

**A Report on Three Arauan Speech Varieties (Jamamadi,
Jarawara, and Banawá) of the Amazon**

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Abstract

This report looks at three closely related speech varieties spoken in southern Amazonas state in Brazil: Jamamadi [jaa] (population 250), Jarawara [jap] (population 165), and Banawá [bnh] (population 80). Generally, their level of involvement in the Brazilian economy and society is quite low. Many are literate in their own indigenous language, but few speak, let alone read and write, Portuguese. Of the three, the Jarawara speak Portuguese the best.

One of the goals of this survey was to see if Jarawara and Banawá could benefit from additional Jamamadi literature. The results seemed to indicate that the Jarawara could do so more readily than the Banawá.

1. Introduction and Purpose

The authors began the survey on March 6, 2003, with a meeting that included three translation teams. The teams had been working in these three speech varieties belonging to the Arauan language family since 1986. The three teams are Alan and Lucilia Vogel (Jarawara), Ernie and Barb Buller (Banawá) and Jon and Rosa Campbell (Jamamadi). Jon's parents, Bob and Barb Campbell, began working with the Jamamadi in 1963, and still play a strong role in the program. On March 7, the survey team met with the translators individually. From the 11th to the 14th, we were in the villages of the Jamamadi, Jarawara, and Banawá, where we tested intelligibility between these speech varieties. The methods used included recorded text tests, cloze tests, and questionnaires.

2. Geographic Location of the Jamamadi, Jarawara, and Banawá

The area looked at in this report is in western Brazil, between two rivers, the Purus and the Juruá, that flow north into the Amazon. The three Arauan tribes in question have historically lived where they continue to live today, on the high ground between the two rivers in Amazonas State.

The Jamamadi and Jarawara villages discussed here are in the Jarawara/Jamamadi/Kanamanti Indigenous Territory. The nearest town is Labrea, population 17,000, on the Purus River towards the east. The Jarawara live closest to Labrea.

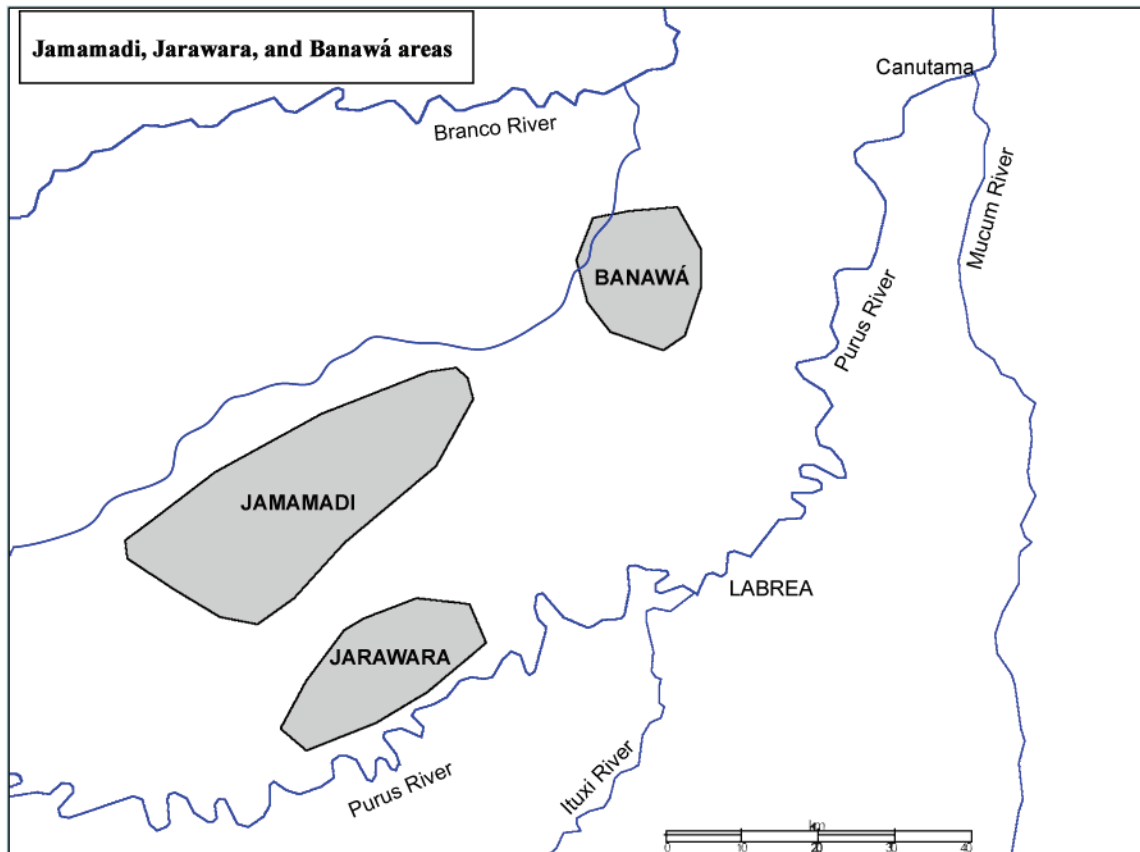
The single Banawá village, Kitiya, is in the Banawá/Rio Piranha Indigenous Territory. It is 100 kilometres north of the Jamamadi and Jarawara area, and is equidistant from the Purus River towns of Canutana to the north and Labrea to the south. Of the three, the Jarawara have the easiest time getting to town.

There are people who call themselves Jamamadi living on four other reserves: Camadeni (200 kilometres west), Inauini/Teuini (another 200 kilometres west), Igarape Capana (200 kilometres south of Inauini/Teuini), and Caititu (on the western side of the Purus). Of these four reserves, Stefan Deinst suggests that only the people at Caititu speak Jamamadi. The others share their reserves and language with the Culina and Deni and are

out of the scope of this survey. We visited only the villages of Agua Branca (Jarawara), São Francisco (Jamamadi) and Kitiya (Banawa). The reason we chose these three villages was because they already had SIL linguists working on location.



Map 1. General location of the three groups in Brazil.



Map 2. Specific location of the three groups with reference to the Purus River and the town of Labrea.

3. Previous Scholarship

According to Schröder and Costa Junior (n.d.:246), early ethnographic sources on the Jamamadi include reports by the explorer William Chandless in the mid 1800s, the ethnologist Paul Ehrenreich and Joseph Steere in the beginning of the twentieth century, and in 1985 by Gunter Kroemer of the Indigenist Missionary Council (CIMI). In 1994, Lucia Helena Vitalli Rangel wrote an ethnographic monograph on the Jamamadi as a Ph.D. dissertation. Between 1977 and 1993, SIL members Barbara and Robert Campbell published several articles about the Jamamadi language (<http://www.socioambiental.org/pib/english/source/ji.shtm>). SIL member Al Vogel has written a thesis and dissertation on Jarawara (Vogel 1989, 2003).

4. History and Former Economy

Jamamadi

The area in which the Jamamadi now live has a long history of human habitation, as evidenced by the stone tools that they find in the region from time to time. As rocks are

extremely rare in the area, the Jamamadi explanation is that they are left behind by lightning (Buller 2003, personal communication).

The first mention of the Jamamadi in a historical record was made in 1845 (Schröder 2002c), by the military officer João Henrique Matos, who makes a reference to their many *malocas* (community houses). At that time, some Jamamadi were already working for the merchant Manoel Urbano da Encarnação, who controlled the exploitation of jungle spices and herbs on the Middle Purus. Manoel Urbano da Encarnação found two more *malocas* during his 1861 expedition. He described the Jamamadi as being numerous and quite inclined towards hunting and fieldwork. In 1866, the British traveler, William Chandless, located the Jamamadi on the Purus River (Schröder 2002c). He noted they avoided the river, and that they did not have canoes. In 1872, the rubber baron Labre, founder of the city of Labrea, described them as agriculturalists with no commerce with other people, timid and fleeing from contact with the non-indigenous people (Schröder 2002c).

In 1877, the Franciscans attempted unsuccessfully to establish a mission for the Jamamadi (Schröder 2002c).

In 1904, Euclides da Cunha encountered a camp of Peruvian rubber gatherers who were holding 60 Jamamadi prisoners. In the rubber boom years that followed, the Jamamadi were decimated by their service to the rubber barons (Schröder 2002c). It is a possibility that they abandoned agriculture to become highly nomadic during this time of crisis. This would explain Jon Campbell's claim that the Jamamadi only became farmers relatively recently.

In the middle of the twentieth century, the Jamamadi suffered a series of epidemics that reduced their numbers to around 80 people, with very few children. In 1963, Robert and Barbara Campbell arrived in the area. Thanks to their care and medical help, the Jamamadi population in the area has rebounded to around 250 people (Schröder 2002c).

Jarawara

Much of the Jarawara history is shared with the Jamamadi. Like the Jamamadi, they have always lived in the high ground between the Jurua and Purus rivers.

Schröder (2002g) mentions the Jarawara center being an ancient village called Mokovi. From there, the Jarawara moved nearer to the Purus River to be able to trade more easily with the merchants. This seems to harmonize with SIL member Al Vogel's observation that the Jarawara used to grow a greater variety of food than they do now. Because of trying to imitate the *ribeirinhos* (Portuguese speaking river dwellers) their diet has become impoverished.

Banawá

Ernest Buller (2003, personal communication) explains that 100 years ago, or perhaps even earlier, the Banawá left the Jamamadi area and settled along the Purus, apparently making fairly permanent settlements. About 60 years ago, the Banawá had to flee from this location to escape annihilation by Brazilians. This was the result of an incident that began when two young Banawá women asked their suitors for some trade goods. To get them, the young Banawá men killed a river trader and his wife and took both of their children back to the village. One child cried too much, so she was killed on the way home. The Brazilian reprisals for this act drove the Banawá deep into the previously uninhabited area where they now live.

The Banawá were the most nomadic of the three groups. Originally, they didn't plant fields, but just gathered food from the jungle. The chief told us his grandfather was the first Banawá to plant a field, which he learned to do from a Brazilian river trader.

5. Social Factors Relevant to the Sociolinguistic Environment

5.1 Present market economy

The three groups' involvement in the greater Brazilian economy consists mainly of selling handicrafts and copaiba palm oil. Most of the handicrafts are sold via the missionaries. Schröder (2002b) describes the extraction of copaiba oil as "tiring, arduous and time-consuming work, and is hardly worth the effort given that the forms of trade practiced by the river merchants to acquire the oil are scandalous. These merchants generally trade these products for merchandise, since few Jamamadi have concrete ideas about the value of money. Thus, some merchants are able to get profit margins of up to 3,000% or more, according to our calculations." Neither pursuit brings the Indigenous people into much contact with Portuguese speakers. None work in Labrea or any other Brazilian town.

5.2 Population distribution

Jamamadi

Most of the 250 Jamamadi live in the villages of São Francisco, Pauzinho, and Niteroi. There are also many minor villages that are not permanently occupied. There are a couple of men who spend a lot of time in Labrea and other towns, but no Jamamadi actually lives outside their village. Jamamadi almost always marry other Jamamadi, but there are a few who have married Jarawara.

The Jamamadi have annual birth rates of 3.3% (Schröder 2002a), and 60% of the population is under 19 years of age (Jon Campbell 2003, personal communication). The demographic density of the lands of the Jamamadi is from .03 to .1 inhabitants per km² (Schröder 2002b).

Jarawara

All 165 Jarawara live on the reserve, in the villages of Agua Branca, Casa Nova, Saubinha, and various smaller communities. The Jarawara and Jamamadi live on the same reserve, which is contiguous to the Banawá. A few Jarawara are married to Jamamadi.

At 2.8%, birthrates are lower than among the Jamamadi, and only 37% of the population is under 19 years of age. There are between .1 and .2 inhabitants per km² in the Jarawara area (Schröder 2002f).

Banawá

The 80 Banawá live in one village and two remote family settlements. There is not any intermarriage outside the group. Their birthrates and population density are similar to that of the other two tribes.

5.3 Religion

Jamamadi

Although most of the Jamamadi are now Protestant Christians, others still practice their traditional shamanism. There are no bona fide shamans though there are two men who practice shamanism occasionally. One custom that all Jamamadi families practice is the ritual of tobacco snuff (sina). The owner of the house puts a portion of sina on a green leaf and holds it in the palm of his hand, and inhales with a hawk leg bone. It is then passed on to the next person (Schröder 2002c).

A Protestant congregation, with Jamamadi leadership, has existed in the Jamamadi since 1991. In 1999, they built a church building where they meet every night for singing Christian songs in Jamamadi, playing guitar, and reading Scripture portions that they have available in Jamamadi.

Jarawara

There are Protestant congregations in Agua Branca and Casa Nova, established in 1997 and 1998, respectively. The Jarawara also have positive contacts with Catholic workers from Labrea. They are influenced by the spirituality of the Jamamadi church, and almost all adults are baptized. At their religious meetings, both Jamamadi and Jarawara Christian songs are sung, and three Jarawara play the guitar. Shamanism is still practiced, but no new shamans are being trained. Regarding Scripture, they told us they wanted to read the Jamamadi, as well as the Jarawara (“the Jamamadi in our writing”).

Banawá

The Banawá also have a Protestant congregation, although not as vibrant as the other two. They started meeting in 1997, and the following year missionaries erected a church building in the village. The chief stated that he wanted the Bible in Banawá. Most of the people are favourable or indifferent to Christianity. A few are somewhat opposed, but still attend church at times. Although they have not had a shaman for over 20 years, the Banawá continue to maintain various practices associated with traditional beliefs.

5.4 Education

Jamamadi

The Jamamadi have a school in the village of São Francisco that is exclusively in their own language. Most of the adults and older children know how to read. The Jamamadi do not speak enough Portuguese to effectively use the materials they are given by the government. Another school exists in Pauzinho village that is exclusively in Portuguese. In that village a teacher from the outside has come in and she seems to be having moderate success (Jon Campbell 2003, personal communication,).

Jarawara

There are municipal schools in the three main villages, staffed with bilingual Jarawara teachers. Jarawara and Portuguese are used in the schools, and both children and adults attend. The general attitude toward education is extremely positive (Vogel 2003).

Banawá

There is a municipal school in the village staffed by a semi-literate Banawá man. Banawá is the main language of the school, but some things such as numbers are taught in Portuguese. The classes often last for no more than half an hour, and less than half the children show up on any given day. Attendance is entirely up to the children, or up to the teacher to convince them to go. There is not a strongly-felt need for education. The fathers tell the teacher, “That’s your job – they pay you to do that. My work is in the field.” The Banawá are not too interested in reading letters from the Jamamadi, because “They just send letters to us and ask for stuff” (Buller 2003).

6. Intelligibility

6.1 Differences between Jamamadi, Jarawara, and Banawá

In order to determine the best language development strategy for these three groups, we must look at what the tests reveal about their inter-intelligibility. However, it is also very important to find out how different the speakers and translators perceive these speech varieties to be. With this in mind, we used two different methods to look at the differences between Jamamadi, Jarawara, and Banawá. One way was to ask the

translators and the indigenous people what they thought about intelligibility between the three. Another way was to run tests to find out their similarity and level of comprehension. Neither of the two methods is very convincing by itself, but if we look at both together, we are able to get a more accurate picture.

At the group meeting on March 6, the translators agreed that the differences between Jamamadi, Jarawara and Banawá were minimal when pertaining to superficial communication on everyday subjects. They stated that these differences, which included a few words, iterative markers, object markers, word order, and normal sentence length, would not pose a big barrier to comprehension between the three groups. Specifically, the translators felt the Jarawara and Banawá were well acquainted with Jamamadi and could understand it. The three orthographies are in harmony with regard to symbols for phonemes. The differences concern only word division issues. Even though they were minimal, the translators noted that written differences were greater than oral differences. However, one of the translators commented that if the three orthographies were further standardized, the opposite would be true; the written would be easier to understand than the oral.

Jamamadi

The Jamamadi said they understood spoken Jarawara, but not Banawá. They have some difficulty with written Jarawara. When they receive letters written by the Jarawara, they study them together. After studying them, they can more or less read the Jarawara writing as well. Apparently under the impression that the Jarawara are trying to write Jamamadi, one commented, "If they write clearly, some of us understand."

Jarawara

The Jarawara understand both Jamamadi and Banawa. With reference to Jamamadi, one Jarawara said, "It's almost our language, just a little different." We observed Jon Campbell speaking Jamamadi with the Jarawara who gathered around the plane. He explained the topic of conversation was not very deep – just routine greetings and asking about mutual acquaintances. The Jarawara observe that although Jamamadi is the old way of saying things, they are able to read it. The reading of Jamamadi (and Jarawara) letters is usually done in small groups. The Campbells told us that, when they took the Jamamadi Scripture to the Jarawara, the latter could not make heads or tails out of it because it said something completely different.

Though several Jarawara stated Banawá was harder to read, write and understand than Jamamadi, their test scores indicated otherwise. They did better on Banawá than on Jamamadi.

Banawá

Most Banawá men and teenage boys know enough Jamamadi to understand hunting stories and for casual conversation. As in the Jarawara village, we noticed Jon Campbell

conversing with the Banawá who had gathered around him. Ernie Buller explained that most of the differences between Banawá and Jamamadi were like those between British English and American, but some words were as different as Dutch and French. The Banawá seem to understand the Jamamadi letters. We observed them read a couple of letters and tell us about their contents. One Banawá man put it this way, “When we hear (the Jamamadi) talk, we don’t understand what they’re saying, but when we see it written down, we can figure it out.” Another said, “I can read Jamamadi, but I hardly understand a thing.”

Echoing the Jarawara, the Banawá felt Jarawara was more difficult than Jamamadi. One Banawá man summed up the problem this way, “If we had heard them talk, we could have figured out what they were saying – but we never hear the Jarawaras talk.” However, both Jamamadi and Jarawara songs are sung in church.

Wordlists

One of the tools we used to check for differences between Jamamadi, Jarawara, and Banawá was a list of about 200 basic vocabulary words. We counted up the words that were similar and the words that were different. One count was done by the translators themselves and the other was done by Tim Jore, an experienced surveyor. Both counts should be considered liberal counts, because when in doubt, the words were generally considered similar. The counts allowed wide latitude of comparison, were not taken by the same person, and the words were not transcribed phonetically. They were transcribed phonemically, in the orthography each translation team had developed for each variety. However, the translators were all familiar with the languages, so it is unlikely the transcription differences strongly biased the results.

Translator’s wordlist counts:

Jamamadi has 44 words different from Jarawara
Jamamadi has 137 words similar to Jarawara

Jamamadi has 44 words different from Banawá
Jamamadi has 136 words similar to Banawá

Jarawara has 21 words different from Jamamadi
Jarawara has 155 words similar to Jamamadi

Jarawara has 27 words different from Banawá
Jarawara has 156 words similar to Banawá

Banawá has 52 words different from Jamamadi
Banawá has 122 words similar to Jamamadi

Banawá has 60 words different from Jarawara
Banawá has 123 words similar to Jarawara

Each translator took the wordlists from the other two languages and counted the words that were similar and different. Obviously, some translators counted more conservatively than others. After consulting in a group, they concluded that 40–60 words were different between all three varieties. They also posited that 85% of the words are possibly cognates.

Tim Jore's wordlist count

Tim imported the data into a spreadsheet and ran the calculations that way. His conclusion was that each language seems to share 70+% lexical similarity with the other two.

R. M. W. Dixon's wordlist count

The well known field linguist, R. M. W. Dixon, states that Jarawara, Jamamadi, and Banawá have very similar grammars, and are fully intelligible. He maintains that 95% of the words are cognate, which means that 95% of them have identical form between the three dialects (2006, personal communication). Dixon and Aikenvald treat Jarawara, Jamamadi, and Banawá as three speech varieties of the Madi language (1999:294).

Cloze tests

In each indigenous group we visited, we conducted a battery of 3 cloze tests, one for each language. Each cloze test consisted of a similar text with one out of every seven words deleted (<http://olc.spsd.sk.ca/DE/PD/instr/strats/cloze/index.html>). The object is to see how well the subjects can fill in the deleted words. The text chosen was a translation from Acts of the story of the cripple who was healed at the temple. The results of the cloze test were as follows:

Jamamadi

Scored 90% on hometown cloze test

Scored 10% on Jarawara cloze test

Scored 31% on Banawá cloze test

The Jamamadi said the Jarawara test seemed to be talking about a crippled person. They said if we filled in the blanks, they might be able to tell what they were saying.

Jarawara

Scored 90% on hometown cloze test

Scored 50% on Jamamadi cloze test

Scored 85% Banawá cloze test

The Jarawara said they understood Jamamadi better than Banawá, but the cloze test scores indicated the opposite.

Banawá

Scored 85% on hometown cloze test

Scored 20% on Jarawara cloze test

Scored 20% on Jamamadi cloze test

It took a couple of Banawá over an hour to finish the hometown test.

Jamamadi Scripture recorded text test (RTT)

Another test we did only looked at comprehension of the Jamamadi Scripture. In each of the villages, we played a tape of two different portions (representing two different genres) of Jamamadi Scripture and asked ten questions on each passage (Casad 1974). The following were the results:

Jamamadi

John (narrative) 65%

James (hortatory) 78%

Jarawara

John (narrative) 85%

James (hortatory) 50%

Banawá

John (narrative) 60%

James (hortatory) 50%

We received low scores for the narrative portions of the hometown test. Because of limited time we were not able to change the questions on the RTT and retest to obtain higher scores. The low scores were likely the results of those being tested not fully understanding what we were doing. They may have wondered why we were testing their comprehension of their own language. Thus they may have assumed that we were looking for some information other than what was obviously being requested. We tried to ensure that the information sought was clear to those we tested in the other village locations.

Overall results

All of the tests discussed above seem to indicate that the closest are Jarawara and Banawá. They also indicate that Banawá and Jamamadi are the furthest apart.

6.2 Literature development

There have been attempts to have all three translation programs work together. In 1992 there was a workshop with speakers of the three speech varieties and in 2000 there were steps taken to work on a computer adaptation from Jamamadi into the other two.

In all three groups, the local people are not the primary translators. They are mainly involved as assistants. The local people's primary role is in the checking process.

Jamamadi

The Campbell family has been involved in translation and teaching literacy since the late 1960s. Of the New Testament, all but Hebrews, Romans and Revelation is translated (at least in rough draft). Of the Old Testament, the books of Jonah and Genesis have been translated. Most adults and teens can read Jamamadi.

Jarawara

David and Francisca Irving from JOCUM have translated Jonah and are translating the Jesus film. Al Vogel has been instrumental in the translation of the Picture Bible, part of Mark, and part of Acts. As a result of literacy efforts of JOCUM and Lucilia Vogel, today just about everybody between the ages of about 12–30 reads and writes in Jarawara.

Banawá

The Bullers have translated about half of the New Testament and three books of the Old Testament. Five were taught how to read Banawá, and today the number has probably doubled.

7. Social Relations

7.1 Interaction with Portuguese speakers

Jamamadi

About 20 of the Jamamadi (mostly from the village of Pauzinho) interact regularly with Portuguese speaking Brazilians. One man spends a fair amount of time in Labrea, collecting retirement money and relating to government officials. The rest of the Jamamadi hear Portuguese only when government teams come through about three times a year, or with traders who visit perhaps every six months.

Jarawara

The Jarawara have contact with Portuguese speaking Brazilian on the Purus River, in their own villages, and in the town of Labrea. There is a Brazilian woman who is responsible for the government clinic in Casa Nova village. The villages are in close

proximity to the Portuguese speakers on the Purus, who would fish out their rivers and chop down their forests if the Jarawara let them. With some support from the Brazilian government, the Jarawara have begun protecting their lands and resources, but they are often content to let the Brazilians fish as long as they receive a portion of the catch.

Banawá

Banawá men have occasional contact with Portuguese speakers, but Banawá women's contact is much less frequent. All would like better access to the outside.

7.2 Interaction with indigenous people from other locations

Jamamadi

A handful of Jamamadi visit the Banawá village for extended periods several times a year. The rest might see the Banawá every other year for only a day or two, when the Banawá come to visit them. Reciprocal visits with the Jarawara are much more frequent. The Jamamadi told us they enjoyed visiting the others, and felt well received. They often get letters from the Jarawara, but seldom from the Banawá.

Jarawara

The Jarawara have frequent contact with Jamamadi, but very seldom with Banawá. They had positive things to say about both groups.

Banawá

One or two Banawá men may visit the Jamamadi village for a few days every year or so. The Jamamadi who visit the Banawá village for extended periods are an unsavory lot (Buller 2003, personal communication). We were told of the Jamamadi coming onto the Banawá reserve and taking their copaiba palm oil. The Banawá also dislike the Jamamadi because of their reputation for shamanism. For fear of being cursed, they handle the Jamamadi letters they receive gingerly. The Banawá complain that the Jamamadi ask for everything in these letters, not realizing that the Jamamadi are in fact only trying to establish a reciprocal relationship (Buller 2003).

They have much less interaction with the Jarawara, and had nothing negative to say about them. The Banawá sometimes pass through the Jarawara area on their way to Labrea, but no Jarawara has visited the Banawá. Members of the two groups have met each other at workshops in Porto Velho.

8. Portuguese Bilingualism

Jamamadi

Most men know enough Portuguese for trade. The chiefs and middle-aged people (about three individuals each in the villages of São Francisco and Niteroi) speak Portuguese the best. In Pauzinho the number is higher because they have a navigable waterway, a school which functions in Portuguese, and a clinic. One Jamamadi was raised among Brazilians and speaks good Portuguese. Approximately two to four Jamamadi can read Portuguese.

Jarawara

Of the three, the Jarawara speak Portuguese the best, and many are now beginning to read and write it as well. Portuguese is becoming more important because of the clinic, retirement money, and the contact with the town of Labrea that where that money is spent. The village schools use Portuguese part of the time, and Portuguese songs are sung in church services.

Banawá

Most adults and young people know at least enough Portuguese to be able to do business with outsiders. Younger women generally know less than the older women, because 60 years ago they lived closer to Brazilians on the Purus River. In church, they sing some Portuguese, Jamamadi, and Jarawara songs. If a Brazilian is present, they will translate the gist of what is being said into Portuguese. No one is literate in the national language, and they don't appear to be moving toward bilingualism in Portuguese.

9. Language Attitudes

Jamamadi

Jon Campbell states that the Jamamadi value their language strongly and do not appreciate people saying it is the same as Banawá and Jarawara. He says they speak Jarawara to be humorous. Several Jamamadi men told us they like the Jarawara, but not their language. One said, "The Jarawara are one of us, but different."

The Jamamadi value Portuguese as a means to communicate with Brazilians in general and the government in particular. They made statements to us such as, "We do not know Portuguese, but want to know more." "The government thinks we should learn Portuguese so we will not be cheated as easily and be able to use medicine." In a telling letter written to the Banawá, the Jamamadi said, "We do not like the outsiders (Portuguese speakers), but we like you. We like our outsiders (Campbells). We should all just read God's word."

Jarawara

Although the Brazilians living on the river ridicule Jarawara, Al Vogel believes most of the tribe has retained a positive attitude toward their own language. In spite of living close to the Purus River and thus having a lot more pressure to speak Portuguese, they are not afraid to speak Jarawara outside of their village. Like the Jamamadi, they speak the other Indigenous language to be humorous.

Banawá

The Bullers have observed that the Banawá's attitude toward their own language has greatly improved over the years. Today they are no longer ashamed to speak Banawá when outsiders are around. They believe the community wants their children to continue to speak pure Banawá, and not to have their language corrupted by the other two close ones. (This is especially a concern of the parents, as it is 'in vogue' among the young people to imitate the others, and to sing their songs.) One Banawá said, "After a while, we could understand Jamamadi, but it would ruin our language." For the same reason the elders discourage the young people from marrying with the other two groups. Buller has noted that when Banawá are talking to a Jarawara or a Jamamadi, they will try to throw in the Jarawara or Jamamadi words they know. However, if there is a Jarawara or a Jamamadi present among a group of Banawá, the conversation is in pure Banawá. We heard Ernest Buller use some Jamamadi words for comic effect. These attitudes would seem to indicate the Banawá have a clear awareness of what is not their language, as well as some disdain for Jamamadi and Jarawara. These feelings may be fueled by their resentment toward the Jamamadi who take copaiba oil from Banawá land.

Most adult Banawá feel the need to know how to speak at least transactional Portuguese. Certain ones, among them the schoolteachers, are becoming interested in learning more Portuguese. Most parents, however, are making no effort to teach it to their children. (A clear exception to this would be one couple and six other individuals who are married to Brazilians, who live outside the Banawá village and culture, and who are out of the scope of this survey.)

10. Language Vitality

Jamamadi

Jamamadi is the only language spoken at home and at work. The nightly church services are exclusively in Jamamadi, with a Portuguese song sung maybe once a month. They seized the opportunity of our trip to write a couple of Jamamadi letters to the Banawá.

Jarawara

In the villages, Jarawara is spoken exclusively, but both Portuguese and Jarawara are spoken in town.

Of the three groups, the Jarawara stood out as being the ones who showed the most enthusiasm for reading and writing in their language. We were told that they frequently send letters to the other Jarawara and Jamamadi villages. The letters, which sometimes tell secrets, are usually read in small groups. Although we did witness them writing letters to the Jamamadi, this domain of literacy may be in danger of fading. The Jarawara were pleased to tell us, “We do not send letters to the Jamamadi anymore because we have a radio now and we can send messages that way.”

Al Vogel pointed out that portions of the Jarawara language and culture are beginning to decay. For example, Jarawara has over 600 words for plants, many of which were edible or medicinal. In an attempt to imitate the outsiders, they are cultivating fewer varieties of plants. Because of modern medicine, they are using their jungle remedies less and less. Since they no longer use these products of the rain forest, the words for these plants are being lost.

Banawá

Banawá is spoken at home and work. Church is held in Banawá but they sometimes sing in Jamamadi, Jarawara, and Portuguese. If there are Brazilians present, someone will explain from time to time what is being said. Boys and girls write notes to each other in Banawá.

11. Anthropological Observations

Jamamadi

In the past, the Jamamadi lived in conical-shaped *malocas*. According to Steere (in Schröder 2002d), they were huge—up to 40 meters long and 22 meters high—and were subdivided into up to 25 family compartments. Today, families live in individual *tapiris* (grass houses built on stilts).

Before contact, the men used only a cord to tie up the penis, at times covered by various strings hung from the cord; and the women wore cotton aprons (Schroder 2003). Today the men dress similar to other Brazilians and the women wear long dresses that look like Mennonite clothing.

The Jamamadi had a large number of forest animals in captivity, including tapir, deer, and monkeys.

Their puberty festivals involved beating the young woman into unconsciousness. This custom has been modified lately, likely due to the influence of Christianity.

Jon Campbell told us that the Jamamadi did not plant fields in the old days, but survived by hunting and gathering.

Jarawara

The Jarawara's culture is very similar to the Jamamadi's. Some anthropologists, including Gunter Kroemer, of CIMI in Labrea, classify them as a Jamamadi subgroup.

The Jarawara's traditional houses were *malocas* as well, but their modern ones are *tapiris* on stilts. Vogel explained that neighboring Brazilians, who build their homes on stilts because they live on the flood plain, told the Jarawara they would not get sick if they built theirs the same way.

The Jarawara's dress was indistinguishable from that of modern Brazilians. Even their hairstyles and hair coloring were in style.

Shortly before our arrival, there had been a puberty festival in the village. Largely due to the influence of the Jamamadi, instead of beating the initiate unconscious, they gave her a token whipping with some leafy branches.

Banawá

The Banawá's houses are similar to the other two groups, and reflect influence from the outside. The chief, who is around 50 years old, told us that when he was a boy they lived on the ground.

The Banawá men dress like traditional rural Brazilians. The women have been imitating the way the Brazilian health worker dresses, and they all sport colorful knee-length skirts.

Chief Bido told us the Banawá originally did not have fields. Bido said it was his grandfather that first acquired plants from the Brazilians.

Many of the young men were absent during our visit. We were told they were in the forest drinking cachaça liquor they had bought from the traders.

12. Conclusions

The Jamamadi, Jarawara, and Banawá speak very similar speech varieties. However, there is little sense of community between them.

We observed that both the Jarawara and the Banawá have a clear awareness of what is and what is not their language. Thus at present, it appears they would not use Jamamadi literature effectively. This is partly because the three translation programs have not worked together very closely. The translators have told us that the written differences were greater than oral differences, but that if the three orthographies were standardized, the opposite would be true; the written would be easier to understand than the oral. Due to time and personnel constraints, it will be very difficult to continue separate translation programs for the Jamamadi, Jarawara, and Banawá.

Appendix A: Wordlists

(Loan words are from Portuguese)

Parenthetic annotations are retained as provided by the data sources.

Word	Jamamadi	Jarawara	Banawá
body	ai abano	e abono	abono (M) aboni (F)
head	ai tati	e tati	tati
hair	ai tati kone (hair of the head)	e tati kone (head hair)	kone
face	ai noko / (fem) noki	e noko	noko (M) noki (F)
eye	ai noko bodi	e noko korone	noko korone (M) noki kori
ear	ai narabo / (fem) narabi	e narabo	warabo (M) warabi (F)
nose	ai widi	e witi	widi
mouth	ai inodi	e inohoti	irodi
teeth	ai ino / (fem) ini	e ino	ino (M) ini (F)
tongue	ai ebene (ai ebete=cheek) / (fem) abene	e ebete	ebete
breast (female)	ai yowari	e yohari	yowari (3rd person)
belly	ai nabadi	e nabati	nabadi
hand	ai yehe / (fem) yahi	e yehe	ye (M) yei (F)
elbow	ai yokori	e yokohori	yokori noko (M) yokori noki (F)
palm (of hand)	ai yehe bako (doro) / (fem) yahi baki	e yee bako	ye bako (M) yei baki (F)
finger	ai yehe bidi / (fem) yahi bide	e yehe (same as hand)	ye (M) yei (F) (note: each finger has a distinctive name)
fingernail	ai yehe ataro / (fem) yahi atori	e yee ataro	ye ataro (M) yei atari (F)
foot	ai teme / (fem) tame	e teme	teme (M) tame (F)
skin	ai mese	e ataro	ataro (M) atari (F)
bone	ai tone	e tone	tone
heart	ai atibonokori	e makawari (?) e ka koraSão (loan)	wakamari
blood	ai-ka ama (ai emene)	e emene	emene (M) ame (F)
urine	ai yokari	e yokari	yokari
feces	ai yoto / (fem) yoti	iyó (unpossessed), e yoto	yoto (M) yoti (F)
village	(unpos) tabora / (mas) tabaro / (fem) tabori	tabora	tabora (freeform) taboro (M) tabori (F)
house	yobe	yobe	yobe

roof	yobe tati	yobe tati	yobe efe (LIT house leaf)
door / doorway	nokobi	nokobi	nokobi
firewood	yifo	yifo	yifoya
broom	basora (loan)	basora (loan)	fasora (loan)
mortar	fowa after name of tree used to make it	fowa	fowa
pestle	?	taro	to-too awa
hammer	matero (loan)	matero (loan)	*unknown*
knife	yima	yimawa	yimowa
axe	bari	bari	bari
rope	mado	yama mati	mado
thread	rina (loan)	kotora (loan), yama mati	rina da-dasi (1st word loan 'linha')
needle	akore (loan)	akoye (loan)	awi (borrowed word – lingua geral)
cloth	bora	makari	makari
ring	aneo (loan)	momoro, aneo (loan)	ye hone
sun	mahi (bahi=thunder)	bahi	mai
moon	abariko	abariko	abariko
sky	neme	neme	neme
star	amowa	amowa	amowa
rain	faha kaki	faha (water)	faa kake (LIT water comes)
water	faha	faha	faa
river	faha webote kayana (large body of flowing water)	faa eebote (large river or other body of water)	faa madi
cloud	neme sabi	neme sabi	neme sabi
lightning	bahi yeбенane	bahi	mai yeбeni
rainbow	maka	maka	maka (LIT snake)
wind	boni / yama hakini	boni	yama wanini (breeze) yama boni (storm wind)
stone	yati	yati	yati
path	hawi	hawi	hawi, hawine (M) hawi (F)
sand	siki	siki (white sand), wami (dirt)	siki
fire	yifo	yifo	yifo
smoke	yifo asawi (close to the Jaruawa word for ash)	yifo hote	yifo asawari
ash	yifo hibakori	yifo hasawiri	yifoya
mud	atabo	atabo	atabo

dust	wami mekori or wami hibakori	wami ime	nami hobokori (dirt dust)
gold	oro (loan)	oro (loan)	*unknown*
tree	awa	awa	awa
leaf	(awa) afe (must be modified-possessed)	wayo afe	efe (M) afe (F)
root	(awa) habo	awa habi	habo (M) habi (F)
thorn	atiwa	atiwa	atine (M) atia (F)
flower	(awa) mowe	awa mowe, yama mowe	bono mowe (M) boni mowe (F)
fruit	awa bono	awa boni	yama hadi, hede (M) hadi (F)
mango	maka	maka (loan)	maka (loan)
banana	sibati	yifari	yifari
wheat	*unknown*	tiriko (loan)	tiriko (loan)
barley	*unknown*	*unknown*	*unknown*
rice	ahoisi (loan)	ahosi (loan)	ahosi (loan)
potato	*must specify type-irish potato batata (loan)*	batata (loan)	hosi
eggplant	*not known*	*unknown*	*unknown*
groundnut	*not known*	*unknown*	*unknown*
chili	*not known*	bimeta (loan)	koriti
tumeric	*not known*	*unknown*	*unknown*
garlic	ayo (loan)	ayo (loan)	*unknown*
onion	sebora (loan)	sibora (loan)	sebora (loan)
cauliflower	*not known*	*unknown*	*unknown*
tomato	tomati (loan)	tomati (loan)	*unknown*
cabbage	*not known*	*unknown*	*unknown*
oil	oiyo kosina (loan)	*unknown*	yama yei
salt	São (loan)	saha	sa (loan)
meat	bani	bani	bani eme, eme (M) ime (F)
fat	(fem) yaha / (mas) yene	yaha	NOUN yene (M) yei (F); ADJ yataka / ime/ime
fish	aba	aba	aba
chicken	arakawa	arakawa	arakowa
egg	(arakawa) hife (must be modified-possessed)	arakawa hifene (chicken's egg)	nefene (M) nafe (F)
cow	bowi	bowi	bowi (loan)
buffalo	*not known*	*unknown*	*unknown*

milk	yohari fahi (breast milk- powdered milk=reti (loan))	bowi yoari fehe (cow's milk)	yowari fene (M) (ie, of a masc species) yowari fai (F)
horn	(bado) narabo ewene / (fem) narabi awe	bani warabo ewene	warabo ewene (M) warabi ewe (F)
tail	(bani) yofari	yifori	yifori
goat	bodi *(loan)*	kabirito (loan)	kabara (loan)
dog	yomahi	yomee	yomai
snake	maka	maka	maka
monkey	*no generic term*	(name for each species) yowi (capuchin sp.)	(many species, no generic name)
mosquito	bita	bita	bita, waaro, (2 species as example)
ant	*no generic term*	mafo (small ants)	(many species, no generic name)
spider	wanakori (doesn't spin webs), hako (spin webs)	hako (non-poisonous) wanakori (poisonous)	hako, wanakori
name	ai oni	e ino	ino (M) ini (F)
man	maki	maki	maki
woman	fana	fana	fana
child	ewe / madehe	inamatewe	enemedede / inemedede / nemedede (speaker variation)
father	badi / abi	e ka abi	Vocative: abi, referent: badi
mother	madi /ami	e ka ami	Vocative: ami, Referent: madi
older brother	ayo / anodi	e ka ayo	Vocative: ayo, Referent: anodi
younger brother	soho / yosori	e ka niso	Vocative: noso, Referent: nosori
older sister	adi / hinakadi	e ka ati	adi
younger sister	asima / hinakasima	e ka asima	asima
son	okadão / bidi	okatão	dão, Referent: bidi
daughter	okoto / bide	okoto	koto, Referent: bide
husband	maki / oka yobote	oko yibote	maki (spouse – karibote)
wife	fadi / oka yibote	oko yibote	fadi
boy	sowi bidi	yetene (teenage boy)	yetene(youth)
girl	bete	atona (teenage girl)	atona(youth)
day	yama teeya	yama wehe, yama waa toni ya	yama wai
night	yama sokiya	yama soki ya	yama soki

noon	mahinokoriseya	bahi nokorise ya	mai ite
evening	mahi taboteya	bahi fawa nise ya	mai fowanisei, mai tokei
yesterday	hibatiya, mahi ohariya	ote (loan)	fai yama towa nadia, (SUFFIX: -kawine)
today	hibayata	owisi (loan) afa yama amake haro (sentence)	fai yama amaniha
tomorrow	mahi owaya	yama waamini ya	yama one
week	semana (loan)	semana (loan)	*unknown*
month	abariko (moons-not exactly equivalent to calendar months)	abariko	*unknown*
year	faha fowi (high waters-not exactly equivalent to calendar years)	faa fowe	*unknown*
old	bote	bote	bote
new	yati	yati	yati
good	amosa	amosa	sibara, tamina
bad	towe (hiyara=news or story)	hiyara	erebo, hiyi owara, hiyara
wet	afa	afa	afi towa
dry	hoko	hoko	hokowa / kasa kana
long	yabo	yabo	yabowa
short	da-dão or yabora	totoro na	kote
hot	hiwa	hiwa	hie kita
cold	siri	siri	siria
right	kanika-ya	kahihina na	nii-ka
left	sayokana-ya	yayaso na	nasoka-ka
near	aiyata-ya	yabora	ai yata
far	akaya	yabo	yabowa
big	webote	ehebote	nafiei (M), nafia (F); badi (M), madi (F)
small	bidi	i-isi na	bidi (M), bide (F)
heavy	kanaha	kanaha	kana
light	kanara	kanahara	kani owara
below	bofe-ya	bofe ya	bofe-ya, bofe himani-ya (below & beyond)
above	neme-ya	neme ya	neme-ya, neme himani-ya (above & beyond)
white	sawa	sawa	sasawana (LIT light colored)
black	soki	sosoki na	sosokina (LIT dark colored)

red	mawa	mamawa na	mamawara, mamawana
one	ohari	ohari	damara, owaria
two	fama	fama	fama
three	fama, oharimaki (or loan)	tere na (loan)	famabisa one owaria (OR loan)
four	*loan*	(loan)	famabisa (OR loan)
five	yehe ohari nima (or loan)	(loan)	e ye kadamara (LIT 1 our hand)
six	*loan*	(loan)	e ye kadamara one owarima (OR loan)
seven	*loan*	(loan)	e ye kadamara e ye one famama (OR loan)
eight	*loan*	(loan)	e ye kadamara e ye one famama, one owarima (OR loan)
nine	*loan*	(loan)	e ye kafama bone atina, e ye damara hasina (OR loan)
ten	yehe kafama nima (or loan)	(loan)	e ye kafama
eleven	*loan*	(loan)	(loan)
twelve	*loan*	(loan)	(loan)
twenty	*loan*	(loan)	(loan)
one hundred	*loan*	(loan)	(loan)
who	ebeniki?	hibake	hikei
what	yamata?	himata	taa
where	ebeni-ya?	hika ya	beni
when	(Amoni) emenihi? (how many + time word)	himata yama ya	beni (mai / abariko) towe-ya / towari
how many	emenihi?	ee na	taa nima
this	haro	haha	hai, he, fe (M); ha, fa (F)
that	haro	fa	hai, he, fe (M); ha, fa (F)
these	haro	haha	hai, he, fe (M); ha, fa (F)
those	haro	fa	hai, he, fe (M); ha, fa (F)
broken	bakatohini	baka tona	bakatona
whole	nafi	itero (loan)	nafi towa saana
few	fa-famata	tamara	dami owara
many	dama	tama	dama

all	nafi	nafi	hinama / nafi
You eat!	titafahi	titafahi	Titafiye!
The dog bites.	yomahi waiteeni	yomee era wai tee amaka	Yomai ere wayine yofinei.
You are hungry.	tifimini	tifimi tike	Tifimia
You drink!	tifihi	yama tifahi	(Faa) fowa tiye!
You are thirsty.	bako hokotini	bakasi tiwa tike	Bakasi tia.
You sleep!	amotinahi	amo tinahi	Amo tiye!
You lie down!	tiwinahi	tiforihi	Tiwina. (hammock) Tifore. (bed, floor, etc)
You sit!	tiwitarihi	tiwitarisahi	Tiwitererisa! / tiwitere!
You give!	daatinahi	yama taa tinahi	(Yama) daa tiye!
You burn the wood!	awa sarikanahi	yifo afo tikanahi	Ha awa tiyifowa. /hiri tiye. (? Not natural)
He died.	Abini / (mas) abane	ahabareka	Abowei. / Aabai.
You kill the bird!	bani bidi tinahabahi	bani biti tinabowahi	Bani bidi tinabowiye.
The bird flies.	bani bidi diwateeni	bani yana tee amaka	Bani bidi yama dāoni tokei.
You walk!	yakatinahi	yaka tinahi	Yaka tiye.
You run!	kanatinahi	kana tinahi	Bede tiye!
You go!	tikahi	tikamahi	Tikamiye!
You come!	tikahi	tikamahi	Tikama
You speak!	tiwati yananahi	tiwati yana nahi	Tiwati saia bone, ona. (LIT: You will speak, I say.)
You listen!	timitahi	yama tikamitahi	Yama tikamita
You look!	tiwahi	kikii tinahi	Kii tina! / tia!
I	owa	ha owa	ha owa / owa (2 forms are referent & DO)
you (sing.)	tiwa	ha tiwa	ha tia / tia
you (formal)	*not exist*	*unknown*	*unknown*
he	hi	he	?
she	hi	he	?
we (inclusive)	ai	ha e	ha ee / ee
we (exclusive)	oda	ha ota	ha oda / oda
you (plural)	de	ha te	ha de / de
they	me	me	me (M), -rawa (F) (suffix)

Appendix B: Cloze Tests

Jamamadi

Mahi towitawitiya Deoso-ra me hiyateenini.

Mahi _____ Bedero, Yowaho me fama

_____ yobe-ya me towakama,

Deoso-ra _____ hiyarabonehe.

Deoso-ka yobe nokobiri-ya maki itarene,

_____ dori-ya hi-hiyanane, yakateerene.

Hini-ya me hiwakameya nokobi amosi-ya

Me hiwatariitarine.

Deoso-ka yobe-ya me _____, me-ra haane,

“Oka yinero-ba de _____,” _____ itariri.

I-di Bedero me tokiyoma _____ me-ra haane.

“Oka _____ de daanahi” Atinemarine.

“Yinero oda kihara, Yeso _____. Tiwa-ra nakitamebonaha.

Jarawara

Yama wee one yaa Betoro yaa _____ mee

famaha mee

towakamehemetemoneke, teboru

yaa, _____ mee haa nabone mati bahi weo

_____ yaa. Soteo fara mee totokoma

kaa _____ mee watohemetemoneke Teoso mee

haa nabone_____.

Betoro yaa Yowão mee famaha mee

_____teboru nokobirine yaa. Haaha teboru

nokobirine

_____ amake haaro, nokobi amosa

tohaaaro. Mee _____ mee kaa owa mee

kakamakehemetemoneke mee _____

hinahaari yaka ni watoraari. Fara

hikawatahemete _____.

Banawá

Maki teme rebo yokane towe owarei _____,

Bedero ya Yowão me fama teme _____ me hikasomai.

Yodeo ka me nafi _____ me hiyari

mowa metemone mai waanakose-ya. _____ wai

one ya, mai waanakose-ya, Bedero _____ Yowão me fama me

yana me _____ metemone, Deoso ka yobe ya

me _____ bone, Deoso me hiyara bone.

Deoso _____ yobe nokobirine dame madi

towei, nokobi _____ ini Nokobi tamina ini

towa metemone. _____ nokobi beri ya maki barei

itari _____ matamona, me one ka

yinero kanike _____ matamona, tefe

bona kanikei bona. Hai _____ wade ya teme rebo

yokana towe _____ matamona, yaka hine

owateerei mona.

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