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A Tale of Two Worlds: A comparative study of language ecologies in Asia and the Americas

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Language use patterns of individual speech communities are largely conditioned by the different language ecologies in which they are immersed. We believe this ecological stance helps explain why minority languages of Asia are more likely to be sustainable than those in the Americas. We have identified fourteen traits which characterize ecologies in general, describing how they play out differently in the Americas versus Asia. Each trait is considered to be on a continuum, with opposing values that measure whether conditions are more or less favorable to language maintenance. On one side of the continuum, we discuss the values in the Americas, and explain how these are more favorable to language shift. On the other side of the scale, we talk about the values in Asia, and explain how these are more conducive to language maintenance. To show the application of these traits, the paper also includes two in-depth case studies as prototypical examples from each area, one from the Americas and one from Asia. We conclude with some comments about how these traits can be useful for those engaged in language development work.

The backstory This paper was birthed out of our life experiences. In the following paragraphs we will tell our stories. They are our accounts of field work among particular tribes in two very distinct places. These experiences led us both to the same question, “Why do languages act so differently in these two worlds?”

SA: By 2013, I had been studying minority groups in the Americas for twenty years. I thought I had a good understanding of how tribal languages functioned. I had spent a lot of time and effort trying to encourage people to maintain their indigenous languages, or to begin speaking them once more. I met with little success, and was beginning to believe minority languages everywhere were doomed. I thought the only ones that could survive were the ones that had remained isolated from the mainstream society.

Then, I moved to Malaysian Borneo and began doing research on a small group called Sebuyau. These people had been in intimate contact with mainstream society for many generations. Yet, there was no evidence at all of language shift. The Sebuyau of all ages continued to speak their language vigorously. At first, I was perplexed as to how this could be, and thought the group might be an anomaly. But after a year, I

began realize many of my ‘American’ assumptions about minority languages did not apply to the Sebuyau at all. As I traveled around Asia some, I started to see language use patterns in other tribes that were similar to what I was observing in Borneo. This started me thinking more about language ecologies, and eventually led to this paper.

DE: My story is a parallel one. It starts out with 20 years of off and on contact with the Mamaindê language community of west-central Brazil. I was determined to help them along the path of language development, particularly in terms of vernacular literacy. A previous linguist had worked with them in the 60s and 70s, introducing reading and writing in L1.¹ Although this initial program was discontinued in 1977, I was convinced that it would only be a matter of time before the Mamaindê would once again become enthused with vernacular literacy and embrace it as their own. But it never happened. A few years before my arrival on the scene, the government started a village school and Portuguese literacy was introduced. Shortly after the arrival of the school, government jobs and project funding became available to those who could read and write. Portuguese literacy became a hot commodity. By the time we re-introduced Mamaindê literacy in the early 90s, the literacy and education domains had already become solidly associated with Portuguese. Any need or function for L1 literacy, if there had ever been any, remained in the past.

In the last three years I have been teaching sociolinguistics at Payap University, northern Thailand. Many of my students are members of minority language communities from Southeast Asia, doing their MA field work on the sociolinguistic situations of their own communities. I have also begun leading language development workshops throughout Asia. These workshops target participants who are members of local endangered languages. Advising students and engaging with local communities in workshops has provided me with glimpses into the language ecologies of minority groups in this part of the world. What has jumped out at me in the process is the vast gulf between language use patterns reported by members of minority groups in Asia, and the patterns I am familiar seeing in the Americas. This paper addresses that gulf.

1. Introduction

1.1 Setting the scene We begin with a background to language vitality studies. In 1992, Michael Krauss wrote a seminal article in the linguistic journal *Language* that sounded the alarm of endangered languages. He likened them to endangered species, and warned that they were becoming extinct at an alarming pace. Although the rate of this extinction has been neither as dire nor as rapid as Krauss’ predictions, his point was well taken. Over the past twenty years, minority communities of the world and the languages they speak have become a growing topic of study. Researchers have

¹L1 will refer to a traditional mother tongue, and L2 will refer to a majority or national language. We employ these conventional terms for their ease of use but recognize their limitations. Even when a traditional language is replaced by a majority one, this paper will continue to refer to the majority language as L2 (an unfortunate misnomer, we admit). Another weakness of the L1/L2 terminology is the assumption that one’s earliest repertoire is acquired in a serial fashion rather than in parallel (or ‘at the same time’). The serial model appears to fit most Western minority groups, but we are finding a growing number of communities in Asia (and elsewhere) where a parallel model is required.

realized they can have a role in sustaining minority languages and many have become involved in revitalization efforts. Local speech communities have also begun efforts to develop and maintain their own languages. Nevertheless, languages are still dying, faster in some parts of the world and slower in others. Their demise is accompanied by the loss of specific bodies of knowledge and ways of life.

The relative ‘health’ of languages is gauged in terms of the rather abstract notion of ‘language vitality.’ While originally the phrase primarily referred to the percentage of community members who use a language, today it can also mean the number of functions for which it is used. We can say the higher the percentage of speakers and/or the higher the number of functions, the higher the vitality. The lower the percentage of speakers or the lower the number of functions, the lower the vitality. This lower vitality is a sign of ‘language shift,’ a phrase applied to communities that are opting to use another language for the functions of everyday life. Numerous authors have identified the multitude of social and environmental conditions contributing to language shift (Giles et al. 1977; Holmes 1992; Edwards 1994; Wardhaugh 2002; Mesthrie et al. 2000; Crystal 2000; Dorian 1998; Paulston 1994; Grenoble and Whaley 1998; Nettle & Romaine 2000; Fishman 1972; 1991; 2002; 2004, to name a few).

1.2 Focus and hypothesis This paper will focus its attention on languages that are at a very specific place in terms of vitality. We will call it ‘sustainable orality.’ This refers to a condition where there is full intergenerational transmission and virtually every member of every generation of the language community speaks the heritage language.

While sociolinguists would all agree that ‘sustainable orality’ is crucial to language maintenance, it is also a very diverse level of vitality that is often oversimplified. It would be easy to believe that all groups at this level share common experiences and employ the same language use patterns. This appearance of homogeneity, however, is an illusion. The more careful approaches to assessing vitality, such as the UNESCO Language Vitality and Endangerment approach (UNESCO 2003) and Lewis and Simons (2015), have tried to avoid simple definitions that employ a single scale, and have taken significant pains to identify sustainable orality by way of additional factors that inform assessment. The LVE approach utilizes 9 additional factors, and Lewis and Simons (2015) employ 5 conditions.² This care to reference additional information is an explicit recognition that every level of vitality has much internal variety. Based on the above, our hypothesis is that diversity within the level of ‘sustainable orality’ can be broadly characterized by a difference in language ecology types.

We suggest there are at least two types of ecology. The one kind tends to be more prototypical of the Americas, while the other is found more frequently in Asia. We will characterize these two types of language ecologies by way of 14 criteria that

²According to Lewis and Simons (2015:157–190) there are five conditions that characterize sustainable language use: Function, Acquisition, Motivation, Environment, and Differentiation (diglossia). Lewis and Simons encourage an approach to language assessment that applies these five (FAMED) conditions to each language in order to arrive at a more careful determination of language use.

tend to cluster around 2 poles of a continuum, one for the type of sustainable orality typically found in the Americas, and the other for the type generally found in Asia.

As Lewis and Simons remind us (2011:10), the future prospects of a language are related to its current status. This means that a misreading of ‘where a language is’ may foster a false perception of ‘where the language is going.’ We hope this paper will help people who work on languages (whom we lump under the term ‘language practitioners’) be more effective in their communities.

1.3 Sources A good number of first-hand sources provided the data for these criteria. We are intimately familiar with some of these, and there are others we are just beginning to understand. The languages, countries and locations covered in these sources were not chosen in any methodical manner. Rather, we simply reflected on the languages we have personally studied over the past 20-some years in both the Americas and Asia. Our primary data comes from the results of (a) sociolinguistic surveys, (b) sociolinguistic workshops, and (c) specific case studies we have researched in depth in the Americas (Brazil) and Asia (Malaysia). The clusters on the Americas side are probably more reliable because we have worked in the New World for over twenty years. In contrast, we have been in Asia for only three years and have researched fewer languages there.

Let us explain our sources in more depth.

- a) **Sociolinguistic surveys:** These were trips to collect data on language use patterns in a number of minority communities: *Brazil*—Cinta Larga, Gavião, Calon, Xokleng, Jarawara, Mamainde, Jamamadi, Banawa, Karipuna, Creole French, Carib, Panara, Piraha, Tenharim, Tora, Fulnio, Latunde, Negarote, Suruí, Zoró, Matses, Kanamari, Marubo Irantxe, Aikana, Myky, Enenawe-Nawe, Wayampi, Emerillon, Kaxinawa, Shanenawa, Yawanawa; *Mexico*—Nahuatl, Mixe; *Malaysia*—Bookan, Bonggi, Sungai, Kalabakan, and Tutong.
- b) **Community Based Language Development (CBLD) workshops:** Mother tongue speakers of many minority language communities participated in these CBLD workshops. In addition, about half of the participants were linguists working with the tribal groups we were studying. Together, the mother tongue speakers and outsiders arrived at assessments of local language use. Three five-day workshops were held in *Malaysia* (one in Sabah, one in Sarawak, and one in peninsular Malaysia), covering the following minority languages: Bajau, Begak, Bongi, Kadazan Dusun, Kalabakan Murut, Lotud, Murut Serudung, Bidayuh Bukar-Sadong, Sebuyau, Jagoi, Kajaman, Bidayuh Bau, Bidayuh Biatah, Melanau, Bisaya, Lanoh, Temiar, Jahut, and Jahai. In a CBLD workshop in Islamabad, *Pakistan*, we studied the following minority language groups: Seraiki, Gojari, Palula. A workshop in Surabaya, *Indonesia*, (hosted by the Indonesian Linguistics Society) involved assessments by native speakers of Bawean, Palembang, Balinese of Surabaya, and Surabaya Javanese. In *Brazil*, two workshops were held in the capital, Brasilia, with participants from eight indigenous lan-

guages: Paumari, Nadëb do Rio Negro, Tembê, Kuripako, Matis, Nheengatu, Assurini, and Aikana.

- c) **Case studies:** These are the languages where the authors have each spent years of time gathering data: the Mamaindê language community of west-central Brazil (Eberhard 2009), and the Sebuyau language community of Sarawak, Malaysia (Anonby 2014). We do not assume that all indigenous communities in Brazil are similar to the Mamaindê, nor that all languages in Malaysia pattern like the Sebuyau. Rather, Mamaindê and Sebuyau should be seen as specific and detailed examples of sustainable orality in each region. By way of these case studies we will be able to understand the continuum more clearly. The Mamaindê and the Sebuyau will then be incorporated into the larger picture that we have formed from our interactions with the other languages encountered in the surveys and workshops.

In the pages that follow, we will outline a list of criteria that show how language maintenance can differ in terms of their specific ecologies. We will look at two of these ecologies one at a time, after introducing the continuum we will be using.

2. The language ecology continuum Based on our experience, we would like to propose that ‘sustainable orality’ is not a single, homogenous and predictable label to define a language. Rather, it can be best understood if we think of the various sustainable languages as points on a continuum. More precisely, we are thinking of a continuum of language ecologies, some more or less favorable to sustainable orality. This continuum will be explained shortly. Let us first make clear what we mean by ‘language ecology.’ The term was first popularized by Haugen (1972:325):

Language ecology may be defined as the study of interactions between any given language and its environment...Part of its ecology is therefore psychological: its interaction with other languages in the minds of bi- and multilingual speakers. Another part of its ecology is sociological: its interaction with the society in which it functions as a medium of communication.

Since then, this term has come to be associated with two closely related perspectives (Edwards 2009:216–245). Each of these perspectives deals with the notion of ‘home,’ based on the Greek term, ‘oikos,’ from which ‘ecology’ is derived. The first view is found in much of the recent literature (see Mühlhäusler 2000 and Wendel & Heinrich 2012, among others), where language ecology is properly understood as the study of how to make the best out of the linguistic home. This use of the term is espoused by linguists who employ it for the valuable task of the preservation of language diversity.

The second perspective, and the one we will employ here, is less ambitious. It limits the use of the term *language ecology* to a *description* of one’s sociolinguistic home. We are fully cognizant that ecology has direct implications on language planning. However, we feel that a better understanding of the types of ecologies one is

likely to meet in different regions is a helpful step towards proposing solutions for those ecologies. Voegelin and Voegelin emphasize the application of this descriptive approach in relation to a broad linguistic area:

In linguistic ecology, one begins not with a particular language but with a particular area, not with selective attention to a few languages but with comprehensive attention to all the languages in the area (Voegelin & Voegelin 1964:2).

Following Voegelin and Voegelin, we will thus use *language ecology* to refer to the broader sociolinguistic landscape, leaving aside for the moment the additional tasks of language revitalization and planning within that landscape. For our purposes, the term will describe the linguistic and social affinities that hold between all the communities and languages within a given area. Thus, each community has its own unique language ecology. As Mühlhäusler (2000:318) suggests, “The support system required to keep particular ways of speaking intact differs from language to language and from situation to situation.” This ecology includes all speech varieties that are part of a groups’ repertoire. It also encompasses all neighboring groups in a given region and their languages, regardless of whether they are spoken by group X or not. Each of these communities, and the languages they speak, interact in ways similar to flora and fauna in a given ecosystem. Such a semiotic view helps us to understand the complex nature of the links between language communities and their surrounding cultures. It also explains how a healthy language ecology requires those interactions to remain stable for its survival.

The continuum we propose, the ‘Language Ecology Continuum: Orality,’ measures the relative favorableness of language ecologies with regard to sustaining minority languages. It also makes explicit our belief that there are various types of such ecologies. Our paper will describe two of these ecological types. On the one end of the continuum, we find those ecologies that are the least favorable to sustainable orality. At the other extreme are the ecologies that are the most favorable. We have observed that certain parts of the world and certain types of language ecologies often appear to coincide. Thus we have placed the two regions of the world we are most familiar with, the Americas and Asia, onto the continuum. The Americas typically represents a position close to the ‘less favorable’ type of language ecology, while Asia is typically ‘more favorable.’ For the rest of this paper we will be referring to sustainable languages as belonging to the ‘Asia type’ or to the ‘Americas type.’

The writers suspect that other parts of the world, such as Africa and Australia, might fall even further to the right and left sides of this scale, respectively. Due to our lack of experience in those continents, we leave such evaluations for experts in those regions.

There are many exceptions to the regional classifications we are proposing. Some languages of the Americas behave as if they were part of ‘more favorable’ ecologies, and many Asian languages shift almost as quickly those in the Americas. It may seem that we are addressing one large generalization (all languages with sustainable orality) by introducing yet another set of smaller generalizations (‘Americas’ type

and ‘Asian’ type). However, we believe we can understand strong minority languages better when we group them in regional ‘prototypes.’ We use the terms ‘Americas’ and ‘Asia’ to represent the weak and strong poles on a continuum. This perspective will allow us to appreciate the possible variations found within sustainable orality.

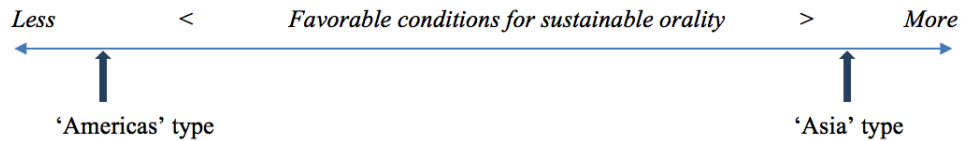


Figure 1. The Language Ecology Continuum: Orality

Each of these ecology ‘types’ will be defined by a set of 14 traits. These will describe the typical language ecologies of a speech community from each side of the continuum. Some criteria are clearly broader in scope and others are narrower. But whether the focus be regional or local, these qualities are all part of the greater ecology. The criteria have not been chosen via any empirical method, nor are they considered to be exhaustive. They have not been listed in terms of any particular ranking. They are offered here simply as those characteristics which both authors have frequently observed as most salient in each of these geographical regions.

The continuum itself, with ‘more favorable’ and ‘less favorable’ at its poles, provides for a relative ranking of all types of oral language ecologies. The 14 traits will provide more specific metrics for making these evaluations of language ecologies. For example, we see the characteristics of ecologies in the Americas as more ‘unfavorable’ to linguistic minorities. It seems to be the case that language sustainability there is tenuous, and healthy language communities must work harder to keep their languages alive. On the opposing side (both of the continuum and of the world), the ecologies found in Asia appear to be less onerous and thus more ‘favorable’ to language maintenance. Thus, the prospects for maintaining sustainable orality are higher. This evaluation of ‘favorable/unfavorable,’ however, is a very general measurement. It only makes sense when applying all of the criteria to a specific language community and its ecology, and then evaluating the overall effect of the whole.

Figure 2 is a list of ecology traits that make a difference in preserving minority languages. At this point the traits are simply defined. These traits will be explained and fleshed out further as we apply them first to our two case study languages and their local ecologies. Later we will comment on their application to broader continental ecologies.

The list below is organized in such a way that the traits are stated in the middle (such as Size/Prestige Gap), with the corresponding values for that criterion on either side (such as Narrow & Wide). The traits are the broad characteristics of language ecologies, and the values represent the possible extremes for each trait.

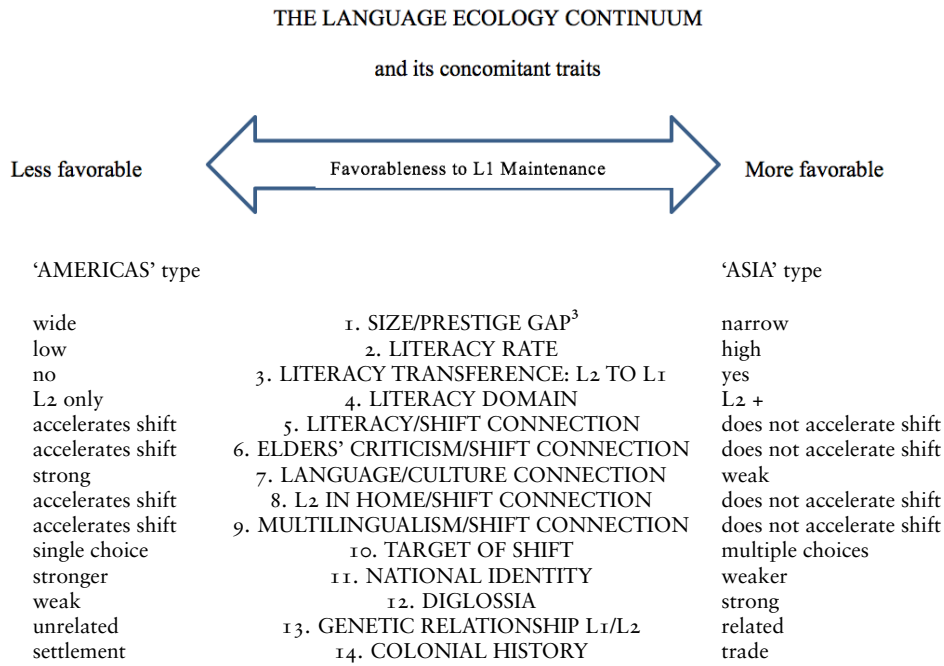


Figure 2. The Language Ecology Continuum and its concomitant traits

Most of the features in the continuum above (for example, national identity and colonial identity), pertain to contact between a typically smaller, weaker community, and a typically larger, more powerful community. Others (for example, prestige) speak to the influence of the stronger economy shaping the weaker one (see Wendell & Heinrich 2012:159-164, for an insightful account into the dynamics of equality and diversity).

3. The case studies These case studies will compare minority communities and their languages to majority communities and their languages.

3.1 Mamaindê The Mamaindê language community of west-central Brazil has had contact with the larger Brazilian society ever since the early 1920s (Eberhard 2009). During that time they went from being a group that was totally monolingual in the Mamaindê language to one where all generations are bilingual, speaking both Mamaindê and Portuguese. Despite this huge shift from monolingualism to bilingualism, the use of their traditional language for oral communication has remained strong. A few traditional domains of language use have been completely lost (for example,

³This trait refers to the relative gap between the size/prestige of a minority society and that of the majority society. We acknowledge there are some low prestige languages that have millions of speakers, and there are a few high prestige languages with small numbers of speakers. However, the norm in the Americas and Asia is for the relative size and prestige of minority communities vis-a-vis majority communities to pattern together.

making pottery and nose piercing). Others are gradually being taken over by modern ones (for example, working for government jobs in the village is replacing slash and burn agriculture). However, on the whole, the Mamaindê language can still be characterized by a state of vigorous oral use.⁴

Literacy in L₁, as described in the backstory to this paper, was fleeting. It came at a time when the Mamaindê were monolingual in their mother tongue. As soon as Portuguese bilingualism arrived, vernacular literacy was completely replaced by literacy in L₂, which is supported by very strong functions and motivations. When we tried to reintroduce literacy in the 90s, vernacular literacy classes were attended by a few, and only as a means of acquiring more familiarity with the Roman alphabet which they knew they needed for Portuguese. The few who spent some time in the vernacular classes excelled the most in Portuguese literacy and did manage to get government jobs. These classes did not lead to any renewed use of Mamaindê literacy in society. After a number of years, children came to class with even better oral Portuguese and there was no longer a sufficient motivation for Mamaindê literacy. When the village teachers attempted to resurrect vernacular literacy again, Mamaindê children exclaimed, “Now we are going backwards.”

We will now apply our criteria to the Mamaindê speech community and its surrounding ecology.

Table 1. Mamaindê Ecology Traits

	Criteria	Value	Comment
1.	Size/Prestige Gap	Wide	There is a tremendous size and prestige differential between the Mamaindê community and the surrounding culture. Brazilian culture is monolithic in comparison. The perceived benefits of the majority culture are obvious and ever present.
2.	Literacy Rate	Low	The Mamaindê practice no literacy in L ₁ , and shallow literacy in Portuguese. For all practical purposes, they are illiterate in both L ₁ and L ₂ .
3.	Literacy Transference: L ₂ to L ₁	No	There is no transference of literacy skills from Portuguese to Mamaindê in any domain. Many of the youth own smartphones now, but use only Portuguese with each other on social media.

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⁴This is true of 3 of the 4 villages, where all generations speak the language.. In the Cabixi village, however, where there has been the most intermarriage with other ethnicities, the first passive speakers of Mamaindê are now in their teen years.

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	Criteria	Value	Comment
4.	Literacy Domain	L2 only	Only the L2 is used in all literacy domains, and only by the small (but rapidly growing) subset of youth who have learned to read. Thus we have a clear compartmentalization of the literacy function: when literacy is involved, the language used in that domain must be Portuguese. This is a diglossic use of language mediums.
5.	Literacy Shift Connection	Literacy accelerates shift	Literacy in any language has sped up language shift among the Mamaindê. The few students who learned the Mamaindê orthography best were then also able to excel at Portuguese literacy, and now hold the few coveted government jobs. These young people have monthly salaries and thus do not perceive any need to practice traditional slash and burn agriculture. They are also the ones who allow Portuguese in their homes more than others, a 'leaky' diglossia that has recently resulted in the first passive speakers in one village.
6.	Elders Criticism/Shift Connection	Accelerates shift	When a Mamaindê adult in the Cabixi village criticizes the younger ones for not speaking their mother tongue, the youth become even more embarrassed of speaking Mamaindê.
7.	Language/Culture Connection	Strong	The Mamaindê in 3 of the 4 villages have maintained many aspects of their traditional culture, such as the female puberty rite, their music, and their food. Shamanism and slash and burn agriculture are still in use by elders. The retaining of these cultural traits continues to be beneficial to their communal life and thus coincides with the retaining of their L1.
8.	L2 in Home/Shift Connection	Leads to shift	In homes with 'leaky' diglossia, the youngest children are passive speakers of Mamaindê.

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	Criteria	Value	Comment
9.	Multilingualism/Shift Connection	Group multilingualism accelerates shift	Multilingualism (L1 and L2) on the part of all speakers is a short lived phenomenon. While the vast majority of the Mamaindê are currently bilingual in Mamaindê and Portuguese, it is a recent situation, within the past 25 years. The loss of L1 has already begun in the Cabixi village. This type of bilingualism in Brazil usually results in a period of shift over 2–3 generations that culminates in monolingualism in L2.
10.	Target of Shift	Single choice	Brazilian society is almost entirely monolingual (except for the very small population of indigenous peoples, and recent migrants). Because of this majority culture trait, the Mamaindê are not under any outside expectation to retain their mother tongue. The expectation is instead to become monolingual like Brazilians. The language choice that Mamaindê have to shift to is only one—Portuguese. There is no other choice. ⁵
11.	National identity	Stronger	The Mamaindê live in a country with a strong national identity where the overwhelming majority of citizens consider themselves Brazilian. Being Brazilian is about knowing what the proper identity markers and norms are, and abiding by them. For example, these boundaries make it clear who is Brazilian vs. Argentinian or Bolivian. The Brazilian identity holds out the promise of enormous benefits for indigenous people.

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⁵In the far western edge of the Amazon basin there are a few areas where multilingualism in languages other than the national language is common. In terms of the overall picture, however, this is a small percentage.

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Criteria	Value	Comment
12. Diglossia	Weak	Oral Mamaindê is spoken by all generations and in almost all social domains. However, Portuguese is also used in many of those settings. In some domains, Portuguese is more common, such as in political meetings, soccer matches, and code-switching among the youth. More recently, Portuguese is even being spoken in some homes alongside Mamaindê.
13. Genetic Relationship L1/L2	Unrelated	The structure of the Mamaindê language, or of any other indigenous language of Brazil, has nothing whatsoever to do with the structure of Portuguese.
14. Colonial History	Settlement type	The ‘settlement’ type of colonization was what eventually brought whole families from Portugal to Brazil. This in turn meant that they put down deep roots and did not return to their native land. The permanence of these European settlers in the New World had long-term impacts on the languages spoken there. One of those impacts is that the mother tongue of the original colonizers remains the national language today.

3.2 Sebuyau The Sebuyau are a tribal group of several thousand people living in the southwestern corner of the Malaysian state of Sarawak, on the island of Borneo. They live in Lundu district, in about 20 villages, which are interspersed among Chinese and Malay settlements. They have lived in contact with Chinese, Malays and other tribes for around 200 years, and appear to have been multilingual for most of that period (Steinmayer 2004). They have lost some domains of language use, along with some of their traditional practices. However, on the whole, their language has remained strong, especially in the spoken domain. The Sebuyau are a good case study illustrating the characteristics of many languages in Asia. Below we will describe some of the characteristics of their language ecology.

We will now apply our 14 criteria to the Sebuyau speech community and its surrounding ecology.

Table 2. Sebuyau Ecology Traits

	Criteria	Value	Comment
1.	Size/Prestige Gap	Narrow	In the context of Sarawak state in general and Lundu district in particular, the relative size gap between the Sebuyau and the neighboring languages is narrow. The population is more or less equally divided between Chinese, Malay and various tribal groups. Additionally, most Sebuyau have rather high self-esteem. This prestige also helps them to feel proud of their language. The Sebuyau have no qualms about speaking their language out loud in the presence of those who do not understand them. They compare themselves favorably to the Malays and to other tribal groups. Some of this status may come from the fact that they own large tracts of land.
2.	Literacy Rate	High	Almost all the Sebuyau write in both Malay and their tribal language.
3.	Literacy Transference: L2 to L1	Yes	Almost all have attended school, which is taught in Malay. They then transfer these writing skills to Sebuyau. Most people have cell phones, and they text to their fellow tribesmen exclusively in their own language.
4.	Literacy Domain	Two or more languages	Sebuyau and Malay (and sometimes Iban and English) are all used for literacy purposes. The diglossia depends on the audience.
5.	Literacy Shift Connection	Literacy does not accelerate shift	Although there is almost universal literacy among the Sebuyau, all ages continue to speak their language.

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	Criteria	Value	Comment
6.	Elders Criticism/ Shift Connection	Does not accelerate shift	The Sebuyau elders criticize the way the youth speak their language. They denigrate it as “Sebuyau Baru” (New Sebuyau). This attitude does not seem to intimidate the young people, who continue to speak the language in all the domains they can.
7.	Language/Cul- ture Connection	Weak	The Sebuyau have largely abandoned their traditional culture. They no longer live in longhouses, and it is mostly the older people who still practice farming. However, their culture and their language are not closely linked, but rather pattern separately. Although they have lost their old culture, everyone continues to speak the language.
8.	L2 in home/shift connection	Does not lead to shift.	In many Sebuyau homes, the children speak “campur,” a mixture of Malay and the tribal language. They learn Malay from television and from pre-school. However, by the time they become older, they begin to recognize which words are Malay and which are Sebuyau. So, Sebuyau is more the language learned from peers than learned in the home.
9.	Multilingualism/ Shift Connection	Group multi- lingualism does not accelerate shift	Bilingualism levels are close to 100%. I have never met, nor have I heard of, a Sebuyau who is not able to speak Malay, the national language. There have been Malay and Chinese people living among the Sebuyau for about 200 years. The historical records imply that much of the tribe has been bilingual for many generations. Prolonged group bilingualism has been the norm for a long time, and has not led to language shift.

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	Criteria	Value	Comment
10.	Target of Shift	Multiple choices	The Sebuyau live in a multilingual country. If they want to be bilingual, they have three languages to choose from: Malay, English and Chinese. Many actually speak all four languages. The other larger ethnic groups in Malaysia look at this practice with favor. The larger society expects the tribal people to speak their own language in addition to a language of wider communication, such as Malay.
11.	National identity	Weaker	The Sebuyau live in a country with a weaker national identity. In spite of the best efforts of the government, many citizens see little benefit in adopting a Malaysian identity. Rather, the people feel strong loyalty towards their own ethnic group, be it Chinese, Malay, or tribal.
12.	Diglossia	Strong	By later childhood, the Sebuyau's speech becomes diglossic. When one of them speaks in Malay to another Sebuyau, the other will say, "Why are you speaking Malay to me?" On the other hand, Malay is always used with Malays. Furthermore, Sebuyau is not the language used in education. In the past, students were fined or punished for speaking their tribal language in school.
13.	Genetic Relationship L1/L2	Closely related	Sebuyau is very similar to Malay. Both languages belong to the Malayic branch of the Austronesian family. For someone who speaks Sebuyau, it is not difficult to learn Malay.

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	Criteria	Value	Comment
14.	Colonial History	Trade type	The Sebuyau lived under British colonial rule for over 100 years. However, they ruled under a system that Mufwene (2001; 2002) calls the “trade type colonialism.” The British officers who came to the area were very few, and were almost exclusively single young men. Their superiors encouraged them to take Sebuyau wives. Because they did not settle in the Sebuyau area with British families, the colonial masters had little impact on the local cultures and languages. They did not compete for land and the local people continued to be mostly self-governing.

4. The language ecology traits of the Americas and Asia We now turn from specific case studies to broader ecologies.

Many of the traits on one end of our continuum apply very well to languages from the Amazon of Brazil. Most characteristics on the other end accurately describe communities in the southern part of Sarawak, Malaysia. Thus, it might be more correct to label the opposite extremes of our continuum ‘Brazilian’ and ‘Malaysian.’ The most precise description might even be ‘Amazonian’ and ‘Sarawakian.’ However, we have also based our hypothesis on regional literature and discussions with sociolinguists in each area. We have participated in conferences and research in India, Pakistan, Canada, United States, Malaysia, Indonesia, Myanmar, and various Latin American countries. We have come to the tentative conclusion that these traits are not restricted to Brazil and Malaysia. Rather, these two countries are good representatives of larger trends within the language ecologies found in Asia and the Americas. And if that is so, then this hypothesis is more general in nature, and takes on more significance. We consider the list below to be a helpful starting point. It accurately describes language ecologies over much of the Amazon and southern Sarawak. Secondly, the list provides a useful rubric to discuss what sustainable orality typically looks like in much of the Americas and Asia.

4.1 The ‘Americas’ type of language ecology

4.1.1 Size/Prestige gap *Wide.* The minority languages of the Americas are usually very small size and juxtaposed to majority languages that are monolithic. We are not only referring here to the actual size of the minority (L1) language, but to its relative

size in comparison to the majority (L2).⁶ Prototypical examples of such situations are extremely small languages in the Americas (often less than 1,000 speakers) where English, Spanish, and Portuguese are the majority language. These L2 languages are monolithic and leave an enormous cultural footprint. They absolutely rule the environment. The benefits of switching to English, Spanish or Portuguese are huge and obvious.

The relative size gap was largely caused because the American tribes were decimated. Massive loss of life affects the chances of a language community being able to hold its own in relation to the larger groups around it. Due primarily to epidemics, most of America's minority communities experienced huge population losses. The Mamaindê of Brazil are just one example of this sad history (Eberhard 2009:39–50). These waves of epidemics weakened the cultures and languages of the native peoples. This experience was particularly acute because it was juxtaposed to the European immigrants who had immunity to these diseases.

This is in comparison to the prestige they give to the L2 languaculture. There are very few ways in which the indigenous language can compete with the national one. The language is often associated with low prestige domains and is spoken by people holding little political power.

4.1.2 Literacy rate *Low (in both L1 & L2).* People speaking sustainable minority languages in the Americas usually can't read or write any language. This is related to their living traditional lifestyles, which have little need for literacy.

4.1.3 Literacy transference: L2 to L1 *No.* If they become literate in the language of wider communication first, they don't subsequently use that knowledge to learn to write in their heritage language. This is the case even for low literacy functions. They text or use social media only in the majority language.

4.1.4 Literacy domain *L2 only.* Due to its 'perceived benefits,' initial presence of L2 in literacy results in a diglossic pattern. The larger language dominates all the literacy or education domains of use. Benefits of literacy in L1 are unclear or non-existent (see Criteria #6), while benefits of L2 literacy are huge.

4.1.5 Literacy/language shift connection *Accelerates shift.* Literacy in the Americas, whether in L1 or in L2, typically leads away from the fragile, traditional way of life because the ecology is such that literacy in general is most associated with the L2

⁶We agree with Mesthrie et al. (2000:250) that "it is not possible to specify a critical mass of speakers necessary for the survival of a language." Many small languages have been surprisingly sustainable. And some large language communities can be considered 'minoritized' (disenfranchised from the decision making processes of their own region) even when they are in the majority (such was the plight of French speakers in Quebec for two centuries prior to the 1980's—Fishman 2004:423). But on a broader scale, the relative difference in size between the minority language and the majority language can make the benefits associated with L2 impossible to ignore (such as prestige, control, employment, standard of living, education, etc.

world.⁷ Fishman (2002) agrees that, “in a shift setting [literacy] will quickly foster shift.” In the 1950s, a successful bilingual education program was begun in Bolivia, using Spanish and Quechua. What the activists didn’t predict was that this would lead to Spanish monolingualism within two or three generations (Luykx 2011:146). Bernard Spolsky, a linguist who worked in Arizona, suspects that “the long term effect of developing Navajo literacy was to weaken the language” (personal communication, 4 Sept 2001). Kathy Dooley, a literacy specialist in Brazil, makes a similar comment about the Guarani. “Actually, all we did was get them into public schools through the innocent back door. They realize that if their kids succeed in school they’re going to have to do it in Portuguese” (personal communication, 9 and 10 Dec 2010).

The authors have seen a great number of languages, particularly in Brazil, where literacy in L1 did not hold them back from shift to L2. Rather, it appears that when the majority of the youth in a minority community have their sights set on becoming part of a wider national identity, L1 literacy speeds up that process. It does so by providing young people a means of acquiring the idea and basic skills of literacy, a skill which they can then more rapidly apply to literacy in L2.⁸ Once literate in L2, shift rapidly follows.

4.1.6 Elders’ criticism/language shift connection *Accelerates shift.* When young people mix their heritage language with L2, through heavy borrowing or even mixed grammars, the elders laugh at their speech. This causes the young people to be reluctant to speak L1 in front of elders. By force of habit, they also stop speaking their language with each other, and shift to L2. In Canada, one of the authors witnessed both Cree and Kwak’wala speakers shamefully recount how elders had laughed at their attempts to speak their heritage language. In both cases, they mentioned they preferred to speak in English rather than be ridiculed.

4.1.7 Language/culture connection *Strong. communities that maintain their culture maintain their language.* In the Americas, people speaking sustainable languages are usually still living off the land in somewhat traditional ways. They are not urban. They are still practicing some hunting and traditional farming, albeit in modified fashion, usually using different tools than in the past. This practice may be shrinking among the younger generations.⁹

Communities that don’t maintain their culture don’t maintain their language. Shifting communities in the Americas aren’t choosing to shift languages, they are

⁷Stable, second generation L1 literacy in the Americas is only found in those places where it took root before L2 literacy, and at a time when the community was largely monolingual.

⁸The possibility that education in L1 may not always be supportive of L1 language maintenance has been voiced by many. Rehg (2004:513), citing the decline of Hawaiian even after a prolific literary history, claims that “there is little evidence to support the belief that literacy is an effective safeguard against language loss.” This same idea is suggested in Mesthrie et al. (2000:249), citing Kloss (1966). See also references in Grenoble and Whaley (1998:32), who cite Mühlhäusler (1990), and Okedara & Okedara (1992:93).

⁹Support for this criterion can be found in Nettle and Romaine (2000) who suggest that there is a significant link between ‘way of life’ and the preservation of oral heritage language use. Mesthrie et al. (2000:248) summarize the Nettle and Romaine proposal thus: “where an indigenous group retains control of its traditional habitat and way of life, language maintenance is likely.”

choosing to shift cultures/ways of life.¹⁰ The ‘perceived benefits’ of the modern world are strong forces which influence communities to make choices that change their way of life.¹¹ These choices alter the traditional language ecology, compelling them to enter a completely different world. The language follows. Cultural shift thus precedes language shift. As Fishman (2001:21) reminds us, “the loss of a traditionally associated ethno-cultural language is commonly the result of many long-ongoing departures from the traditional culture.” The shift experienced by sustainable language communities in the Americas model is actually the result of a previous move away from traditional lifestyles and cultures. This move can be characterized by baby steps, a subtle slide, or giant leaps.¹²

4.1.8 L2 in home/shift connection *Accelerates Shift.* In the Americas, the home domain is sacred. If children begin to use the L2 in the home, it is a sign that language shift is beginning.

4.1.9 Multilingualism/shift connection *Accelerates shift.* At the very least, prolonged bilingualism within minority groups is unstable in the Americas. If everyone in the group becomes bilingual, the tendency is for people to shift to the second language over two or three generations. Luykx (2011), who studied the five hundred year history of contact between Spanish and Quechua in Bolivia, makes this point. She points to recent Bolivian census data that show that for many Quechua families bilingualism is a transitional phase, leading to Spanish monolingualism within two or three generations (Luykx 2011:146). If most of the group is bilingual or multilingual, they are much more likely to be in the 6b on the EGIDS. That is, if the group is largely bilingual, their traditional language is usually weak. In highly bilingual groups in the Americas, there is usually a large proportion of the children who do not speak their heritage language. By contrast, the strong languages are the ones where there are significant sectors of society that only speak the indigenous tongue. Such groups are increasingly rare in the Americas, and thus shift to EGIDS level 6B or below is the more common scenario.

4.1.10 Target of shift *Single choice.* The majority culture is monolingual in a single national language. In the Americas, nation states typically only have a single language

¹⁰The connection between the way of life of a people and their patterns of language use is a complex one. Opinions of sociolinguists vary on the strength of this connection, some proposing a strong connection between the two, and others a looser one. Fishman (1991:57; 2001:21) takes the stronger view. Mufwene (2002:177–178), while claiming that “linguistic changes echo cultural changes,” concludes by supporting the ‘looser connection’ view, citing examples such as African French where communities adopt another language and associate it to their traditional culture. Comparing a number of minority languages from the Americas and Asia has made it very clear that at least in these two regions we need a continuum to deal effectively with the relative strength of the language/culture connection.

¹¹See Karan (2001) for an insightful and comprehensive model of language shift built around the concept of ‘perceived benefits’ and their motivational influence on language use.

¹²As Crawford (2007:50) puts it, “Language choices are influenced, consciously and unconsciously, by social changes that disrupt the community in numerous ways.” Fishman (1991:57–66) refers to this languaculture shift as a set of ‘dislocations’ away from the world of L1 and towards the world of L2.

used nationally, not several. And the speakers of the ‘national’ language are typically monolingual—not multilingual. For example, the language you are going to shift to in Brazil is totally obvious—Portuguese. Likewise, English is the only target for language shift in the US. Anything else is unusual. This single language/monolingual tendency of the L2 culture also means that there is a (usually unstated) norm or expectation for its people. That is, a typical member of society is only able to speak the national language. An example of this is that in most of Canada, it is generally considered rude to speak a language other than English in public. This assumption has an influence on the choices made by the minority groups within these societies. They generally choose to become monolingual in the national language.

4.1.11 National identity *Stronger*. In the Americas, many countries have a strong sense of national identity. Usually, one very powerful language is piggy-backed onto this strong identity. For example, being called ‘American’ or ‘Brazilian’ entails speaking English or Portuguese, respectively. An overwhelming percentage of people in the country belong to the majority group, with a concomitant, recognizable, strong national identity.

4.1.12 Diglossia *Weak*. Most daily domains of use that are based on orality are not compartmentalized. Instead, L1 and L2 are present in the same oral domains. For example, it is permissible to use both Mamaindê and Portuguese in casual conversation between tribal members.

4.1.13 Genetic relationship between L1/L2 *Unrelated*. American minority languages are completely different genetically/structurally from the majority languages that surround them. Apart from a few loanwords, they exhibit no similarity with the Indo-European colonizing languages. When this is coupled with a sense of high prestige accorded to L2 and low prestige to L1, this can have an effect on the language choices. The great genetic differences are then appealed to as confirmation of the gulf between the L1 and L2. The supposed ‘superiority’ of the one and ‘inferiority’ of the other is taken as being linguistically demonstrable in the minds of the younger generation undergoing shift. Young passive speakers of the Negarotê, Sabanê, and Latundê languages (Brazil) have expressed this sentiment to one of the authors. They have stated that qualities such as creaky voice, implosion, and tone found in their heritage languages are ‘primitive’ ways of speaking, and not nearly as effective as the voice qualities of Portuguese.

4.1.14 Colonial history *‘Settlement’ type*. In the Americas, a new colonial community and its language came to stay. The colonizers often brought their families with them. They had no intention of assimilating to the local communities, or learning local languages. Rather, they set up their own communities modeled on European cultures and languages. The language of the colonizers eventually dominated and

assimilated the local speech varieties.¹³ This process was sped up by the diseases that wiped out most of the indigenous people.

4.2 The 'Asian' type of language ecology

4.2.1 Size/prestige gap *Narrow.* Tribal languages are larger, and the languages of wider communication are comparatively smaller. This means the gap between them is narrower when compared to the Americas. Unlike their counterparts in the Americas, most minority peoples of Asia were not decimated by European diseases. Usually, they experienced a population gain rather than a loss. Because of this, Asian minority languages usually have more speakers than their American counterparts. One of the results of this is that the gap between the relative size of L1 and L2 is not as gigantic as it is in the Americas. The lesser size difference makes the pull to the national language weaker. Thus, for example, the benefits of switching to Malay in Sarawak are not as huge as the benefits of switching to English in the US.

Sustainable languages have relatively higher prestige. Language communities in Asia tend to have more pride in their heritage languaculture than communities in the Americas. This may be because other factors, such as larger size, make them more comparable to the majority population.

4.2.2 Literacy rates *High.* A large portion of people speaking sustainable minority languages in Asia often can read and write quite well, sometimes in more than one language. Since they are typically integrated into the national economy, there is great economic need for them to be able to read in the language of wider communication.

4.2.3 Literacy transference: L2 to L1 *Yes.* If they become literate in the language of wider communication first, they subsequently may learn to write in their heritage language. Once literate in an LWC/national language, tribal people in Asia often learn how to write informally by transferring their L2 literacy skills to L1. This is assuming that the LWC orthography lends itself to adequately represent the L1. The Maguindanaon people of southern Philippines, as well as several tribes in Sarawak, Malaysia, a number of communities in the Cameron Highlands of Western Malaysia, and number of minority language groups in the north of Pakistan are all texting in their own language after becoming literate in L2.¹⁴

¹³Mufwene (2001) identified 3 types of colonization that affected language use patterns: Trade, Exploitation, and Settlement. In general, the first did not cause shift or bilingualism, as it involved sporadic contact (but it may have influenced the creation of pidgins/creoles). The second often caused additive bilingualism, and the third typically caused shift.

¹⁴These observations are based on comments from mother tongue speakers at several CBLD workshops held in Malaysia and Pakistan, and on data from the Philippines provided by Manap Balabagan Mangulamas (forthcoming), a linguistics student at Payap University currently doing his master's thesis work on the usage of the Maguindanaon language in social media.

4.2.4 Literacy domain *L2+*. Reading and writing in more than one language is common. One language does not dominate all literacy domains. There is no expectation that one would only write in L2. Other literacies are possible. If formal uses of literacy are all in L2 (such as education and religion), informal uses such as texting and social media are allowable and common in L1.

4.2.5 Literacy/shift connection *Does not accelerate shift*. Literacy in L1 does not necessarily lead to people abandoning their language. In fact, literacy may even strengthen their indigenous language. If it is used in more and more domains, such as texting, literacy may cause their language move up the EGIDS scale and become stronger and more secure.

4.2.6 Elders' criticism *Does not accelerate shift*. Particularly in urban Asia, many people pepper their tribal speech with borrowed words from other languages. For example, young people mix Sebuyau with Malay and Iban. Many elders criticize it, calling it “Sebuyau baru,” or “New Sebuyau.” However, this criticism doesn't cause the Sebuyau youth to stop speaking it. They continue speaking and texting only their variety of Sebuyau with each other. Likewise we have seen this phenomenon in other tribes in Southeast Asia. For example, the Iban and the Kenyah young people speak a variety that is laughed at by their elders, but they continue to speak the tribal language with each other and do not shift to Malay.

4.2.7 Language/culture connection *Weak*. Language communities do not have to maintain a traditional lifestyle/culture to keep their language. Most of the people speaking sustainable languages in Sarawak don't live off the land anymore. They are either urban or primarily dependent on the goods that come from modern development. They buy most of their rice instead of growing it, and are part of the global community.¹⁵ The Sebuyau of Sarawak have moved away from their traditional lifestyles and culture. However, they have continued speaking and have begun texting in Sebuyau. Local speakers of other Sarawak languages mentioned in a CBLD workshop in Kuching that this was also the case in their communities. Whether this is common among sustainable languages of Asia needs further study, but we include it here as another possible characteristic.

4.2.8 L2 in home/shift connection *Does not accelerate shift*. In Asia, young children speak a mixture of languages in the home domain. This does not lead to their abandoning their tribal language.

4.2.9 Multilingualism/shift connection *Does not accelerate shift*. In Asia, language communities with sustainable L1 orality often remain largely bilingual for centuries. This is considerably longer than the norm for the Americas. Group multilingualism

¹⁵Our criteria #2 is about the ability of a people to continue their traditional livelihood wherever they are. We feel the inability or unwillingness to do so has had a huge effect on many languages of the Americas.

in Asia is not necessarily a transition to monolingualism in the language of wider communication. In other words, prolonged group bilingualism can be stable in Asia. Even when almost everyone in the community is bilingual, the minority language can remain strong. All ages continue to speak their indigenous language.

4.2.10 Target of shift *Multiple choices.* The multilingual nature of the majority cultures in Asia makes shift more complex. When shift happens, the language you are going to shift to isn't always obvious. You may have a choice of more than one language that can offer social benefits. This is the case of the Sebuyau in Sarawak, which have Iban, Malay, Chinese, and English as second or third languages from which to choose. Usually, they choose Malay.¹⁶ The fact that there is more than one language of wider communication to choose from limits the reach, depth, and prestige of all other LWCs and even of the national language.

The majority cultures do not expect and pressure minorities to become monolingual in the LWC. To the contrary, the expectation is that the majority of the population will be multilingual. In Malaysia, it is extremely common to hear tribal languages spoken out loud in public places. They are not made fun of for doing so. So, these assumptions have an influence on language choices. Minority peoples generally don't speak *only* their tribal language, nor do they speak *only* the national language.

4.2.11 National identity *Weaker.* Unlike Brazil or Canada or the States, in many Asian countries there is no monolithic majority group, comprising the vast majority of the population. National identity is comparatively weak, since there is not a huge bloc that first and foremost identifies itself through its national 'belonging.' In Malaysia, people do not identify themselves first as 'Malaysian,' and certainly don't consider themselves as those who speak 'the Malaysian language.' This is also true of Myanmar, where being considered 'Myanmar' is a relatively new and fragile phenomenon due to years of internal conflict, and its connection with the national language is often downplayed by minority groups as this can bring ethnic divisions to the fore. Across the border in Thailand, an opposite situation prevails. There the strong unifying sense of Thai-ness most definitely defines the large majority. We would thus characterize the prevailing language ecology in Thailand as having 'strong' national identity, thus conforming more to the 'Americas' type than the 'Asian' type.¹⁷

4.2.12 Diglossia *Strong.* In Asia, the domains where minority languages are used are quite clear. For example, a tribal member always speaks Sebuyau with Sebuyaus. If one Sebuyau speaks to another in Malay, the second will say, "Mutang kwa bejako bahasa Laut ngao ako?" "Why are you speaking Malay with me?"

¹⁶Source: class discussion with a Southern Subanen linguistics student in Manila, 2012.

¹⁷Papua New Guinea would presumably also fit this 'Asian' criteria, as the notion of a national identity in PNG is very incipient. But other factors may show that a unique PNG ecology type is needed that differs from the Asian or the Americas types.

4.2.13 Genetic relationship between L1 and L2 *Related.* Asian tribal languages are often genetically related or structurally similar to the majority languages around them. Sometimes, they are so close, it is difficult to know which language is being spoken. For example, before Sebuyau children enter school, they are often unable to distinguish between Malay and their own language. The similarity between the two makes it difficult for those who might want to build a case for supposed ‘superiority’ of L2 over L1. Also, since the larger and smaller languages are so close, it does not require great effort for the people to learn and retain both languages. One of the writers is experiencing this firsthand, learning three closely related languages in Borneo: Sebuyau, Malay and Iban. This is obviously a far easier task than trying to learn three unrelated languages (such as Swahili, Russian and Malay) at the same time.

An example from Spain, which shows how genetic relationship affects maintenance, is Catalan versus Basque. Catalan is structurally similar to Spanish, while Basque is not. Basque is shrinking, while Catalan seems to have achieved stable multilingualism. Part of the reason may be that it takes less effort to maintain Spanish and Catalan, than it does to maintain Basque and Spanish.

4.2.14 Colonial history *‘Trade’ type.* In Asia, colonial powers originally built ports of call where they would extract the goods they sought. There was little intent of settling there and making a new life in that new world. This practice left “elbow room” for the growth of local cultures and languages. Some of the colonial powers did eventually establish a significant presence in Asian countries, but never to the extent they did in the Americas. Many of these countries were ruled by colonial powers for decades, or even centuries. However, the European immigrants never became a majority, nor did their languages overpower the local cultures. This also may be due to the fact that the indigenous population of Asia, unlike the Americas, was not decimated by disease. Thus, the land in Asia was more densely occupied, leaving less room for European settlers. We believe this constitutes a significant difference between the ecologies of Asia and those of the Americas.

These 14 traits should be enough to illustrate the incredible variety found within the ecologies of minority languages.¹⁸ While there are certainly exceptions to the regional tendencies on both sides, this model is consistent with the vast majority of first-hand encounters the authors have had with languages in the Americas and Asia.¹⁹ These traits paint a picture of ecologies within the Americas that appear much more

¹⁸We do not, of course, make any claims that this list is complete, as there are certainly other traits that could be added to these criteria that also distinguish these different positions on the continuum.

¹⁹It is important to think of ‘nested’ ecologies. The larger continental ecologies are helpful only in a very general way. Smaller national and regional ecologies exist within the continental ones, and can be similar or dissimilar to the latter. Thus the language ecology of Thailand, although it exists in the larger continental Asian ecology, differs from it in some very significant ways, and is actually more like the Americas type of ecology in terms of both the predominant monolingualism and the strong sense of national identity of the L2 culture.

tenuous and less stable than in Asia.²⁰ How sustainable a language is, in a very general sense, appears to be strongly conditioned by its local language ecology.

5. Implications for language development The above study has shown the variety that exists within minority languages, particularly those with sustainable orality. Languages at this stage are not competing on a level playing field. We have argued that this is the case because they exist in very distinct language ecologies. We have provided a continuum by which one can rank language ecologies in terms of their favorableness to stable orality. Finally, we have proposed a set of traits by which one can differentiate two types of ecologies along that continuum, namely, the Asian and the Americas types.

On the practical level, the ability to make these finer distinctions can impact language development activities. Awareness of various ecology types allows speech communities and language practitioners to better understand the local environment. It also helps people appreciate how that context affects their language's current vitality and future possibilities. This in turn can help them set more realistic goals for the development of their language.²¹ As Lewis and Simons (2011:10) remind us, "the current vitality level of a language determines both the prospects for maintenance and potential for development." In the end, this means that sustainable language development is not about getting the future of a language to align with one's goals. Rather, it must be about getting one's goals to align with the potential future of that language.²²

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²⁰Because of this tendency for languages to be less stable in the Americas, those languages in the western hemisphere that are extremely strong have maintained that position only with an amazing amount of determination and tenacity, facing unbelievable odds. This trait is known as 'ethnic stubbornness,' a term used by Paulston (1994:16) to refer to a minority community that, in the face of significant external pressures, largely refuses to assimilate to the outside world and maintains a strong degree of group cohesion and identity. A good example of this trait are the Gavião de Rondônia, a very small speech community in western Brazil. The Gavião are living remarkably close to a large Brazilian urban center, and have access to the outside world whenever they desire. However, they cling tenaciously to their culture and language. Even though they are bilingual in Portuguese, they use their L2 only in the outside world, forcing visitors to use interpreters to speak to them within their own village. Such 'ethnic stubbornness' has encouraged a diglossic use of their repertoire that has enabled them to maintain their language in conditions that are very favorable to language shift.

²¹While goal setting is not the topic of this paper, we want to make sure this is not misunderstood. Development goals are the rights and responsibilities of local communities and not of institutions or agencies. This is because the language is their possession and no one else's. Community ownership is thus fundamental to any successful language development. Joseph wisely reminds us of the vital importance of the community, for it is "the people who alone can ultimately decide to save the languages involved." (Joseph 2004:23).

²²There are of course exceptions to this statement. There are cases where some improved or new use of a minority heritage language has been achieved through introducing new functions, such as new bodies of knowledge or vernacular literacy. But the above statement does still appear to fit the vast majority of language development scenarios we have had the privilege to observe around the world.

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