

A revolution in cross-linguistic research

December 5 2017, by Rick Hellman

In his new book, "The Comparative Method of Language Acquisition Research" (University of Chicago Press), Associate Professor of Linguistics Clifton Pye introduces a revolutionary method for crosslinguistic research.

He argues that while we now have sophisticated techniques for studying how children learn their first language, researchers have neglected the problem of fitting the results from individual languages into a coherent picture of how children acquire language in general. He notes that we can't use acquisition results from one language to predict how children acquire other languages.

Investigators collect language-acquisition data from [different languages](#), but they typically report these results separately for each language. In rare cases, they compare results from the acquisition of other languages with the acquisition of English—the language that has been studied more intensively than any other. Pye claims that the investigation of English has become the standard for all language-acquisition research and creates a lens that distorts research on other languages.

He says that the unit of comparison problem is the critical difficulty in crosslinguistic research on language acquisition.

"You can't compare how children acquire different languages unless you compare how they acquire the same linguistic features," Pye said.

Although researchers would like to think that different languages use

pronouns in the same way, this assumption can't be maintained when languages like Madurese have two pronouns, Fijian has 135 pronouns and the Mayan language Mam does not have any pronouns.

Pye solves the unit of comparison problem by borrowing a method from [historical linguistics](#): "Historical linguistics over the past 250 years has developed what's called the comparative method of doing linguistics. Historical linguistics is unique because it's the only branch of linguistics that really focuses on comparing data from different languages in order to build a history of a family of languages.

"So I used that technique and applied it to data on how children acquire languages."

Historically related languages share a common ancestor and retain many common features. Researchers can use these common features as units of comparison for their investigation of language acquisition in different languages.

"Slowly you put together the picture within each of these branches to come at how the differences within those languages affect children's language development," Pye says. "I had to demonstrate this notion, because it's not a notion that researchers are familiar with. We're trained to look at how children acquire a single language, not really to compare across languages."

Pye began studying the Mayan language K'iche' when he lived in a Guatemalan village as a graduate student. Subsequently, he branched out into studying the acquisition of nine other Mayan languages, including Ch'ol and Mam.

Pye notes, "it's taken me some time to appreciate the structural differences between K'iche' and English."

"One of the main differences is that there is a lot more morphology of verbs in K'iche' than there is in English, so children simply have much more to work with than they do in English. There are lot more things to keep track of when you are speaking K'iche' than when you are speaking English."

Pye says that, traditionally, one of the things that language-acquisition researchers have studied is the proportion of nouns and verbs children use.

"The claim is that children latch onto nouns more easily because the meaning is easier for children to navigate than the meanings of verbs," Pye said. "What I discovered is that one of the advantages of looking at Mayan languages is that the [verb](#) category is divided between transitive and intransitive verbs.

"Intransitive verbs are verbs with just a subject like 'run' and 'walk,' and transitive verbs are verbs that take subjects and objects like 'put' or 'I broke the pencil.' And what I found was that not only do you find in these Mayan languages that in some cases children are using more verbs than nouns, but in Mam the children use more intransitive verbs than transitive, and in Ch'ol children use more transitive verbs than intransitive verbs. That's the opposite of Mam, and both are the opposite of the patterns seen for children acquiring European languages."

Pye's book demonstrates how the comparative method can be used to understand the interactions among vocabulary, grammar and morphology in the acquisition of three Mayan languages: Ch'ol, Mam and K'iche'. The method, he said, can be applied to any family of languages.

In his blurb, David Ingram, professor of speech and hearing science at Arizona State University, writes, "No one has tackled [language acquisition](#) and reached a depth of understanding in an entire language

family as Pye has. ... his comparative method has the promise to provide a model for future research in a much wider range of language families. Nothing comparable to this book is likely to come along anytime soon, if at all."

Pye hopes investigators using the comparative method will be able to document more of the world's languages before children stop learning them.

"We don't have data on how children acquire most of the world's languages," he said. "And with many of the planet's 7,000 languages dying every year, there is an urgency to document their unique linguistic qualities.

"Often, the act of recording [children](#) speaking an endangered [language](#) shows parents the significance of their cultural heritage."

Provided by University of Kansas

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