state it in one rule, it would look like this: v → [high tone] / # $c_{-1}v_2 \begin{Bmatrix} \# \\ v \\ c \end{Bmatrix}$ # This same closure on the part of long vowels or [-syll, +obs, +cont,] will be at work in the two syllable rules below. The examples illustrate that a [- syll, +cont] can come at the end of a word, thus modifying the tone. (see sheet II)

See last Paragraph P4

In the following set a similar rule applies as in the preceeding example; v→ [high tone] / # c_(c)cv $\begin{bmatrix} v \\ \acute{c} \end{bmatrix}$ # (Note the following seem to be an exception to the rule; táxko 'glándula hinchado del cuello', téépi 'garganta', sépa 'resina', kóó ing 'angila comestible, ní čito 'flecha para aves', wóxti 'peine', wóte 'sin punto', wí?xa 'arbol', wíema 'lejos'. With the exception of the above, this rule applies to the restof the 342 words cited below. (see sheets III. IV, V.) At least ¾ of the irregular words are compound words (táxko. čito, wóxti. wóte.). Later we will have a rule that will place the high tone on the first syllable when the immediatly preceeding consonant is /?/. v→ [high tone], / # c_?(c)v $\begin{bmatrix} c \\ v \end{bmatrix}$ # This effectively reduces our list of exceptions to 4.

The cvcv set is the hardest to break, since there are two or more factors operating. It can be seen from the cv?v words that the /?/ medially with any consonant word initially will put the high tone on the first syllable. This is about 10% of all of the forms operating. From the list (see example sheets VI) it can be seen that where the consonant combinations are strong enough the tone is determined by this sequence alone. In other combinations they are not that strong, and the vowels involved will place tone on one syllable or the other. This is the area to be studied in more detail.

The glottal in the consonant medial position exerts a very strong influence. (See example sheet VI) In every instance of cv?v words we have found, the tone is always cv́?v. /pá?i/ 'ala', /tó?a/ grande, /tá?i/ 'pied', etc. The two syllable words with the cvcv shape do not have any easy pattern to break. They all have the influence of the vowels changing the tone pattern set by the consonants. The following charts show the consonant-vowel patterning, and the syllable the high tone occurs on. /see example sheet VII/ The exact rules to show the way the consonants influence each other, and the modifications the vowels make on the tone assigned is not worked out yet. It is assumed that the consonants determine the primary tone, and if the vowel combinations are strong enough they overrride the tone assigned by the consonant combinations.

In some cases it is noticed that with certain consonant patterns the tone is on one syllable. Then along with that there is usually one word that has the same consonant pattern but the tone is on the opposite syllable. The following set of rules deals with the majority of these words, and shows some of the consonant-vowel relationships. (see example sheets VIII & IX)

The above examples and rules predict all but about 5.6 % of high tone placement on the cvcv patterns. What is indicated more strongly are the presence of certain ordered rules thatare working in placing high tone. The rules given in IX are based on the immediate constituent chart below. (See example sheet X)

Asin the set of cvv(c) words mentioned above where the long second vowel or consonant closure had a secondary effects on tone, we see the same thing happening in two syllable words. The rule is stated: v → [+high tone] / ___ (c)cv(c)# (Note: There appears to be three exceptions to this rule; /sápa/ 'resina', /kónsi/ 'angila comestible', and /wisma/ 'lejos'. /táxko/ 'glándula hinchada del cuello', /číto/ 'flecha para aves', /wóxti/ 'peine', and /wóto/ 'sin punto', are words that you would expect to find the high tone on the oral syllable. However this indicates that the tone assigned in the root form of the word stayes there even if the first syllable is later nazalized or has a consonant closure in it. /wá?xa/ 'arbol' would be following the rule stated above that the glottal medially places high tone on the first syllable. The rule stated in the paragraph applies to all of the following illustrations. (See example sheets III, IV, & V)

We have seen that the problem of phrase tone change has been dealt with previously by Russell from the examples shown above. Basically what he said was if a class II word is followed by any word, the tone is not moved from one syllable to another. Ex. /ʔiso/ & /waká/ combine to form /ʔish waká/ 'cria de maquisapa'. If a class I word is followed by a class I word, the tone shift is noted, /ʔino/ & /waká/ combine to /ʔino wáká/ 'cría de perro'.[fn] /fn. Russell, pp. 3,4./ In the tone assigned from the examples cited above high tone is assigned like this: /ʔinó/ 'perro', /ʔíso/ 'maquisapa', /waká/ 'criatura'. The phrase tone indicated would be the following; /ʔíno wáká/ 'cría de perro', /ʔíso waká/ 'criatura de maquisapa'. Instead of word classes being the determining factor, there is postulated something in the underlying structure of the first word, or the consonant vowel combinations of the syllables of the two words that produce this tone change. Note that the class I word being the third word in a modifying string has it's isolation tone assigned to it in the charts above. The first and second words will have the high tone alternating on the odd syllables as well. The stress will be placed on one of the occurances of the high tone, and this will be the highest tone in the phrase. It is not known which factors determine the placement of stress, grammatical or lexical, but there seems to be a phrase stress in each phrase utterance. Note the [illegible] high tone in the following example: /nóno waká/ 'patito', /nóno čáʔo waká/ 'patito negro'. (For more examples see sheet # XI) It is presently postulated that a consonant cluster falling in the medial syllable of the first word in the phrase will move the tone of the second syllable to the first syllable of the second word in a two word phrase. It does not always do this, since some of the examples so not act this way. (See sheet XII) Some examples to show this is: /káspi ʔíča/ 'muchas flechas', /káspi hoxó/ 'flecha blanca', and /káspi toró/ 'flecha corta'. Normally /ʔičá/ 'mucho', /hoxó/ and /toró/ all pattern similar to Russell's class II words. In the above example these do not pattern alike.

In the phrase constructions, the high tone usually falls on the odd syllables, 1,3,5, etc. This can be seen from some examples from the sheet XI: //ʔísokóre ʔíča/ 'muchos monos (choros)', /ʔíso xówaa/ 'mono gordo (maquisapa)'. However pattern pressure will remove high tone from one word to make sure that

there aren't two high tones on contigous syllables, even when they are accross word boundaries. Ex. /'ʔátapá/ 'galliana,' /'ʔa^{1}ta^{3}pa^{2}/; /'ʔátapa xáni/ /'ʔa^{1}ta^{3}pa^{3} xá^{2}ni^{4}/ 'galliana gorda'. This system does not cross phrase boundaries as seen in the following example: /há^{2}ná^{3}'má^{1}ra^{3}má^{2} # ha^{2}ʔa^{3}x # ho^{3}ni^{2} # ki^{2}nu/

en el rio estar hombre (clitic)

'el hombre vivío en el río'. The boundaries are marked by #, and shows the limits of the respective phrases: locative; predicate; subject; and sentence ending clitics. Note also that /honí/ is 'hombre' is in it's isolation tone pattern, and is heard with the glottal at the end immediatly preceeding the clitics /honíʔ/. All of the subjects observed in the post verbial position have their isolation tone irregardless of being a transitive or an intransitive subject. (See example sheet XIII). An interesting thing to notice in this chart is the fact that the subject can be in the transitive mode without an expressed object. Another way of looking at it is that you have an incohative verb with the object implied, and automatically takes a transitive subject in the pre-predicate position: /hóni # waíʔi # kiná/ 'El hombre está haciendo-chacra.' In this section the glottals /ʔ/ are included in the transcription to show that they occur and thus mark off the phrase tone boundaries. When the stress is written in the phrase tone constructions, it is always followed by the highest tone, /1/. It is believed that the emphasis is marked off by stress to further emphasise the point.

The purpose of this paper is to show that there have been some rules found that work with predicting tone, and that the words once written correctly will be able to write the isolation tone without having to have them spoken by a native speaker. This data is not yet fully analyzed. The areas to study in the future are set out by it.