New Writing Systems

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Nancy Hornberger writes,

In the Americas as elsewhere, it has long been perceived that literacy in the dominant language of the society is linked to power in the society; while anyone or anything indigenous has traditionally been powerless. . . . What the papers in [Hornberger's 1997] volume collectively show, however, is that, for the indigenous communities, indigenous literacies are increasingly seen as providing opportunities and means for empowerment—of indigenous people, their languages and their cultures. Whatever the differences in specific rationales and means of implementation among the cases described . . . , they are united in suggesting that indigenous literacies provide a door of opportunity for those who have been marginalized. (Hornberger 1997a, 360)

This chapter will discuss both the benefits and the pitfalls of having a writing system (Section 1); then, I will discuss the history of writing systems in the Americas (Section 2). Assuming a community wants a writing system, the procedures for developing one and issues surrounding its design will be described (Section 3). In the last two sections, I briefly discuss the teaching of literacy and the use of writing as a tool for native empowerment.

PROS AND CONS OF WRITING SYSTEMS FOR NATIVE AMERICAN LANGUAGES

More and more Native American communities are opting to adopt writing systems for their languages, and finding good uses for them and pride in their existence. Some writers go so far as to say, “Lack of literacy is the most important factor in the deterioration and abandonment of indigenous language” (Salinas Pedraza 1997, 173).

But not all would agree that this is the case. Even though any language can be written, for some communities, developing a writing system might not be the best idea at a given time. The Cochiti pueblo in New Mexico is among those communities who have consciously decided not to write their languages at all (Chapter 7).

Pros

There are certainly many reasons why a community might desire to develop a writing system for their language. Some of these follow.

Pride

There is a strong feeling in the modern world that languages with writing systems are in some way superior to languages without them, and that people who do not have written languages are somehow cognitively impoverished compared to those growing up in a society with writing. Linguists are quick to point out that languages without writing systems are every bit as complicated and expressive as languages with them, so it is incorrect to think that there is anything intrinsic to the language that is inferior if it is unwritten. Some authors have opined that written language leads to more complicated sentences, polished language, and objective thinking than can be present in spoken languages, but this is not true either. It is true that if you compare a written essay to informal spoken English, you will definitely see that
the written language is quite different. However, some of the features attributed to written English might be due to the contrast between formal and informal language, rather than between speaking and writing. Wallace Chafe, in a 1981 article, shows that Seneca (an unwritten language) has many of the same features in formal oratory that are often attributed to written speech. He suggests that written language and ritual language have six traits in common which set them apart from colloquial spoken language:

First, they tend to be more conservative, where colloquial language is more innovative. Second, they tend to be more polished, where colloquial language is rougher. Third, they tend to be more integrated, where colloquial language is more fragmented. Fourth, they tend to be more stylized and constrained, where colloquial language is freer. Fifth, they tend to be more detached, where colloquial language is more involved. Sixth and finally, they tend to be more authoritative in their assertions, where colloquial language is more hesitant. (Chafe 1981, 132)

Thus a healthy unwritten language has genres of speech that have many characteristics usually attributed to written language. Nevertheless, native peoples often internalize the attitude that their unwritten language is inferior to a written language and come to believe that the development of a writing system for their language can increase the status of the language in their own eyes as well as the rest of the world. In this sense, there is truly empowerment through writing, even if it is only the empowerment that comes through a positive shift in language attitudes.

**Documentation**

For an endangered language especially, documentation is of key importance. At the present time, documentation may be done through audio and visual recording, and these means should definitely be used. But written documentation remains critically important and serves some functions better than audiovisual means (in fact, the most valuable documentation of all is audiovisual documentation with a written transcript). Endangered languages, as they lose speakers, lose also much of the knowledge that the traditional culture has accumulated. Stories, songs, histories, prayers, ceremonies, and traditional crafts and practices are all in danger of dying with the languages. And the unique and wonderful words, sounds, semantics, grammatical structure, and discourse patterns of the language die too. All of these can be at least partially preserved through writing.

For language revitalization, written documentation may be the primary surviving resource from which teachers and language learners may draw. Thus any and all possible recording of the last speakers through writing or other means is essential. Language pedagogy depends in part on the written word: even if oral approaches are stressed and native literacy is not being taught, teachers might depend on a writing system in their language to be able to create lesson plans and curriculum.

**Practical Uses**

Within an active society with a thriving language, writing may develop many practical uses, not only for the development of literature, newspapers, language materials, and so on, but also for the uses of day-to-day life—letters, shopping lists, diaries, advertisements, accounting, recipes, and so on. When Cherokee developed its syllabary in the 18th century, it was such a hit in that monolingual society that within a few years mass literacy prevailed and was used for everything listed above and more. Even in bilingual communities where English is the dominant language of writing, practical uses develop for a native writing system.

**Expansion of Language (Written Literature and Other Avenues of Expression)**

The development of a writing system for a language generally results in new genres for the language, such as children's literature, newspaper journalism, poetry, hymnals, school essays, and so on. For an endangered language, these new genres may produce excitement and interest that can help promote language use. As an example of the promotion of a language through new written genres, the Peruvian Academy of the Quechua Language (Academia Peruana de la Lengua Quechua) has instituted the National Cusco Prize for a Quechua Novel, Poem, Story, or Drama, and has given out awards to Quechua writers from all the countries on the west coast of South America (Hornberger 1997b). One author alone, Faustino Espinoza, has written over 40 books in Quechua.

**Cons**

**Written English Serves Most Practical Purposes**

In bilingual societies, such as any Native American group in the United States today (who, even if their language survives, will also be fluent English speakers), many practical functions are already fulfilled by English literacy, so that when a community develops a writing system it tends to be used much less often than in the Cherokee case described above, and the spread of native literacy will be much less dramatic. While languages with large populations such as Quechua can develop large literatures, which itself creates a reason for literacy, the smaller language groups will not have the ability to produce large amounts of reading materials. In many indigenous communities that develop writing systems, mass literacy in the native language is never achieved, and if it is taught in school, the students find little reason to use it after graduation.
Loss of Control over When and Where and to Whom Information is Communicated

Often elders and sometimes younger members of the community become concerned over one important consequence of writing: the person whose utterances are written down can easily lose control over who has access to his or her utterances. Much ceremonial and religious information, for example, is secret and if written down could get into the hands of people who have no right of access. On the other end of the scale of respectability, gossip is meant to be told, heard, and then silenced. Even in speaking, there is danger to the original speaker that his or her words can be passed on to people in ways originally unintended, but the written word has an even longer lifespan and can be passed on infinitely through space and time in a way that could be damaging. In our own society, we are legally liable for things we have written, whereas the law is much less able to hold us responsible for things we have said (unless they were tape recorded), because there can be no real proof that we said them. A written contract, for example, is much more binding than an oral contract. There are many things in any society that should not be written, and it is good to consider this fact as literacy develops. It is partly due to this issue of control and secrecy that some communities decide not to adopt a writing system for their language at all.

Written Documentation Freezes and Decontextualizes Language and Language Arts

Written documentation is a hollow shell of a real speech event, since it does not record visual and other concomitants of a performance, nor its context, nor the deep aspects of the meaning of the event within a society still actively using it. While this does not mean we should not document, it does point out the limits of documentation. We do not "save" a language or culture by recording it; we preserve it, like a pickle (Hinton 1994). Many activists for native languages say that in the case of a severely endangered language, the main energy of the community should be put into producing new speakers rather than in documentation. I myself believe the two need equal billing: documentation of the last speakers is critical, but this can be done through video and audio recording, which are in some ways more complete than written documentation and are much quicker as well.

Writing May Slow and Impoverish Language Learning

Many people believe that a writing system must be developed before language teaching can occur, and teaching would be through the written word. But one does not learn to speak a language by reading and writing; one learns by hearing and speaking. It is sadly typical for language classes in communities to consist of the teaching of written vocabulary, with the primary spoken language of instruction being English. In Chapter 14, I discuss the pitfalls of this approach. If people are not already literate in their language, learning how to use the writing system takes further time away from oral language learning; and if there is not yet a writing system for the language, still more time and energy is taken up with its development. Language learners, especially beginners, will usually display very poor pronunciation when they depend on the written word instead of aural input. In a situation where all the speakers of a language are old, it is critically important to devise ways of learning their language and other forms of knowledge, rather than delaying this in order to develop and teach a writing system to the community. The main point here is that whether or not a community wants to have and use a writing system, the community should never decide that documentation and language teaching should wait until after the development and teaching of literacy.

As I write this, a call for papers for a forthcoming conference arrived today with further discussion of the pros and cons of writing systems for endangered languages, written by Nicholas Ostler of the Foundation for Endangered Languages, Bath, England.

Literacy, the ability to read and write a written form of the language, has often been viewed as a necessary first step in maintaining and promoting use of the language. The introduction of literacy is predicated upon the development of an acceptable written form of a language, a step considered by many essential for:

— the creation of grammars, dictionaries, and teaching materials;
— the preservation of traditional oral literature in communities where the younger generations lack the patience to learn the texts orally.

However, efforts to develop a written language and instill literacy may encounter cultural obstacles and have unforeseen consequences. For example:

— the development of literacy may, over time, fundamentally alter or interrupt the oral transmission of a community's knowledge and beliefs;
— the members of the community may resist efforts to introduce literacy due to cultural beliefs about, for example, the spiritual or mystical nature of oral communication;
— the introduction of literacy may create divisions within the community between the literate and the illiterate that ultimately may have social or economic implications.

Even within communities that are receptive to the introduction of literacy, the development of an acceptable written language may pose challenges:

— there may be difficulties selecting one of several dialects upon which to base the written language;
— there may be problems adapting existing alphabets, syllabaries, or other writing systems to the sound system of the language;
— the availability of typewriter or computer fonts may force unacceptable compromises in the orthography for the language;
— the language may lack acceptable vocabulary or syntactic structures to replace the written language suprasegmental, kinetic, and paralinguistic components of oral, face-to-face communication. (Nicholas Ostler, 15 January 2000, e-mail announcement of Fourth International Conference hosted by the Foundation for Endangered Languages)
THE HISTORY OF WRITING IN "PRELITERATE" SOCIETIES

Ideographic Writing

If writing is defined in a narrow sense as the visual recording of actual language, then no, most small indigenous groups did not have a tradition of writing in the past. In the New World, so far as we know, only the Mayan hieroglyphic system is a true writing system.1

Nevertheless, "nonliterate" or so-called preliterate societies have many ways of doing the visual recording of information. Even if a visual recording system does not represent language, it may represent ideas quite precisely. The examples on the following pages show three ways that people have kept accounts of history. The first is a Sioux "winter count" done on a buffalo hide, keeping track of key events for 70 years by marking pictures symbolizing the events on the hide (Figure 19.1). The second is a Navajo petroglyph panel describing the campaign of Kit Carson against the Navajos (Figure 19.2). The various symbols represent the various stages of the campaign, the starvation of Navajos making a stand and their eventual surrender, the death of many, and finally their incarceration at Fort Sumner. (See Martineau 1973 for a complete explanation.) The third is one page from the Nutall Codex, made by the Mixtecs of Mexico (Figure 19.3). This codex is the genealogy and biography of the ancient hero Eight Deer (named for his birth date); this particular page, which is to be read from the upper right corner down, up through the center and down again on the left, is the story of Eight Deer's father's marriages and the birth of Eight Deer and his siblings, and finally of Eight Deer's marriage. (See Nuttall 1975 for a complete explanation.)

Through the use of complex ideographic systems like these, most of the functions of writing can be fulfilled by so-called preliterate societies. Groups without "writing" can still record history, stories, and songs; keep accounts; send bills and letters; make maps; have signatures; and do virtually everything else that we use writing systems for. Unfortunately, knowledge of these fascinating and often artistically and intellectually stunning systems of visual recording are part of the knowledge that disappears with endangered languages.

The Cherokee and Cree Syllabaries

Several groups in North America (as well as elsewhere) developed syllabic writing systems in the early 19th century.
The two most famous and widespread of these writing systems are the Cherokee and Cree syllabaries (see Figures 19.4 and 19.5), both developed by and for communities who did not know how to speak or read and write English. Thus these syllabaries became the first writing system to be used by the communities. The development of the Cherokee syllabary was completed in 1821 by the great Cherokee intellectual Sequoyah. The Cree system is reputed to have been developed by the Protestant missionary Reverend James Evan, although legend has it that he adopted an indigenous system already in existence (if so, it was probably an ideographic system at the time rather than a syllabary). Both syllabaries are still in use today; the Cree syllabary has spread to several other Algonquian languages in Canada, and also to Inuit (an Eskimo language). The Cree syllabary is especially widespread in Canada, with a large and ever-growing literature. Cherokee literature using the syllabary spreads back over 180 years, to the publication in 1828 of the inaugural issue of the Cherokee newspaper Tsu la gi Tsu lehisanunhi or Cherokee Phoenix, printed in parallel columns in Cherokee and English. It was the first Indian newspaper published in the United States (Mankiller and Wallis, 1993). Both syllabaries have computer fonts available at various sites (e.g., the Yamada Language Center at the University of Oregon, at <http://babel.uoregon.edu/yamada/fonts>.

**Bilingualism and Alphabets**

Now that the vast majority of Native Americans know how to speak, read, and write English, there is a very strong impetus toward the use of the Roman alphabet for Indian languages, because of the simple but excellent reason that everyone knows that alphabet. It is estimated that people spend 10,000 hours reading and writing English before they graduate from high school; and only then do we feel that a child could really be called good at it. Most people do not have another 10,000 hours to spend on some totally new system; it is much more efficient to start from what we have already mastered and move out from there. The knowledge of two completely different writing systems is certainly
possible; many Cherokees, Crees, and Inuit do it, and so do the Japanese and various other nationalities who have more than one writing system to deal with. But most people who do not yet have a writing system developed for their language opt to start from the writing system they have already mastered, rather than try to design a completely new one from scratch; and in the early days of a writing system, when its designers are trying to gain its acceptance in a community, a friendly, familiar-looking writing system gains more friends than one which even a native speaker could not make any sense of at first glance. It is hard enough as it is for native speakers to learn to read the language they have only spoken all their lives. Even some of the Cree and Cherokee literature nowadays is written in both the syllabaries and an alphabetic transcription.

Unifon

Because of their long history, there is a good deal of loyalty to the Cree and Cherokee syllabaries. However, when symbol systems that deviate strongly from the Roman alphabet are developed today, they tend to fare less well. The history of one non-Roman alphabet that was adapted to some Native American languages in the 20th century might serve as a case in point. This is the alphabetic code called Unifon, which was invented in 1959 by John Malone, an economist from Chicago. It was intended by its developer to facilitate the learning of English in first-language and second-language classes and to be used as a pronunciation key in English dictionaries. Its symbols include some capital Roman letters and other letters that are not the same as the Roman letters but are based on them. The system is uniquely related to English spelling in that, for example, all symbols that are based on the letter “A” are different pronunciations of sounds that are spelled with the letter “a” in English. Thus the sound of a in “batt,” “fate,” and “father” could each be represented in Unifon by a letter that is based on A (Figures 19.6 and 19.7).

Tom Parsons, who then worked at the Center for Indian Community Development at Humboldt State University, adapted Unifon to the various indigenous languages of Northern California with some of his native students, and he and his employees taught this system to native speakers and children. Unifon systems were developed for Hupa, Yurok, Tolowa, and Karuk. Since Parsons did not know the languages himself and was not a linguist, the orthographies initially developed for the languages were insufficient for representing the sound systems; however, some native scholars worked to improve the systems, and in the end some of them were sufficient. This is especially true of the Tolowa orthography, which was much improved by the native scholar Loren Bommelyn.

From the beginning, the Unifon orthographies were disapproved of by linguists, but many native people devoted years to learning and improving them and many publications

![Unifon Table](https://example.com/unifon_table)

**FIGURE 19.4** The Cree syllabary.

**FIGURE 19.5** The Cherokee syllabary.
were developed, so that the communities had a certain sense of loyalty to them. The greatest strain against Unifon, nevertheless, came from within the communities themselves. Once Tom Parsons left the university, there was no one there to teach this strange-looking system, and people of the next age group down, who had not learned UNIFON, were put off by the strange symbols. Linguists, meanwhile, were working with other community members on using standard Roman symbols; Loren Bommelyn himself ended up going to the University of Oregon for a degree in linguistics and decided at that time to abandon Unifon. At this time, all four languages are now being written primarily in a standard Roman alphabetic system.

The Phonetic Alphabet

English has a very strange spelling system: each letter can have several different pronunciations (for example, the g in "go," "gentle," "enough," and "though"), and each sound can be spelled in several different ways (such as the sound in "kite," "cable," and "back"). Unifon is only one of the attempts people have made to solve the inconsistencies of the English spelling system. In the late 19th century, French scholars developed what is now known as the International Phonetic Alphabet (IPA), primarily to assist people trying to learn English pronunciation. This alphabet has been expanded now so that it can write any language in the world according to how it sounds. At the same time that the IPA was being developed in France, another system known now as the Americanist system was being developed here. The two systems have interacted with each other and become fairly similar, with only a few symbols differing. In one version or another, the phonetic alphabet has been used to transcribe the sound systems of most of the indigenous languages of the world. Thus whether or not the speakers of a language are literate, parts of the language itself have most likely been written down by someone.

As we all know, Rome was once a great empire. The great empire before Rome was Greece, and the Romans adopted their alphabet from Greek letters, changing some, adding some, and ignoring some of the letters of the ancient Greek alphabet. When Rome brought Europe under its administration, one of the things that happened was that the various languages of Europe adopted the Roman alphabet to write their languages. For many centuries after the fall of the Roman empire, Latin was still the language of learning in Europe, and so the Roman alphabet continued to hold sway. English is one of the languages that adopted the Roman alphabet. With the English language now dominant due to its own empire building, the Roman alphabet continues to spread to other languages, including the indigenous languages of which we speak.

Phonetic Alphabets and "Practical" Alphabets

If a community desires to develop a writing system, one of the first decisions to be made is whether to develop a system that is based on the phonetic alphabet in which scholars have written their language or use a "practical" system, as it has come to be called, which uses primarily English letters rather than the special symbols the scholarly phonetic systems use. There are good arguments both ways. The main arguments for the practical systems are:

- The practical writing systems use letters that can be typed or printed using a standard keyboard or typewriter, so high-tech solutions do not have to be found to put the language into print.
- The practical writing systems look familiar to people, since they are based on the same alphabet as English (or whatever the dominant language is). Thus it is easy to learn and not off-putting to people seeing it for the first time.
However, there are also good reasons for adopting a system based on the phonetic alphabet.\textsuperscript{2}

- If linguists have produced a sizable literature for an endangered language, the community may prefer to have a writing system that allows them to read that literature. Adopting a different writing system would make the literature less accessible.
- Since the phonetic alphabet is based on the principle of "one symbol, one sound," the rules of pronunciation will be clear. As we shall see below, a practical system generally also uses the one symbol, one sound principle, but this makes it an orthography that looks like English but does not use the principles of English spelling, which some people argue is potentially confusing.
- Since many sounds that might be part of one's language are not present in English, a way must be developed to represent them. As we shall see below, English letters can either be modified or their pronunciation redefined to represent a sound, but the phonetic alphabet already has a symbol to represent that very sound, so why not use it? Redefining the pronunciation of an English symbol might be confusing, and the symbol could easily be mispronounced by a learner.
- While it is true that a standard keyboard does not contain the non-Roman phonetic symbols, phonetic fonts are increasingly easy to obtain through purchase or free downloading from the Web. Looking forward in time a decade or two, it is probable that all computers will use "Unicode," which will include all phonetic symbols as well as the orthographic symbols of most languages of the world.

Several communities have in recent years decided to retain a writing system based on a scholarly phonetic alphabet. In California, the Kashaya Pomo use the phonetic system that the linguist Robert Oswalt used for his publications on the language. And for another California language, Salinan, Joe Freeman is working on the development of a writing system that will allow learners easy reading of J. P. Harrington's linguistic field notes.

Folk Writing

Another form of writing that we frequently see is what some linguists call "folk-writing" (Wallace Chafe is the first person I heard use this word in this context), the kind of writing that is done by people who are trying informally to write their language. The two main features of folk writing, for American Indian languages at least, is (1) the frequent use of dashes for syllable breaks, and (2) the use of English spelling rules and even whole words in English to represent the syllables of the language being represented. Figure 19.8 shows some examples of handwritten folk writing from a speaker of the Wuchumne language.

This form of writing is usually used by speakers and learners as a memory aid in language classes. It is helpful primarily to the speakers, who can use the written words to remind them of what they taught in the class. It is not at all good for the learners, however, for it inevitably leads to mispronunciation of the words.

Making a Practical Alphabet

Despite the arguments for using a phonetic alphabet that were listed above, it is still the case that the majority of indigenous languages developing writing systems today utilize the orthographic resources of the dominant language of their country. I will now discuss the practical considerations that go into the successful design of a practical writing system based on the Roman alphabet.

Sounds That Do Not Exist in English

One obvious consideration is that there are probably sounds in your language that do not exist in English. The two most likely solutions to this problem are:

1. to use an English letter but define its pronunciation as being that of the non-English sound in your language. For example, if your language has an s-like sound but is not quite like an English s, you could still use the letter "s" to represent it, but you would explain in a pronunciation guide that it is pronounced differently. A common sound in many Native American languages is a post-verbal or uvular stop (it sounds a bit like a "k" but is uttered farther back in the throat). In the phonetic alphabet, this sound is represented as q, and that letter is often used to represent it in the practical systems as well.

2. to make up another letter, probably based on an English letter but with extra marks, perhaps. A common set of sounds in Native American languages in the west is known in linguistics as "glottalized stops" or "ejectives." They are sounds like p, t, or k, with an added "popping" quality to them. A typical way of representing these sounds in writing is to add an apostrophe after the p, t, or k, like this: p' t' k'.
Digraphs

The typical Romanized practical writing system uses the letters of the Roman alphabet, but also adheres to the one letter, one sound principle described above for the phonetic alphabet. One exception to this is the use of digraphs—two letters—to represent a single sound. English spelling does this a great deal, and that tradition is carried over into the practical systems: thus letter combinations like th, ch, and sh are commonly used, each one of them standing for a single sound. In phonetic writing, these would be represented by single (non-Roman) characters.

Vowels

English has 14 vowel sounds, but only 5 vowel letters. It solves the problem of how to represent all its different vowel sounds by the use of digraphs (ee, ea, oo, ou, etc.) and by the use of a single letter for more than one sound (such as the a in man, father, main, etc.). There is no reason to purposefully create a system as complex and irregular as English spelling. Digraphs might be used in some cases, but communities developing writing systems almost never try to use the same single vowel letter to represent more than one sound. Most commonly, the "Roman" pronunciation of vowels is used (the same as Spanish). Thus, i would always stand for the vowel sound in "beet" (or possibly for the sound in "hit"), and so on. The typical pronunciation of the five vowels would be as follows:

- a (as in "father")
- e (as in "pet")
- i (as in "elite")
- o (as in "phone")
- u (as in "hula")

Some languages will have somewhat different pronunciations than others—consistency is primarily important within a language, rather than across languages. Thus the vowel sounds of Yurok are described (Hinton, ms.):

<table>
<thead>
<tr>
<th>Letter</th>
<th>Closest English sound</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>between &quot;ot&quot; and &quot;father&quot;</td>
</tr>
<tr>
<td>e</td>
<td>between &quot;ot&quot; and &quot;pet&quot;</td>
</tr>
<tr>
<td>i</td>
<td>pit</td>
</tr>
<tr>
<td>o</td>
<td>between &quot;coat&quot; and &quot;cot&quot;</td>
</tr>
<tr>
<td>u</td>
<td>put</td>
</tr>
</tbody>
</table>

If your language has only five vowel sounds, then you are lucky. If your language has six or more vowels, then you have to figure out what to do for representation of those extra vowels. The Ipai (Digueño) writing system, developed by Margaret Langdon in the 1970s, has five vowels, but one is quite different from English: it is called "schwa" in phonetic parlance, a sound much like the last vowel sound in the English word "sofa." The other four vowels of Ipai were easily represented by a, i, o, and u, so e was left free for other uses. In phonetic writing, the schwa is represented by an upside-down e, so the use of e was a good choice.

Another possible choice is a digraph. For example, if a is used for a sound like the vowel in "father" and e is being used for the sound like the vowel in "pet," and your language also has a sound like in English "hæd," that last sound might be represented by a digraph, ae. In Yurok, there is a vowel that is exactly like the er sound in the English word "her," and so the digraph er is used to represent that sound.

Very common in Native American languages is a distinction between long and short vowels. Long vowels are represented by digraphs in some practical writing systems, and in others they are represented by a colon or other convention. In Havasupai, the word ha (with a short vowel) means "water," and the word ha: (a long vowel represented with a double letter) represents "cottonwood tree." The closely related language Hualapai uses a colon for the long vowel instead, ha:.

A third choice for representing a sound that is not in English is to modify a letter to stand for it. Some of the Uto-Aztecan languages have a special vowel sound that is represented in the Americanist phonetic alphabet as a barred i, and so many of the Uto-Aztecan practical writing system have adopted the use of barred i as well.

Tone, Nasalization, and Voiceless Vowels

Some languages, such as Navajo and Acoma, are tone languages, and some, such as Navajo, have two sets of vowels, one set nasalized and the other non-nasal. (French and Portuguese are examples of Old World languages that have nasal and nonnasal distinctions in vowels; Chinese is an example of a tone language.) Other languages have both voiced vowels and "voiceless vowels," that is, vowels that are whispered. (Japanese is an example of an Old World language with silent vowels.)

The most common way to write these aspects of vowel quality is through diacritics, extra marks that are added above or below letters. The Western Mono orthography developed by Chris Loether and Rosalie Bethel marks voiceless vowels by underlining them. Navajo marks tone by writing accent marks over the vowels and nasalization by a hook under the vowel.

Some of the languages of Southeast Asia, such as Hmong and Vietnamese, have Roman-based alphabets that mark tone by the use of letters at the end of each syllable. Thus in Hmong, muab 'give, get' is actually pronounced "mua" with a high tone, while mua j 'have' is "mua" with a falling tone, and so on (there are seven tones altogether).

Some languages end up ignoring some of these vowel features. Acoma has both tone and voiceless vowels but does not write any diacritics to mark them. The decision as
to whether to write or ignore aspects of pronunciation is something each community must decide for itself. If people are fluent speakers of a language, they only need to recognize a word and then they will know how to pronounce it. Hebrew, for example, does not even write vowels at all, only consonants. Yet it can still be recognized—try a sample of consonantal writing from English, and you will find that a little practice is all that is needed to figure out what is meant:

Prhaps the pssg cn b rd vn thgh ll th vnels r msng.

Another clue to whether to write an aspect of pronunciation can be taken from Hebrew as well: for nonnative speakers just learning the Hebrew language, for children just learning to read, and for the transcription of new words that a reader is unlikely to know, the vowels are written. If the people most likely to read a Native American language are learners rather than native speakers, then it would be more important to write all aspects of pronunciation.

Consonants

Consonants do not present anywhere near the problem that vowels do, it seems; but even so, there are many consonants not found in English that must be represented somehow in a writing system. Like vowels, consonants not found in English can be represented by:

1. digraphs (as in the “backed-s,” represented as sr in Acoma);
2. new symbols (for example, Havasupai uses a r with an extra cross in it for a dental r, and the same sound is "d" with a cross in Hualapai); or
3. diacritics over or under old symbols (e.g., ē in Havasupai, underline i for voiceless vowels in Mono).

Differentiation versus Unity in Writing Systems

There are political and social issues involved in the design of writing systems as well as practical considerations. A given writing system might be associated with a certain faction, country, or religious system, which might make it more attractive or less so depending on one’s affiliations. I will tell several stories here to illustrate this.

The Havasupai and Hualapai Story

The Havasupai and Hualapai developed their writing systems at the same time. I consulted with both tribes during this development in the mid-1970s; I was especially involved with the Havasupai orthography, but I also consulted frequently with Lucille Watahomigie, the director of the Hualapai Bilingual Education Program and the main designer of the Hualapai alphabet. Lucille and I had agreed that it would be useful if the Havasupais and Hualapais could have the same writing system for the purpose of sharing of reading and curriculum materials. So Lucille and I worked together, debating various symbols and various solutions to orthographic problems. We were each reporting to our tribal councils as we developed the system, so they were well aware of what we were doing. After a couple of months of this interaction, the tribal councils, meeting independently from each other, decreed that they did not want identical writing systems. They said they were two separate tribes and they wanted that separateness demonstrated by differences in the writing system.

As a result of this tribal decree, the two writing systems ended up quite different from each other. Wherever the Hualapai and Havasupai committees had different ideas about the best solution to a particular orthographic problem, we simply each adopted our own idea. The systems are not so different as to be completely unreadable, but there are a few symbols that differ—Hualapai has an ny where Havasupai has a n; Hualapai has a d with a cross through it for the dental unaspirated t, while Havasupai has a t with an extra cross through it; and there is one very obvious difference in vowel orthography—Havasupai does not write the predictable short vowel that gets inserted to break up consonant clusters, whereas Hualapai writes it. These differences are political symbols of the separateness of the two tribes.

The Campa Story

A speaker of the Campa language, located in the Amazonian region of Peru, came to Berkeley one year for six weeks to work on his language with a class. The Campa, who are beleaguered by and fighting the encroachment of settlers and various eco-destructive business interests, are a noncentralized group with multiple villages spread over an area of hundreds of square miles and speak a large number of mutually intelligible dialects. Our visiting colleague said that Campa leaders are attempting to unify the Campa politically.

Our colleague had once been trained by a religious organization for linguistic work with indigenous peoples, but had broken with them and had no amicable feelings toward them. In fact, he made various accusations about the organization, believing that they were in league with the government of Peru to "pacify" the Campa and keep them from unifying so that settlement and development of the region could continue. He claimed that one way in which the organization was not acting in the best interests of the Campa was to insist on creating a different writing system for each dialect, so that wherever two dialects differ in pronunciation, they would be represented by different spelling. This, said our friend, was motivated by the desire to keep the villages from
unifying. It was his goal that the pronunciation differences between the languages be “leveled” in the writing system to allow better communication, one step toward creating the political alliance the Campa were seeking.

Of course, having spelling reflect pronunciation is the standard orthographic solution that any (albeit politically naïve) linguist would be likely to adopt, and I would be loath to believe that the organization in question had any nefarious motives for this policy. Nor would I expect that our friend represented the viewpoint of all the Campa. I present this story not to discredit the organization but to illustrate the political implications of orthographic development—in this case, just the opposite of the Havasupai-Hualapai case, where two almost identical dialects are differentiated in writing.

The Hmong Story

One interesting problem develops when a sizable population speaking a language endemic to one country migrates to another country that has a different writing system. The Hmong are a case in point. Originally a mountain people of Laos, Thailand, and southern China, the Hmong fought beside the Americans in the Vietnam War and faced genocidal repercussions when the Americans withdrew. They died by the thousands both during and after the war, and the survivors fled by the thousands to refugee camps in Thailand and elsewhere. There are roughly 150,000 Hmong people in the United States and many thousands more in Australia, France, and other countries. Several million Hmong people still remain in China, Thailand, and Laos. The Hmong have a number of writing systems. There is a unique demisyllabic system invented by a previously illiterate Hmong named Shong Lue Yang, who obtained it through a vision (Daniels and Bright 1996; Smalley et al. 1990). Associated with particular religious principles, it is used by those adhering to those principles. A Romanized Hmong writing system was developed by missionaries in the 1950s. Other writing systems for Hmong have been developed in the United States and elsewhere. Hmong living in Asia might have writing systems based on Thai, for example, or other non-Roman orthographies. As Gary Yia Lee (1996) says, “We are challenged by the need to adopt a common Hmong writing for all and not the many scripts we now use.” Schools offering bilingual education to Hmong children want Roman scripts, partly because they see that learning a Roman script for Hmong will make reading skills more easily transferable to English. But for many Hmong, the main reason for adopting a common writing system is to be able to communicate with Hmong living in other countries. The American, French, and Australian Hmong clearly would prefer a Romanized script, but to what extent can the Hmong still in Asia become part of this worldwide Hmong communication network? These are all thorny issues.

TEACHING READING AND WRITING

Sometimes teachers say of children, “I notice that the kids can’t read in our language [whichever indigenous language they are referring to] even though they read English very well,” or “I notice the kids get confused when they try to pronounce written words in our language; they pronounce it like English spelling.” The reason for this situation is very clear. The students have spent thousands of hours being taught how to read and write English, and few if any hours being taught how to read and write their language. Even though many indigenous writing systems use the Roman alphabet, people’s knowledge of English reading and writing will not allow them to automatically read and write their own language. Students still have to be specifically taught how to read and write their own language; and if they are to learn how to read and write as well in their language as do in English, their language needs to have equal time in the classroom.

WRITING SYSTEMS
AS EMPOWERMENT

An example of a fascinating project utilizing new writing systems is CELIAC (Centro Editorial de Literatura Indígena, A. C. in Oaxaca, Mexico.) At CELIAC, three-month courses are offered where the indigenous leaders Jesús Salinas Pedraza and Josefa González teach bilingual teachers, campesinos, and housewives to write in the native languages. They write about anything they want, “using computers to write in their own languages about their lives, their customs, their legends, histories, natural medicine, and so on” (Salinas Pedraza 1997). As of the date of his article, the Oaxaca CELIAC project had trained 121 people, including speakers of 14 indigenous languages in Mexico: Quechua and Aymara from Argentina, Ecuador, Bolivia, and Peru; and one Shuar from Ecuador. Once trained, the participants return to their communities and write and also develop literacy in the home communities.

As Hornberger remarked in the quote that opens this chapter, writing systems can be seen as modes of empowerment. Salinas Pedraza writes:

Emodesarrollo is the policy that drives some indigenista institutions today. The objects of development in emodesarrollo are the various indigenous communities, conceived as total social, cultural, and historical units, that have been marginalized and dominated by the nation state. According to the emodesarrollo perspective, the development of Indian communities across the Americas requires the transformation of national systems of ethnic dominance. Specifically, it requires formal, legal recognition by the nation states of the Americas of their multicultural nature.

History to date shows that this is only possible with direct pressure from the indigenous communities themselves. Economic, social, cultural, and political strengthening of Indian communities will
come about only when Indians make conscious decisions to start the
process. This is the only way in which we will be able to exert pres-
ssure for change on interethic relations.

This is what we are trying to promote at CELIAC.
(Salinas Pedraza 1997, 175–76)

Notes

1. Until a couple of decades ago, it was still strongly debated as to whether Maya was a true writing system; now it has been proven beyond any
doubt. The Inca quipu might also have counted as a true writing system,
even though knotted ropes may seem like a strange way to write; but the
Spanish conquistadors were so ruthless in their destruction of the upper
class and the burning of the quipus houses that we have too little evidence
left to make a clear determination. We know the quipu represented num-
bers; what we do not know is whether it could also be used to represent
words.

2. I would like to thank Joe Freeman, who is presently designing a Salinan
writing system for his community based on the phonetic systems used by
linguists, for cogently arguing for his choice with most of these points.

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