

Language and Ecology: The View from the Kuna Indians of Panama

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This paper explores various ways in which the Kuna language is related to the Kuna natural environment. It will examine words for animals and plants, the organization of words into semantic systems, variation in the use of these words, and the use of the language of ecology in Kuna speaking practices. While not about language endangerment per se, to the degree that Kuna ecology is in danger, the language that is intimately related to ecology is also in danger.

1. Introduction

The purpose of this presentation is to investigate various ways in which the language of the Kuna Indians of Panama is related to the Kuna natural environment. I will begin by looking at words (as they would appear in a Kuna dictionary). The rich diversity of the Kuna tropical forest environment (flora, fauna, etc.) is reflected in an exuberance of words for animals and plants. I will then discuss the organization of words into systems, focusing on the ways in which the words for various plants are related. Next, I will talk about the rich and elaborate variation in Kuna names for plants and animals, including day and night names, ritual names of various kinds, mythological

names, and playful, humorous names, as well as a yet to be investigated dialectology of the Kuna vocabulary of flora and fauna. This leads me to discuss the ways in which names of plants and animals are used metaphorically and symbolically. Finally, I will talk about the use of the language of ecology in Kuna speaking practices, especially in curing chants, political speeches, and humorous stories. While I do not intend this talk to be about language loss or language endangerment per se, it is about the relationship between language and ecology. To the degree that Kuna ecology is in danger (and it is, in various ways and for various reasons) the language that is intimately related to it is also in danger.

While my focus here is on my own work with the Kuna, I want to frame it within a more general discussion, beginning with a brief history of attention to ecology in linguistic anthropology and ending with a call for a project to document and archive linguistic information about ecological matters in the indigenous languages of Latin America. I begin with the history.

A paper written by Edward Sapir in 1912 entitled *Language and Environment* is typical of the work of Sapir in this period of the professionalization of anthropology and linguistics. The paper “pooh pooh’s” existing theories, such as the idea that harsh sounds are found in harsh environments or that certain types of grammatical structure are characteristic of particular climates, uses actual data from languages to counter such views, and shows that linguistic form is due rather to the nature of language structure and language change in and of themselves or to the relationship between language and society. At the same time, he proposes a more sophisticated approach to the relationship between language and ecology with a focus on vocabulary and mediation by social factors. It is this kind of approach, with added features, especially in the area of discourse, which is again coming to the fore within linguistic anthropology.

Sapir argues that vocabulary is the best place to look for relationships between language and environment. Vocabularies contain specialized inventories of the flora and fauna, topography, and physical environment of a region, with complex semantic organizations, often involving hierarchies of various kinds, as well as such features as color, stage of growth, and whether an item is raw or cooked. Specialists in

this flora and fauna, such as curing specialists, will use precise terms to refer to particular plants, terms that are endemic to the language since they reflect species that are endemic to the local ecology, while non-specialists will simply label them as tree, bush, or weed.

Drawing on languages of the Pacific Northwest, Sapir notes that elements of ecology enter into grammatical form in that prefixes and suffixes with referential content reflect and express aspects of the natural environment, having meanings such as “up river,” “down river,” “toward the coast,” “away from the coast,” and so forth. In Kuna, and in many other languages of tropical and lowland South America, there is great attention to form, shape, and texture in nominal and verbal prefixes and suffixes, enabling fine-grained expression of aspects of local ecologies.

Sapir’s provocative and, we can now say, pioneering article leads us to several topics and concerns in contemporary linguistic anthropology. The first is a continuing interest in ethnoecology (the title of a recent book edited by Ted Gragson and Ben Blount, 1999), which combines the field of the study of native knowledge and cognition with issues of resources and rights. I personally find it lamentable that so few anthropologists and linguists are involved in this area of research, which is not as fashionable as it was in the 1950s and 1960s when it was part of a fertile intersection of anthropology and linguistics.

The second is a concern on the part of some linguists and fewer anthropologists in the issue of endangered languages and dialects, in particular when this concern is focused on languages as repositories and expressions of knowledge about the local ecology. There is an interesting and indeed fascinating co-evolution between locally adapted plants and animals and the knowledge that small cultural groups have of them, as expressed and created in language. This is particularly true in tropical regions where there exists an endemic richness and complexity in both species and languages and where dominating species and dominating languages are increasingly wiping out diversity (See Hale 1992; Harman 1996; Hill 1997). Just as traditional environmental knowledge is increasingly being seen as valid scientific information by biologists, it is disappearing at an alarmingly rapid rate. As stated by Stephan Schwartzman, “Tropical forests hold between 50 and 90% of the living species on the planet. This margin

of uncertainty accounts for what biologists do not know about the plants and animals in tropical forests. No more than one-tenth of the species alive are known to science (and maybe only one-one hundredth)” (Schwartzman 1999:62).

A third area of contemporary thinking related to issues of language and ecology is the study of the anthropology and linguistics of landscape and place, often from a discourse perspective. A collection of papers edited by Steven Feld and Keith Basso entitled *Senses of Place* is reflective of this approach (1996).

Most of my research having to do with the Kuna has dealt with language in relation to culture and society and has increasingly been focused on Kuna oral literature, what I like to call verbal art. While this work touches on ecological questions, and indeed these are often crucial, in this paper I will focus upon the ecological aspects.

2. Vocabulary

As Sapir taught us, the first place to look at language in relation to ecology is in the area of words—vocabulary. A dictionary of a language includes a repository of items in the natural environment of a group of people—plants, animals, fish, birds, insects, and so forth. But it is also a selective index of an ecology, with elaboration and focus in some areas and less attention in others.

In general, the density and diversity of the Kuna tropical forest ecology is reflected in lexical diversity. For example, on one of the first days I was in San Blas/Kuna Yala, I was traveling on the sea with a Kuna friend who was fishing as we moved along. Since I was there to learn the Kuna language, I asked him for the names of fish in Kuna. Without having any fish in front of him and without hesitation he gave me name after name, until I had filled up an entire notebook. We tried to translate the Kuna names into Spanish, but most of the names had no Spanish equivalent.

Most of these words are not found in either Holmer’s quite excellent dictionary of Kuna (1952) (or are simply listed as “name of a fish.”) or in Erice’s *Diccionario de la Lengua Kuna* (1982). More recently, I sat down with a guide to fishes of the Caribbean and tried, with the assistance of Anselmo Urrutia, very knowledgeable in Kuna

language, culture, and ecology, to match Kuna names with the pictures and names in the guide.

(1) Examples of fish

Fish	Translation	Fish	Translation
<i>ua arrat</i>	parrotfish	<i>mila</i>	tarpon
<i>orwaip</i>	triggerfish	<i>tapu</i>	sennet
<i>Tuku</i>	grouper, bass	<i>ikku</i>	snook
<i>Kelu</i>	jack	<i>ua putte</i>	trumpet fish
<i>Nalu</i>	snapper	<i>ua kepkep</i>	san tile fish
<i>ua taktak</i>	blue tang, surgeon	<i>tasi</i>	flame fish
<i>puttu</i>	filefish	<i>ner kuki</i>	hamlet
<i>ua oyo</i>	burrfish	<i>sespa</i>	creole fish

Often each of these words is the name for a class of fish, the members of which are labeled by size and other characteristics, such as their color, a plant they resemble, or places where they are located.

(2) Examples of fish associated with particular characteristics.

Fish	Translation
<i>ua arrat totokkwa</i>	small parrotfish
<i>ua arrat tummati</i>	big parrotfish
<i>ua arrat sichitti totokkwa</i>	small and black parrot fish, called “midnight” in guide
<i>akkwapir ua arrat</i>	on top of coral parrotfish
<i>orwaip sapan sipu</i>	parrotfish with white belly, called “gray triggerfish” in guide
<i>ua taktak sapkakiiti</i>	blue tang like the sapka plant leaf, called “doctor fish” in the guide

I will discuss the issue of semantic classification more fully in a moment.

Similarly, a number of years ago I brought with me to Mulatuppu a recently published book of birds of Central America and the Caribbean. I sat down with Anselmo Urrutia and showed him the book. There were literally hundreds of birds as well as names for them all in Kuna.

(3) Examples of birds

Bird	Translation	Bird	Translation
<i>kwasir</i>	wood-rail	<i>sikwaili</i>	bare-throated tiger heron
<i>(kakan) kwasir</i>	Columbian crake	<i>pokko</i>	rufescent tiger heron
<i>takki takki</i>	spotted rail	<i>tolop</i>	“like” white-necked heron
<i>patu pipis</i>	sungrebe	<i>nalakke</i>	bat falcon
<i>tulikwa tummat</i>	sunbittern	<i>nini</i>	plumbeous hawk
<i>ukku</i>	quail	<i>noo</i>	Falcon
<i>puttu</i>	Great Tinamou	<i>kau kau</i>	grey headed kite
<i>suirkwa</i>	little Tinamou	<i>tuk tuk</i>	Pigeon

As with fish, each of these names is often the label for a class.

(4) Examples of birds associated with particular characteristics.

Bird	Translation
<i>yal ukkur</i>	rufous-fronted wood-quail: in Kuna literally “mountain quail”
<i>ukkur kammu sipu</i>	black-breasted wood-quail: in Kuna “white lipped quail”
<i>ukkur wakar kinnit</i>	marbled wood quail: in Kuna “red faced quail”

While we are fortunate to have several dictionaries of the Kuna language, including Holmer (1952) and Erice (1982), none has listed the large number of fish names and bird names that I wrote down during those days. The same is true for many other areas of ecological vocabulary, for example, plants and trees used in Kuna life from house construction to cooking to medicine and curing. This work remains to be done and is a critical task if we are to have an adequate compendium of the lexical knowledge encoded in the Kuna language.¹

Related to the names for things are words used to describe them and their properties. In linguistic terms, these are often verbs and adjectives. The Kuna language has an elaborate set of verbs to describe the movements and actions of things, in particular humans and animals. Sometimes a verb is used to describe a particular movement of a particular animal.

¹ A wonderful start is Ventocilla, Herrera, and Núñez 1995.

(5) Verbs related to snakes

Verb	Translation
<i>tipamakke</i>	sticks out his tongue/fangs
<i>aketemakke</i>	salivates
<i>tikkinmakke</i>	moves his fangs up and down
<i>yalumakke</i>	wags his fangs
<i>mokimakke</i>	drags along the ground
<i>piknimakke</i>	turns over on the ground

I found none of these verbs in Holmer (1952) or Erice (1982). I am convinced that the many words for features of the Kuna environment, in particular the flora and fauna, and the verbs associated with them are in great danger of disappearing from the language as individuals become less involved in traditional activities such as farming, hunting, curing, and cooking, and as more and more Kuna move to Panama City.

Adjectives also provide very precise descriptions. Table (6) below offers examples of adjectives, descriptive of plants and trees, from an area of Kuna vocabulary in which words are reduplicated in a playful but meaningful way. Here we have an entire area of lexicon and grammar involving reduplication, intimately related to ecology, which has never been reported in the literature on the Kuna language and which is probably unknown to recent generations of Kuna, especially city dwellers.

(6) Examples of adjectives

Adjective	Translation
<i>ukka ukka</i>	having pieces of bark peeling off
<i>ikko ikko</i>	spiny
<i>kwinni kwinnikwa</i>	having many small holes
<i>iti iti</i>	jagged
<i>sirpi sirpi</i>	having close circular lines, as around a tree or pole
<i>ala ala</i>	slightly bumpy

3. Organization of Words

The vocabulary of a language is not merely a matter of words and lists of words. Words are organized into sets and fields, relationships,

and classes of many kinds, as my examples of fish and bird names illustrates. The semantic organizations underlying Kuna vocabulary, in particular the ecological vocabulary, have not been much studied. James Howe and I carried out a study a number of years ago dealing with the semantic organization of what the Kuna call *sappi turpa*, the words for various types of crops and forest products found in the jungle (1975). It might be interesting to begin with how this area of vocabulary is organized in English and Spanish. There exist various possibilities. Some individuals might think in terms of botany and classify a tomato, for example, as a fruit, because it has seeds, and a potato as a root crop. Others might classify in a culinary fashion, designating items as part of the structure of a meal, thus classifying a tomato as a vegetable or part of a salad.

Howe and I found Kuna crops and wild forest products classified according to the kinds of access people other than their owners may have to them. Thus, corn is never given to anyone, coconuts are given to family members, rice is offered to others by owners, small quantities of bananas, avocados and yams are given when asked for in advance, pineapples or sugarcane can be eaten on the spot, limes and peppers can be taken home in a small quantity if asked for (either before or after taking), mameys and mangos can be taken home if they have fallen to the ground, and various kinds of wild nuts are considered to not have any owners at all.

In addition to its mental or cognitive organization, this classification is relevant to everyday life, in particular to such critical problems in Kuna social and economic organization as theft, generosity, and a conflict between cash crops and the subsistence economy. In addition, Kuna individuals vary in their application of some of these semantic/cognitive access rules. I suspect that today we would find much more variation than we did when we carried out this study, especially if we included Kuna living in Panama City.

There is no doubt that Kuna vocabulary offers complex organizations and classification of elements of ecology. One I have looked into is that of *kapur*, the small hot peppers used in curing rituals. Investigating the hot peppers mentioned in a performance of *kapur ikar* "The Way of the Hot Pepper," a chant used to cure high fever, which I recorded, I found 53 types of hot pepper, organized in classes

(Sherzer 1974). These classes are organized by such features as color (white, blue-green, and multicolored pepper). There are naturally occurring forms, such as *sankwa*-type pepper, as well as forms that have been transformed, such as toasted and ground pepper. And there are forms that, while not necessarily existing in nature, are part of the pepper spirit/metaphorical world, such as misty pepper and transformed like the sea pepper. The types of hot pepper are not named randomly, but rather in systematic fashion, from both a semantic point of view and within the chant itself. The naming of the hot peppers takes place within a long portion of the chant in which a particular pattern, with some slight variation, is repeated 53 times. In each repetition a different type of pepper is named. The resulting discourse structure makes explicit the semantic taxonomy of hot pepper used by the performer of the chant. The chant (and the taxonomy on which it is based, or which it makes manifest) lists each type of pepper followed by its subtypes. This semantic taxonomy is plugged into a parallelistic pattern of the chant structure in a systematic way, namely by beginning at the top of a node in the taxonomy, moving down for each type and subtype until it is completed, and then moving on. The verse pattern is as follows:

(7) “The Way of the Hot Pepper”

In the north
 Name of pepper
 Name of type of pepper
 Name of subtype of pepper
 Is named
 The flowers are perceived
 The leaves are perceived
 The stems are perceived
 The seeds are perceived

Knowledge of and especially utterance of long and complex lexical taxonomies such as this one are important aspects of magical power and control. Kuna ritual specialists must be botanical taxonomists. And in chants such as “The Way of the Hot Pepper,” knowledge of Kuna ecology is archived. Information stored in such oral archives is extremely valuable to botanists interested in medical, culinary, and other properties of plants.

4. Sociocultural Variation

Now I turn to the ways in which the choice and use of words for elements of the Kuna ecology vary in different social and cultural contexts. I have already mentioned or alluded to this in some of my examples. Not everyone knows the reduplicated adjectives describing tree and plant textures. I had never recorded them until just a few years ago. I suspect that this is an area of vocabulary restricted to individuals who spend much time in the jungle, farming, and, in particular, fathering medicinally valuable plants. James Howe and I found variation in the classification of crops and forest products. I am sure we would find considerably more today.

While the Kuna language is relatively uniform in its phonetic/phonological/ grammatical/basic lexical properties, there are no doubt significant dialectal differences in the vocabulary of flora and fauna, although these have not been systematically studied. The Kuna territory, the San Blas islands, and the Darien jungle, being tropical, manifest local variation in the dense and complex array of flora and fauna, with species and subspecies endemic to very small regions. Vocabulary reflecting and expressing this situation should also be endemic to very small regions.

In addition to these examples, Kuna vocabulary, and in particular that referring to animals and plants, includes much variation in that the same animal or plant is often labeled differently according to whether it is used in everyday conversation, in a myth, in a magical, curing chant, in a playful riddle, or, in some cases, at night.

(8) Examples of terms in everyday speech, in the mythic language of chanting chiefs, and in the magical language of curing.

Translation	Everyday Speech	Mythic Language	Curing Language
white-lipped peccary curassow	<i>yannu</i>	<i>oloweliplele</i>	
tapir	<i>sikli</i>	<i>olokupykkilele</i> (or) <i>olomiikinyaliler</i>	<i>itoni (or) mii</i>
agouti	<i>moli</i>	<i>oloalikinyalilele</i> (or) <i>oloswikinyaliler</i>	<i>ekwilamakkatola</i> (or) <i>ekwirmakka</i>
	<i>usu</i>	<i>olokwirkwikalilele</i> (or) <i>oloyayakkiny</i>	<i>aliler</i> <i>yaya (or) yayamakka</i>

(9) Examples of play or riddle names.

English	Everyday Speech	Play/Riddle Name	Literal Translation
deer	Koe	upsan saya	cotton ass
		ipya kwiintakleke	eyes open
crab	suka	pormo yarkan	tin can back
		kapur ipya	hot pepper eyes

(10) Examples of night names.

English	Everyday Speech	Night Name
guava	marya	kaya piri
snail salu	tios uwaya	
peach palm	nalup	ikko turpa

What's in a name for the Kuna? Plenty. Knowing the name of an object, in particular a plant or an animal, a name originally given in mythic times, enables one to control the object today.

5. Metaphors and Symbols

Kuna speaking practices, especially formal and ritual ones, make use of language in metaphorical and symbolic ways. This often involves ecology and can be quite complex. I will give but one of many examples. In political speeches, especially those involving the installation of new political leaders such as chiefs, there is a set of standard metaphors used to refer to these leaders. A very common metaphor compares the installation of a chief to the planting of a tree. Various of the many trees found in the nearby jungle represent different types of chiefs. The sticky *isper* tree, which gives up its fruit easily, is a friendly, generous chief, but one who might be a little too easy-going and perhaps susceptible to corruption. On the other hand, the tall, hard *ikwa*, *ina kale* and *sapkwa sis* trees are stingier and less accessible but sturdier chiefs. These metaphors can be elaborated and developed in various ways. A tree can be rotten in some parts and put aside for a while and then used again. This is a chief who has not performed well from the point of view of the community and is removed, but is still basically qualified for chief, and is later reinstated.

In one speech I recorded, the speaker preferred the *isper* tree to the *ikwa* tree. He said that the *ikwa* tree had wood that was too hard and thus

difficult to obtain; the *ikwa* tree is an autocratic chief. The *isper* wood is softer and its fruit is easier to get; it is a democratic chief. And other trees, plants, or animals can be used in this metaphor complex as well. The *isper* tree attracts butterflies, deer, and birds, that is, all kinds of people. The *ikwa* tree feeds only white-lipped peccary, tapirs, and squirrels, that is, only village leaders. A chief might be compared to a parakeet singing in a tree, since a chief chants from his hammock. A not-so-positive metaphor compares a chief to a spider or cockroach causing rotting within a pole. All of this is part of a Kuna theory of metaphorical co-evolution, based of course on the Kunas' actual observations and knowledge of co-evolution (see Sherzer 1990: chapter 4).

Use of ecological terms in metaphorical and symbolic ways depends on knowledge of ecology—not only the words, but also the properties of the trees, plants, and animals that these words express, as well as the discursive/verbal art/literary traditions associated with them.

6. Discourse and Ecology

Discussion of metaphors leads us to the uses of ecology in the language of Kuna discourse—myths, curing and other magical chants, political speeches, stories, and everyday conversation. The intimacy of the language/ecology relationship in Kuna life is reflected in and expressed through the many ways in which plants, animals, and other elements of Kuna ecology are found in Kuna discourse.

I begin with everyday interaction—conversations and narratives. Especially Kuna specialists (but traditionally this meant almost everyone) talk about flora and fauna as they fish, hunt, farm, gather medicinally useful plants, and walk along in the jungle. They talk about their names, where they found them, their properties, their significance, and their symbolism. Now to more verbally artistic uses of ecology.

The chanting and speaking of chiefs in the Kuna gathering house deals with many topics from myth, to history, to personal experience. One common theme, which I heard and recorded many times in Mulatuppu, is a listing of the plants and animals in the jungle, including planted crops, reminding people that they were given to the Kuna by Father, God, and must be cared for by the Kuna. Here is an example from a chant from a Mulatuppu chief, Mastaletat, now deceased:

(9) Mulatuppu chant

Father sent us to this mountain say hear.
 In order to care for banana roots for him I pronounce.
 In order thus to care for taro roots for him say hear.
 In truth I pronounce.
 Thus in order to care for living yams for him say hear.
 I pronounce.
 Thus in order to care for living squash for him say hear.
 I pronounce.
 Thus in order to care for pineapple roots for him say hear.
 Father gave us this mountain.
 “Here together you will be,” say.
 Father said he did I pronounce.
 Father left white-lipped peccary strongholds say.
 We came in order to care for them say.
 Father left tapir strongholds see say.
 We came in order to care for them for him say.
 Father left living collared peccary see say.
 We came in order to care for them say.
 Father left living agouti see say.
 We came in order to care for them say.

Notice the extensive semantic and syntactic parallelism and the framing of each line and verse. As in “The Way of the Hot Pepper” discussed earlier, this parallelistic format is a way for the Kuna to orally archive their knowledge of their ecology.

Curing chants index both plants and animals, the latter as protagonists in a struggle between the causes of disease and the curers of disease. Various plants, especially those with curative properties or properties which enable individuals to have such talents as being successful hunters, are addressed directly, often using their magical, spirit names, such as *inpiseptili* for the *pisep* “basil” plant and *nele pina isepa nele* for the *kapur* “hot pepper” plant. Snakes are addressed in their spirit names in order to control them. Examples are *maci aktikunappi* and *olowintunakpe*. Many stories, especially humorous ones, deal with the exploits, interactions, competitions, and foibles of animals, such as agouti, jaguar, monkey, tortoise, and sea turtle. These animals are both models of and models for human actors in the Kuna

scene of life. They reflect behavior as the Kuna see it and express an ideal of what Kuna should be like.

In Kuna literature we see ecology in Kuna terms—as a pharmacy for use in curing, as a supermarket full of things to eat, as a source of gathering and hunting, and as a vast and complex potential for metaphor and verbal art.

7. *inna sopet ikar*: “The Way of the Making of *Chicha*”

Following are illustrations of the richness of Kuna ecology as found in Kuna oral literature. These examples are from *inna sopet ikar*, “The way of the making of *chicha*,” which I recorded from Mulatuppu chief Mastaletat and of which I have been recently preparing a translation. The purpose of this chant is to insure that *chicha* is successfully prepared for a puberty rites festival. It is performed by the person directing the making of this *chicha*, in this case Mastaletat. It describes in beautiful detail not only the making of the *chicha* but also many aspects of the festival. Among the animals found in this chant are *korki* “pelican” and *tete* “armadillo,” both used in making flutes played in the ritual. The *kannir* “chicken” crows at the beginning of the ritual. It is called either *pule kokoli pap walakanti ulukkana*, *ulukkan poytule*, or *ipe ulukka kokopana*, referring to its wings and to its pecking or crowing sound. People bathe in the river before dressing for the ritual and *esko*, small river sardines, swim through their hair. They are called *ia wala tulaki tolakampi* “the inhabitants of the river.” The *kantule* (master of ceremonies of puberty rites) has a hat made from a *salu punnu* “macaw’s tail.” The principal plant involved in this chant is *kai*, the sugar cane that ferments into *chicha*. It is called *puna olo kaypikintili* “sister golden *kaypikintili*.” Various plants are used to aid in the cooking/fermentation process. These include *naa* (called *naa tilikkwa*), *kanna* (called *kanna tilikkwa*), and *wawarkwa* (called *wawarkwalikwa*). Vessels of *chicha* are placed on shelves made from various types of wood, including *ukkur wala* “balsa” and *ila wala* “palm.” Various plants are used for jewelry, make up, and perfume: *nunap* beads (called *ipe nunapa kiakampi*) for their nice look and smell, *makep* (called *ipe kikkaki pakkwamakka*) the red aciote dye used to redden cheeks, and *muttu* (called *ipe muttulawalakampi*), the black resin used to make black lines on the face.

8. Conclusion

Kuna language, culture, and ecology are tightly bound together. Their maintenance and preservation are intertwined. While in many ways Kuna language is stronger than it has ever been and is spoken by more people than ever, words, semantic structures and organizations, chants, myths, and stories are being lost and with them a complex expression of Kuna ecology through language. Because of this situation, I began a number of years ago, in collaboration with Kuna individuals of various generations, a systematic archive of the Kuna linguistic materials I have collected and analyzed, especially recordings, transcriptions, and translations. This is a tape and cassette, paper, and, increasingly, electronic, archive matching the mental and oral archive which Kuna individuals possess in their heads and discourse. More recently, I and colleagues here and elsewhere have begun a project to create a web-based archive of the indigenous languages of Latin America, focused on recordings, transcriptions, and translations. This project has important scientific, as well as political and ethical implications and consequences.

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