Abstract: Mashco Piro is an Arawakan language of Peru whose speakers have lived in voluntary isolation from the rest of the world until recently. To my knowledge no linguistic data from this language had been published until the recent list of Parker (2015). That brief corpus of 24 words gives us a preliminary glimpse of how Mashco Piro phonology compares and contrasts with that of Yine, a closely related language. In this paper I posit an initial linguistic analysis of the wordlist and discuss the difficulties inherent in working with such a small set of data. Despite these limitations, the picture which emerges is that Mashco Piro’s segmental inventory and syllable structure may be essentially identical to the phonemic system posited for Yine by Matteson (1965), Lin (1997), Urquía Sebastián and Marlett (2008), and Zimmermann (2013). At this point the main difference between the two languages appears to lie in their prosodic (metrical) parameters for assigning stress. This study thus highlights how far we can delve into the phonology of an undocumented language with a very small sample of its vocabulary, given appropriate caveats.

1. Introduction

The main goal of this paper is to analyze a tentative list of 24 Mashco Piro words and phrases, originally presented in Parker (2015). The Mashco Piro people are a small and highly nomadic group of individuals living in the Amazonian lowlands of southeastern Peru. They speak an Arawakan language closely related to Yine. Until the year 2013, most of them avoided prolonged contact with the outside world. However, back in 1994 a Mashco Piro woman voluntarily settled in a Yine village bordering on an area where Mashco Piros had been seen in the past (see §2 and §3). From her I elicited a short set of random lexical items which I transcribed phonetically. That list serves as the focus of this paper.

The remaining sections of this paper are organized as follows. In §2 I summarize the current situation of the Mashco Piro ethnic group. In §3 I provide more details about how I obtained the wordlist. In §4 I then (re-)present the linguistic data, followed in §5 by some comments concerning glosses, possible morpheme breaks, inventories of phonetic segments, syllable structure, and stress. Finally, §6 concludes.

2. Who are the Mashco Piros?

The purpose of this section is to summarize what is currently known about the Mashco Piro people and their language. Historically, most of the previous encounters between Mashco Piro individuals and outsiders have ended quickly, in one of two ways: either the Mashco Piro person(s) made threatening gestures until the other party withdrew, or the Mashco Piros themselves fled. Nevertheless, on June 24, 2013, a group of mostly unclothed Mashco Piro individuals emerged from the rainforest on the bank of the Piedras River opposite the Yine village of Monte Salvado, in the Tambopata district of the Madre de Dios region of Peru. They remained there for three days. On the second of these days (June 25), a total of about 110 men, women, and children were observed. Over the course of these three days, the inhabitants of
Monte Salvado communicated off and on with the Mashco Piros by speaking loudly to them in Yine across the river. At times the Mashco Piros made aggressive gestures and, on one occasion, even started to cross the river. The Yine settlers in Monte Salvado were naturally afraid but defended the situation by shouting to the Mashco Piros things such as, “We are your relatives. Don’t hurt us,” etc. The Mashco Piros indicated that they wanted bananas, manioc, sugarcane, machetes, cooking pots, knives, and clothing. The village of Monte Salvado had in fact been intentionally founded at a location where Mashco Piros in the past had come to look for turtle eggs to eat, in the hope of eventually facilitating a peaceful and more long term contact. During this encounter the Yines filled several canoes with bananas and pushed them across the river to the Mashco Piros. A video clip taken by a local ranger during those three days documents some of these events. Portions of it can be accessed on different internet sites. After that encounter the Mashco Piros left the area, but subsequently returned.

A situation of this type presents a number of complex and difficult factors of a political, anthropological, ethical, and humanitarian nature. One obvious motivation for the Mashco Piros to have initiated this contact is their need for food. It is also speculated that pressures from the outside world — such as lumbering, oil exploration, tourism, low-flying airplanes, drug trafficking, etc. — have limited their use of their historical territory. From a medical perspective any contact with outsiders could potentially infect previously isolated individuals with deadly bacteria or viruses since they will not have built up any natural immunity. It is for this reason, in part, that the inhabitants of Monte Salvado did not want the Mashco Piros to get too close to them. In response to these dangers the Peruvian government has prohibited outsiders from directly approaching any uncontacted native people. Furthermore, the area where the Mashco Piros and other uncontacted groups live was designated a nationally protected reserve zone known as the Manu Park in 1973. A number of Peruvian and international organizations are working to promote the interests of groups such as these. Two particular organizations made up entirely of native speakers of different minority languages of Peru are the Asociación Interétnica de Desarrollo de la Selva Peruana (AIDESEP) and the Federación de Comunidades Nativas del Río Madre de Dios y Afluentes (FENAMAD). These two organizations monitored the encounter that took place in Monte Salvado back in June. AIDESEP also owns the complete video of the contact, and has offered to share it with interested parties.

The ISO 639-3 code for Mashco Piro is cuj. The Ethnologue lists its full genetic classification as Maipurean, Southern, Southern Outlier, Piro, Piro (Lewis et al. 2013b). Its closest linguistic relative is thus Piro (pib: Lewis et al. 2013c). The speakers of this latter language now call themselves Yine, which means ‘people’ (Nies 1986). Consequently, some of them refer to Mashco Piro as Mashco Yine instead. Yine and Mashco Piro are also related to the Machinere language of Brazil (mpd: Lewis et al. 2013a). Yine persons who have spoken with Mashco Piros report that the degree of mutual intelligibility varies between 50-80%. Alternate names for Mashco Piro are Cujareno or Cujareño. Mashco is actually a pejorative word first used in 1687 to refer to a different Peruvian ethnic group (Lewis et al. 2013b, Wikipedia 2013). Estimates of the number of speakers of Mashco Piro range from 60 to as high as several hundred.

1Rittma Urquía Sebastián, personal communication.
3See http://www.aidesep.org.pe/miembros-de-aidesep-y-fenamad-presentan-video-exclusivo-de-los-mashco-piro/.
4The facts and details reported in the first three paragraphs of this section can be verified on websites such as the following. All of these were accessed on October 22, 2013:
From a phonological point of view, Yine is interesting in several respects. First, it exhibits many complex syllable- and word-initial consonant clusters that violate the principle of rising sonority; many of these are resolved by inserting excrescent transitional vocoids. Furthermore, it has a pervasive process of vowel syncope that is triggered by certain morphemes, yet not others which are segmentally identical to them. For example, /meyi-wa-lu/ (celebrate-intransitive.verb.theme.suffix-nominalizer) ‘celebration’ undergoes syncope and is thus pronounced as [meyiwØlu]. In contrast to this, /heta-wa-lu/ (see-yet/still-3rd.person.pronominal) ‘going to see him yet’ resists syncope and is therefore realized phonetically as [hetawalu], without any changes (Matteson 1965, Pater 2009). Finally, Yine has three different degrees of predictable stress at the phonetic level, assigned from different ends of the prosodic word. For all of these reasons, analyses involving Yine data have made important contributions to the descriptive and theoretical literature (Lin 1997, Matteson 1954, 1965, Matteson and Pike 1958, Nies 1986, Parker 1989, Pater 2009, Urquía Sebastián 2006a, 2006b, Urquía Sebastián and Marlett 2008, Yanagisawa 2005, Zimmermann 2013). It is thus probable that Mashco Piro will eventually be discovered to contain one or more intriguing phonological phenomena analogous to these patterns. This highlights the significance of analyzing this preliminary wordlist now, as a first look into the linguistic structure of a previously unstudied language.

3. Obtaining the data

In this section I present metadata describing the circumstances in which the Mashco Piro wordlist was collected. At some point during October 1994, a naked couple from the Manu Park area appeared in Diamante, a Yine village on the Madre de Dios River in Peru. They were looking for metal pots and machetes. The man was Machiguenga (now spelled Matsigenka) and the woman was Mashco Piro. They spoke to each other in Mashco Piro, but she also knew some Machiguenga. At that time I was working at the main center of the Summer Institute of Linguistics (now called SIL International) in Yarinacocha, Pucallpa, Peru. We were notified about this couple through a radio call from Juan Sebastián Sandoval. Juan was a Yine bilingual teacher and community leader. He had a keen interest in trying to locate and contact the Mashco...
Piros. He was therefore one of the individuals who later helped establish the village of Monte Salvador (see §2).

On December 8 of that year I flew to Diamante to meet the Mashco Piro woman. Since I do not speak Yine, I said everything in Spanish, and then Juan and other local people translated this into Yine, which they spoke to her. I was told that she had been reluctant to give them her name (as an aside, until just a few decades ago, personal names were not even used in Machiguenga culture at all (Snell 1972)). The Yines also reported that she did not know how to count, so I do not know her exact age. Many Amazonian languages of Peru in fact lack native terms for numbers higher than two or four; e.g. see Parker (1987) on Chamicuro, Parker (1992) on Huariapano, and Davis (2004) on Machiguenga. Nevertheless, I estimate that at that time this Mashco Piro woman was around 30 years old. By means of pointing at objects and having my Spanish words translated into Yine, I requested her to pronounce the equivalents in her language. At first I tried to elicit the names of body parts such as tongue and nose, since these are unlikely to have been borrowed. However, a complication with this semantic domain is that such items often require an obligatory possessor, especially in Arawakan language (Payne 1987, 1991). In §5.1 I discuss the problem of glossing expressions of this type; see especially the comments concerning cells B23 and B24 of Table 1. Consequently, I soon abandoned this approach and focused instead on common ambient objects (see Table 1).

Eventually I was able to have the Mashco Piro woman pronounce individual words. I wrote these down by hand in a notebook, using the Americanist system for transcribing phonetic symbols. We did not make any video or audio recordings of these interactions. In 1994 the modern language documentation movement was in its infancy (Krauss 1992, Himmelmann 1998), so I was not aware of the importance of obtaining explicit informed consent from native speakers to use their data. Furthermore, even if I had attempted to do so, it would have been complicated by having to communicate through Spanish and Yine as intermediate languages. What is more, given her situation as having just experienced “the outside world,” it would have been virtually impossible to explain to her a concept such as a professional linguistic journal, much less the internet. The policy that SIL has adopted in cases such as this is to permit publication of legacy materials without a formal process of informed consent if they were collected prior to the year 2000. My recent attempts to find out more about the current status and location of this Mashco Piro woman have so far been unsuccessful.

Since I planned to leave Diamante the next day to return to Yarinacocha, Juan Sebastián agreed to try to elicit more Mashco Piro data from this woman afterwards. I left with him a Swadesh type list of basic vocabulary items in Spanish. He eventually obtained a total of about 300 individual Mashco Piro words, including a few paradigmatic items such as ‘(anybody’s) hand’ vs. ‘my hand’. Juan was not a trained linguist, so he transcribed these forms using the practical Yine orthography, as exemplified by Nies (1986). A few of these are included in the list in Table 1. Later he gave his data notebook to me. Copies of this are archived with GIAL and SIL in Dallas, and have not been previously published. Since Juan passed away a few years ago, as did his wife, I contacted his niece, Rittma Urquía Sebastián, by e-mail to inquire about permission to distribute his materials. Rittma is the (co-)author of several papers on Yine listed in the bibliography of this article. On October 3, 2013, she responded that her mother, Raquel Sebastián de Urquía, who is Juan’s oldest sibling, authorized me on behalf of the family to publish the wordlist he had collected.
4. The wordlist

In this section I display the set of 24 Mashco Piro words and phrases that I collected in 1994, as explained in §3. A brief linguistic analysis of these data will be presented next, in §5. Table 1 below is structured in the following way. In column A I list the 24 Mashco Piro utterances which I transcribed on location at that time, using the Americanist phonetic alphabet (see §3). The vertical order in which these expressions appear in the table is random. Column C provides the Spanish gloss for each word, as indicated to me by the Yine speakers who helped me elicit the data (see §3). Column B contains the corresponding English glosses, which I myself translated directly from column C. Column D indicates the Mashco Piro expressions which Juan Sebastián wrote down subsequently for these same Spanish glosses. As described in §3, he used the standard Yine orthography. Consequently, these do not necessarily represent Mashco Piro speech in a phonetically accurate way (a legend of the grapheme to phoneme mappings appears at the bottom of Table 1). Furthermore, the data Juan elicited did not overlap completely with these 24 items, so some of the cells in column D are blank. Column E presents the closest Yine equivalent(s) that I could find for each Mashco Piro word by searching through the dictionary of Nies (1986). This uses the same practical Piro orthography as employed by Juan Sebastián in column D. Finally, column F gives the corresponding phonemic and/or phonetic transcription of each Yine word listed just to its left, in column E. These involve the same Americanist character set that I use for the Mashco Piro forms in column A. Together columns E and F then give us an idea of how closely these 24 Mashco Piro utterances correspond linguistically with what may be (in some cases) potential cognate items in Yine.
Table 1: Mashco Piro wordlist obtained on December 8, 1994, in Diamante, Peru

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>[há:mïnïʔ]</td>
<td>‘tree’</td>
<td>‘árbol’</td>
<td>subsequent Mashco Piro transcription by Juan Sebastián in Yine orthography</td>
<td>gagemuna</td>
<td>/hâhmïnï/</td>
</tr>
<tr>
<td>2</td>
<td>[kábra]</td>
<td>‘dog’</td>
<td>‘perro’</td>
<td>gaamuna</td>
<td>gagemuna</td>
<td>/kew/ ([kêbê])</td>
</tr>
<tr>
<td>3</td>
<td>[kočiklo]</td>
<td>‘species of palm tree’</td>
<td>‘yarina’</td>
<td>kawé-kawrá</td>
<td>kochiklo</td>
<td>/kočiklo/</td>
</tr>
<tr>
<td>4</td>
<td>[kòckawàlòwàlè]~[kòckawàřowàlè]</td>
<td>‘yard grass; fodder crop’</td>
<td>‘gramalote’</td>
<td>kochkawale</td>
<td>kochkawale</td>
<td>/kočkawale/</td>
</tr>
<tr>
<td>5</td>
<td>[tenòtla]</td>
<td>‘tall; high’</td>
<td>‘alto’</td>
<td>teno, tenolu, tenolo</td>
<td>/teno/ ([ténu])</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>[hònà?]</td>
<td>‘water’</td>
<td>‘aguá’</td>
<td>gonu</td>
<td>/honí/</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>[čìšaʔ?]</td>
<td>‘earth; ground; dirt’</td>
<td>‘tierra’</td>
<td>chiji-řá</td>
<td>chiji</td>
<td>/čixí/</td>
</tr>
<tr>
<td>8</td>
<td>[yògÌI-břá]</td>
<td>‘(it is) a species of tree’</td>
<td>‘(es) cetico’</td>
<td>yoklu</td>
<td>/yoklí/</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>[páotla]</td>
<td>‘sun’</td>
<td>‘sol’</td>
<td>tkachi</td>
<td>tkachi</td>
<td>/tкаčи/</td>
</tr>
<tr>
<td>10</td>
<td>[(ha)čičèhra]</td>
<td>‘fire; firewood’</td>
<td>‘candela; leña’</td>
<td>chichmero; chichiwani; chichnìwalé</td>
<td>chichi</td>
<td>/čičí/</td>
</tr>
<tr>
<td>11</td>
<td>[sòtI-ra]</td>
<td>‘rock, stone’</td>
<td>‘piedra’</td>
<td>sotlu; sotlu-řá</td>
<td>sotlu</td>
<td>/sotI/</td>
</tr>
<tr>
<td>12</td>
<td>[ksàtI-ra]</td>
<td>‘sand’</td>
<td>‘arena’</td>
<td>satu-satrá</td>
<td>ksatu</td>
<td>/ksatI/</td>
</tr>
<tr>
<td>13</td>
<td>[pàńcíra]</td>
<td>‘house’</td>
<td>‘casa’</td>
<td>panchi; panchi-řá</td>
<td>panchi</td>
<td>/panči/</td>
</tr>
<tr>
<td>14</td>
<td>[hátnI]</td>
<td>‘path, trail’</td>
<td>‘camino, trocha’</td>
<td>gatnu; ga-gatnu-řá</td>
<td>gatnu, gatnu gapo</td>
<td>/hatní/</td>
</tr>
<tr>
<td>15</td>
<td>[kàšřIr]</td>
<td>‘arrow’</td>
<td>‘flecha’</td>
<td>kashri-Řá</td>
<td>kashritva</td>
<td>/kašři/</td>
</tr>
<tr>
<td>16</td>
<td>[ké:fa]</td>
<td>‘bow’</td>
<td>‘arco, balista’</td>
<td>kirrutwa; kiru-kiru-twará</td>
<td>kashritwa</td>
<td>/kašřitwa/</td>
</tr>
<tr>
<td>17</td>
<td>[tánotla]</td>
<td>‘cloud’</td>
<td>‘nube’</td>
<td>tenotla klatalu-mk</td>
<td>kyachgapere, yachgaper</td>
<td>/kyačhapeřeří/ yachgapere</td>
</tr>
<tr>
<td>18</td>
<td>[kàliála]</td>
<td>‘bowstring’</td>
<td>‘cuerda de arco’</td>
<td>kalyalutsa</td>
<td>kashritwatsa</td>
<td>/kašřitwatsa’a/</td>
</tr>
<tr>
<td>19</td>
<td>[iwátla]</td>
<td>‘type of bamboo’</td>
<td>‘paca (bambú)’</td>
<td>(?) wata</td>
<td>/wata/</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yine/Piro</td>
<td>English</td>
<td>Yine/Piro</td>
<td>English</td>
<td>Americanist Phonetics</td>
<td></td>
</tr>
<tr>
<td>-----</td>
<td>-----------</td>
<td>-----------------</td>
<td>-----------</td>
<td>-------------------</td>
<td>-----------------------</td>
<td></td>
</tr>
<tr>
<td>20.</td>
<td>[ahá:hřa]</td>
<td>‘stick’</td>
<td>‘palo’</td>
<td>gagajrã</td>
<td>gagaje, giye</td>
<td>/haḥaxe/</td>
</tr>
<tr>
<td>22.</td>
<td>[čiřátřa]</td>
<td>‘canoe’</td>
<td>‘canoa’</td>
<td>ga chiretra</td>
<td>kanawa</td>
<td>/kanawa/</td>
</tr>
<tr>
<td>23.</td>
<td>[wínířa wåle]</td>
<td>‘that is our tongue’</td>
<td>‘esa es nuestra lengua’</td>
<td>wunnu</td>
<td>wale</td>
<td>/win:i/</td>
</tr>
<tr>
<td>24.</td>
<td>[wixiříña wåle]</td>
<td>‘that is our nose’</td>
<td>‘esa es nuestra nariz’</td>
<td>jri-</td>
<td></td>
<td>/x̯ři-/</td>
</tr>
</tbody>
</table>

Note: the Yine/Piro practical orthography used in columns D and E of this table is based on the spelling system utilized in works such as Nies (1986). These graphemes correspond to the Americanist phonetic symbols used in column F in the following way: 
- **g** = /h/ (a voiceless nasalized glottal fricative);
- **u** = /i/ (a high, back, unrounded vowel);
- **r** = /ʁ/ (a voiced alveolar flap or tap);
- **ch** = /č/ (a voiceless alveopalatal affricate);
- **j** = /x̯/ (a voiceless palatal fricative);
- **y** = /y/ (a voiced palatal glide);
- **sh** = /š/ (a voiceless alveopalatal fricative);
- **ts** = /tʃ/ (a voiceless alveolar affricate); and **tj** = /t̥ʃ/ (a voiceless palatal affricate). All other grapheme-to-phoneme correspondences in this table are straightforward and obvious, and follow Spanish orthographic conventions in the default case. See §5.2 for further discussion and explanation.
5. Analysis of the data

In this section I posit an initial linguistic analysis of the Mashco Piro data presented in Table 1. First I explain some semantic difficulties and uncertainties with respect to the glosses and potential morpheme divisions, in §5.1. Then I discuss the tentative inventories of phonetic segments and syllable types, as well as stress, in §5.2.

5.1 Cell-by-cell comments

In this section I note a number of issues and complications concerning the meanings of the Mashco Piro items I elicited. I also speculate about morpheme breaks whenever these appear to be present. The organization of these notes corresponds to the columns and rows of Table 1. References to Nies (1986) are annotated here as “the Piro dictionary,” and “Juan” stands for “Juan Sebastián” (see §3 and §4).

Cell E1: The Piro dictionary translates the word gagmuna not only as “árbol” (‘tree’), but also as “madera” (‘wood’).

Cell A2: /kabřa/ in Spanish means ‘goat’.

Cell C3: The Piro dictionary gives the following additional explanation for the translation of kochiklo as “yarina”: “especie de palmera de fruto comestible; las hojas sirven para techar las casas” [“species of palm tree whose fruit is edible; its leaves are used to make roofs for houses”]. An alternative Spanish gloss for this Mashco Piro word that was originally provided for me by the Yine speakers at the time is ‘shapaja’, which the Piro dictionary explains as “especie de palmera” (“species of palm tree”). However, the Piro equivalents given for this Spanish word in the dictionary are ksamì and kantsu. I thus believe that ‘yarina’ rather than ‘shapaja’ is the most accurate Spanish gloss for this Mashco Piro word. Both yarina and shapaja are regional terms, neither of which is typically found in standard Spanish dictionaries. Yarina likely comes from Quechua. It is of the genus phytelephas.

Cell C4: The Piro dictionary gives the following additional explanation for the translation of kochkawale as “gramalote”: “hierba gramínea de hojas rojas; crece en las orillas de los ríos y de las cochas” [“gramineous grass having red leaves; it grows on the banks of rivers and lakes”].

Cell A4: Juan gives this item the glosses “hierba” (‘grass’) and “pantano” (‘swamp, marsh’).

Cell C7: Other translations for the Yine word chiji are ‘land; soil; country’.

Cell A8: This is the only Mashco Piro form which I transcribed in my notebook with a hyphen, indicating the presence of a possible boundary of some type. I do not remember now why I
did this; likely it is because the speaker pronounced this utterance with a pause or hesitation between the two parts on at least one occasion. See also the discussion of the final syllable [-řa] below.

Cell E8: The Yine word yoklu “cetico” is also spelled in Spanish as setico. This is further explained as “a tree used for making paper; the heart (cogollo) of its wood is used to heal wounds and stingray stings”.

Cell A10: Elsewhere on my data sheet I noted the comment that, in this woman’s speech, the syllable [há] seems to be used at the beginning of certain utterances. I jotted this down in Spanish as empieza a hablar ‘she begins to speak’.

Cell D10: The Piro dictionary translates chich-mero as “brasa, carbón ardiente, fogata” (“coal, hot charcoal, bonfire/blaze”). Juan translates chichiwani as “ceniza” (“ash’), and chichniwalé as “leña” (“firewood”).

Cell E10: Other forms of the Yine word for ‘fire’ are chich(i)-pawa and pawchi. Another form of the Yine word for ‘firewood’ is gichimi.

Cell D11: Juan translates the word sotlu as “roca” (“big rock, boulder’), and sotlu-rrá as “piedra” (“stone, rock”).

Cell D12: Elsewhere in Juan’s data, satu by itself is translated as “otro” (“other, another (one)’). The Piro dictionary gives the additional glosses ‘(a) certain (one), a, an, one, someone’ for satu.

Cell E12: The Yine word ksatu is also glossed as “playa” (“beach’).

Cell D13: Juan translates this word as “tambo” (“small house”).

Cell E13: The Yine word panchi is also translated as ‘dwelling’ or ‘room’.

Cell A14: I also noted the possible alternative pronunciation of this Mashco Piro word as [hátina].

Cell D16: Juan translates the word kirrutwa as “mi arco” (“my bow”).

Cell D17: Elsewhere in his data, Juan translates tenotla by itself as ‘snow’, and klatalu in isolation as ‘ice’. In Yine the word klatalu means ‘white’.

Cell E17: The two Yine words for ‘cloud’ are also glossed as “neblina” (“fog, mist’). These two Yine words are so different from the corresponding Mashco Piro word phonologically that the gloss of this Mashco Piro word might initially appear to be wrong. Comparing it with the Mashco Piro word for ‘tall; high’ in cell A5 suggests that they are perhaps free variants of each other. However, Juan’s subsequent transcription of this word in cell D17 indicates that my transcription of this word, and its gloss, are probably correct after all.

As Josiah Walters (p.c.) pointed out to me, the sequence [-otla] occurs in three different words all conveying some aspect of the concept ‘high’: #5 [tenótla] ‘tall; high’, #9 [pátotla] ‘sun’, and #17 [tánotla] ‘cloud’. Since the sun and clouds are ‘high’ up in the sky, [-otla] may be a shared morpheme encoding this lexical relationship. Furthermore, if the purported morpheme is posited to be just [-tla] (minus the [o]), then #19 [iwátla] ‘type of bamboo (paca)’ may also contain this same lexical value. However, this seems to be less likely unless it is an extremely tall kind of bamboo.

Cell D18: Juan translates kalyalutsa as just “cuerda” (“string”).

Cell E19: The closest Yine word that approximates the phonological shape of the Mashco Piro word in Cell A19 and has a semantically related meaning is wata. The Piro dictionary translates this latter as “marona (especie de bambú espinoso de tronco áspero. Sirve para
hacer puntas de flechas)" [“a species of spiny bamboo with a rough trunk. It is used to make arrow tips”]. The dictionary does not list any Yine words starting with the letter i.

Cell E20: The Yine word gagaje is also translated as ‘small tree’.

Cell D22: In Juan’s transcription of this utterance there is a distinct space between ga and chiretra. An initial ga occurs many other times in his Mashco Piro data; most of the corresponding Yine words lack this syllable. His use of a space after ga is frequent but inconsistent; in many such cases a hyphen occurs instead, as with the form ga-gatnu-rá in cell D14. See also the discussion of the final syllable [-řa] at the end of this section.

Cell E23: The Yine word wu-nnu consists of ‘our-tongue’ and wale is translated as ‘he, him, his; that (one)’. Elsewhere in his data Juan translates the Mashco Piro word wale in isolation as “él” (‘he, him’).

Cell A24: For the meaning of the word wale, see the note concerning cell E23. In conjunction with this phrase, I noted that the Mashco Piro word [wále] may also convey the meaning ‘se dice’ (‘it is said’), although I put a question mark after this to show my uncertainty.

One overall comment on this section is that the final syllable [-řa] appears to be some type of suffix in Mashco Piro. I base this hypothesis on three facts: (1) it occurs frequently (in rows 2, 10, 11, 12, 13, 15, 16, 20, 22, 23, and 24 of column A in Table 1, nearly one-half of all items in my wordlist); (2) in most of these cases the corresponding Yine word lacks this syllable; and (3) Juan Sebastián separated this syllable from the rest of the Mashco Piro word by means of a hyphen in a few of his transcriptions (rows 11, 13, and 15 of column D in Table 1). However, there are two complications. First, Juan’s transcriptions chiji-řrá in cell D7 and sotlu-řrá in cell D11 have the additional grapheme <j> at the beginning of this suffix. Second, in my phonetic transcription in cell A8 the suffix appears to be [-břa] rather than just [-řa] (see the note on cell A8). At the moment I have no explanation for this discrepancy, and hope that future Mashco Piro data may clarify this point. It is interesting to note, nevertheless, that for the gloss of this utterance I added the Spanish word es ‘it is’ in parentheses (cell C8). This suggests that the morpheme [-břa], and by extension [-řa] as well, may be a copular verb of some kind.

5.2 Brief phonological description

In this section I posit a tentative phonemic analysis of Mashco Piro, based on the wordlist from Table 1. Given the small size of the corpus, any conclusions we might draw are of necessity somewhat speculative. Consequently, confirmation of this phonological sketch must wait until a larger and more adequate set of data becomes available.

5.2.1 Consonants

I start with the inventories of phonetic segments, consonants first:
Table 2: Inventory of phonetic consonants

<table>
<thead>
<tr>
<th></th>
<th>bilabial</th>
<th>alveolar</th>
<th>alveopalatal</th>
<th>palatal</th>
<th>velar</th>
<th>glottal</th>
</tr>
</thead>
<tbody>
<tr>
<td>voiceless plosive</td>
<td>p</td>
<td>t</td>
<td>č</td>
<td>k</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td>voiceless fricative</td>
<td>s</td>
<td>ŝ</td>
<td>ħ</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>voiced stop</td>
<td>b</td>
<td>d</td>
<td>h</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>voiced fricative</td>
<td>b̅</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nasal</td>
<td>m</td>
<td>n</td>
<td>ŋ</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lateral</td>
<td></td>
<td>l</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flap</td>
<td></td>
<td>ř</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glide</td>
<td>w</td>
<td></td>
<td>y</td>
<td>(w)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

I now discuss the consonantal system of Mashco Piro, following the arrangement of Table 2 from left to right first, then from top to bottom. I focus somewhat on those segments whose phonemic status appears to be doubtful. I will also compare this inventory with the consonants of Yine whenever possible.

Among the voiceless plosives, the oral stops [p t k] seem to be contrastive. The alveopalatal [č] is an affricate and is also phonemic. I assume that it is a single complex unit rather than a bisegmental cluster of /t/ followed by /š/, for two reasons. First, it can be preceded or followed by another consonant (items 4, 10, and 13 in Table 1). Second, the corresponding segment /č/ in Yine has also been interpreted as an affricate (Matteson 1965, Urquía Sebastián and Marlett 2008). This latter argument is of course not necessarily conclusive in and of itself, although it is suggestive. This raises an important methodological point for a study of this type. Namely, hard language-specific evidence from Mashco Piro should always outweigh any possible conjectured resemblance to Yine when these two factors come into conflict. Otherwise, we are in danger of circular argumentation. In the default case, of course, we would hope that appealing to a comparison with Yine phonology confirms what we would naturally tend to conclude from looking just at the Mashco Piro data anyway. Fortunately this is true as far as this particular issue is concerned (interpreting [č] as an affricate in Mashco Piro).

The only other voiceless plosive in Table 2 is the glottal stop [ʔ]. This phone occurs only in word-final position, in four items (#1, 6, 7, and 21). Technically speaking, then, this segment contrasts with its absence in words that end with a vowel (the majority of the cases). However, no other consonants appear in this position in my data. Furthermore, Yine does not have the segment [ʔ], even at the phonetic level, as far as I am aware. Consequently, I suspect that [ʔ] is not phonemic in Mashco Piro either. Rather, it may be just an optional transitional sound that can show up in word-final or phrase-final environment. Another Peruvian language in which intrusive [ʔ] exhibits this same type of distribution is Panobo or Huariapano, now extinct (pno: Parker 1994).

With respect to voiceless fricatives, Mashco Piro has the same four segments phonetically as Yine does. All four of these appear to be contrastive in Table 1. A minor
difference is that in Yine the glottal /h̨/ is inherently nasalized, an effect of rhinoglottophilia. In Mashco Piro, on the other hand, I did not detect nasalization on this segment. One might offer the counterargument that Juan Sebastián invariably transcribed this Mashco Piro phoneme with the grapheme <g> (rows 1, 6, and 14 of column D in Table 1). In response, however, I point out that Yine does not have a corresponding symbol for an oral [h], so he had no other way to write this. Furthermore, he was not trained in phonetics. Consequently, it is very likely that he may not have even noticed the lack of nasalization on the Mashco Piro variety of /h/. In terms of voiced obstruents, Mashco Piro has four of these at the phonetic level: [b d ɡ b̵]. I doubt that any of these are phonemic per se. The two bilabials occur in only one word each, both before the flap /ɾ/ (#2 and 8). So they are in complementary distribution with [w] and can thus be analyzed as allophones of it, as in Yine. The coronal [d] likewise appears in only one word (#6 [hʊndaʔ] ‘water’), following an [n]. This sequence ([nd]) could therefore possibly be a single complex unit – either a prenasalized stop or a postoralized nasal. Another option is to consider [d] an allophone of underlying /t/. In this case we would appeal to a process of postnasal voicing assimilation (t → d / n __), which is cross-linguistically common and aerodynamically natural (Pater 1999). However, in word #13 we observe the voiceless [č] after a nasal: [páŋčɪɾa] ‘house’. This would force us to stipulate that the rule applies only to pure stops, not affricates, if we hope to pursue this explanation. It is also conceivable a priori that this [d] could be an allophone of /ɾ/ or /l/. This would entail a process of fortition, conceivably motivated by the Syllable Contact Law (e.g., /nɾ/ → [nd]; Murray and Vennemann 1983, Seo 2011). However, it is not certain whether there is a syllable break between the [n] and the [d] in this word; see §5.2.3. Finally, the velar stop [ɡ] is also limited to just one occurrence (#8 [yɔgli-ɓá] ‘(it is) a species of tree (cetico)’), right before /l/. Consequently, it is possibly an assimilated allophone of /k/. The corresponding root of this word in Yine has a phonemic /k/ here, confirming this line of analysis. So we might be motivated to posit another tentative voicing assimilation rule for Mashco Piro such as the following: k → g / __ 1. However, this appears to be falsified by the contrastive word [kočíklo] (#3, ‘species of palm tree (yarina)’). Furthermore, there are several instances of the phonetic sequence [tl] as well. Consequently, more data are clearly needed in order to know what to do with the segment [ɡ] in #8. At any rate, I note that the phonemic inventory of Yine has no voiced obstruents. This fact partially supports the speculations posited in this paragraph, pointing to the same conclusion for Mashco Piro.

Among the three phonetic nasals in Table 1 ([m n ŋ]), the bilabial [m] appears only in item #1, [há:mɪnɪʔ] ‘tree’. Nevertheless, it seems to contrast here with [n], which is more frequent in this wordlist. On the other hand, the alveopalatal [n] also occurs only once, in #13, [páŋčɪɾa] ‘house’. In this case, however, it can be analyzed as an allophone of /n/ resulting from place assimilation to the following /č/. In other words, the data at this point suggest that Mashco
Piro has just two nasal phonemes, /m/ and /n/. This conclusion also matches the Yine inventory on this point.

Finally, the four oral sonorants [ɾ l w y] all appear to contrast with each other, and with other consonants as well. The palatal glide [y] occurs only once, in #8: [yòɡlï-bfá] ‘(it is) a species of tree (cetico)’. Here it precedes [o]. The rounded glide [w] is more frequent in this corpus and is followed by most of the other vowels except [o]. Nevertheless, the Yine counterpart of #8 has the phoneme /y/ in this position (yoklu). Furthermore, in the Piro dictionary both glides /w y/ contrast before most of the phonemic vowels of Yine. Therefore, the apparent complementary distribution between [w] and [y] in this small set of Mashco Piro data is most likely accidental and hence nonrepresentative of the language as a whole. The two liquids [l] and [ɾ] are free variants of each other in #4 ([kòčkawàləwále]~[kòčkawàɾəwále] ‘yard grass; fodder crop’). Perhaps this is driven by dissimilation with respect to the /l/ later in that word. Elsewhere they contrast.

In summary, the consonantal system of Mashco Piro phonemes is probably identical to that of Yine, as far as these data indicate. One minor, subphonemic detail is that the voiceless glottal fricative /h/ in Mashco Piro is oral rather than nasal. The only other difference is that Yine is known to have two additional voiceless affricates: alveolar /ʦ/ and palatal /tx̯/. The lack of these segments in Mashco Piro, however, is most likely due to the limited wordlist. I assume that with a more robust corpus these two additional phonemes might also eventually be discovered.

5.2.2 Vowels

I now consider the vowel system of Mashco Piro. Once again I will conclude that it may be identical to that of Yine, at least at the phonemic level.

Table 3: Inventory of phonetic vowels

<table>
<thead>
<tr>
<th></th>
<th>front unrounded</th>
<th>central unrounded</th>
<th>back unrounded</th>
<th>rounded</th>
</tr>
</thead>
<tbody>
<tr>
<td>high</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>tense or close</td>
<td>i</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>lax or open</td>
<td>i</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>mid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>tense or close</td>
<td>e</td>
<td>o</td>
<td></td>
<td>q</td>
</tr>
<tr>
<td>lax or open</td>
<td>e:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>low</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a</td>
<td>a:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The high front lax vowel [i] occurs phonetically in five forms (#13, 15, 20, 22, and 24). Since it always precedes the flap /ɾ/, we can posit that it is an allophone of /i/:

\[ \text{(1) Vowel Laxing } i \rightarrow i / \_ \_ \_ ſ \]
This type of vowel laxing before a flap is common cross-linguistically. For example, another Arawakan language which exhibits a similar process is Iñapari (inp: Parker 1999). This is presumably the reason why the mid front vowel is also pronounced as lax before /ř/ in the only word where it is observed, #16: [ké:řa] ‘bow’. In this latter case, however, I transcribed the [ɛ:] as long. Since Yine has a length contrast for all five of its vowel phonemes, it is likely that Mashco Piro does as well. Naturally, of course, this type of reasoning by analogy is only valid to the degree that all other relevant facts are equal. Furthermore, this preliminary argument implicitly always awaits confirmation with further data. The only other phonetically long vowel in my data set is the low central [a:]. It occurs twice (words #1 and 20), in apparent contrast with its short counterpart. The reduced mid central vowel [a] is probably not phonemic. Rather, in item #4 it is an allophone of /e/ in what may be word-final position. In all other cases [a] is a nonsyllabic excrescent vocoid which serves to ameliorate the transition between two consonants (words #10-12). In Yine, [a] exhibits this same low-level function (Matteson and Pike 1958). The high back vowel segment [i] is unrounded. It is probably somewhat lax or open, as in Yine (Matteson 1965). This may in fact be an areal feature of Amazonian languages (Parker 2001, Souza and Parker 2012). Finally, the only round vowel in Mashco Piro is /o/. In word #6 it is phonetically nasalized before /n/: [hōndaʔ] ‘water’. Since Yine does not have contrastive vowel nasalization, this can be assumed for now to be a predictable (allophonic) feature:

(2) Vowel Nasalization  o  →  q  /  ___  n

Additional phonetically transcribed data will probably show that this happens with at least some of the other vowel phonemes of Mashco Piro as well. However, in word #6 this nasalized [q] follows /h/; we do not know at this point whether this extra stipulation is necessarily crucial in the environment that triggers rule (3). In summary, based on the current set of Mashco Piro data, it appears that this language has the same inventory of five vowel phonemes as Yine does: /i e a o ï/.

5.2.3 The syllable

Among the phonetic forms occurring in the wordlist in Table 1, the following syllable types appear to be fairly well established. Nevertheless, it would be preferable to have more canonical exemplars of at least some of these:

(3) CV  [pá.totla]  #9  ‘sun’
      [kó.šo.liʔ]  #21  ‘fish species (mojarra)’
      [ké:.řa]  #16  ‘bow’

V  [i.wátla]  #19  ‘type of bamboo (paca)’
   [a.há:hiŋa]  #20  ‘stick’

CV:  [há:.míŋiʔ]  #1  ‘tree’
With respect to the last syllable type in the list above ([CV?]), recall from §5.2.1 that this is observed only in word-final position. Furthermore, the glottal stop does not occur elsewhere in the data, so it is probably not phonemic. In addition, no other Mashco Piro forms end with any other consonants. Consequently, this [ʔ] likely does not contribute to syllable weight as a true moraic coda segment. Therefore, although the contrastive vowel length seems to indicate that Mashco Piro does permit bimoraic rhymes, the lack of compelling evidence for syllable-final phonemic consonants suggests at the moment that the canonical template we should posit for Mashco Piro does not allow a true coda position.

First, though, it behooves us to consider how Yine syllable structure has been traditionally dealt with. One undeniable fact is that Yine does not exhibit any canonical word-final consonants, either. Therefore, that language is typically analyzed as having an obligatorily open maximal syllable template. Consequently, all consonant clusters in Yine are parsed as tautosyllabic onsets, ex hypothesi, by Matteson (1965) as well as by Urquía Sebastián and Marlett (2008). This is true even of words such as /pánči/ ‘house’ in Yine (cell E13 of Table 1), which these same scholars would syllabify as [pa.nči], despite the resulting violation of the Sonority Sequencing Principle. Mashco Piro may be amenable to the same type of analysis (maximize the onset everywhere). If it were not for this precedent, however, I would very naturally prefer to parse the corresponding Mashco Piro word [páñčɨɾa] (#13) as [páñ.čɨ.ɾa], with an initial closed syllable. The lack of codas in Yine is supported by the fact that clusters of up to three consonants occur in word-initial position, indicating that word-internal complex onsets can also be licensed. In Mashco Piro we have only one example of an initial bisegmental onset, but it is a fairly strong (unambiguous) case: [ksáːɾa] ‘sand’ (#12). All of these facts, then, exert a modicum of pressure on us to analyze Mashco Piro with the same general syllable structure as Yine. That is, true codas are not allowed, and onset clusters freely occur. This suggests that intervocalic sequences of the type /...VCCV.../ in Mashco Piro might always be syllabified as [V.CCV], following Yine’s lead. The attested bisegmental consonant clusters in word-internal (intervocalic) position in Mashco Piro consist of the following sequences phonetically:

(4) [bɾ] (#2)  
[kl] (#3)  
[čk] (#4)  
[tl] (#5, 9, 17, 19)  
[nd] (#6)  
[gl] (#8)  
[bɾ] (#8)
[čɨʔ] (#10)
[tɬɭ] (#12, 22)
[ŋɛ] (#13)
[ʃɨ] (#15)

In addition, one form (and only one) has a phonetic sequence of three consonants in non-initial position: [sótlɨʔa] (#11, ‘rock, stone’). However, this word plausibly consists of /sotlɨ-ʔa/ underlyingly. Two facts suggest this analysis: (1) the corresponding Yine form is sotlu (cell E11), and (2) /-ʔa/ is probably a suffix (see §5.1). In other words, if this root can occur by itself in isolation, it must have the phonemic shape /CVCCV/.

To summarize this section thus far, it appears that the maximal syllable template motivated by the Mashco Piro data currently available is possibly [CCV:], at least for underlying representations. In other words, up to two consonants can co-occur in the onset, with either a short or a long vowel in the nucleus. This is identical to what has been posited for Yine (Matteson 1965, Urquía Sebastián and Marlett 2008).

5.2.4 Stress

In Yine, primary stress is uncontroversially assigned to the prosodic word from right-to-left, regularly falling on the penultimate syllable (Matteson 1965, Parker 1989, Urquía Sebastián and Marlett 2008). This also appears to be the default tendency in the list of Mashco Piro data in Table 1. Of 24 individual words, 14 exhibit penultimate primary stress. However, one half of these 14 examples (viz., 7) contain only two syllables. Therefore, we should examine more carefully the items containing three syllables or more. When we do so, we observe the following distribution:

(5) penultimate stress        antepenultimate stress
[kočɪklo] (#3)               [háːминʔ] (#1)
[kočkawɔwɔlɛ] (#4)           [pátnɔlɔ] (#9)
[tenɔlɔ] (#5)                [páñčɪɾa] (#13)
[kɔliɔla] (#18)              [hɔtɛn] (#14)
[iwátlɔ] (#19)               [káʃɛɾa] (#15)
[čtɛɾra] (#22)               [tɛnɔtɔlɔ] (#17)
[w邶ɪɾɪʃa] (#24)             [ahá:hɪɾa] (#20)
[koʃɔliʔ] (#21)              [wɔninʃa] (#23)

In these longer words, antepenultimate stress outnumbers penultimate stress by 9 tokens to 7. However, this is complicated by two potentially confounding factors. First, two of the forms with antepenultimate stress have a long vowel in that position (#1 [háːминʔ] ‘tree’ and 20
Second, four of these forms end with the apparent suffix /-řa/ (#13, 15, 20, and 23; cf. §5.1). Another generalization we can make is that all three of the words containing four syllables or more have penultimate stress (#4, 18, and 24). One more quirk to deal with is #8, [yòglï-břá] ‘(it is) a species of tree (cetico)’, with primary stress on the final syllable. I discussed this previously as a tentative suffix (§5.1); another possibility is that the morpheme [břa] is actually a verb. I leave this as residue.

Another option to consider is sonority-driven stress assignment, as popularized by Kenstowicz (1997) and de Lacy (2006, 2007). For the sake of discussion, let us posit a tentative sonority scale for Mashco Piro vowels, categorized by height:

(6)  a > e, o > i, ĭ

In other words, the lower a vowel is in terms of tongue and jaw position in the oral cavity, the higher its inherent relative sonority. Now we can specify a simple algorithm sensitive to a two-syllable stress window:

(7)  Among the penultimate syllable and the antepenultimate syllable of each prosodic word, place the primary stress on that syllable containing the higher sonority nucleus (vowel).

The statement in (7) almost works for all cases. The lone problematic exception is #3, [kočíklo] ‘species of palm tree (yarina)’. Furthermore, when the two relevant syllables in question tie in sonority in any given hypothetical word, one of them should presumably always be preferred as the default winner. Our dilemma now is that we observe [tenótlæ] with penultimate stress vs. [kóšoliʔ] and [wínřa] with antepenultimate stress, although the latter case might be explained as consisting of two morphemes.

Before concluding this section, a comment about secondary stress should be made. There are four items long enough to exhibit this phenomenon: #4, 8, 18, and 24. In all of these forms the secondary stress falls on the second syllable preceding another stress. Word #4 in fact shows that secondary stress can iterate ([kòčkawàləwàle] ‘yard grass; fodder crop’). However, as discussed in §5.1, this form probably contains two morphemes, and may even consist of two distinct words.

To summarize this section, in this little exercise I have speculated about some possible ways to predict where the primary stress will fall in any particular Mashco Piro word. Given the limited data, no generalization is robust enough to be statistically reliable at this point. Once again, then, we have some possible avenues of investigation waiting to be confirmed or disconfirmed when a larger corpus of individual words becomes available.

5.2.5 Syncope

As noted in §2, an interesting aspect of Yine morphophonemics is a process of vowel deletion between consonants. Three of the data forms in Table 1 appear to undergo this phenomenon: #10-12. As previewed in §5.2.3, when the putative suffix /-řa/ is added to a Mashco Piro word, the preceding vowel (at the end of the root) sometimes drops out.
underlying quality of this segment can be predicted or inferred by looking at the Yine equivalent. A better and more direct way to determine these phonemic vowels of course would be to elicit these roots in isolation. Since many of these Mashco Piro nouns do in fact surface without the syllable /-řa/, presumably this is a possible option for all of them. The Yine equivalents of #10-12 all end with a high vowel (either /i/ or /i/), suggesting that perhaps the lower sonority nuclei are more prone to elision. Nevertheless, other roots with final high vowels preserve these when a suffix is attached (#8, 13, 15, and 20). One might quibble that in several of these latter cases there is a consonant cluster right before the root-final vowel that could block syncope. However, the same configuration is present in #11, but syncope still applies, leading to a sequence of three consonants in a row in the phonetic form: (hypothetical) /sotl-řa/ → [sotlřa] ‘rock, stone’.

6. Conclusion

In this brief sketch of Mashco Piro phonology I have demonstrated what can be done with a list of just 24 pieces of data. I have also identified several inherent problems and limitations in working with a corpus this small. For example, we cannot be completely sure about some of the glosses; this in turn makes it difficult to identify potential morpheme breaks. Another area of uncertainty involves the inventory of contrastive segments, syllable types, and consonant clusters — in a sample this small several of these elements are likely to be missing, especially if they are infrequent in the language overall. Nevertheless, while there are obviously still gigantic gaps in our knowledge about this language, this preliminary wordlist allows us to make an educated guess about what the sound system of the language will eventually look like, pending confirmation with more data. For the moment we have at least been able to establish that the phonemic system and segmental inventories of Mashco Piro are probably identical to those of Yine, modulo some relatively minor allophonic distinctions. The syllable structures of the two languages are also similar in many respects, although Mashco Piro exhibits a word-final [ʔ] in phonetic forms that has no counterpart in Yine. Finally, it appears that the greatest potential difference between the two languages lies in their prosodic systems, i.e. the metrical parameters for assigning stress. Specifically, primary stress is evidently not as fixed in Mashco Piro as it is in Yine, even though one would hope that it may ultimately prove to be predictable. This is one important aspect of Mashco Piro phonology, among others, that clearly cannot be conclusively resolved until more data become available. When they do, I hope that they (and the linguistic world in general) will be merciful to me:

“Years from now, when you talk about this — and you will — be kind.”
(Deborah Kerr starring as Laura Reynolds in “Tea and Sympathy” (Anderson 1953/1956)).

Acknowledgments

Thanks to Brenda Boerger, José Limonchi, Josiah Walters, and Mary Ruth Wise for helpful comments and suggestions on an earlier version of this paper.
References


