At long last the tragedy of language loss worldwide has begun to enter the public conscious. In the past, individual communities and linguists have grieved over the disappearance of particular languages, but until recently the general public has been unaware of the accelerating loss of one our most valuable human intellectual resources. As the drama is repeated over and over around the world, it is easy to forget a crucial feature of the phenomenon: the very diversity that makes the loss irreversible. A great variety of languages are being threatened by a multiplicity of factors, in a wide range of community situations. Attitudes toward the impending loss differ both across and within communities. The human and material resources available to those hoping to work toward revitalization and documentation are similarly varied. Because of this diversity, the kinds of goals that are envisioned and feasible differ as well. What these communities do share is the significance of the moment: what they choose to do now, as well as what they fail to do, will have irrevocable consequences for future generations. With business as usual, all will be lost to the descendants of current speakers.

The diversity of languages

Many modern residents of North America are themselves unaware of the phenomenally rich linguistic diversity indigenous to their continent. We will never know exactly how many languages were once spoken in North America, but documentation survives of around 270 distinct, mutually unintelligible languages north of Mexico, and there were once many more. A third of the known languages are already gone, and most of the others are in grave danger. Only a handful will survive far into the next century.
The loss of these languages is not a monolithic one. Some notion of its scope can be grasped by considering the genetic relationships among the languages involved. Languages are considered genetically related, that is members of the same language family, if they are descended from a single ancestral language. Genetically related languages typically share certain vocabulary and structural characteristics inherited from their common parent. Most of the languages of Europe, for example, belong to a single family known as Indo-European, which includes not only English and other languages of the Germanic branch of the family, but also languages of the Romance, Celtic, Baltic, Slavic, Greek, Albanian, Armenian, Indic, Iranian, Tocharian, and Anatolian branches. Native American languages, by contrast, are generally considered to constitute over fifty distinct families. The families are of all sizes, from the Athapaskan-Eyak-Tlingit family with around forty languages, down to many single-member “isolates,” languages that show no demonstrable genetic relationship to any other, such as Zuni. This genetic diversity is matched by tremendous structural diversity. North America is home to an extraordinary variety of languages, as different from each other as they are from European languages, each with unique potential contributions to our understanding of the possibilities of the human mind and spirit.

A glimpse of linguistic diversity: Central Pomo words

A small sample of the kinds of differences found among North American languages can be glimpsed in some examples from Central Pomo, a Pomoan language of California. The Pomoan family consists of seven mutually unintelligible languages. Central Pomo is spoken approximately 100 miles north of San Francisco in three communities: Point Arena-Manchester Rancheria on the Pacific Coast and the Hopland and Yokaya Rancherias 40 miles inland. Examples cited here come primarily from conversations recorded over a 9-year period among most of the remaining speakers: Jesse Frank, Winifred Leal, and Eileen Oropeza of the Point Arena Rancheria; Frances Jack and Kate Daniels of the Hopland Rancheria; and Salome Alcantra and Florence Paoli of the Yokaya Rancheria. The recordings were transcribed, translated, and analyzed with the help of Mrs. Jack, Mrs. Jack, Mr. Frank, Mrs. Alcantra, and Mrs. Paoli have since passed away.

The segmentation of experience into words

Most people who know two languages realize that all words in one may not have perfect equivalents in the next. This lack of isomorphism can be seen by comparing the Central Pomo words in (i) with their English translations.

As might be expected, the Central Pomo words for “run around” are not equivalent to each other. When just one person is running around, the verb ēdôt wan is used, but if there is more than one, heôt wan is used; running around alone is portrayed as a different activity from running in a group. When the runner is a coyote, deer, or dog, the verb móôt wan is used, indicating locomotion on all fours. The same verb is used for an older person, particularly a parent-in-law, as a sign of respect. A pack of running dogs (or several parent-in-law) would be described with a slightly different word, móôt wač. A group of people travelling around in a car are described with still another word: ēdôt wač. Verbs for “sit” show similar distinctions. For one person sitting on a chair alone or a bird perched on a branch, the term ēmdač is appropriate. For a group sitting together on a bench or a row of birds on a wire, the term banač is used. A person sitting on the ground may be described with the verb pëč dač, but a group sitting on the ground would be described with the verb napdač. For a container of liquid sitting on a table, the verb ēom is used.

From these examples it might be hypothesized either that Central Pomo allows finer distinctions than English (sitting on the ground versus sitting up off the ground), or that it prohibits generalization (general sitting). Of course neither hypothesis is correct. The categories delineated by Central Pomo words are simply different from those in English. Just as multiple Central Pomo words may correspond to a single English one, a single Central Pomo word may correspond to a whole set of English ones. The verb napdač, used for a group sitting on the ground, is also used for a group camped together or settled, as well as to mean “marry,” but only for
women. If a man marries, an entirely different verb is used: ?dïw. Marriage is expressed as a different event for a woman than for a man. Many other single Central Pomo terms also correspond to sets of English ones.

(1) Central Pomo–English translation equivalents: one to many
   šyêw "stop picking fruit/collecting seaweed/weaving"
   šdïw "carry something in a bag"/"string beads"/"pull bucket out of a well"

2.2 The segmentation of words into morphemes

The alert reader may have noticed that some of the Central Pomo words seen so far share certain elements. English shows the same phenomenon. An English word like unknowingly, for example, consists of several meaningful parts, termed “morphemes.” The root know forms the basis of the word, the suffix -ing converts the verb know to an adjective know-ing, the suffix -ly converts the adjective to an adverb knowing-ly, and the prefix un- contributes the meaning "not."

(3) English unknowingly
   un- know- ing- ly
   prefix root suffix

Each of these morphemes also appears in other English words. The prefix un- also appears in un-happy, the root know also appears in knowledge, the suffix -ing also appears in become-ing, and -ly also appears in quick-ly.

The root of a word serves as its foundation, the morpheme generally considered to contribute its central meaning. The Central Pomo verbs in (1) are based on the roots čâ- “run” (said of one person), hé- “run” (said of more), and mò- “crawl.” The prefixes and suffixes attached to roots, collectively known as affixes, generally modify the roots in some way. All of the Central Pomo verbs in (1) for “run around” contain a suffix -?w- “around,” which qualifies the kind of running expressed. All of those verbs also contain an imperfective aspect suffix that qualifies the action as having internal temporal texture, here continuing activity. The Central Pomo imperfective suffix has two different forms, depending on how many individuals are involved: -an for one, -aĉ for more. The verb čâ-?wâĉ “group riding around in a car” is interesting in this regard. The root čâ- “(for one to) run” is used because there is a single running activity, but the imperfective suffix shows the plural form because there are multiple participants. The verb describes a group of people running as one.

2.3 Roots and affixes

An intriguing difference that can sometimes be seen among languages is in the distribution of meaning between roots and affixes. The picking motion in the Central Pomo verb šyêw “stop picking,” for example, is indicated by a prefix, š- “pulling, dragging, manipulating by a handle.” A pulling/dragging/handling motion similar to that involved in picking hops or cherries is involved in collecting seaweed and weaving. The root ye- contributes the meaning “stop.”

(5) Central Pomo roots and affixes
   š-ye-w
   prefix root suffix
   by_pulling stop-perf
   “stop picking fruit off branch/collecting seaweed/weaving”

Carrying a bag or purse, stringing beads, and pulling a bucket or dipper from a well, are seen to involve the same kind of pulling motion as hop-picking. The verb šdïw “carry a bag,” “string beads,” “pull a bucket from a well” thus contains the same prefix š-. The meaning of the root dï- is quite general: “move or be in a location.”

(6) Central Pomo roots and affixes
   š-dï-w
   by_pulling move-perf
   “carry something in a bag”/“string beads”/“pull bucket out of a well”

The roots ye- and dï- both appear in a number of other words with different prefixes. The verb hyêw “stop pounding acorns on a rock/poking someone in the ribs,” for example, contains the prefix h- “by poking/thrusting/jabbing,” and the root čyêw “stop cracking acorns” contains the prefix čh- “with full body weight/heavy mass/pressure.”

2.4 Denotation and connotation

Such translations raise the question of just how specific the meanings of these verbs actually are. When a speaker hears the verb šyêw, for
(10) Central Pomo yöl "mix"

čayöl “chop several things together, as onions and celery for stew”
(ča- "by sawing or slicing")
čyöl “plant things close together, such as melon and pumpkin, with the
result that the flavors meld”
(dh- "by vegetative growth"/”by pressure or mass")
dayöl “add dry ingredients one at a time while baking”
(da- "by pushing, especially with palm of hands")
hyöl “add salt or pepper”
(h- "by poking/jabbing/thrusting")
myöl “throw various ingredients together into pot”
(m- "by heat")
mayöl “mix, as shortening with flour to make pie crust”
(ma- "by stepping or twisting wrist")
qayöl “eat several things together, as meat and potatoes, bread and jam”
(qa- "by biting, pinching")
šayöl “sift dry ingredients”
(šš- "by shaking, moving long object lengthwise")
yöl “throw various ingredients into a bowl with fingers”
(?- "by fine hand action, especially fingers")

Similarly, verbs meaning “call,” “comb,” “dig for,” “peek at,” “shake,” and
“set fishing line” might not seem to form a semantically coherent set, but
their Central Pomo equivalents share a common basis, the root -ʔöl.

(11) Central Pomo -ʔöl “summon”

baʔöl “call”
(ba- "orally")
čʔöl “comb hair”
(čʰ- "involving vegetative growth or flowing motion")
daʔöl “dig for”
(da- "by pushing, digging")
hʔöl “probe with stick to see whether something is hiding”
(h- "by poking")
maʔöl “reach for something with the foot”
(ma- "by stepping")
pʰöl “peek at someone”
(pʰ- "visually")
pʔöl “shake something to see if there is dirt on it”
(p- "encircling")
šʔöl “set fishing line”/”check for fish”
(š- "hanging/dangling/manipulating by handle")

2.6 The legacy of the lexicon: possible words versus actual words

A sample of the rich repertoire of Central Pomo prefixes can be seen in (10) and (11) above. There are more. These prefixes are pervasive in
Central Pomo speech: a substantial proportion of events and states are
characterized according to the kind of motion or medium involved. The
prefixes are in fact so pervasive that it may at first seem that all can be
combined with any root. In fact not all combinations of prefixes, roots, and
suffixes necessarily occur as words in the language, even when they make
sense. Words are created for a purpose, as labels for recurring, nameworthy
concepts. Part of speaker competence involves knowing which combina-
tions could exist as words in the language and which could not because
they would violate the regular grammatical patterns. Speakers also know,
however, which words could exist but simply do not because there has not
been sufficient need for them. The verb lót’s “be slick,” for example,
appears in combinations with some instrumental prefixes, among them ča-
“by sitting,” da- “by pushing,” qa- “by biting,” and ᵇ- “by finger action,” but
not with others, such as čʰ, h-, m-, pʰ, -š, and š. Some of these combina-
tions would make sense, such as čʰlót’s “with-pressure-be.slick.” It could
conceivably be used to describe a slick object that slips when one tries to
hit it with a heavy instrument. Speakers have simply not felt a need to
express this property sufficiently often to devise a label for it. They are,
therefore, aware of that fact.

(12) Central Pomo actual versus possible words

<table>
<thead>
<tr>
<th>Actual, existing words</th>
<th>Possible but not actual words</th>
</tr>
</thead>
<tbody>
<tr>
<td>lót’s “be slick”</td>
<td>čʰlót’s čʰ- “with heavy mass/pressure”</td>
</tr>
<tr>
<td>čalót’s “be slick to sit on”</td>
<td>ʰlót’s ʰ- “by poking/thrusting”</td>
</tr>
<tr>
<td>dalót’s “be slick to the palm”</td>
<td>ʰlót’s ʰ- “by heating”</td>
</tr>
<tr>
<td>of the hand, like a</td>
<td>pʰlót’s pʰ- “by swinging/seeing”</td>
</tr>
<tr>
<td>hard surface</td>
<td>šlót’s š- “by sucking”</td>
</tr>
<tr>
<td>qalót’s “be slimy to eat”</td>
<td>šalót’s ša- “by shaking”</td>
</tr>
<tr>
<td>ʔölts “be slimy to the</td>
<td></td>
</tr>
<tr>
<td>fingers, like a fruit”</td>
<td></td>
</tr>
</tbody>
</table>

The words that exist in a language thus provide a special legacy to new
generations of language learners. They provide a view of the concepts speakers
have chosen to label over the centuries during which the language has
evolved, those that have been expressed sufficiently often to be considered
nameworthy.
2.7 The legacy of the grammar: origins of grammatical categories

One of the ways that languages can vary the most saliently is in their grammatical categories, the distinctions that are typically or even obligatorily expressed. An important aspect of these differences is that they are neither arbitrary nor accidental.

Within most languages, the majority of grammatical categories have been part of the language for such a long time that their historical origins have become obscure. It has been possible in a number of cases, however, to trace their development so that much is now understood about the kinds of origins that underlie them. The evolution of some categories can be traced through written records. The origin of certain Modern French affixes can be seen in Latin documents, for example, and the origin of certain Modern English forms can be traced from Old English.

The most common source of affixes is in independent words. The *Oxford English Dictionary* (1971) tells us, for example, that the English suffix -dom in such words as kingdom, freedom, and wisdom developed from an Old English noun dóm meaning "jurisdiction" or "position" among other things. It was combined with certain other nouns in recurring phrases. As the phrases were used over and over, they came to be interpreted as lexical units, single words referring to single concepts: cýningdom "royal or kingly dominion," fréodóm "the condition or state of being free," and wisdóm "the condition or fact of being wise." The element dóm lost its stress and was reinterpreted as a suffix. It continues as a productive suffix in Modern English meaning "condition/state/dignity/domainrealm," even though the noun dóm from which it originated has disappeared.

Sometimes the original source of a modern grammatical affix has remained in the language as a separate word. The Modern English suffix -ful of faithful, for example, originated from the Old English adjective ful (Oxford English Dictionary 1971). The adjective typically appeared adjacent to nouns. Over time, some of these noun-adjective phrases melded into single words with a single primary stress, and the element -ful was reinterpreted as a suffix. It is now highly productive, frequently used to form new adjectives. Its ancestor, the adjective full, has remained in the language as a separate adjective alongside the suffix.

Although we have no written records through which to trace the historical sources of Modern Central Pomo prefixes and suffixes, some can still be detected because the sources have remained in the language.

The historical origins of most of these suffixes have been clouded by time, but a few can still be detected because their sources have remained in the language. One of these is -m "over, on, across."

(4) Central Pomo suffix -m "over/"on or onto a surface/"across"

a. p³-di-m
   swinging-be/move-over
   (S/he) jumped onto/over/across (it)

b. tás a mék-m
   dish set.pl-onto
   (S/he) set the table

In certain contexts this suffix has the shape -ma.

(5) Central Pomo suffix

   tás a mék-ma-mi!
   dish set.pl-onto-imp
   "Set the table!"

The historical source of the suffix is the verb root ma- "be over," "cross," which still survives in the language.

(6) Central Pomo verb root ma- "be over," "cross"

   má-w
   be.over-perf
   "He went over it (a bridge)"

   &-má-w
   sitting-be.over-perf
   "He is sitting (out of the ground)"

The development of the suffix probably began when speakers juxtaposed verbs such as "jump" and "cross" to yield "jump across." As the combination
was used more and more frequently, speakers began to consider it a single word referring to a single event rather than separate actions. The element *má* lost its status as an independent word and its primary stress. Over time, its form has further eroded with use, so that it is most often just *-m*.

The source of another directional suffix is also still recoverable. The suffix *-mač* means “northward,” “upstream,” “upward,” or “into.” Its range of meanings reflects the fact that the Russian River, along which the Central Pomo live, flows from north to south.

(17) Central Pomo suffix *-mač* “northward,” “upstream,” “upward,” “into”

An independent verb root *mač*- “go north” also still survives in the language.

(18) Central Pomo verb *mač*- “go north”

This verb is presumably the source of the modern suffix.

An important principle that comes from our understanding of the processes of grammaticization is that the grammatical categories we find in languages are not random. They represent those distinctions that speakers of the language have expressed the most often, over centuries or millennia. Some grammatical distinctions are quite common cross-linguistically, because they express concepts shared by much of humankind. Some distinctions can be related to the environment in which the languages have been spoken, such as the suffix *-mač* “go northward, uphill,” where the river was a basis of orientation. Even today Central Pomo speakers indicate location and motion in terms of cardinal directions in natural speech more often than do English speakers.

Other differences in grammatical categories are more subtle, reflecting the many possibilities of expression and interpretation open to the human mind. Much can be learned about traditional patterns of expression in these domains as well from the grammatical distinctions available to modern speakers. Central Pomo, for example, contains a rich repertoire of morphemes (clitics) for indicating the nature of the evidence on which statements are based. Examples of their use can be seen in (19).

**The significance of diversity**

- **a. (=do)**: quotative evidence (speaker was told by a specific person)
  
  *Muile=do* q6 *q6-ìf-n*
  
  that=quotative what not-imperf
  
  “According to him, there’s nothing wrong with that”

- **b. (=7do)**: hearsay evidence (speaker has heard tell)
  
  *Bal=7do mašdùn ʔ=mištùya men dò-č-ma-w*
  
  this=hearsay white it.is.they such do-sentl-multiple.agent-perf
  
  “They say white people do this”

- **c. (=ya)**: perceptual evidence (known from direct personal observation)
  
  ?it ʔe q6-ča-ma-ya
  
  already.it.is.toward-run-multiple.event-multiple.agent=perceptual
  
  “They’re here!” (speaker is standing on porch as they drive up)

- **d. (=nme)**: auditory evidence (speaker has heard evidence)
  
  ?it ʔe q6-ča-ma-nme
  
  already.it.is.toward-run-multiple.event-multiple.agent=perceptual
  
  “They’re here!” (speaker hears the crunch of gravel from indoors)

- **e. (=la)**: performative evidence (speaker is/was responsible)
  
  q6-áwaq: qa-dò-n=la
  
  gum biting-do-imperf=performative
  
  “I’m chewing gum”

- **f. (=wiya)**: affective evidence (event affected the speaker)
  
  q6-áwaq: qa-dò-n s-dì-ʔ=wiya
  
  gum biting-do-imperf sucking-be/moving-levelly-affective
  
  “I swallowed my chewing gum (accidentally)”

- **g. (=ka)**: inferential evidence (speaker has deduced or surmised)
  
  Méen ya-l qaddl-maq-ač=qakà
  
  so we-patient hate-multiple.agent-imperf.pl=inferential that long.ago
  
  “They must hate us from way back”

The use of the evidentials illustrates another difference that morphological structure can make. Two languages may both contain devices for specifying a certain distinction, but differ in the frequency with which they are used. English speakers can of course specify their source of information if they wish, as can be seen in the translations of the Central Pomo sentences in (19). To do so, however, they must resort to a full word or phrase.
(apparently, so they say, according to him). These devices, which involve a certain focus of attention, tend to be used more rarely than their pervasive Central Pomo counterparts. The Central Pomo evidentials have eroded through use to just one or two unstressed syllables that do not interrupt the flow of speech or thought. The difference in use appears even in translations by bilinguals. When Central Pomo is translated into English, speakers usually omit the evidentials.

The evidential examples illustrate another related point. What is asserted in one language may be only implied in another, and vice versa. Sentences (9e) and (9f) above contain no overt pronoun referring to the speaker corresponding to the "I" of the English translation. Yet reference can be inferred from the evidentials. In (9e), the speaker indicated with the evidential $l^a$ that her statement was based on evidence of personal experience in carrying out the action herself. In (9f) the statement with $\approx$w$\approx$y$\approx$ is based on the speaker's experience of having been affected by the event.

This brief sample of Central Pomo words and grammatical categories provides just a glimpse of some of the subtle but pervasive ways in which languages can differ. Glimpses of other kinds of differences can be seen in a language from the other side of the continent, one which differs as much from Central Pomo as it does from English.

3 Further glimpses of linguistic diversity: a Mohawk anecdote

Mohawk is a language of the Iroquoian family, spoken primarily in Quebec, Ontario, and New York State. Mohawk speakers have been recognized for centuries for their skillful use of language and their rich repertoires of oratorical styles. It would be impossible to do justice to this virtuosity within the space of a short chapter, but a few features of the language can be seen in the anecdote in (20), told by Kariwhénhawe' Lazeore, originally of Ahkwesáhsne. The top line shows the words as spoken. (In this orthography, currently in use in community schools, vowels i, e, a, o are essentially as in French, en represents the nasalized vowel of French en, on the nasalized vowel of English noon, and ' glottal stop.) The second line shows a segmentation of each word into its meaningful parts or morphemes. The third line provides the meaning of each morpheme. The fourth line is a free translation, composed by the speaker.

The significance of diversity

Mohawk: Kariwhénhawe' Lazeore, speaker
Ake'nisétënh' 6:nen kwa:k kë:n' náhe' i:qikkaratón.ni,
ake'-nistë-hë 6:nen kwa:k kë:n' náhe' i:qik-karät-onni
my-mother-little now just a bit ago one/me-tell-to
"My mother told me that a while ago,
Kanàth'en ne tsi kand:taïen
ka-nat-h-en ne tsi ka-nat-i-en
it-town-divided-is the that it-town-lie-s
she was crossing the street
ia'teia:ka:hhahah:ia'k'onhÀ:kië.
ia'te-ia:ka:hh-hia'k-onhÀ:kië'
there-two-one-road-cross-ing
in downtown Cornwall.
Tha'kië:ro'k idën' isi' na'ohâhâti
tha'kië:ro'k idën' isi' na'o-hah-adi
suddenly-X hearsay yonder so-it-road-beyond.is one-own-car-goes
All of a sudden, she heard
önhà:k' khe Ontahöh:en:rohtë'.
ownhà:k' khe Onta-ho-henre-hë'
who-only just back-toward-he-shout-cause-perf
someone give a yell from across the street.
"Se'nikön:ra:kk' wats ensâkwahtë'
thi kà:sere.'
se'nikönhr-ra:kk' wats en-sa-kwa-hë'të'
theset mind-set-cont later will-it/you-get-cause-perf that it-drag-s
"Watch out for that car!"
Tânon' idën' tontahohahah:ia'k'onhÀ:kië'.
tânon' idën' tonta-ho-ho-hia'k-onhÀ:kië'
and hearsay back-toward-he-road-cross-ing
The fellow who had issued the warning crossed the road,
Tsi wa'thië:terë ne'
tsi wa'thi-ate-ra:n-ne'
as factual-two they two-each other-reach-come-to-perf
and as she met him,
ne ake'nisëtënh' wa'ë:ron,
ne ake'-nistë-hë wa'ë-ihron
the my-mother-little factual-one-say
my mother replied,
["If the car hit me, it would be no loss to you." After he had walked on a bit,
her protector turned and yelled back, "But the car would be demolished!"]
5.1 The length of words

Even the short passage in (20) illustrates a number of ways in which Mohawk differs from both Central Pomo and English. One of the most obvious ways is the length of words: Mohawk words tend to be longer, on the average, than Central Pomo or English words. They can consist of a large number of morphemes (meaningful parts), a characteristic known as "polysynthesis."

(21) Mohawk polysynthesis
wa-'t-hi-die-ra-'ne'
factual-two-they-two.each.other-reach-come.to-perf
"they two met each other" = "she met him"

An English speaker might well wonder whether the Mohawk in (21) is indeed just one word. A number of facts confirm that it is. The most important is that speakers know it is just one word, whether or not they have ever thought about grammar. If asked to repeat a sentence word by word, they do not hesitate. A second is that speakers do not pause in the middle of words like these any more than English speakers pause in the middle of Englishish words. A third is that none of the parts would be identifiable to a speaker in isolation. A Mohawk speaker would not recognize the segment -ate- or -ra- any more readily than an English speaker would recognize the segment -t- in isolation (the past tense of feel in fel-t). A Mohawk word has only one primary stress, one syllable that is stronger than the others. The stressed syllable in (21) is on the middle á. Additional facts confirm the fact that it is a single word.

Does this word-hood matter? In fact it does. Words express a single conceptual unit, here a single event of meeting. If the speaker had wanted to say that she had met a policeman she would have used at least two words, one for the meeting and one for the policeman; policeman-meeting is not a simplex idea. If she had wanted to draw special attention to the fact that there were just two who met, she would have emphasized the number with a separate word "two" in addition to the verb "meet" above.

5.2 Nouns and verbs

A second difference between the Mohawk passage and its English equivalent is the relative proportions of nouns and verbs in each. It might be thought that although the words of one language might not have perfect equivalents in the next, at least where speakers of one use nouns, speakers of the other will also use nouns. In the English version of (21) the proportion of nouns and verbs is equal: 9 nouns, 9 verbs (1:1). (Pronouns are not included in the count.) The Mohawk version of the same anecdote contains 2 nouns and 14 verbs (1:7). Such a proportion is not atypical of Mohawk. Mohawk speakers generally use a much higher proportion of verbs than either English or Central Pomo speakers do. Several factors contribute to this discrepancy, most related to the richness of Mohawk verbal morphology.

Many objects labeled by nouns in English or Central Pomo are labeled by verbs in Mohawk. The verb may characterize the object by describing its appearance, behavior, or function. These descriptive verbs are then used as if they were nouns, although their literal meanings are still verbal.

(22) Mohawk verbal descriptions of objects
ká:šere
ká-tačen
ka-'ser-e
ka-native
it-drag-s
it-town-ile-s
"car"
"(lying) town"

Relationships are often described with verbs rather than prepositions.

(23) Mohawk verbal descriptions of relations
na'óhádi
kanáthen
na'ok-we-átí
ka-native
so-it-road-beyond.is
it-town-divided.is
"(it is) across the road"
"(it is) in the middle of the town"

Finally, nouns are often incorporated into Mohawk verbs.

(24) Mohawk noun incorporation: noun-verb compounds for unitary concepts
se-níkon:rá-ak
ta-teiakóhóháki:ta 'konhái'k
se-níkonhr-á-ak
ia-teiakóhóháki:ta 'konhái'k
you-mind-set-continuous
there-two-one-road-cross-ing
"Watch out!"
"She was crossing the street"

Noun incorporation is done for a purpose. It creates single words for what are portrayed as single concepts or events. The construction offers speakers options. If they would like to put separate emphasis on an entity, the noun referring to it is expressed as a separate word. In the anecdote in (21), the speaker's mother had said "If the car hit me, it would be no loss to
you." The man replied, "But the car would be demolished," contrasting the car with the woman. The focus of contrast, the car, is a separate word.

(25) Mohawk focus of contrast: no incorporation

Käsere ki' wâhe' enkanhokwâ:ta'ne'
car just certainly it will break to pieces
"But the car would be demolished"

3.3 The ordering of ideas

A third difference between Mohawk and English speech is in the order of words. As can be seen by comparing the Mohawk in (20) with its translation, words do not appear in the same order in the two languages. The basic order of words in English sentences is Subject–Predicate–Object:

(26) English word order

The fellow crossed the street.
subject predicate object

Mohawk word order differs in a fundamental way. It has little to do with the syntactic status of words as subjects, predicates, or objects. In (25) above, for example, the car, which is the subject of the sentence in the English translation, appears at the beginning of the Mohawk sentence. But in (27), the car, again the subject in the English translation, appears at the end of the Mohawk sentence.

(27) Mohawk word order

Ensâkwâ:he' thi käsere.
en-sa-kwa-ht-e' thi ka'-ser-e
will-it/you-get-caus-perf that it-drop-s
"That car will get you"

Words are ordered in Mohawk according to their relative newsworthiness at the moment. Items which are particularly significant, because they are new and important, or they introduce a new topic, or they highlight a focus of contrast, appear early in the sentence. Those that express more predictable or peripheral information appear later. The most newsworthy element of the warning in (27) is the possibility of being hit, so the verb appears first and the "car" appears later. In (25) the car is more newsworthy, because it represents the focus of a contrast with the mother. This time it appears first in the sentence, before the verb "break."

5.4 Text-structuring through particles

In addition to the nouns and pervasive verbs, Mohawk contains a third kind of word termed "particles." These words, which have no internal morphological structure, are often notoriously difficult to translate. Many particles serve an important but subtle role in regulating the flow of information, the rhythm of the discourse. A minor example of such textual structuring can be seen in the use of the hearsay particle idâken' "it is said" in (26). Mohawk speakers, like Central Pomo speakers, systematically identify information they have heard from others. If identifying the source of information were the sole function of idâken', however, it should appear only once in an anecdote like that above, perhaps at the beginning. Yet it appears twice just within the short passage cited in (20), even though the original teller of the tale, the speaker's mother, had just been specifically identified two lines before. The particle serves another more subtle secondary function, structuring the narrative by highlighting significant shifts in the flow of the action.

(28) Mohawk text-structuring through particles

"My mother told me that a while ago

she was crossing the street

in downtown Cornwall.

Tha'ki:ro'k idâken'
suddenly hearsay

she heard someone yell from across the street.

'Watch out for that car!'

Tânton'i' honk: hahâhâhiia kohâkhtie'.

and hearsay back-toward-he-road-cross-ing

And it seems that he crossed the road,

and as she met him,

my mother replied, . . ."

The examples cited here in sections 2 and 3 have provided just a glimpse of some of the ways in which Central Pomo and Mohawk contrast with English and with each other. Each shows us alternative ways of structuring perceptions of the world, of making sense of experience. Most people who speak more than one language well have noticed that they not only use different words in each, they also say different things. Both Central Pomo and Mohawk speakers comment that they "think differently" when they speak their first and second languages. The differing vocabularies of each
language may lead them to package concepts differently. The grammatical categories of each may lead them to single out different aspects of situations under discussion, and relate ideas in different ways. Languages are constantly evolving to meet the needs of their speakers as they are shaped by usage, but they are not created overnight. They reflect what a people has chosen to say most often over millennia. A lost language cannot be replaced.

4 The diversity of community contexts

Just as the languages indigenous to North America differ substantially from one community to the next, so do the situations in which they are disappearing. Over the course of history and before, languages have disappeared for a variety of reasons. Some languages died abruptly with the premature deaths of their speakers. In North America, diseases brought by Europeans often preceded direct contact with the Europeans themselves. In many areas heavy losses resulted from warfare. These factors, combined with the sudden loss of land needed for subsistence, destroyed already small communities. The Yana of Northern California, for example, were reduced from approximately 1,900 to under 100 within twenty years of the arrival of white settlers in 1846 (Johnson 1978:362-363). The Yahi dialect of Yana was assumed to have been extinct by the 1860s, until a lone Yahi man, later known as Ishi, emerged in 1911 after decades of hiding. His language came to an abrupt end when he died of tuberculosis in 1916.

More common in recent times has been the loss of traditional languages through language shift, as people used the language of the dominant society in place of their mother tongue in more and more situations. A major contributor to the current decline of languages all over North America was the institution of formal education, particularly in boarding schools designed to separate children from the influence of their homes and families during their formative years. In community after community, elders now recall the pain of this separation, of being forbidden to speak their languages or observe their traditions, and of their resolve never to put children of their own through the hardship of being unable to speak the dominant language. It was a time when the strength of their own cultures and the intellectual value of bilingualism were little understood or appreciated. Strong pressures against the maintenance of traditional languages persist to this day. In most areas, children continue to be educated in the

outside language, and success in life is often equated with the ability to conform. The ubiquitous presence of television in the dominant language also sends a strong message to children and young people.

Even processes of language shift have not been uniform across the continent, however. Obviously more remote communities, such as those of the Yup’ik in Alaska and the Inuktut in the Canadian north, were not subject to outside pressures as early as those near centers of European settlement, such as the Powhatan of Virginia or the Esselen south of San Francisco. Community size has also played a role. Navajo and Cree are spoken not only in relatively remote areas, they are also used by relatively large numbers of people. Both languages are still being learned as a mother tongue by children, though the proportion of children learning them is diminishing every year.

In a number of cases what has been remarkable is the impressive strength of linguistic traditions under highly unfavorable circumstances. In the west, the Barbaren Chumash were nearly all taken into the Franciscan mission at Santa Barbara within a few years of its founding in 1786. With a few exceptions, the Franciscans seem to have had scant interest in the language or culture of their converts. Little attempt was made to learn or even record the language. The Chumash were immediately put to work learning European occupations and Spanish. Yet the Chumash languages persisted miraculously for generations, over nearly two centuries. The last speaker of Barbaren Chumash, Mary Yee, was highly skilled in the language right up until her death in 1965. She commanded a massive, intricate vocabulary and a full, elaborate repertoire of grammatical and stylistic categories and constructions. Several factors can be seen to underlie her skill. She was in daily contact with at least one other fully fluent speaker throughout most of her lifetime. She thought about her language and its structure, recording and analyzing it over three decades of work with linguists. She was also an intelligent, articulate individual, fully fluent and literate in three languages: Barbaren Chumash, Spanish, and English.

A second impressive example of the strength of linguistic tradition comes out of a different kind of history, this time in the East. The Mohawks encountered Europeans quite early, at the beginning of the seventeenth century, and contact has continued to the present. Mohawk communities have been characterized by neither the geographic isolation nor the very large numbers of the Navajo or the Cree. The community at Kahnawake...
has been situated on the south bank of the St. Lawrence River, directly across from Montreal, for three centuries. Residents have long gone outside the community for work; particularly their steel works as far away as Boston, New York, Detroit, and even Dallas. Yet the Mohawk language is still spoken skillfully, after nearly four centuries of contact. What is the key to its strength? There are probably nearly as many answers as speakers, but certain factors stand out. The Mohawk communities have always been strong ones, in which individuals are respected and relations among members valued. Mohawk speakers have always appreciated their language and cultivated skillful use of it. Unfortunately, even here few children are now learning Mohawk as a first language. Perhaps the most important ingredient in the current vitality of the language is the dedication of a core of individuals who have worked tirelessly and selflessly for over twenty-five years to give their children the gift of their own heritage in Mohawk immersion schools and language classes (see Jacobs, this volume, for details).

4.1 The diversity of attitudes

Even in the face of language endangerment, heroism like that of the Native teachers and curriculum specialists at Kahnawá:ke and elsewhere is not uniformly acclaimed. Attitudes toward language and its preservation vary both across and within communities. In parts of California, for example, where communities have always been relatively small, people could often expect to marry someone with a different language, and thus to use several languages during their lifetimes. Multilingualism was a norm, and a pragmatic view of language often prevailed; language was seen first as a practical tool of communication. Learning a new language was not viewed as a sign of disloyalty to the old. In other areas, or among other individuals, there is stronger consciousness of the social meaning and cultural connections of specific languages. Some of the most salient forms of culture are expressed linguistically. Special ceremonial language cannot be easily replaced with a translation into a new language; jokes no longer have the same zip; stories no longer convey the same spirit or warmth. People interact with each other in different ways.

Current attitudes toward the perpetuation of the traditional language vary as well. In some communities, elders realize that the maintenance of language is crucial to the retention of culture in its full form. Considerable effort is being devoted to language instruction. Young people are searching the historical, anthropological, and linguistic literature for any information they can find about their cultures and languages. Yet in other communities, such pursuits are viewed with little enthusiasm, for several reasons.

It is felt by some that if the traditional language is to die, it is not up to human beings to interfere with this natural process. The kinds of measures that preservation might entail, such as formal teaching, recording and writing, are seen as conflicting with the nature of the language itself, which has always been an oral organism. At present, the majority of active language programs involve writing, even where students are not taught to read and write themselves. Writing has allowed curriculum planners and teachers to become conscious of the structures unique to their languages and allowed them to plan lessons accordingly. Of course successful language curricula depend on strong documentation of the language. For documentation, writing is even more central: audio or even video recordings alone will be of little use to future generations who do not control the language. Yet, for understandable reasons, some community members feel that “reducing the language to writing” would do violence to it, destroying its integrity and strength. There are fears that once it is written, this most intimate cultural inheritance will no longer be uniquely theirs but, like so many other aspects of their heritage, become accessible to any passersby, people who may not accord it appropriate respect.

In many communities not all parents are convinced that retention of the traditional language is best for their children. Perhaps they or their parents suffered through the pain of boarding school, of being criticized and punished for using their mother tongue. Perhaps they are simply considering the economic fate of their children in a world that requires competence in one or even two major languages as a prerequisite for employment. If an English-speaking Mohawk child in Quebec needs to know French to find work, whether it be clerking in a drugstore or presiding over a bank, parents may hesitate to force the child to learn Mohawk first, and to dedicate scarce human and economic resources to a Mohawk language program.

4.2 The diversity of available resources

Tremendous differences exist across communities in the resources available to those concerned with language preservation, differences in linguistic resources, in human resources, and in economic resources.
In some communities, the traditional language can be heard everywhere, while in others, it is used only rarely. In a few areas people of all ages still speak the traditional language well, and children are still learning it as a mother tongue. In others, parents are fluent but young people have only a passive understanding. In many, a strong core of middle-aged people speak the language well, although younger adults have only a rudimentary or passive knowledge. In still others, only elders command the language fully. Finally, in a number of communities, no speakers remain. Such differences necessarily affect the kinds of preservation efforts that are possible.

Probably the most crucial ingredient in the success of language programs over the past several decades has been the attitudes and talents of community members. The creation of Native-language programs requires extraordinary vision, determination, and industry. In many communities, knowledgeable speakers with unending dedication are few, and potential language students have other priorities. As more and more communities have developed language programs, however, more curriculum ideas are becoming available for sharing. Techniques devised for one language in one community may not always be appropriate for the next, but in many cases they can stimulate new ideas, a valuable commodity for teachers who have no textbooks for their subject matter but who must produce classes that will hold their students’ attention day in and day out. For most speakers, language is a relatively unconscious phenomenon. Few speakers are aware of the tremendous complexity or harmony of the tool they use constantly. A good linguist can help a community discover what is special about their linguistic heritage and how to understand it in its own terms, rather than those of the dominant outside language. Most successful programs have in fact involved collaboration between community members, who set the goals and provide language expertise, and linguists, who can provide technical support in such areas as orthography construction, curriculum design, language-teaching techniques, and procedures for language documentation.

Finally, in the closing years of the twentieth century when it is almost too late, certain practical resources are slowly becoming more accessible. In the United States, an evolving respect for Native languages and awareness of their impending loss are leading to increased funding for community projects. Conferences, workshops, and summer courses specifically designed for communities developing Native-language programs are now taking place in a variety of locations throughout North America. These gatherings are providing a forum for the sharing of ideas, expertise, solutions to problems, and enthusiasm. Communities no longer need work in complete isolation.

The diversity of goals

Because of the diversity of the language structures involved, of the patterns of language use, of attitudes toward traditional languages, and of human and material resources available, no single goal is appropriate for all situations, nor is there a single formula for success. One response to impending language loss is to do nothing and let the process run its course unimpeded. Such a decision is of course the privilege of local communities, to whom the languages belong. Such a decision should of course be made only with full awareness of its effect not only on current community members but also on their descendants, who will not be in a position to make the decision for themselves.

In some communities, the perpetuation of native bilingualism is a desired and even attainable goal. Where children are still learning the traditional language as a mother tongue, as in Greenland, maintenance may be primarily a matter of ensuring that it remains a part of their daily lives, that it is in constant use around them even if they are bilingual in the dominant language, and that it is enjoyed and respected. Special linguistic training may not be necessary in such a situation; strong personal commitment may be sufficient.

Where the youngest speakers are parents of young children, as in some Yup’ik communities in Alaska, now is the time for communities to discuss their priorities. If they value the traditional language, it may still be possible to pass it on to their children with concentrated efforts at constant use. If adults who know the language always choose to use it with each other and with the children, the children will have a much better chance at remaining bilingual.

Where most of the younger speakers are middle-aged, vital language programs are still possible, as has been demonstrated at Kahnawà:ke and elsewhere. The commitment of Mohawk speakers at Kahnawà:ke has brought about a tremendous change over the past twenty years. In the early 1970s, the language was rarely heard in public. There was no reason for children to consider it a viable part of their heritage. Once they realized the
consequences of their daily use of English, however, a substantial number of Mohawk speakers simply resolved to speak Mohawk to each other. The community has transformed itself. The sound of the language and the usual accompanying laughter is everywhere; it is a visible presence as well, appearing in places of all kinds, from signs on buildings to bank statements. Children growing up now are being given a strong, positive sense of their special heritage, but their English has not suffered at all. Decisions such as this do not necessarily require great financial resources, although they may involve substantial personal effort. Where active speakers remain, a number of such options remain possible. Grandparents may resolve to speak only the traditional language to their grandchildren. Simply gathering fluent speakers together with semi-speakers (those with basic but limited native competence) for daily gossip sessions can foster tremendous growth, allowing them to widen their vocabulary and augment their mastery of idiomatic expressions, complex structures and stylistic options. Language classes and even immersion programs remain possible. Speakers past their childrearing years often provide the most valuable human resources of all, combining vigor and commitment with knowledge and experience. Master/apprentice projects like those in California described by Leanne Hinton could be especially successful in such situations, where energetic masters are available and apprentices already possess native command of the basic sounds and structures of the traditional language.

Where the only speakers are too elderly to teach, as among the Hupa of California, they can still serve as a vital resource for language programs, as models for semi-speakers, as resources for curriculum construction, and as the basis for documentation of the language. Because it is extremely difficult to teach full fluency if one is not fluent oneself, appropriate goals in such situations may be more modest, but still extremely important. Even limited familiarity with the language can have strong symbolic value for both children and adults, providing a link with their own heritage and a crucial sense of self.

Where no native speakers remain, as among the Chumash in California, it may be too late to create new ones, but if good documentation of the language exists, it may still be possible to instill an appreciation of the special richness and power of the traditional language. The extensive fieldnotes of John Peabody Harrington on Barbareno Chumash, for example, have provided an irreplaceable resource for descendants of speakers to discover their own heritage. There is not a language in North America that fails to offer breathtakingly beautiful intricacy. For descendants of speakers to discover this beauty can profoundly enrich their lives, much like the discovery of music, literature, or art, if not more.

Although the diversity of community settings, attitudes, and resources necessitates a diversity of goals among language programs, efforts in the face of severe endangerment must differ in a fundamental way from those meant to prepare American tourists for a week in Paris, or allow Japanese students to read American computer manuals. The ultimate aim of Yup'ik, Mohawk, Hupa, or Chumash language programs is not rudimentary communication or comprehension. Most speakers of endangered languages in North America also know English, French, or Spanish, so their children and grandchildren need not learn the traditional language to speak with them. The purpose of the work is to understand and preserve what is special about the tradition itself. The loss of languages is tragic precisely because they are not interchangeable, precisely because they represent the distillation of the thoughts and communication of a people over their entire history. Language instruction and documentation that is limited to translations of English words or even English sentences misses the point entirely. It must capture not just how things are said, but also what people choose to say, not only in ceremonies and narrative, but in daily conversation as well.

5 Conclusion

Language represents the most creative, pervasive aspect of culture, the most intimate side of the mind. The loss of language diversity will mean that we will never even have the opportunity to appreciate the full creative capacities of the human mind. The hundreds of North American languages that are currently disappearing or that have already disappeared differ in a vast variety of ways, some fundamental, some subtle, many both. Just a few of these ways have been illustrated with examples from Central Pomo, a language of the west, and Mohawk, a language of the east. We have seen differences in the segmentation of experience into word-sized categories: languages do not contain perfectly equivalent vocabularies. We have seen differences in the features selected as most salient to describe certain concepts: languages differ in their repertoires of grammatical categories. What
is packaged in one language as a root, the primary foundation of a word, may be packaged as a prefix or suffix in another, a qualification of the core concept. What speakers of one language express primarily with nouns, speakers of another may convey with verbs. Distinctions expressed routinely in one language may be expressed only rarely in another. We have seen, furthermore, that such differences are neither random nor arbitrary. Vocabulary and grammar are shaped by use. The lexicon of a language reflects those concepts that speakers have referred to often enough to consider noteworthy. The grammatical categories of the language represent those features of situations that speakers have specified so often that they have become routinized. It is this diversity, the result of millennia of development, that makes the loss of these languages irreparable.

The circumstances under which the languages are disappearing differ as well. Some of the languages are spoken in large communities, some in small ones; some are spoken in remote areas, others under conditions of heavy contact. Some of the languages are still used daily by large numbers of people of all ages, while others are only dimly remembered by a few elders. Among some groups the traditional language is highly valued and preservation is greatly desired, while among others alternative values have priority. Some communities have, through great effort, been able to secure certain human and financial resources for language projects, while others have few resources at all. Such variables mean that no single goal can be appropriate for all situations, nor can there be a single formula for success. Results of one program cannot be judged against those of any other.

Because of the urgency of the situation, however, now is the time for general awareness of the consequences of both action and inaction. Now is also the time for the sharing of experiences, expertise, and solutions to similar problems. Although the same strategies and techniques may not be equally applicable to all programs, ongoing communication can provide useful ideas and encouragement in the face of a demanding task.

For those communities committed to language revitalization, preservation, and appreciation projects, it is worthwhile to take time to consider the ultimate goal of the work. If the intent is simply to equip descendants with a short list of basic words to use as symbols of their heritage, the task is a relatively minor one. If it is to capture the uniqueness of their heritage, however, this specialness must be respected in both teaching and documentation. Simply eliciting vocabulary and basic paradigms will not be enough; speakers must be allowed to speak for themselves. It is crucial to record how good speakers use their language, what they choose to say in the multitude of settings that constitute their daily lives, how they describe their own experiences, how they provide explanations, and especially how they interact with each other. Such a record will lay a foundation for their descendants to discover the intricate beauty of a system unlike any other, and a chance for us all to appreciate some of the capacities of the human spirit.
Endangered languages
Language loss and community response

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