

K. David Harrison. 2010. *The last speakers: The quest to save the world's most endangered languages*. Washington, D.C.: National Geographic. 302 pp.: ill.; glossary; 23 cm. ISBN: 978-1-4262-0461-6. US \$27.00, Hardcover.

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The Last Speakers is a highly personal look at language documentation, language endangerment, and language extinction. The book focuses on the experiences of individual speakers of highly endangered languages and the author's own experiences as a linguist working with them. While aimed primarily at non-linguists, his engaging style, detailed examples, and colorful anecdotes make this a book that can be enjoyed by linguists and non-linguists alike.

Harrison's work fulfills an important niche in the literature by not only discussing the need for documentation on a global level, but also by demonstrating the effects of endangerment on individual people and communities around the world. This juxtaposition of the local and global scales is one of the strong points of the work that sets it apart. The discussion of the global level sets the issues in context, while the individual stories exemplify the effects of endangerment on a personal level around the world.

Harrison's experiences and the last speakers he meets are unique, and through his numerous experiences around the world he paints a picture of the incredible diversity among languages, cultures, and even the last speakers themselves. The experiences he relates cover a broad spectrum of the globe, from nomads in Siberia to traditional healers in South America, and from the descendants of the first inhabitants of the Australian Outback to small tribal societies in New Guinea.

His introduction sets the stage for the remainder of the book by discussing some of the most important issues surrounding the topics of language diversity and language endangerment, including the value of multilingualism and the wider implications of language endangerment. Among the many potential ramifications of language loss, Harrison's point is clear: with the loss of indigenous languages comes the loss of knowledge. He claims much of what humankind has learned throughout history is not yet codified in books and journals, but resides with speakers of minority languages. As he says, "species and ecosystems unknown to science are well known to local people, whose languages encode not only names for things but also complex interrelations among them" (p. 10).

As examples, he cites the vast knowledge of medical plants possessed by some tribes in South America and the extensive knowledge of cold weather meteorological phenomena belonging to indigenous peoples living in the far north. Even more than a correlation between knowledge and language, he holds that much of this traditional knowledge is encapsulated in the language itself, and that "this knowledge dissipates when people shift to speaking global tongues" (p. 10). This theme is repeated and exemplified persistently throughout the book.

After this broad scale introduction, Chapter 1 turns to Harrison's specific experiences with language endangerment. Called 'Becoming a Linguist,' this chapter overviews the language experiences that eventually lead to his passion for linguistics. Since Harrison's

family was trained at the Summer Institute of Linguistics, he was exposed to the concepts of linguistics and fieldwork at an early age. In spite of being met without success at several attempts to learn languages, everything clicked when he had a chance to learn Polish by studying abroad in Poland. This experience opened up his eyes to the field of linguistics, and drove him to pursue his mission of language exploration around the world.

The first step of this mission, a fieldwork expedition to Siberia to collect data for his dissertation on the Tuvan language, is described in the next chapter, 'Siberia Calling.' Unperturbed by the officials who assured him that the town he was looking for did not exist, he was eventually able to move into a traditional yurt with a Tuvan family. The Tuvan lifestyle primarily revolves around the difficult profession of herding yaks and sheep. Harrison paints a picture of what it was like to do fieldwork in a remote language community. One strong point of Harrison's work is his ability to combine personal anecdotes with clear explanations of linguistic phenomena that are relatable for a general reading audience. He gives short, concise explanations that serve to give a flavor of language diversity, for instance, calling a pitch accent language "a poor man's tone language" (p. 36) or describing noun incorporation as an instance of a verb that had "swallowed" other words (p. 234).

One aspect of Tuvan that is very interesting from the perspective of English is the lack of a general verb for movement. He explains, "every time I moved, pantomimed, or pointed to indicate 'go,' I seemed to elicit a different word" (p. 49). He eventually discovered that the Tuvan system for expressing movement is tied into knowledge of the local geography, and especially knowledge of local rivers, with verbs like *còkta* 'go upstream,' *bàt* 'go downstream' and *kes* 'go cross-stream' (p. 50). Using this system requires a great awareness of one's environment and a careful attention to context. This is especially important when there are multiple eligible rivers that flow in different directions—as Harrison learned after being told by one individual to go 'downstream' to his location and another to go 'upstream.' In Tuvan, even a seemingly basic and universal concept, like the general verb for movement, is closely intertwined with specific local environmental knowledge, and as Harrison points out, such systems require speakers to be attentive to those aspects of their environment.

Another example from Tuvan that shows the connection between language and local geographical knowledge even more strongly is the seemingly inconsequential word *iy*, meaning 'the short side of a hill' (p. 48). Contained in this word is a deeper implication, namely, that hills indeed have one side that is shorter and steeper, and there is therefore a right and wrong way to approach every hill. Climbing the *iy* of a hill means a more arduous trek up and a more dangerous trip down. He writes from his own experience, "Once you know that there *is* an iy, you don't really have to be told to notice it or avoid it. You just do" (p. 48).

The connection between language, culture, and knowledge is further explored in Chapter 3, aptly titled 'The Power of Words.' He further elaborates his perspective on the connection between language and knowledge, explaining that, "languages abound in 'cultural knowledge,' which is neither genetic nor explicitly learned, but comes to us in an information package" (p. 58). As has been seen, one of the main ways Harrison shows cultural knowledge being 'packaged' is through the vocabulary of a language, especially in terms of the lexical items that exist and the semantic ranges of those items.

Another example, this time from the ecological domain, comes from another people

group in Siberia, the Tofa. The Tofa are primarily reindeer herders, and they have a vast vocabulary for describing different types of reindeer. An example which illustrates the complexity of the system as a whole is the word *dönggür*, which is defined as a 'male domesticated uncastrated rideable reindeer in its third year and first mating season, but not ready for mating' (p. 57). In the Tofa people's current situation, there is cultural pressure to switch to Russian, which of course does not have such a broad range of specific terms unique to the domain of reindeer herding. He states that reindeer herding is still possible for those who now speak Russian, but "they lack the labels to do so efficiently" (p. 59).

At this point, Harrison introduces the Sapir-Whorf hypothesis, and summarizes some of the controversy that has surrounded it. He does not hold to the strong form of the hypothesis, but suggests, "Instead of thinking of language as a kind of blinder that prevents us from seeing or saying certain things, we can think of it as a magnifying glass that focuses our attention, requiring us to pay attention to certain details" (p. 70-71). In addition to the Tuvan and Tofa examples mentioned earlier, he cites the Yupik people's many descriptive words for cold weather phenomena and the vast secret vocabulary for healing plants used by specialists among the Kallawaya people of Bolivia. He concludes his chapter on 'The Power of Words' by discussing the often contentious topic of language ownership.

The next chapter, called 'Where the Hotspots Are,' has a geographic purview, discussing some of the regions in greatest need of attention. He begins by defining 'Language Hotspots' as "regions of the world having the greatest linguistic diversity, the greatest language endangerment, and the least-studied languages" (p. 88). The first hotspot to be visited is Northern Australia, which has received a substantial amount of linguistic attention, but is nevertheless the home to many highly threatened languages. There Harrison and his team meet with Neil Mackenzie, an elder of the aboriginal Rubibi people, whose language has only a handful of speakers remaining. Neil guides them around the outback, relating valuable treasures of survival knowledge, including how to find water in the middle of the desert and how to use indigenous plants to catch as many fish as one would like. With the disappearance of the language and the shift from traditional culture, much of this traditional knowledge is being lost, remaining only in the minds of a few elders such as Neil.

The pattern of shift from traditional ways of life is echoed in the next hotspot they visit, the harsh Chaco region of Paraguay. He describes the radical changes that have come about in the lives of the Chamacoco people: in a very short amount of time historically speaking, they have exchanged many aspects of their traditional way of living for more Western artifacts. Older speakers have witnessed the entire change from start to finish. While in Paraguay, Harrison and his team had the opportunity to observe ceremonial traditions and songs, including a rare ceremonial dance that had not been performed for such a long time that many younger people had no knowledge of it. Amidst these cultural pressures, many members of the younger generation are beginning to switch to Spanish. Although Spanish has not replaced Chamacoco everywhere, the effects of language and cultural shift are readily apparent, showing again a connection between language and cultural knowledge

Harrison's expeditions around the world continue with a trip to India, described in Chapter 5, 'Finding Hidden Languages.' 'Hidden languages' he defines as those that have been previously undiscovered by outsiders, whether they have been intentionally hidden or simply ignored. Here, Harrison describes an exploratory field trip to a remote part of India and the opportunity his team had to meet speakers of a small language called Koro,

a Tibeto-Burman language they had not previously known to exist. Another 'hidden' language that is discussed is Ös, spoken by the Chulym people. One particularly interesting section gives excerpts from a traditional Chulym epic narrative, which describes a man's journey to the underworld to free his kidnapped wife from the "evil Iron Khan" (p. 149). The chapter concludes with a reflection on the potential fragility of oral storytelling traditions in the face of cultural shift and the importance of documenting this type of cultural knowledge, which serves as a unique window on the human experience.

Moving from Siberia to New Guinea, the sixth chapter describes contact with people from indigenous ethnic groups such as the Karim and the Yokoim. He describes local culture, traditions, and history, encapsulated in artful stories and songs. He also brings to attention the interesting and sometimes highly complicated systems for counting used in Papua New Guinea. He describes a particular experience learning to count to 'one.' At first, the word for the number seemed to be *mban* 'one.' However, as he and his colleague Greg Anderson delved more deeply into the counting system, they learned that the simple elicitation form masked a quite complicated pattern of allophony. In a four-page transcription of their conversation with a language consultant, more and more complexity is added to the system as competing hypotheses are silently proposed and discredited. They find that *mban*, *mbo*, *mbanma*, *mbai* and *mbaiya* are all possible realizations of the word for 'one,' depending on what is being counted. They conclude that the system involves allophonic variation conditioned by both semantics and phonology.

Harrison also describes the counting system of Sora from India, which is particularly interesting in its use of both 12 and 20 as bases; for instance, the word for ninety-three is literally 'four twenty twelve one' (p. 176). Even though numbers may seem like a basic, immutable component of the universe, there is a great potential for diversity in the way that languages package this information. Harrison asserts that, "smaller languages, with their sometimes radically different ways of conceptualizing numbers, may hold some unique insights—if we can learn them before they vanish" (p. 176).

In the next chapter, Harrison turns to another highly important aspect of any culture: stories. Stories are an important part of cultural heritage, and can serve not only as sources of entertainment but as a cultural foundation and a connection to the past. He describes how stories have been preserved from time immemorial solely through the memory of speakers, but because of changing circumstances, many stories are in danger of being lost forever. He also relates three examples of unique and interesting stories from around the world. For instance, in Australia, the speaker Charlie Mangulda describes the Rainbow Serpent, a potentially terrifying mythical creature leaving both destruction and new life in its wake. The Tuvan storyteller Shoydak-ool narrates the escapades of the heroine Bora in her quest to bring her brother back to life. Finally, K. C. Naik Biruli, a very bright individual of the Ho people of India, narrates the Ho culture's myth of creation, as well as demonstrating his people's unique writing system.

The following chapter continues the focus on oral art and literature by looking at indigenous songs. Harrison and his team traveled through central and northern Asia, where they experienced a widely varied range of music and song. The first Harrison describes is the unique Tofa song tradition. Although the Tofa have a large repertoire of songs, all the songs Harrison and his team heard were sung to the same melody of only five musical notes. Harrison saw this as a "truly ancient, basic, primordial song tradition that had persisted, resisting outside influences, special and insular unto itself' (p. 207). He also describes the Tsengel people of Mongolia's complex and productive system for developing new onomatopoetic words. The penultimate section describes certain nomadic Mongolian peoples' use of songs to control animals, including songs to calm animals while they are being milked or sheared, which Harrison posits are part of "an unbroken continuity of knowledge, going all the way back to the first instance of animal domestication" (p. 216). The last type of song described in the chapter is those songs sung by a Mongolian shaman—invocations to the spiritual world.

The next chapter, Chapter 9, describes other experiences with the Tofa-speaking people. He begins by describing the intense complications involved in the initial journey, which was plagued by bad weather, less-than-congenial workers and a general misunderstanding of officials as to why anyone would ever want to visit the Tofa. Upon arrival, he describes the close connection between the Tofa and their natural environment, including their special respect—even reverence—for the bear. The remainder of Chapter 9 focuses on the long-term effects of language death, discussing the alternative viewpoints on the issue and emphasizing the importance of endangered languages. He concludes his discussion by saying, "We have much to learn from them, if we are still willing to listen" (p. 242).

The final chapter, Chapter 10, is simply titled 'Saving Languages.' He begins by comparing species endangerment and language endangerment, finding that by his metrics, languages as a class are significantly more endangered than other types of species. He spends a significant portion of the chapter summarizing the thoughts and feelings expressed by last speakers about their language. He says that the general mood is often sad, many times accompanied by despair that it is too late or that the language is too far gone. However, other speakers are hopeful, and even optimistic about what the future may hold for their mother tongue. To an even greater extent than any of the previous chapters, the last chapter provides a penetrating perspective on how last speakers feel, driving home the implications of broader trends for individuals in each of their unique situations.

Amidst some discouraging situations, he also includes some hopeful stories of language maintenance and revitalization, such as a class on the American Indian language Lenape that was recently developed at Swarthmore College, or the incorporation of endangered languages into Facebook and other types of social technology. As to the question of 'how to save a language,' there may not be a single answer that works for all situations, but Harrison enumerates several strategies that have been used by speakers in the past. Depending on the situation, some communities see it as valuable to write down their language, while others prefer to keep it only spoken. Some prefer to keep their language secret, while others desire for it to be freely shared. Many languages have had success by deciding to utilize the powerful tools available through computers and the Internet. Documenting a language is another important component of preservation for many languages, although Harrison stresses the importance of sensitivity to speakers' needs and wishes.

In a final discussion, Harrison discusses the potential for globalization to have both positive and negative consequences. On the one hand, globalization allows goods and ideas to flow in an uninhibited way around the world, which can potentially benefit everyone. Applying this to language revitalization, members of one community can glean ideas and inspiration from other minority language communities around the world. Independent of current trends of globalization and our uncertainty about what the future may hold, he reas-

serts the importance of indigenous knowledge. He says of indigenous peoples, "What they know—what we've forgotten or never knew—may someday save us.... Let's listen, while we still can" (p. 274).

Throughout the work, Harrison suggests that language loss causes the loss of cultural knowledge. His case for a connection between language and cultural knowledge is persuasive; however, some readers might question whether this relationship is necessarily a relationship of causality in all instances. Language loss does not occur in a vacuum: there are a multitude of interrelated factors, all of which contribute to the health of a particular language. Furthermore, there can be a great diversity from one language to another, and future research is needed to unravel the many intricate cause and effect relationships involved in language endangerment. A telling metaphor is given by Keren Rice (2007: 319), who suggests that the loss of a language may be 'the canary in the mine' for the loss of a culture. While some readers may still have questions about the strong form of the hypothesis, Harrison's argument and examples nevertheless persuasively indicate a robust connection between the two that must not be ignored.

Overall, Harrison fulfills his goal quite well. His writing style is very personable and enjoyable to read. His explanations of the concerns at hand are intellectual, and at the same time clear and easy to understand. Altogether, I think Harrison hits his mark of reaching a wide audience with the importance of language endangerment and language documentation, and his book has the potential to reach a large variety of individuals with his concise, powerful explanations of the issues surrounding language endangerment and his personal stories of those most affected: the last speakers.

REFERENCES

Rice, Keren. 2007. Review of When languages die: The extinction of the world's languages and the erosion of human knowledge by K. David Harrison. Language Documentation & Conservation 1(2). 317–321.

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