

Vanishing tongues: Scientists fight to save world's disappearing languages

By Gareth Cook, Globe Staff, 11/5/2000

This summer, on a high grassy plateau in western Mongolia, framed by the Altai mountains, linguist David Harrison chased yaks with a digital video camera.

All around him were Tuvan yak herders, dressed in high leather boots and multicolored silk robes, urging the beasts to pasture with plaintive "domestication songs." They speak a language called Tsengel Tuvan, which Harrison has been scrambling to document before it vanishes.

We are living, scientists say, in the midst of an unprecedented, worldwide linguistic collapse. Of the 6,700-odd languages now spoken, at least half - and perhaps as many as 90 percent - will be extinct in a century's time, as younger generations reject traditional tongues for a few dominant languages.

With a language dying roughly every two weeks, said Harrison, a visiting lecturer at Yale University, "we are missing an incredible opportunity. You can still go out there and find an entire language that not a single scientist has documented. It's like adding a new element to the periodic table."

Amid a growing sense of alarm, linguists, archivists, and computer scientists plan to gather at the University of Pennsylvania in December to plot the rebuilding of the Tower of Babel before the bricks turn to dust. Their plan, together with a loose, worldwide collection of institutions, is to convert as many of the world's languages as possible into detailed digital records, including sound files, and then post the results on the Internet in a common, searchable format.

Anthropologists bemoan the language massacre, saying that each language is like a soaring cathedral: a thing of beauty, the product of immense creative effort, filled with rich tapestries of knowledge. Interviews with traditional healers, for example, have identified new drugs. And comparing disparate languages reveals clues to the fundamental building blocks of human thought, as well as echoes of what scientists call our "deep history" - the vast, prehistoric movements of peoples across continents and the relation of one tribe to another.

"All of a sudden, we can have a much more complete picture of the science of language," said Steven Bird, the conference organizer and associate director of the Linguistic Data Consortium, an organization of 850 institutions. "At the present time, there is an amazing convergence, with the ability to store large amounts of data cheaply, and the ability to share it."

Flowing through the digital switches and fiber optic cables of the Internet, many world languages would live on in at least some form, organizers say, available to researchers, or to descendants who want to reconnect with a past they rejected as children.

But many anthropologists and indigenous activists say that such efforts skirt the real issue. Saving a language, they say, requires political and economic muscle. Bird admitted that his efforts would "only be a small part of the solution." For many of these languages, he added, "one has to be fairly cynical about the future."

Yet, even if it is a twilight struggle, other scientists said it will be a crucial one. "A magnificent human creation like the "Mona Lisa" or the Sistine Chapel shouldn't just vanish without being recorded," said Stephen Pinker, a psychology professor at MIT and author of "The Language Instinct." "This is history that is not written as history."

As linguists first trekked through jungles and mountains with tape recorders, they were stunned at the richness of human language. In the endangered Australian language Guugu Yimithirr, for example, there are no relative spatial words like "left" and "right"; instead, speakers would refer to a person's "north hand" or "west leg," depending on how they are standing in the world. Another Aboriginal language has a class of nouns relating to "women, fire, or dangerous things."

Looking for differences between languages is also one of the only ways scientists have to estimate how long two groups have been apart. Thus, it was a linguist, Sir William Jones, who first suggested that much of India and Europe were colonized by the descendants of one tribe - an ancient band now thought to have originated north of the Caspian Sea.

With enough languages, the same approach can be used to probe tens of thousands of years of human history.

Languages can also contain within them a mass of accumulated knowledge about the natural world, a treasure trove for botanists and even pharmaceutical companies. Paul Allen Cox, an ethnobotanist who heads the National Tropical Botanical Garden in Hawaii and Florida, said that he spent a year living in western Samoa recording the knowledge of Pela Lilo, a traditional healer.

One preparation Lilo described involved peeling bark that smells of menthol from a certain tree, soaking it in water, and drinking the pink suds. Back in a laboratory, researchers found in the liquid a compound that doubled the life of a kind of cell, called a "T-cell," that plays a crucial role in human immune systems. The journal *Cytotechnology* published the result in 1994.

Last month, Cox said, he held Lilo's hand as she died in her bed, the last of her people with such detailed knowledge.

"When we lose the language, we also lose the plant lore," said Cox, who is horrified at how many languages the world loses every month. "I see language as a bottle that holds a precious fluid."

Reacting to the crisis, organizations have sprung up to salvage what they can. Harrison's

work was coordinated through the New Haven-based Endangered Language Fund, founded in 1995, and paid for with a grant from the Volkswagen Foundation, which began an endangered language program last year. The University of Texas at Austin opened a Web site this year as part of its new Archive of Indigenous Languages of Latin America. And there are sites across the Web offering everything from detailed grammars of vanishing African languages to dictionaries and language tapes for native North America.

With their conference in December, Bird and his collaborators hope to convince the field to agree on what they call a "metastructure" - a common electronic language that would ensure that everyone's efforts will be compatible and that would allow whole new kinds of comparative research. An organization called LINGUIST List, one of the oldest linguistic presences on the Web, has applied for funding for a five-year project to try a similar approach with 10 wildly different endangered languages, including Lakota in South Dakota and Ega in the Ivory Coast.

Even among the researchers involved, though, there is a fear that making the data - some of it personal histories, or revered foundation myths - so readily accessible could create additional problems. What can they do, they wonder, to prevent a sacred lament from being used in a new song by Fatboy Slim?

But Tony Woodbury, who is coordinating the Latin-American project and has been vocal in warning of the Web's potential for abuse, said that "there is also an ethical cost to just leaving it in the attic," where it will be forgotten.

If we don't explore these languages, Harrison added, we won't know what we have missed. He explained how Mongolia's nomadic herders have a profusion of names for grass, and how a minor change in the waving fields could be a signal they need to take the grazing animals elsewhere.

"The grass tells them when it's time to move on," said Harrison. "It tells them their time is up."

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