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2 Perspectives for the documentation of indigenous languages in Brazil

1 Introduction

In the last two decades language documentation has advanced greatly in Brazil, a nation with many minority languages within the predominantly Portuguese-speaking national context. This paper aims to provide an overview of the evolution of language documentation and relevant language policy in Brazil. There are identifiable country-specific macro factors and trends at work which strongly influence the prospects for language documentation and revitalization and which are different from those found in other world regions.

In Brazil the situation of the native peoples (some of which are still out of contact with the outside world) is different from that of the native peoples of the USA or Australia. Scientific linguistics is relatively recent in Brazil. The impact of international documentation programs has been stronger in Brazil, where documentation was less developed, than in Europe or the United States. Large government programs in Brazil have important effects but are notably precarious, with success by no means guaranteed. Like other aspects of Brazilian society, the development of language documentation and revitalization encounters resistance from those who are adapted to the underdeveloped system. Such an underdeveloped system is not a lack of something, but rather a positive system that actively seeks to reproduce itself and defends maintenance of the status quo by reacting against what is perceived as threats. So, as odd as it may seem, linguists whose prestige would diminish with the development of more effective responses to the issue of language endangerment in the country can be motivated to oppose them. At a more micro level the questions encountered in projects are similar to those encountered elsewhere, for example, taking into account local systems of cultural meaning (Dobrin 2008), dealing with local politics and rivalries (Benedicto et al. 2002; Pharao Hansen et al., this volume), power sharing in collaborative projects (Benedicto et al. 2007) and realistically evaluating the chances of success in language revitalization (Dorian 1987).

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Some historical information about linguistics in Brazil is presented in Section 2. Then the role and impact of the large international documentation programs are examined. Two individual documentation projects supported by international documentation programs are described briefly in Section 3. A noteworthy effort that merits attention, the indigenous language documentation program of Brazil's National Indian Foundation (FUNAI), is discussed in Section 4. Language documentation and maintenance, and language policy and planning in general, require knowledge of the situation of the languages of a country. This has been problematic in Brazil, given the large size of the country, the number of languages, and the often difficult access to speakers of the native languages, more than two-thirds of which are spoken in Amazonia. Academic politics among the community of linguists complicates the matter further. The nature of the difficulties in knowing the situation of the indigenous languages is described in Section 5. Two initiatives by the federal Brazilian government in principle aim at surveying the nation's languages: a national survey of the languages of Brazil (INDL) and the inclusion of a question about indigenous languages in the 2010 Brazilian national demographic census. The methodology of these potentially important programs and their results to date are discussed in Section 6, relating them to some of the relevant questions for language policy and management. In Section 7 a summary of the aspects presented in the paper is offered to help evaluate the perspectives for language documentation and revitalization in Brazil.

2 Language documentation in Brazil and the international documentation programs

Language documentation, in some sense, was carried out early in Brazilian colonial history, with descriptive efforts by Jesuit missionaries; for example, Anchieta (1595). That work was tied to practical aims and did not continue. The Jesuits were expelled in the mid eighteenth century. In the last half of the nineteenth century and the first half of the twentieth century, non-specialists, especially members of scientific expeditions, achieved a certain amount of linguistic description. Notable among these non-specialists were Karl von den Steinen, General Couto de Magalhães, Theodor Koch-Grünberg, Curt Nimuendajú, Emilie Snethlage, and João Capistrano de Abreu. Modern scientific studies began in the second half of the twentieth century. Mattoso Câmara Junior established the Linguistics Sector of the Museu Nacional in Rio de Janeiro in 1961 and wrote a monograph about indigenous languages (1965), in spite of not being a fieldworker himself. By the middle of the 1980s the study of indigenous languages had spread to a number

of universities and it has continued spreading to almost all regions of Brazil. Beginning in the late 1980s a number of Brazilian students went abroad to pursue graduate studies in linguistics. Upon their return they contributed to the national capacity in scientific linguistics by bringing recent theory and methods from the centers where they studied. The first comprehensive grammar of an indigenous language written by a Brazilian linguist in decades was published by Seki (2000).

For a period of time, ranging from the late 1950's to the early 1980's, the Summer Institute of Linguistics (SIL) occupied a prominent position in the study of Brazilian indigenous languages. An accord of cooperation was established between the Museu Nacional and SIL in 1956, and it was terminated only in 1981. With the increase in the number and quality of Brazilian scientific linguists the importance of foreign missionaries in the study of native languages has decreased and no national academic institutions have formal cooperation agreements with SIL at the present time. Missionary linguists have not participated in the recent development of language documentation in Brazil. However, they continue to be active in the field and promote religious conversion which may threaten traditional verbal culture.

The greater Brazilian capacity in linguistics was important when the large international language documentation programs began. The DOKumentation BEdrohter Sprachen (DOBES) program of the Volkswagen Foundation supported projects in Brazil beginning in 2001. The Endangered Languages Documentation Programme (ELDP) administered by the School of Oriental and Asian Studies of the University of London, with resources from the Hans and Lisbet Rausing Charitable Fund, supported projects in Brazil starting in 2002. These programs were notably friendly to countries with great linguistic diversity where the national capacity in language documentation could be developed. In the first rounds of the competition for these projects the Brazilian linguists who had studied abroad and the foreign linguists residing in Brazil were more successful, owing in part to their familiarity with foreign languages and international norms for project proposals, as well as greater exposure to the international concern for endangered languages and for language documentation and revitalization. The languages in Brazil documented with support from the DOBES and ELDP projects are listed in Table 1 below.

Tab. 1: Languages documented with support from DOBES and ELDP projects in Brazil

Language (family)	Linguist	Institution(s) ¹
<i>DOBES:</i>		
Kuikuro (Carib)	Franchetto	Museu Nacional
Trumai (isolate)	Guirardello	MPI Nijmegen/Museu Goeldi
Awetí (Tupî)	Drude	Free University of Berlin/Museu Goeldi
Kaxuyana (Carib)	Meira	Leiden/Museu Goeldi
Bakairi (Carib)	Meira	Leiden/Museu Goeldi
Mawé (Tupî)	Meira	Leiden/Museu Goeldi
Kaxinawá	Camargo	CNRS
Aikanã (isolate)	van der Voort	MPI Nijmegen/Museu Goeldi
Kwazá (isolate)	van der Voort	MPI Nijmegen/Museu Goeldi
<i>ELDP:</i>		
Puruborá (Tupî)	Galucio	Museu Goeldi
Sakurabiat (Tupî)	Galucio	Museu Goeldi
Karo (Tupî)	Gabas	Museu Goeldi
Ayuru (Tupî)	Demolin	Free University of Brussels/Univ of São Paulo
Salamãý (Tupî)	Moore	Museu Goeldi
Xipaya (Tupî)	Rodrigues	Federal University of Pará
Apurinã (Arawak)	Facundes	Federal University of Pará
Ofayé (Macro-Jê)	Ribeiro	University of Chicago/Federal Univ of Goiás
Kaduwéu (Guaykuru)	Sandalo	State University of Campinas
Enawenê Nawé (Arawak)	de Resende	Museu Nacional
Oro Win (Chapakura)	Birchall	Radboud University Nijmegen/Museu Goeldi
Waikhana (East Tukano)	Stenzel	Federal Univ of Rio de Janeiro
Wanano (East Tukano)	Stenzel	Federal Univ of Rio de Janeiro
Kanamari (Katukina)	Dienst	Goethe University
Akuntsu (Tupî)	Aragon	University of Utah
Kubeo (Tukano)	Chacon	University of Utah
Desana (Tukano)	Silva	University of Utah
Gavião (Tupî)	Meyer	Museu Goeldi
Suruí (Tupî)	Meyer	Museu Goeldi
Dâw (Nadahup)	Epps	University of Texas, Austin
Paressi-Haliti (Arawak)	da Silva	Federal University of Rio de Janeiro
Paressi-Haliti (Arawak)	Brandão	University of Texas, Austin

These programs, along with some support for projects from other international entities such as the National Science Foundation and the Endangered Language Fund, helped to introduce digital technology and documentation methods into

¹ Institutions to which the linguists were associated at the time of the project.

Brazilian linguistics. They also made language documentation more prestigious and encouraged descriptive and diachronic studies based on the data they provided. For example, the documentation project of Sérgio Meira with the Bakairi and of Bruna Franchetto with the Kuikuro provided essential data for the classification of the southern Carib languages and their relation to the Cariban family (Meira and Franchetto 2005). This ground-breaking article concludes that the southern Carib languages do not form a single subgroup, since there is no evidence of innovations shared by all of them. The evidence favors two independent sub-branches of the Cariban family in the south: Bakairi-Ikpeng and Kuikuro. This implies that the diversity is not greater than in the north and undermines the hypothesis of a southern origin of the Cariban family.

3 Examples of documentation projects in Amazonia

Two examples of documentation projects for Amazonian languages are given below. The first is noteworthy because it was aimed at a very precarious language situation and achieved considerable benefit for the native community nonetheless. The second is notable for its unusual objects (whistled and instrumental speech) and for its pioneering methods, as well as its effect in encouraging traditional practices. In both projects, the native communities and the linguists discussed fully the objectives and procedures of the project with everyone involved, offering suggestions and critical observations until a consensus was reached that was viable and satisfactory to all participants. Community support and participation was very strong, as is generally the case among Brazilian indigenous peoples for documentation projects which return the project results to the community in an intelligent, usable manner. As discussed by O'Meara and Guadarrama (this volume) in the context of Mexico, the question of providing accessibility to the results of documentation projects is an important issue, especially in places where the speaker communities are geographically isolated or at least rural and, in most cases, have no access to technological infrastructure.

3.1 Documentation of the Puruborá language

The Puruborá case is illustrative of the local impact of language documentation projects. The Puruborá indigenous people live in the state of Rondônia (Brazil). Their initial contact with western settlers was around the first decade

of the twentieth century. By the end of the 1940s, their population was reduced to about 150 people, decimated by various diseases. At that time they left the demarcated indigenous territory, where they had been living for three decades, and spread out around the region. That is when the Puruborá language ceased to be used, and the youth no longer learned the language. Afterwards, reference to this people is practically nonexistent. The Puruborá language and people were considered extinct. Until the first years of the twenty-first century, there was no mention of the Puruborá in the official registers regarding indigenous people or spoken indigenous languages in Brazil. A new chapter in the history of the Puruborá began with the identification of some Puruborá families near the old Puruborá territory in the year 2000. Since then there has been an active search for Puruborá descendants led by the Puruborá themselves, and they now number over 400 people spread over various towns in the Brazilian state of Rondônia. The families that remained in the area near the traditional territory and started the identification process are identified as the core of the community. Their location is seen both by the Puruborá and by the state representatives as the “Puruborá village”, despite the fact that official recognition from the Brazilian government as well as the demarcation of a Puruborá Indigenous Territory is still under investigation. Since 2001, the Puruborá organize larger assemblies where most of the remaining Puruborá gather together to help build the sense of community and belonging as well as to decide on the directions of the Puruborá movement.² The Puruborá now have their own social organization and a political leader chosen in an assembly.

The Puruborá language is the only known member of the Puruborá branch of the Tupian family, but at present there are no remaining fluent speakers and only two semi-speakers or rememberers.³ Over the last three generations, it has not been taught or used as a language of regular communication. In 2001 the Museu Emílio Goeldi started a project to document this language, as part of a larger ELDP documentation project that aimed to document five highly endangered Tupian languages. The objective of this project was to carry out systematic documentation, registering all of the remaining aspects of the Puruborá language and culture that were still accessible. Before this project the only sources of information about Puruborá were old wordlists of limited size and value (Koch-Grün-

² Some of these assemblies were recorded by the documentation project, resulting in three documentaries.

³ In 2001, at the onset of the documentation project there were eight Puruborá elders, but only six of them still remembered words or sentences in the Puruborá language. Between 2001 and 2013, four of these elders passed away.

berg 1932; Bontkes 1968; Moore 1989). This is an example of the current linguistic situation in Brazil, where the languages most threatened with extinction, with a reduced number of speakers and lack of transmission across generations, are typically the least studied (see Section 5 below).

The Puruborá Documentation Project involved fieldwork, audiovisual documentation, organization of language data into databases, descriptive study, and the return of the material produced and the knowledge gained of what remained of the language to the Puruborá people. This project greatly increased the materials available for the Puruborá language. The documented corpus, composed of short word lists in 2001, has now around 1,000 words as well as dozens of sentences. This material forms the largest source of data available for the Puruborá language, consisting mostly of audio recordings, with some parts supplemented by video recording. The documentation efforts focused on parts of the language that were still recoverable. The Puruborá speakers were primarily able to remember concrete vocabulary items – abstract vocabulary and grammatical knowledge were more difficult to remember. The project produced 50 hours of audio and video recordings of cultural and linguistic information. The research also helped to locate various historical documents containing ethno-historical information about the Puruborá, which have been used by the community in their struggle for recognition of their traditional land. Five audio CDs, three audio DVDs and four DVDs of cultural and linguistic data have been produced and returned to the Puruborá people, including the people living away from the so-called Puruborá village. All the material produced by the project was deposited at the Museu Goeldi digital archive, where it is organized and stored for future use.

The documentation project greatly benefited from the continued support of the Puruborá community, which includes all the remaining 400 plus Puruborá people gathered together in the Puruborá assemblies, as they showed a growing interest in the reaffirmation of their indigenous identity and the recovery of what was left of their traditional language and culture. All the remaining elders that still retained parts of their language have actively participated in the study and recording of the language. The project tested a methodology, which proved to be successful, for the documentation of a highly endangered language: the reunion of the remaining speakers (who are frequently geographically dispersed) in order to stimulate their memory and facilitate the collection of information. This method was shown to be extremely effective with the Puruborá and can be used in similar cases. At the beginning, the project did not expect to document the language beyond lexical data since it had not been spoken for over 30 years. However, the project activities helped the remaining speakers to remember various aspects of the language, thus increasing the scope of documentation.

The project also awoke the interest of the younger generations. Initial steps were made toward acquainting the younger Puruborá with their linguistic heritage. In 2005 a Puruborá orthography was proposed and discussed in the Puruborá assembly (Galucio 2005b). This began the process of literacy in Puruborá and has aided the younger generation in learning aspects of their language. In 2012, the state government hired a young Puruborá, who had learned some of the language as recorded by the elders and documented through the project, to teach Puruborá at the community school, built by the Puruborá in the same location where the assemblies take place. As a result, some members of the community who live near the area that has been called the Puruborá village are now learning what was recalled by their older relatives, using the material produced by the project. The project also developed written materials for the community. In 2013, a bilingual Puruborá-Portuguese booklet of animal names (Galucio, Puruborá, and Aporete Filho 2013) was produced in collaboration with the two elders who have the best recollection of the language, for use in the community school.

The development of this project showed that it is possible to carry out successful documentation of highly endangered languages, helping to safeguard traditional cultural and linguistic heritage, even in situations where the language is extremely fragile. The materials collected throughout the project show the importance of this type of work from a sociocultural and scientific viewpoint. Many of the discoveries about the Puruborá language that resulted from this project could not have otherwise come about. For example, valuable information was gathered for the internal classification of the Tupian language family as a result of the project (Galucio and Gabas 2002). The results have also provided a basis for the analysis of the phonetic and phonological structure of the Puruborá language (Galucio 2005a; Santos and Galucio 2007a, 2007b). This project may also serve as a viable methodological model for documentation and revitalization projects focused on protecting linguistic heritage, especially in the most difficult and extreme cases.

3.2 Documentation of the whistled and instrumental speech of the Gavião and Suruí of Rondônia, Brazil

A documentation project by Julien Meyer and Laure Dentel (2008–2012) supported by the ELDP was unusual in aiming at the documentation of whistled speech and instrumental speech among the Gavião and Suruí (Païter) peoples of Rondônia, Brazil. These two language forms are used in many regions of the world as complementary speech registers either for distance communication or for emulating songs, but have seldom been described in Amazonia. Documentation of these

important parts of verbal culture is urgent since they generally disappear long before the spoken language. They are often not noticed, even by linguists and anthropologists who work with the people who have these practices. Whistled speech in Amazonia is most frequently performed in the forest, and any reduction of the time native peoples spend in the forest diminishes its frequency of occurrence. Instrumental speech involves a number of skills, such as constructing the instruments from natural materials, mastering the art of playing the instruments, and learning a repertoire of traditional music. These skills can be easily lost in the youngest generation through disuse. The relation of much traditional music to traditional spiritual beliefs provokes missionary opposition to it, which may promote loss.

Studies of these speech imitations have scientific relevance for questions such as:

- What is the relation between the phonology of a language and its whistled or instrumental form?
- How much can the acoustic signal be reduced while maintaining intelligibility?
- How are these forms of language used and why?

Previous studies had produced analysis of the phonology of Gavião (Moore 1984, 1999) and Suruí (Guerra 2004) that was adequate for the required scientific linguistic basis for the work. The methodological steps in the documentation of the whistled speech were as follows (Moore and Meyer 2014):

- Preliminary inquiry to determine who were the most adept whistlers, when, where and how whistling was used. Recording of whistling was initiated.
- Recording of the common whistled sentences and transcription of these sentences as they would be normally spoken. The various methods of whistling, some involving the use of hands, were recorded.
- Recording of spontaneous occurrences of whistled conversations in audio and video, with subsequent transcription of these conversations as they are normally spoken.
- Double recordings in audio and video, near the speaker and near the hearer, of prepared sentences to test intelligibility. Observation of speaker strategies to maximize intelligibility.
- Recording of whistled and spoken word lists for phonetic detail.
- Phonetic and phonological analysis of the recordings.
- Preparation of audio and video documentation materials for the native community.

Among other results, the study demonstrated that whistling was more intelligible than speech at a distance. The messages being communicated are tied to the immediate shared context, which helps in interpretation. For example, whistling can convey instructions during a hunt or a request to bring some object. In the forest, whistling does not betray human presence to potential prey. It is used often in the Gavião villages, though much less so in the Suruí villages. As would be expected in the case of a tone language, Gavião whistling conveys the FO of speech, as well as contrastive length, but not vowel timbre. Consonants are less articulated (for example, by the lips or teeth) during hand whistling. Consonant articulation is more important when context is reduced.

Worldwide, instrumental speech (for example, talking drums) takes many forms. Among the Gavião there are three musical instruments that are said to “speak”: a flute, a pair of mouth bows, and large bamboo clarinets that play one note each (requiring three players to play, taking turns to vary the melody). Each instrumental music piece that is said to speak has a traditional song associated with it, though that is not sung while it is played. There are, then, three things to be recorded separately and correlated: the music as it is played by the instruments, the associated song, and that song as it is normally spoken (Meyer and Moore 2013). The methodological steps for documentation were as follows:

- Initial fact finding about who has the knowledge of the talking instruments, how they are made, when and how they are played. Details are needed about what the instruments say, the repertoire of songs, contexts of use, and the sound production capacity of each instrument.
- Documentation of how the instruments are constructed and tuned.
- Recording each song in each of its three forms: played on instruments, sung, and spoken normally.
- Linguistic treatment of the sung and spoken forms of the songs, including transcription, translation, and detection of unusual words or morphology.
- Edition of preliminary documentation videos and the correction of these with native consultants.
- Analysis in terms of acoustics, phonology, and musicology of the three forms of the songs and the relations between them.
- Preparation of audio and video material in the form of CDs and DVDs for the community, the National Indian Foundation, and archiving in Brazil.

The results showed that the contrastive tone and length of the language were dominant factors in the relations between the three forms of the songs. The melody of each song basically matched the tone and length of the lyrics, with the limits of the instrument being a constraint. For example, only flat and not curved tones occur in the songs, since the flutes cannot produce curved pitch. The lyrics

of the song were similar in tone and length to their normal spoken form, but were affected by the capacities of the instruments and their players. One striking finding was that the lyrics of the associated songs were rich in archaic lexical and morphological forms, which is not generally true of Gavião native music composed today. Possibly these songs are centuries old – an amazing heritage.

It was satisfying to see the revitalizing effect of the documentation project, as the younger Gavião recognized the complexity and talent involved in their traditional practices and took more pride and interest in them. They now sometimes amuse themselves at events (such as educational gatherings) by giving demonstrations of their ability to communicate by whistling, which leaves onlookers in mystified awe. The documentation material was cataloged and deposited in the digital language archive of the Museu Goeldi, where it will always be available to future generations of Gavião and Suruí. Meyer's work has been reported (e.g., Meyer 2012; Meyer and Moore 2013; Moore and Meyer 2014), and as knowledge of his work and methods has spread in Brazil, more linguists and anthropologists are discovering that whistled and instrumental speech exist in the indigenous groups that they study, for example, among the Wayãpi.

4 A Brazilian government program for documenting indigenous languages: PRODOCLIN

One of the effects of the international documentation programs was to stimulate the creation of a Brazilian program for the documentation of indigenous languages using modern digital technology and recent methodology. The president of the Brazilian National Indian Foundation (FUNAI) obtained considerable financial resources from the Banco do Brasil for documenting native languages and cultures through a program administered by the Museu do Índio in Rio de Janeiro. The coordinator of the program was the linguist Bruna Franchetto who utilized her past experience in a DOBES project when designing this new Brazilian documentation initiative.⁴ The Brazilian program incorporated some aspects of the DOBES approach to language documentation, adapted to Brazilian con-

⁴ Franchetto's documentation of the Kuikuro language on the Xingu Park reserve was an outstanding DOBES project, carried out in the first round of the program.

ditions, but was completely independent from it. The language documentation material was to be archived in Brazil, not abroad.

As planning for the program, now called PRODOCLIN (Projeto de Documentação de Línguas Indígenas), began in 2006, a small group of linguists launched fulminating attacks against it. In spite of the DOBES program's contributions to developing language documentation in Brazil, DOBES was also a target of the attacks, which threatened funding for the Brazilian project and the future of modern language documentation in the country. These attacks were repeated in a keynote address to the Brazilian Linguistics Association (ABRALIN) and published in 2009 (Rodrigues 2009). Earlier, Rodrigues had been unsuccessful in an application for funding from an international documentation program, whereas young Brazilian linguists who had studied abroad were very successful, setting up a possible shift in relative prestige to the young talents. It is worth examining these events and debates briefly to understand the macro political processes facilitating or impeding language documentation and to feel the tone of the discussion.

To argue against the FUNAI language documentation program, Rodrigues attempted to equate it with the DOBES program and create doubts about the latter, with the linguist Himmelmann as a special target. According to Rodrigues (2009: 34), "Now, very recently, the anthropologists of the Museu Nacional induced the Museu do Índio to make an accord with the Max Plank-Institut [sic] for Psycholinguistics, based in Nijmegen, Holland, to introduce the DOBES model of documentation for endangered languages[...]"⁵ In fact, the accord in question was merely for technological cooperation, especially for the archiving of digitalized and annotated recordings in Brazil. Rodrigues (2009: 34) claimed that the DOBES program aims to "[...]relegate to the future the analysis of the documented data[...]"⁶ However, Himmelmann in fact advocated the analysis of data as part of documentation: "It is worth emphasizing that documentation does not exclude analysis. Just the opposite: analysis is essential" (Himmelmann 2006: 23). As to why the supposed relegation of the analysis of data to the future would be part of DOBES policy, Rodrigues (2009: 34) stated that "[...]the justification of Dr. Himmelmann, one of the mentors of the model, is the deciphering of the Sumerian and Hittite inscriptions some millennia after being made[...]"⁷ With respect to

5 "Agora, recentissimamente, antropólogos do Museu Nacional...induziram o Museu do Índio da FUNAI...a fazer um convênio com o Max Plank-Institut para Psicolinguística, sediado em Nimega na Holanda, com o fim de introduzir o modelo DOBES de documentação linguística para línguas ameaçadas..."

6 "...relegar para o futuro a análise dos dados documentados..."

7 "...as justificativas do Dr Himmelmann, um dos mentores do modelo, são as decifrações das inscrições sumeras e hititas alguns milênios depois de feitas..."

Sumerian and Hittite inscriptions, what Himmelmann had actually said was that objects made for practical ends could serve as documentation up to a point, but that it is possible to construct much more adequate and complete models using modern linguistic knowledge and technology (Himmelmann 2006: 3) – a perfectly correct and relevant point. Seeking to oppose documentation to description, Rodrigues (2009: 34) affirmed that “[...]the adoption of the DOBES [and by implication modern digital linguistic documentation] undermines the training of linguists with the analytic methods already established[...]”⁸ and threatens language description. Again, this assessment does not represent the position of Himmelmann (2006), which was quite the contrary. For instance, when discussing the “[...]structural linguistics well-established format for language documentations that consists primarily of a grammar and a dictionary,[...]” Himmelmann (2006: 19) observed that, “[i]n this regard, it should be emphasized that the above points in no way question the usefulness and relevance of descriptive grammars and dictionaries with regard to their main purpose[...]”. In fact, the advisory boards of the DOBES and ELDP programs include respected experts in analysis and description of languages, such as Colette Grinevald, Pieter Muysken, and Anthony Woodbury. Evidently, a professional linguist would utilize the data collected in documentation for scientific purposes. One example of this is the scientific production of the DOBES project of Franchetto on the Kuikuro language in the period 2001–2006, which yielded 45 presentations in national and international events, six book chapters, eight articles in national and international journals, three bilingual didactic books and an exhibit in the Museu do Índio, in addition to accumulating a database for yet additional future studies.

To avoid too much public debate, which would have jeopardized the financing for the PRODOCLIN program, the response to the attacks was mainly in the form of a letter from the directors of the three institutions that were targeted, the Museu do Índio, Museu Nacional, and Museu Goeldi, to the ministries of the federal government. This had the desired effect and the program continued. Opposition to it never spread significantly within the community of linguists in Brazil, who, of course, would benefit from the resources and training made available. The program began in 2008. The linguistic documentation program, PRODOCLIN, together with the cultural documentation program, PRODOCULT (Projeto de Documentação de Culturas Indígenas), share facilities and constitute the overall initiative, called PROGDOC.

8 “...a adoção do DOBES desestimula a formação de linguistas com os métodos analíticos já bem estabelecidos...”

PRODOCLIN has thirteen projects, including languages with different degrees of endangerment, spoken in different regions of Brazil, as listed in Table 2:

Tab. 2: Languages documented through the PRODOCLIN program

Language	Family	Location (State)
Apiaká	Tupi-Guarani	Mato Grosso
Desano	Tukano	Amazonas
Ikpeng	Carib	Mato Grosso
Kanoé	Isolate	Rondônia
Kawaiwete (Kayabi)	Tupi-Guarani	Mato Grosso
Karajá	Macro-Jê	Mato Grosso
Kisêdjê (Suyá)	Macro-Jê	Mato Grosso
Paresi-Haliti	Arawak	Mato Grosso
Maxakali	Macro-Jê	Mato Grosso
Ninam	Yanomami	Roraima
Rikbaktsa	Macro-Jê	Mato Grosso
Shawãdawa (Arara Pano)	Pano	Acre
Yawanawa	Pano	Amazonas

Each project has a coordinator, preferentially a graduate student in linguistics, a multidisciplinary team, and two indigenous researchers. In order to transmit the technology and methodology for documentation, training workshops were held for coordinators and native researchers, in addition to training given in the indigenous villages. Care was taken to obtain documented informed consent for all activities from the native community, since Brazil has rather strict regulations governing the use of images or recordings of native cultures. Results required of each project are:

- digital audio and video files of sessions that are recorded, transcribed, and translated
- a basic descriptive grammar
- a lexical database (dictionary)
- a survey and diagnosis of the situation of the language
- publications, including educational material and scientific research
- mini-sites on the Internet for the native group

Efforts were made to document culturally important subjects and to prepare the indigenous communities to carry on the work after the end of the project. Copies of all material from each project were returned to the native communities. The data collected has been useful to the student coordinators for their dissertations and theses. Since these students are from various institutions, the technology

and methodology for language documentation is disseminated. In the network of native communities the awareness of the possibilities of digital documentation quickly spreads and the demand for documentation increases. Many indigenous communities in Brazil have computer-literate members and access to computers and the Internet.

One part of PROGDOC is the creation of a digital archive to maintain the materials produced by the program safe and accessible into the future. This is an important element in terms of capacity building at the national level, without which the materials would be eventually lost or would have to be exported to some secure archive abroad. Material from the program includes 493 hours of video, 321 hours of audio, and 50,157 photos.

The PRODOCLIN program maintains a relation of cooperation and interchange with the only other digital archive in Brazil, that of the Museu Paraense Emílio Goeldi, a research institute of the Ministry of Science, Technology, and Innovation, located in Belém. The Goeldi also carries out extensive language documentation. Its language archive is part of a long tradition of maintaining scientific collections about Amazonia. The collection of the Linguistics Division contains 1,300 items of several media types (tapes, discs, etc.), which have been digitized and cataloged. The digital archive currently contains 80 individual language collections totaling about 800 hours of data filed in about 1,500 thematic sessions. The video material is still being processed:

Both the Museu do Índio and the Goeldi archives use the Language Archiving Technology (LAT) software suite specially developed by the Language Archive (TLA) at the Max Planck Institute for Psycholinguistics for archiving and managing larger linguistic databases. The implementation of this type of digital archive in Brazil is hopefully part of an emerging South America network of regional archives, involving Argentina, Peru, Brazil and eventually other countries.

5 What is the situation of the indigenous languages of Brazil?

One necessity for planning language documentation or language policy is knowledge of the situation of the languages involved. Part of that is knowledge of how many languages and varieties there are. One tenet of the linguistic folklore of Brazil is that there are 180 indigenous languages. No one repeating this number can explain what it means exactly or what the criteria are for grouping variants into one language. Native languages, like native religions, generally do not have an indigenous name that refers specifically to them. There are hardly ever indig-

enous words for “language” or “dialect” that are different from “speech”. Community judgments of shared identity or language similarity are not necessarily uniform in the community nor constant over time. So appealing to indigenous groups to apply non-indigenous concepts such as “language” or “dialect” is not promising. In world regions where there are centuries or millennia of folk linguistic tradition the distinctions made in national culture may depart from linguistic reality, for example in the case of Chinese “dialects” that are not mutually intelligible. However, many native groups and languages in Brazil have been known for less than one hundred years and there is not a firmly established tradition for language classification. It is useful to have a rational language classification to guide educational efforts and language policy in general. Arguably the best time to propose a rational classification is when there is not yet a firm generally accepted classification.

There continues to be constant confusion between names for languages and names for ethnic groups. For example, the speech of the Gavião of Rondônia is as similar to the speech of the Zoró as Boston English is to New York English, but the two are often listed as separate languages. Even what is an “ethnic group” is not easy to determine among native peoples. For example, in the south of the state of Rondônia the groups Oro Nao’, Oro Eo At, Oro Mon, Oro Waram, and Oro Waram Xijien consider themselves as part of one people, the Wari’. These groups are culturally similar and speak to each other easily. In this case the rational option is to consider Wari’ as a language and the speech of the various groups as variants or dialects. The solution should be similar for, say, the case of the Gavião and Zoró, in spite of the lack of a traditional name that includes both of them. The notion of mutual intelligibility, in spite of its problems, has the virtue of offering a consistent, reasonably objective, criterion for grouping variants into languages and can be explained to indigenous groups to avoid misunderstandings. By that criterion there are perhaps 153 (in round numbers, about 150, to avoid a false impression of precision) known native languages still spoken in Brazil, if we consider all the known languages spoken in the country and count the cases of multiple dialects with mutual intelligibility as single languages (Moore, Galucio, and Gabas 2008).⁹

Interestingly, native peoples tend to adopt language classifications over time. A recent case was the creation, possibly by members of an NGO, of the term Tupi-Mondé for the languages and dialects of the Mondé branch of the Tupi family. This is based on an erroneous analysis of the term Tupi-Guaraní (in which the word Tupi refers to Coastal Tupi, not to the family). This term quickly spread among the

⁹ Revised version available at <http://www.etnolinguistica.org/media:set2008> (Accessed 14 November 2015).

Gavião, Zoró, Aruá, Cinta Larga, and Suruí peoples, many of whom, when asked, now say that they speak “Tupi-Mondé”. The point is that classifications are incorporated eventually and the tradition of indigenous language names and distinctions is still being formed in Brazil, however puzzling this may seem at first. The confusion over these issues, as we shall see, bedeviled the language part of the 2010 national census of Brazil.

One of the key parameters in evaluating the situation of a language is the number of people who speak it. The degree of endangerment of indigenous languages was gravely underestimated for years in Brazil because of the confusion between speaker numbers and group population, and the problem still continues. For example, according to Rodrigues (2006) there are 284 speakers of Parintintin and 222 speakers of Yawalapiti whereas linguists who have done field surveys say that there are only ten speakers of Parintintin (Ana Carla Bruno, p.c. 2005) and ten or fewer speakers of Yawalapiti (Bruna Franchetto, p.c. 2006). Rodrigues (1986: 81) claims 256 speakers of Torá and Dixon and Aikhenvald (1999: 343) give a similar number. However, according to the website of the Instituto Socio Ambiental this language became extinct a generation ago. Moore, Galucio, and Gabas (2008) is one of the most recent attempts to estimate speaker numbers for indigenous languages. The estimates are based on data that Moore collected informally from more than thirty linguists who work with native languages in Brazil, as well as published sources. Supplementary information was also collected by a cooperation request to a discussion list for linguists and others who work with native South American languages. Obviously the data are not definitive and do not obviate the need for standardized field surveys. The linguists consulted usually had an approximate idea of speaker numbers and transmission for some languages. Where information was missing or doubtful the fact was indicated. Another source of information is the Brazil section of UNESCO’s Atlas of the World’s Languages in Danger.¹⁰

Data on language transmission is even harder to obtain. Yet it is the main determiner of the future of a language. The above two sources offer some estimates of transmission. The question is complicated by degrees of fluency. It is common for the youngest generation to understand the language but not speak it. According to the Tembé people, in 2007, out of 111 households only 11 spoke primarily the native language. Moore, Galucio, and Gabas (2008) estimate that at least 21 % of the approximately 150 indigenous languages of Brazil are threatened with extinction in the near future because of low speaker numbers and lack of transmission.

10 Accessed online at <http://www.unesco.org/culture/languages-atlas> on October 15, 2015.

Owing to progress in recent years in the study of indigenous languages in Brazil, some description exists for at least 121 languages, excluding three cases for which data was insufficient (Moore, Galucio, and Gabas 2008). This number corresponds to 81 % of the total of the remaining 150 languages still spoken in the country. Moore, Galucio, and Gabas (2008) also offer a rough estimate of the degree of study of these 150 languages. In this estimate a “complete” description is a grammar and dictionary, an advanced description is a doctoral thesis or many articles, incipient study is a MA thesis or a few articles, and little or no description is the lack of appreciable scientific study. These numbers change rapidly with the advance of study. The quality of the work was not estimated. The estimate in 2008 was as follows:

- 20 languages (13 %) have a complete description
- 57 languages (38 %) have advanced description
- 44 languages (29 %) have incipient description
- 29 languages (19 %) have no significant scientific description

On the other hand, with respect to language documentation, aside from the list of known projects, it was not possible to estimate the actual degree of documentation (for example, recordings) that has been done for each project and/or language, nor where the documentation materials are stored. Revitalization projects and their efficacy are also very difficult to estimate.

6 Brazilian government initiatives for indigenous languages

Two recent large-scale government programs are relevant for language documentation: the national survey of the languages of Brazil (INDL), and the inclusion of a question about indigenous languages in the Brazilian national demographic census of 2010. These two initiatives are still not well understood, even in Brazil, but potentially very significant.

6.1 The national survey of the languages of Brazil: the Inventário Nacional da Diversidade Linguística (INDL)

Brazilian society is multiracial and pluralistic and the federal government has taken a relatively progressive approach to language diversity. Aside from the PRO-DOCLIN program, described above, there are other potentially important initi-

atives by the federal government. In March of 2006 an educational seminar, of notably high caliber, was held in the Câmara de Deputados Federal (equivalent to the US House of Representatives) about the languages of the country. A workgroup, the Grupo de Trabalho da Diversidade Linguística – GTDL (Workgroup on Linguistic Diversity) was formed soon thereafter, charged with formulating a plan for surveying languages and recognizing them as part of the national cultural heritage. The GTDL was within the Instituto de Patrimônio Histórico e Artístico Nacional – IPHAN (Institute for National Historical and Artistic Patrimony), a division of the Ministry of Culture. Within IPHAN the workgroup was administered by the Departamento de Patrimônio Imaterial, which deals with ceremonies, events, and other non-material manifestations of culture in Brazil. Since there were no linguists in IPHAN three professional linguists were included in the GTDL, along with IPHAN employees and representatives of ministries and organizations.

The coordinator of the GTDL was interested in the topic and worked to bring it forward, in spite of its intimidating complexity. There are two steps in the process of declaring something as part of the national cultural heritage: *levantamento* (survey) and *registro* (registry). A survey is an overview of what exists in a region and registry is an in-depth collection of facts, icons, images, etc., to characterize it for national memory and give it official recognition (which confers a certain degree of protection). The coordinator of the GTDL observed that for languages the survey was what was important. There was no basis for declaring one language rather than another as part of cultural heritage, which would be contrary to the idea that all languages should be respected and protected. A national survey of languages would correct the existing lack of knowledge of the situation of the languages of Brazil and provide the basis for directing actions of documentation and revitalization, as well as other activities of language policy, such as education in the mother tongue. As discussed by Sánchez (this volume), a relatively similar project was undertaken by the government of Peru, where an accurate ethnolinguistic map of the country was made to provide information on the current situation of the Peruvian native languages and to function as a language planning tool for decision making regarding the recovery, preservation, and promotion of indigenous language use. A problem that has proved persistent was the lack of a pre-existing model for how to do a survey of languages on a national scale. Linguists have models for how to do scientific research and some have acquired models for documentation, but a language survey is neither of these. Neither is it the demand-based activity to which IPHAN is accustomed. Linguists are accustomed to individual or small group projects but not to planning and administering anything so enormous as a survey of the languages of a vast country such as Brazil, to be completed within a reasonable period of, say, five years. In the GTDL,

only the representative from the Instituto Brasileiro de Geografia e Estatística – IBGE (Brazilian Institute of Geography and Statistics) had any experience with national surveys. The need for standardized procedures and an efficient central database were beyond the experience of the other members of the workgroup.

The survey could revolutionize knowledge of Brazil's languages and make all previous estimates and classifications obsolete. An author of influential classifications and estimates, Aryon Rodrigues, was one linguist of the GTDL and wrote that a survey of the indigenous languages of the country was not feasible, though this opinion was rejected by the group. The survey, if done well, would offer answers to many key questions about the languages and the factors affecting them, positively or negatively.

After many meetings and discussions, the content of the proposed national survey, called the Inventário Nacional de Diversidade Linguística – INDL (National Survey of Linguistic Diversity) was agreed upon. This content was presented in a public hearing and then published (GTDL 2008). The content is summarized below:

- Description of the survey team
- Description of the phases, methods, and results of the survey
- Identification of the language: its various names, autodenomination, region of origin, time in Brazil (in the case of immigrant languages)
- Number of speakers and semi-speakers by age group, degree of language transmission, population of the group
- Linguistic and historical characterization, including genetic classification of the language, internal variation, past geographical movements, contact with other languages
- Geographic distribution: location of speaker communities and their respective degrees of fluency, as well as communities of the same ethnic group which no longer speak the language.
- Language use in society: contexts of use, special forms of the language in defined contexts
- Status and institutions: official status, cultural promotion groups, schools, health posts, organizations for political representation, activities in the language (such as teaching it to outsiders), publication, cultural events, media presentations, revitalization and maintenance efforts, effects of missionary activity on the language and on traditional native beliefs and verbal art
- Writing: literacy rates in the language in each age group, use of the language in schools, source and adequacy of the writing system(s), degree of utilization of each writing system in the case of multiple systems, existence and description of didactic materials

- Oral literature: traditional narratives in the language, music, the context and performers of these, their degree of transmission
- Written literature: written works produced by the community or outsiders
- Audio-visual production and the location and access of the products
- Studies about the language, with bibliography
- Samples of the language: audio recordings of Swadesh's 200-word list, independent writing samples of the same word list by literate speakers (to test consistency and orthographic adequacy), a short video of a few minutes of a conversation with subtitles in Portuguese

Some explanation is in order about the content specification, which was to be uniform for all types of languages to be surveyed: indigenous languages, immigrant languages, Brazilian sign language (LIBRAS), Portuguese dialects, and Afro-Brazilian speech. Where a particular item did not apply, for example, "theater groups" for the Yanomami, it would be left blank. The field methodology would be different for each type of language. For indigenous languages the leading suggestion was to administer the survey by calls for projects which would cover all the languages of a region, hoping to economize time and expense. If the survey manual could be made maximally efficient and clear, people in the region, such as NGOs, indigenous associations, etc., could carry out the survey, helped by their prior knowledge of the native groups there.

After the content of the survey, the next problem to be resolved was the field methodology. In order to test different approaches, pilot projects were commissioned, with funding from IPHAN or from other sources. In a casual bureaucratic decision which would have regrettable effects for the next few years and beyond, the IPHAN call for pilot project proposals, channeled through the Associação Brasileira de Linguística, specified a *minimum* of R\$150,000 (about US\$75,000 at the time) per project. Those responsible for the call for projects said that this was their norm, so as not to administer many small projects. Such large amounts of money opened the door to the use of pilot projects as a feeding trough for linguists and their students, rather than as an attempt to find efficient, inexpensive, and accurate field procedures.

The pilot projects varied greatly in their expense and efficiency. The project for the Wayoro (or Ayuru) was extremely lean, with only one linguist as the only non-indigenous participant, relying on indigenous assistants for much of the work. Techniques were devised to maximize efficiency while maintaining an acceptable degree of accuracy. Villages were located by natives looking at Google Earth images. Households were indicated by maps of villages drawn by local residents. Information on possible speakers outside the native reserve was gathered

from their relatives on the reserve. Those outside the reserve (a large and growing proportion of the indigenous population in Brazil) were visited later.

On the basis of preliminary testing and advice from native assistants, four degrees of fluency were recognized and used in the fluency evaluation: speaks fully, speaks reasonably, understands but speaks little, and no significant fluency. These levels were defined operationally, with questions such as, "If someone tells you that he is going to a certain village tomorrow to go fishing with his brother, could you understand what he said?" If the person can understand this question then he at least understands the language. A positive answer to the question, "Could you reply, 'I will go there with you and get some manioc flour from my uncle'?" would imply that he spoke reasonably. These levels were generally easily understandable and fairly replicable. Fluency judgments were made by speakers who knew the person in question, not by the person himself. The judgments were checked independently with another speaker. The household survey and the speaker estimates were done without actually going to each house, which, in any case, did not seem to increase accuracy, since some household members may not be present and those present may not be careful with accuracy and precision in the information that they provide. Even among motivated and intelligent native assistants providing information there was a certain tendency to omit the more marginal members of a household and also small children.

In a highly complex situation such as the reserve on which Wayoro is spoken, with ten ethnic groups, intermarriage and varying degrees of language and culture loss, a household survey was needed, though in more homogeneous situations statistical sampling and extrapolation would be adequate. The recorded lexical sample (200-word list supplemented by names for common animals, plants, and manufactures) was quick and very useful. That was also the case for the independent spelling samples, which give a fast indication of the degree of success of literacy efforts.

The expenses of the pilot projects for indigenous languages varied enormously, with those supported by IPHAN (the Juruna and Asurini projects) being far more expensive. The approximate figures for four pilot projects to survey indigenous languages are given in Table 3 below.

Tab. 3: Summary of costs for the INDL pilot projects for indigenous languages

	Ayuru (Wayoro)	Mbyá Guarani	Juruna	Asurini of Tocantins
Persons surveyed	800	7.000	400	500
Total cost, R\$	14.000	230.000	150.000	228.000
Cost per person, R\$	18	33	375	456
Estimate cost to survey the 800.000 indigenous people of Brazil, R\$	14.000.000	26.300.000	300.000.000	365.000.000

While the expensive projects produced more products, they went far beyond what was appropriate for an efficient national survey in terms of cost and time.

In December of 2011 the president of Brazil signed a decree for the implementation of the INDL, the national survey. This created a Technical Commission with core members from the ministries and from the IBGE. At the same time there was replacement of the IPHAN staff participating in the INDL: the coordinator and administrative assistant left and a young Brazilian linguist with a doctorate from the USA who was a specialist in indigenous languages accepted a fellowship as the linguistic consultant, with the responsibility to evaluate critically the pilot projects and write the instruction manual for the survey. These changes had serious impact for the course of planning the INDL at IPHAN.

It soon became apparent that there had been a sharp break from previous understandings of what the content, methods, and aims of the INDL were. Not only were the complex, costly methods favored, complexity was further increased by advocating multi-disciplinary teams, hours of annotated video and other measures more typical of the intensive documentation of a single language. Moore, the Technical Commission representative from the Ministry of Science, Technology, and Innovation, made a very rough estimate, on the basis of the cost and activities of the pilot projects, that the cost of implementing such complex measures for all of the indigenous languages would be a minimum of R\$240,000,000 – over one hundred million dollars at the exchange rate at the time. If given a manageable budget of R\$5 million per year, the INDL would take 48 years to complete, by which time many of the languages would be extinct. The response of the coordinator of the INDL was that IPHAN was interested in qualitative questions, not quantitative ones. Most members of the Technical Commission, who had followed the survey planning for years, had a different view. Fortunately, agitation in favor of an efficient survey with universal coverage was successful in late 2013 and a realistic view of survey methodology and cost prevailed in IPHAN, with plans then being made with an eye to expense and feasibility.

Unfortunately, IPHAN still considered the INDL mainly as a program for recognizing individual languages as cultural patrimony, with many miscellaneous facts and illustrative recordings being gathered, without a serious, detailed evaluation of the situation of each language. Their field manual for the survey,¹¹ released in 2014, embodies this vision. In a recent reaction, the Brazilian Linguistics Association (Associação Brasileira de Linguística 2015), in its general assembly on 27 February 2015, unanimously passed a resolution which stated that

the Brazilian community of linguists understands that the National Inventory of Linguistic Diversity must include a standardized and obligatory diagnostic of the situation of each language of the country, including, for example, the following questions considered important for the document:

1. The number of speakers and semi-speakers of each language, by age group;
2. The degree of transmission of each language in quantitative terms;
3. The number of people literate in the language and the degree of adequacy of the writing system(s);
4. The degree of maintenance of traditional verbal patrimony (narratives, music, festivals, rituals, etc.) and indication of the forces which impede or promote the maintenance of this patrimony.¹²

The example of the INDL illustrates a frequent tendency in Brazil to recognize the problem of language loss and the need for documentation and revitalization but to respond with simplistic, inadequate measures, often designed by non-specialists who have no successful experience in such matters.

11 <http://portal.iphan.gov.br/uploads/ckfinder/arquivos/Guia de Pesquisa e Documentação para o INDL – Volume 1.pdf> (Accessed 14 November 2015)

12 ...a comunidade brasileira de linguistas entende que o Inventário Nacional de Diversidade Linguística deve incluir um diagnóstico padronizado e obrigatório da situação de cada língua do país, contemplando, por exemplo, as seguintes questões consideradas importantes para os fins do documento:

1. O número de falantes e semi-falantes de cada língua, por faixa etária;
2. O grau de transmissão de cada língua em termos quantitativos;
3. O número de pessoas alfabetizadas de fato na língua e o grau de adequação do(s) sistemas(s) de escrita;
4. O grau de manutenção do patrimônio verbal tradicional (narrativas, músicas, festas, rituais, etc.) e indicação das forças que impedem ou promovem a manutenção desse patrimônio.

6.2 The Brazilian national demographic census of 2010 and the indigenous languages

Another recent initiative of the Brazilian federal government, which seemed promising, is the inclusion in the Brazilian national demographic census of a question on which language(s) the respondent speaks. This would have been extremely useful for evaluating the status of immigrant languages such as Pomerano or Japanese, whose numbers and geographical distribution are not known with precision. Unfortunately, for reasons of economy, only indigenous respondents were asked which languages they spoke.

The census takers used handheld Personal Digital Assistants (PDAs) to enter the data from the Brazilian census of 2010. Maximum efficiency and accuracy could be achieved by having an exhaustive list of all languages and their alternate names and spellings in the PDA. By entering the first three letters of the language name the census worker would be presented with alternatives from which he could select the correct entry. Writing out the names is much slower and more prone to error. Presumably a definitive list of languages will eventually be produced by the INDL, but a reasonable list was needed by 2009 to prepare for the census of 2010. So a database of all indigenous languages was requested from the GTDL by the census planners of the IBGE.

This provoked the old confusion between ethnic names and languages and between population and speaker numbers. Speaker numbers were not included in the PDAs and were only useful for forming expectations of the tasks involved in the census, but in order to be of any value, they still needed to be correct figures and the old confusion between speaker numbers and population figures had to be worked through. The database adopted by the GTDL, which would become the definitive classification for the federal government, had four main columns: (1) the genetic classification of the language (its family), (2) the “language of classification” (a language defined as a group of varieties which are mutually intelligible with each other but not with other languages), (3) the “language of identification” (basically the name of an ethnic group), and (4) subgroups, alternate names and spellings of the ethnic names. Often the third column contained names of ethnic groups who speak the language indicated in the second column. For example, Wari’ would be the entry in the second column as the language of classification and the groups who speak mutually intelligible dialects belonging to the Wari’ language (Oro Nao’, Oro Won, etc.) would be in the third column, with the first column indicating the name of the family, Txapakura. In this way the maximum of information was there. The idea was that if a respondent said he spoke Wari’ or if he said he spoke Oro Nao’ either answer could be put into the table and understood.

The IBGE was puzzled that the indigenous groups do not have separate names for their languages and religions as many societies do. Partly because of this they removed the second column twice, with the majority of the GTDL opting to reinsert it. The classification of the IBGE is official for all of Brazil, including the Ministry of Education, the FUNAI, and other government entities. So it was essential that it should be technically accurate and understood properly.

A further difficulty was that many names of languages of the past had to be included in the database, since some respondents would claim to speak them. There are incentives in Brazil for establishing indigenous identity, such as medical care and land rights. Also if people can recall or learn something of an ancestral language they may feel that they speak it to a certain extent. There are potential legal and administrative problems associated with affirming that putative speakers of languages long considered extinct by authoritative sources really speak them. As a means of avoiding such uncertain claims, the languages in question were designated as “without current classification” in the first column (language family), since there was no basis for equating the putative present version of the language with a historical antecedent. For example, the presumably extinct language Tupinambarana was designated “without current classification” in the language family column rather than designated as Tupi or Tupi-Guarani, pending an investigation of its contemporary status.

In spite of all the precautions of the GTDL, when the results of the 2010 census were published in the press the linguists of Brazil were stunned that the census claimed not the 150 indigenous languages roughly estimated on the basis of consults with researchers working with indigenous groups nor the older number of 180, but rather 274! That was considerably higher than the 209 languages of identification (ethnic names) that were declared by the indigenous people interviewed by the census, the difference being made up of self-declared speakers of languages generally thought to be extinct or perhaps poorly identified languages. For example, 251 respondents supposedly spoke Tupinambarana, which is considered to have disappeared in colonial times (Aikhenvald 2012: 39). For some languages the results were reasonable. For others they were strange. For example, in Table 1.13 of the 2010 census results¹³ only one speaker of Gavião of Rondônia is listed, though there are at least 400, based on Moore’s decades of experience with the group. Looking into the data, an IBGE worker stated that all of the Gavião except one declared themselves speakers of “Tupi-Mondé”, the neologism indicating one branch of the Tupi family. This is doubtful since older speakers prob-

13 ftp://ftp.ibge.gov.br/Censos/Censo_Demografico_2010/Caracteristicas_Gerais_dos_Indigenas/pdf/tab_1_13.pdf (Accessed 14 November 2015)

ably do not even know this term. Serious overestimates of speaker numbers also occur in the same region. For example, in the IBGE table the number of speakers of Paiter (Suruí of Rondônia) is more than double the population. There are five speakers of Aruá, according to Moore's 2010 survey, but the census claims 189. It is perhaps possible to go to the original data collected during the demographic census and resolve some of the problems, but this has not been systematically done and there is danger that the strange numbers and classification will be used for language policy, with possible negative consequences. A much more realistic answer to the question of which and how many indigenous languages are spoken in Brazil was one of the expected results of the Survey of Linguistic Diversity (Inventário Nacional de Diversidade Linguística), discussed in section 6.1.

7 Perspectives for language documentation and revitalization in Brazil

A number of topics have been discussed above which are relevant for language documentation, and some history of major macro forces and initiatives has been outlined briefly. Clearly, the macro forces are unique to Brazil, without close counterparts in more developed countries. With considerable effort it has generally been possible to channel these forces in rational, useful directions. Opposition to documentation programs and to gathering realistic information on the indigenous languages and their speakers has not had much success and grows weaker. The possibility of an intelligent survey of the situation of the native languages of Brazil remains to be determined. If a survey with well-planned diagnostic content, as suggested by the Brazilian Linguistics Association, is in fact conducted it should be possible to obtain an accurate panorama of what is happening to the indigenous languages and identify the factors that affect their vitality. The results of programs for bilingual education, language revitalization, and language documentation could be evaluated, for the first time, to understand what works, what does not work, and why. This information is fragmentary and unsystematic at the present, a fact that has made quality control a major problem in language programs.

Favorable factors for the native languages of Brazil are the enthusiasm of the indigenous groups for language documentation and maintenance, also their increasing technical competence. Training in documentation for indigenous peoples needs to continue, with safe, organized repositories for the documentation produced. The Brazilian community of scientific linguists is increasingly knowledgeable about documentation and including it in their work. The federal

government is basically favorable, though specific agencies are not necessarily prepared for tasks involving native languages, which are, for the unaccustomed, exotic, complex objects. Growth in institutional capacity is important, such as the implementation of the two professional digital language archives in the country.

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