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# Discovering two almost extinct languages in Bolivia: Jorá and Guarasu

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## ABSTRACT

The work with almost extinct languages demands special strategies, and linguists are confronted with a number of limits in documenting and describing such languages. This paper presents two case studies of almost extinct Bolivian Tupi-Guarani languages, Jorá and Guarasu. The paper focuses on accounts of ethically difficult situations and discusses how the linguists have dealt with these challenges. It then shows our linguistic analysis of very limited datasets we have gathered and how with evidence from phonetics, morphology and lexicon, we can suggest an internal classification for these Tupi-Guarani languages.

**Keywords:** *Tupi-Guarani languages, extinct languages, scarce data, language description, language classification*

**Mots-clés:** *langues tupi-guarani, langues éteintes, données restreintes, linguistique descriptive, classification linguistique*

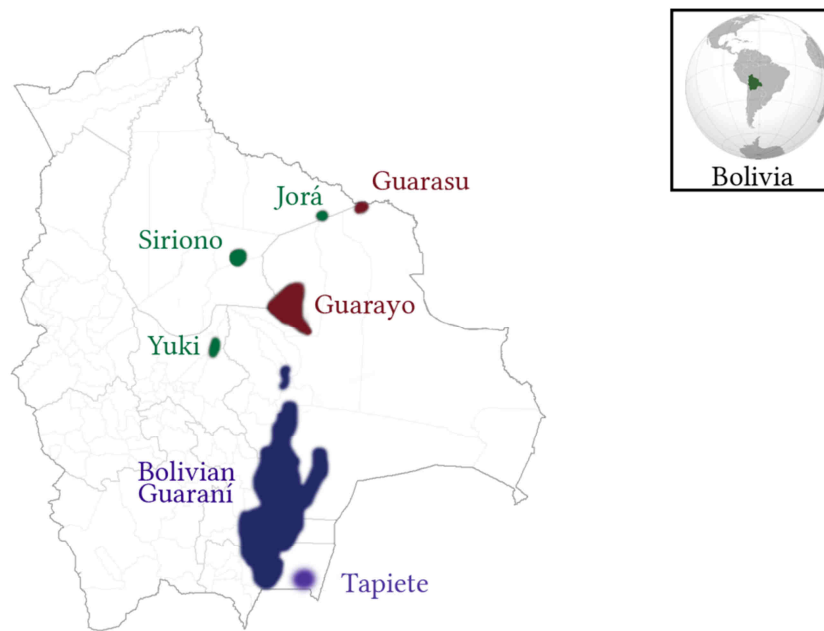
## INTRODUCTION

The language situation in Bolivia is delicate. Even though 36 languages are listed in the renewed constitution (2009, Art. 5),<sup>1</sup> the majority of these languages are endangered (Crevels, 2002; Grinevald, 1998). Some count less than 10 speakers or can be considered to be extinct (Baure, Itonama, Canichana, Guarasu, Tacana etc.). In other cases, there is extensive confusion about language names (Danielsen & Hannß, 2013), so that some languages, such as Paunaka,<sup>2</sup> are not listed, despite clear evidence that they exist, whereas others are named after already extinct languages (Zamuco referring to Ayoreo, Puquina referring to Uchumataqu).

The topic of our paper are two languages: Jorá and Guarasu. While Guarasu is mentioned in the Bolivian constitution, Jorá is not. Both languages belong to the Tupi-Guarani branch of the larger Tupian language family. Since the 18<sup>th</sup> and throughout the 19<sup>th</sup> century, Tupian languages were used as *lingua franca* in Amazonia. But in spite of early classification, the internal relationships of languages within the language families are still under debate, partly due to limited data. For this reason, studies that enrich data on any of the small languages are welcome in comparative linguistics. For Jorá and Guarasu, there has only been very little data available.

**Figure 1:** Bolivian Tupi-Guarani languages.

Map by the authors, based on Rodríguez Bazán & Ayreyu Cuellar, 1998.



Swintha Danielsen has worked with Bolivian languages since 2003, concentrating first on the Arawakan language family. In the course of her studies, she worked on the documentation of Baure, Carmelito, and Joaquiniano (see Dobes archive).<sup>3</sup> These data were compared to those of already extinct Arawakan languages of Bolivia and provided evidence for the internal classification of

<sup>1</sup> [http://www.justicia.gob.bo/index.php/normas/doc\\_download/35-nueva-constitucion-politica-del-estado](http://www.justicia.gob.bo/index.php/normas/doc_download/35-nueva-constitucion-politica-del-estado) (14/05/2013)

<sup>2</sup> <http://elar.soas.ac.uk/deposit/0104> (24/06/2015)

<sup>3</sup> DobeS: Documentation of Endangered Languages, Volkswagen foundation: <https://corpus1.mpi.nl/ds/asv/?0&openpath=node:885634> (24/06/2015)

Bolivian Arawakan, partly based on new analyses of historical data (Danielsen, 2013). While living in the Baure community, Danielsen became aware of the tragic situation of another indigenous group, the Jorá (Tupi-Guarani), who had been victim of genocide in the 1940s. The few descendants of the Jorá live nowadays in the Baure community or in other villages nearby, where they are viewed as “wild Indians/savages”.

Noé Gasparini has been studying Siriono (Tupi-Guarani) since 2011. The language is spoken in the same area as Baure, and a common interest for a comparative project with Danielsen arose in 2012. Since then, the authors have been working together on the data of Jorá, which is said to be closely related to Siriono. In §2, we address the specific situation of the Jorá people.

In the course of this comparative work, Danielsen started a new documentation project,<sup>4</sup> for the study of Guarayo and Guarasu (also known as Pauserna), both Bolivian Tupi-Guarani languages. While it had long been argued that the Guarasu language was extinct, we were told that there were still some last speakers alive. The specific case of the Guarasu people and language is presented in §3.

It is difficult to work with these two languages for two main reasons: one is the scarcity of data and the other the reluctance of the Jorá and Guarasu people to participate in any linguistic project. In §4, we discuss our ethical dilemma as linguists working with the last speakers of two almost extinct languages, this difficulties being the focus of this paper. §5 consider the situation of work with limited resources and present the outcomes of this research briefly, to the extent that details of the comparative analysis and the classification of Tupi-Guarani languages of subgroup 2 will be published elsewhere (Danielsen & Gasparini, *forthcoming*).

## 1. THE JORÁ PEOPLE AND THE LANGUAGE CORPUS

An introductory note shall give an impression of the living conditions of the Jorá people, citing a Baure speaker, in the Baure language, interviewed by Danielsen in Baures (Beni, Bolivia) on September 9, 2009.

Nokotkien, noko to nech ajinevchi. Ti M. noregalachor tech ja chach C., nokichow nopir Ojopi to rashkoewoiy ikarek ti riti' nerikikoe' M. Ojopi, tich woroiy ponshowaperi. Notir grup to nech ver tek epenejen. [...] Noekomorikien, mejowokon to nech woroiynev.

“They [Baure people] caught them [Jorá people] when they were children. This woman, M., they gave to the old man, C. and they named her after his brother Ojopi. This was now her surname; this is why she was now M. Ojopi. This savage woman, she was all alone then; all of her group died. [...] They killed them, they were fierce, these savages.”

### 1.1. *The traumatic history of the Jorá people*

The Jorá are little known. In the 1940s, the Austrian anthropologist Hanke, found out about the situation of the Jorá in Baures in the Bolivian department Beni: they were hunted like animals and suffered a systematic genocide (Hanke, 1959). The Jorá people used to live by a lake near Baures, and the Baure people were afraid of their attacks. When the Jorá were finally captured, they were

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<sup>4</sup> ELDP/HRELP: Endangered Languages Programme; Hans Rausing Endangered Languages Project: <http://elar.soas.ac.uk/deposit/0385>

taken to villages and exposed like in a human zoo. The children and women of the killed Jorá people were adopted by local families. Other survivors were sold as slaves. Hanke brought this to public attention in speeches and in her correspondence (Ocampo Moscoso, 1982).

### **1.2. How to collect data from the surviving Jorá?**

As we were told by Baure informants, one Jorá woman living in Baures was once found as a child with the dead bodies of her parents and taken to Baures. Even though everyone in Baures knows that she belongs to a different ethnic group, to the 'wild Indians', her personal fate and that of her tribe are never addressed. Baure people feel that they were threatened and had the right to kill those Indians. The Jorá descendants do not talk about their memories, even on request. We do not know if they forgot or suppressed them due to the traumatic experiences, or because they were so young. Another Jorá descendent told us that many people have already come to ask the woman about her past, insisting repeatedly on Jorá vocabulary. This happened after the movement of indigenous peoples in Bolivia in the 1990s. We decided to break away from this lurid 'hunt for the last speaker' and did not insist on trying to collect data. We should accept these limitations of the work from an ethical point of view. Instead, we relied on secondary information provided by Baure people who met Jorá captives in the 1940s and 1950s and remembered some of the vocabulary.

### **1.3. Tension in the field with the Guarasu**

The following citation portrays some aspects of the Guarasu people. This citation is taken from a Bolivian publication about the nature reserve, next to which the Guarasu people live together with the Chiquitanos (Muñoz, 2006).

Don José Frey<sup>5</sup> es uno de los últimos descendientes de los guarasug'we. Nació en 1945 y recuerda que su padre andaba 'empeloto', es decir desnudo, cazaba con arco y fleche, tenía 3 mujeres y era el 'capitán' o jefe del grupo. (Muñoz, 2006, p. 18).

"Don José Frey is one of the last descendants of the Guarasu'we. He was born in 1945 and he remembers that his father walked 'empeloto', meaning naked, he hunted with arrow and bow, he had 3 wives and was the 'captain' of the group."

### **1.4. The Guarasu nowadays**

The Guarasu are known in the literature as Pauserna, and in the Bolivian constitution, they are referred to as *Guarasu'we* "Guarasu people", in the plural form. Even though it has already been supposed that the Guarasu language is extinct, e.g. as in Ethnologue publications,<sup>6</sup> we found in a recent publication that there were still a few Guarasu descendants and four speakers (Becerra Vargas, 2006). Riester's *The Guarasug'we: Chronicle of their last days* (1972) already foresaw the disappearance of the ethnic group. The Guarasu now live in the official indigenous lands (TCO)<sup>7</sup> of Bajo Paraguá, which partly lie in the National Park Noel Kempff.

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<sup>5</sup> Note in the original: "José Frey. 2005. Entrevista personal." (Personal interview)

<sup>6</sup> <http://www.ethnologue.com/language/psm> (26/06/2015). The language state is given as dormant, which is explained as a language group in which "no one has more than symbolic proficiency", <http://www.ethnologue.com/cloud/psm>.

<sup>7</sup> TCO = Tierra Comunitaria de Origen, indigenous lands.

## 2. THE EXPERIENCE IN THE FIELD WITH THE GUARASU

Since August 2014, we have tried to find a politically and ethically acceptable way to enter the communities, contact the ethnic group of the Guarasu, present our projects to them and hopefully get consent from the Guarasu representatives to collect data with the remaining speakers. The original project also included employ Guarasu people to be part of the team. However, the situation was complex in winter 2014/2015, partly due to the upcoming municipal elections. The Guarasu are sharing the TCO (*i. e.* regional authority) with other ethnic groups, but lately they have organized themselves and created a separation movement. In a personal meeting in December 2014, one agent of the Guarasu expressed his interest in our projects and wanted to help us enter the field. However, he never managed to do so, and we contacted other local and regional authorities to see how we could find a way to the Guarasu people. We got permissions from the chief of the TCO, who also drove us to the villages, but the Guarasu did not want to receive us. The chief turned out to be their political enemy, and they now saw us as being connected with her. Obviously we had poked in a political anthill here. There was extreme tension. After many discussions, we had to leave the village without any results. The following citation is remembered by Danielsen, having been said by the captain of the Guarasugwe,<sup>8</sup> Sara Durán, on January 23<sup>rd</sup>, 2015, in Porvenir, Santa Cruz, Bolivia.

No me conocen, somos bravos y si yo me enojo, saco mi flecha.. tengo muchas calaberas en mi patio. (Free citation of Sara Durán, 2015)

“You don’t know me, we are wild and when I get angry, I take out my arrow... I have many skulls in my yard.”

There are still speakers of the language, some of them in Brazil, but possibilities to contact them are very small due to the political situation.

### 2.1. Ethical issues

When working with languages and speakers under the described conditions, the ethical aspects of research move into focus. In this section, we consider the different ethical issues we faced to account for our procedure. First of all, it is always difficult to search for the last speakers. As Evans (2001, pp. 250 and 258) depicts it very well, the term 'last speaker' is relative, and even after the death of an alleged 'last speaker', other people may appear who can be more proficient in the language, although more typically they are less proficient.

In the case of the Jorá language, we cannot even be sure that the Jorá descendants can be claimed to be the 'last speakers', because they do not use the language anymore or they used to speak it several decades ago. In the Guarasu case, we learnt from interviews that the people – or at least four persons – are still able to use the language, so that we may want to claim that there are indeed 'last speakers'. We have to be careful with this categorization, as it has been argued by Evans (2001, p. 253).

Under such conditions, the question arises of who might be considered a 'speaker' and who has the right to decide upon this? If we move away from the outsiders' evaluation made by the researcher in linguistics, which generally bases on the production of linguistically complex utterances in the

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<sup>8</sup> *Guarasugwe* is the name the Guarasu people use for a political group.

respective language, we can observe other criteria playing a role from within. For instance, the people may want to identify with the ethnic group in the first place, and the ability to speak - thus including who is considered a 'speaker' of - the language may be part of this identity (compare Evans, 2001, p. 253). In the Jorá case, this cannot be applied, because the Jorá would rather not be considered as descending from another ('savage') group, and they do not have a group identity they could relate to at present.<sup>9</sup> For the Guarasu people, on the other hand, it is important for their identity to also speak the language, especially under the current politicization. "We all speak the language", one Guarasu woman claimed when Danielsen visited them in January 2015. So, who are we (the linguists) to decide they are not all speakers? We have to be careful with categorizing people on the basis of our own criteria only and thus focusing on the few people we may consider as actual speakers.

This leads us to the question of publicity. Do the people want attention to be drawn to their group/language? In fact, this is part of the general considerations of "avoiding harm" when doing research in the field (cf. Crowley, 2007, pp. 25-). The Jorá people definitely do not want the publicity; even though we may feel that the genocide should have official acknowledgement in Bolivian. Working with the Jorá on a regular basis is therefore impossible, because it would draw attention to them against their will. The Guarasu people, on the other hand, definitely want publicity, but they also want to control the information that is published, because, at the present moment, their political and personal life depends on it. Their political group is closely connected with the ethnic group of Guarasu. Their language will be considered as an important marker of identity that will play a role in the official recognition of their political group.

Publicity is not the only ethic problem. It is generally expected of the linguist to follow the official way in order to obtain permissions on all the relevant levels of political institutions for doing research. In the case of the Jorá, this is difficult, if not impossible: there is no higher authority that claims to speak for the Jorá people. They are not listed in the constitution, and the general indigenous organization may be their official representative, but at the same time, they do not seem to be acquainted with the situation or even the existence of the few Jorá. With the Guarasu, the situation is extremely intricate: on the one hand, the Guarasu authorities are not accepted by the highest regional authorities, and on the other the hand, the authority of the TCO (i.e. the regional authority) is not accepted by the Guarasu. Still, it was this chief of the TCO who had the official power to allow (or forbid) us to enter the communities in which we wanted to do our investigation. Our attempt to work with the Guarasu failed due to the lack of our knowledge that the chief had a conflictive relation with the Guarasu. We should not have travelled with her to avoid appearing to have an alliance with her. It was not possible to arrive at any agreement on our collaboration with the Guarasu people in the field.

Both cases, of the Jorá and their genocide history, and of the Guarasu and their unwillingness to work with us, made us feel very uncomfortable when doing linguistic work on the languages. Therefore we decided to question the justifiability of proceeding with our work. Considering the people's views and unwillingness (Grinevald, 1998, p. 155), we decided not to continue our

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<sup>9</sup> Or at least, not a Jorá group as a reference point. We do not claim that the same people are not members of other groups.

fieldwork. Working with the already published data seems fairly acceptable in terms of ethics, and we do not need permission by the respective community for doing so. The dictionary we work on is considered as a product that may be of direct use to the language community, so it is one of the “general ethical responsibilities” addressed by Crowley (2007, p. 33).

### 3. LINGUISTIC ANALYSIS WITH LIMITED RESOURCES

This section shows that the linguistic analysis of our few data of Jorá and Guarasu also led to some relevant results, in spite of the relatively small corpora. When dealing with limited data (§5.1 and §5.2), the linguist has to conclude information on the basis of very little evidence. Phonetics is biased by the writing system used (§5.3), syntactic data are not available and morphological information has to be extracted from elicited phrases (§5.4). Finally, the lexical collection of data from published sources serves the classification of the two languages within the subgroup 2 of Tupi-Guarani (§5.5).

#### 3.1. *The Jorá corpus*

The Jorá corpus consists of 165 items, words and short sentences. The following sources were available: Hanke (1959) collected a wordlist of Jorá vocabulary, evaluated in Loukotka (1963, p. 40). In 1951, the Belgian anthropologist Béghin visited the Jorá and published a word list (Béghin, 1980). Additional secondary data were collected by Danielsen in 2009 and 2011 with the Baure people who met the Jorá or lived with them in the 1940s and 1950s.

In spite of the little information published on Jorá<sup>10</sup> the language appears in the classifications of Tupi-Guarani (e.g. Jensen, 1998, p. 495; Loukotka, 1963, p. 40). Some classifications propose that Jorá is a dialect of the Siriono language (Campbell, 1997, pp. 200-201; Fabre, 2005, p. 137).

#### 3.2. *The Guarasu corpus*

Guarasu has been studied by Snethlage (1935), von Horn (1955), Firestone (1963), and Riester (1972). Riester lived with the Guarasu in the 1960s and collected a vast amount of material and related vocabulary, published in his thesis (Riester, 1972). As he states in his short language sketch (Riester, 1972, p. 55-68), he once planned a language description that was never realized. Our Guarasu corpus now counts 1451 entries compiled in Toolbox. More than 500 words are plant and animal names.

All classifications of Guarasu within Tupi-Guarani are based on the same unanalyzed published data (excluding the majority of items given in Riester, 1972), and no particular word analyses were done. While some linguists have grouped it with locally proximate Tupi-Guarani languages, such as Siriono and Guarayo (Rodrigues, 2007), others have claimed a special position of Guarasu as “a separate language with great time divergence from any of the others” (Firestone, 1963, p. 91).

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<sup>10</sup> Alternative names in the sources are Hora or Yorá.

### 3.3. Phonetics

The data were originally collected by people without training in phonetics and without a special attention to linguistic details. The worst candidates are <z>, <h> and <j>, for which the particularly realized phoneme in the specific languages is not always clear. We will give a few examples:

<z>: /s/, /ts/, /z/, or /ʒ/?

In some sources, the <z> would stand for the affricated variant of /s/, which is [ts], so that other authors may have used the graphemes <s> or <ts> for the sound. We would generally expect that <z> refers to the voiced fricative /z/, which is also sometimes the case in the sources, only that the sound does not seem to be phonemic.

<h>: /h/ or /ʔ/?

While a German or English author would generally use <h> in order to refer to the glottal fricative, Latin-American authors would rather use <j> for the same phoneme. The grapheme <h>, on the other hand, is used for a glottal stop (since the letter is generally not pronounced in Romance languages, such as Spanish, Portuguese, or French).

<j>: /j/, /dʒ/, or /ʒ/?

The <j>, on the other hand, is generally taken for the glide /j/ by German compilers, and the same grapheme represents the affricate /dʒ/ or the fricative /ʒ/ in other sources. In Guarasu (as in Guarayo), the fricatives [j] and [ʒ] are free variants of one single phoneme, which complicates the whole analysis of graphemes.

/i/: <i>, <î>, <j>

For some graphemes, we had to guess what sound they correspond to. Some sounds were not heard properly and noted in a different way by the same author in different words or not at all, like [i] for Jorá, always mentioned as a trait for this people and absent in the corpus. The analysis can only be done by paying attention to the specific conventions in each source and treat them first separately, then standardize the entries on the basis of experience and comparison.

For other reconstructed proto-phonemes, it is impossible to determine their representation in the languages. More complex aspects remain problematic, like the description of nasalization or the existence of final non-released consonants. Phonetic comparison was a first step but only gave insights and evidence for proximity. However, it provided no argument for classification.

### 3.4. Morphology

A morphological comparison is only possible in restricted areas, such as person or possessive markers, often recognized and noted by non-linguist fieldworkers. This gave us another proof of a connection between Jorá, Guarasu and Tupi-Guarani languages. In (1), (2), and (3), there are examples of person marking: possessor on nouns in (1) and subject marking on verbs, set I markers on transitive and active verbs (A, S<sub>a</sub>) (2), and in (3), there is optative marking on verbs (see also Danielsen & Gasparini 2015, p. 494). Our data of Jorá and Guarasu are here compared to Guarayo, a Tupi-Guaraní language closely related to Guarasú (for notation and glossing conventions, see appendices 1 and 2).

	<b>Jorá</b>		<b>Guarasu</b>		<b>Guarayo</b>	
sources:	Hanke 1959		von Horn 1955		Danielsen's own field data, 2015	
(1)	a.	<b>se -nir</b> 1SG.II -sister? 'my sister'	b.	<b>se -retira</b> 1SG.II -sister 'my (younger) sister'	c.	<b>che- -indri</b> 1SG.II -sister 'my (younger) sister (male Ego)'
(2)	a.	<b>a -tji ~tjitja</b> 1SG.I-RDPL~cut 'I cut myself'	b.	<b>a -i -kisi</b> 1SG.I-O-cut 'I cut'	c.	<b>a -yasia ~sia -ra</b> 1SG.I-cut ~RDPL -FUT 'I will cut it in pieces'
(3)	a.	<b>t -a -sa</b> OPT-1SG.I-go 'Let me go.'	b.	<b>do -jo</b> OPT.1PL.I?-go 'Let's go'	c.	<b>t -a -so</b> OPT-1SG-go 'Let me go.'

Many basic lexical morphemes look similar in the related languages of the Tupi-Guarani family, which is, for one, good guidance for the analysis of morphology. Secondly, these lexemes are evidence and proof of the genetic relationship and can be used to determine the distance of the relationships (see section 4.5). Some lexical similarity is displayed by the lexemes in (1) through (3) (for more examples, see Danielsen & Gasparini 2015).

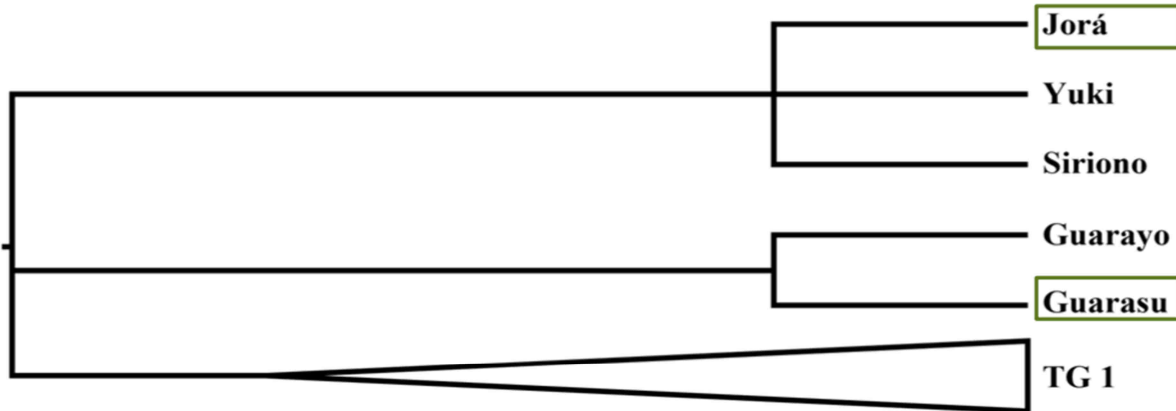
### 3.5. *Lexicon*

For the first time, Jorá lexicon was compiled for systematic comparative purposes. We can state that some basic Tupi-Guarani vocabulary is represented in the 165 entries, but comparison was difficult because of wrong or imprecise translations as well as other problems.

In 2015, we joined an on-going Tupi-Guarani comparison program led by Lev Michael and Natalia Chousou-Polydouri in Berkeley and Lyon. The online database<sup>11</sup> includes lexical data from 34 Tupi-Guarani languages and two languages outside of the family. We included Jorá for the first time in a database and improved the available Guarasu data already gathered by a colleague. We analyzed cognate set data using Bayesian phylogenetic methods to classify the languages on the basis of innovations and retentions (Gasparini *et al.*, 2015). This methodology was powerful enough to integrate scarce data and support our previous consideration and draw a tree with three clades: one integrating Jorá with Siriono and Yuki; a second one with Guarasu and Guarayo; a third one with the Guaranian languages already known as subgroup 1 in previous works (see figure 2).

<sup>11</sup> O'Hagan, Z., Chousou-Polydouri, N., & Michael, L. (Eds). Tupí-Guaraní Comparative Lexical Database v1.1 with K. Bartolomei, E. Donnelly, S. Danielsen, N. Gasparini, E.-M. Roessler, S. Meira, M. Roberts, V. Wauters (compilers), and S. Drude, F. Rose, R. Vallejos (data contributors), 2015.

**Figure 2:** Phylogenetic classification of Tupi-Guarani languages, based on the lexicon.



### CONCLUSIONS

This paper illustrates the difficulties and limitations involved in doing fieldwork on almost extinct languages. It is inevitable to consider the human situation of the last speakers, with a rigorous personal history and a complex identity in the modern world. In this respect, the needs for the researcher to collect data of a disappearing representation of linguistic diversity may be lower-ranked than the needs of the speakers in the field, if they decide not to become part of the investigation at all. Nonetheless, it can be ethically justifiable to work with these languages on the basis of the available published data. Even when direct information appears to be really partial, harvesting existent data opens a way to some analysis and can contribute to comparative studies.

## APPENDICES

### *Appendix 1: Notation conventions*

[x] = phonetic realization;

/x/ = phoneme;

<x> = grapheme.

### *Appendix 2: Glosses*

- = affixation;

~ = reduplication;

1SG.I = first singular, set I markers (S and possessor);

1SG.II = first singular, set II markers (transitive active verbs);

1PL = first person plural;

A = subject of active verbs;

FUT = future;

O = object marker (transitivizer?);

OPT = optative;

RDPL = reduplication;

S = subject of intransitive verbs;

S<sub>a</sub> = subject of active verbs.

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