Studying an emerging sign language won't kill it – so what are linguists scared of?

February 26 2019, by Michael Erard

Connie de Vos was sitting on her hands. It was 2006, her first stay in the Balinese village of Bengkala, and visitors had come every night to her house, sitting on the floor of the front patio, eating fruit- or durian-flavoured candies and drinking tea. About eight to ten people were there now, hands flitting in the shadows, chatting away in Kata Kolok, the local sign language: Where is the next ceremony? When is the next funeral? Who just died?

Kata Kolok was created in Bengkala about 120 years ago and has some special features, such as sticking out your tongue to add 'no' or 'not' to a verb. And unlike American Sign Language (ASL), in which people move their mouths silently as they sign, you also smack your lips gently, which creates a faint popping sound, to indicate that an action has finished.

"If you walk through the village at six, people start to take their baths, getting ready for dinner," De Vos recalls. "You can hear this sound – pah pah pah – all through the village."

A graduate student at Radboud University in the Netherlands at the time, De Vos had come to Bengkala to be the first linguist to map Kata Kolok's grammar and list all of its signs. At that time, she says, it was "kind of untouched", having emerged in an isolated community with a relatively high number of deaf people. Like similar 'village sign languages' that were starting to be identified in the 2000s, it was rich research material. She knew that being first to describe it would be a feather in her cap.

But studying any phenomenon risks changing it. Archaeologists know that breathing inside an ancient tomb can raise its humidity, while zoologists attracting wild chimpanzees with food have to hope it doesn't alter the politics of the troop.

Very young languages offer an opportunity to see how languages emerge and evolve – and therefore what the origin of all languages might have been like. But some linguists have wondered how pure these circumstances really are. They worry that studying one of these sign languages – which may have only a handful of users – introduces an outside influence that could alter its development.

So De Vos was sitting on her hands – deliberately not using signs from other languages – when she was in Bengkala. If there was any chance that she had changed the course of Kata Kolok, her research would be less valid, and its relevance to learning about the natural evolution of languages diminished. The only problem is that shielding a language like Kata Kolok for scientific benefit might not actually be in the best interests of the community that uses it.

"Each of these communities is like a natural experiment. With our modern human brains, if you were to develop a language right now, what would it look like?" asks De Vos, who is now an assistant professor of linguistics at Radboud University. "We have an opportunity to see multiples of those instances happen, and that's really valuable."

From Ban Khor, a sign language in Thailand, to Adamorobe in Ghana, linguists have described about two dozen such languages and suspect that many more exist. There are various names for them. Some researchers call them 'young' or 'emerging' languages, especially when the focus is on how they're evolving. Others call them 'village' or 'micro' sign languages, which reflects the size and isolation of the communities where they spring up. A less frequent but no less apt term is 'shared' sign languages,

because they're often used by deaf and hearing people alike.

They tend to arise in geographically or culturally isolated communities with an unusually high prevalence of deafness, often because of marriages between cousins. In such places, formal education isn't commonly available and there's no access to the national sign language, so over years or decades people have invented signs and ways to combine those signs.

Used by so few people, these fragile languages are endangered as soon as they appear. Someone else more rich and powerful is always eager to get rid of them or tell the signers to use some other language instead. Sometimes those powerful forces are deaf associations that look down on all things rural and remote.

And because the signers don't always agree which signs mean what or how to use them, these languages can seem wobbly and half-baked. They're undoubtedly languages in their own right, however, given that signers have used them their whole lives for everyday communication.

Studies of these languages have already revolutionised what was thought about sign languages. For instance, it was assumed that all sign languages, big or small, use the space around the body to represent time in the same way. The past is located behind the signer's body, the present right in front and the future further in front. But village sign languages often do things differently: Kata Kolok, for example, doesn't have a timeline at all.

De Vos is quick to say that Kata Kolok speakers still think and talk about the future and the past. There are just no designated linguistic structures to talk about them other than, for example, referring to events the speakers all know about.

Studying village sign languages clearly reveals much about how sign languages are unique. But because most of these village sign languages appear to be only 30 to 40 years old, enough for three generations' worth of evolution, they also raise the extraordinary opportunity to witness the birth of a language in real time. Researchers can follow how linguistic structures like word order emerge and change from the first generation to those that follow. Are these changes innate to our human linguistic abilities or do they come from somewhere else?

The opportunity to answer such questions has sparked interest in village sign languages among linguists, and the allure of 'discovering' a new language can be hard to resist.

Given the high stakes, and the potential to exert unwanted influence on these fragile languages, researchers have been arguing for years about how to handle them.

When Judy Kegl, a professor of linguistics at the University of Southern Maine, first encountered what later came to be called Nicaraguan Sign Language (or ISN, for Idioma de Señas de Nicaragua) in the mid-1980s, there was no precedent to follow.

This language had been created around 1980, when deaf students at a school in the capital, Managua, used their linguistic intuitions to pull together signs they brought from home.

From the beginning, Kegl says, she didn't use ASL in her interactions with the students. "I made an effort to just use gesture. By using gesture and not using ASL, the students taught me; they really took on a role of teaching me. If I'd come using ASL, it wouldn't have happened. If they didn't see that my goal was to learn their language, they might not have taken me under their wing."

It was not her aim to preserve the language, but to ensure that the way it developed was the same as it would have been if she was not there. Referring to Star Trek, Kegl says she had a 'prime directive' policy: "You don't come in and influence other cultural decisions with your own sense of what to do."

If people picked up ASL signs on their own, she wouldn't stop them. But if contamination was going to happen, she says, "it wouldn't come from us".

People outside the field have disagreed with this approach, suggesting it would be better to actively integrate these communities into the wider deaf culture, including teaching people more established sign languages. After Kegl's work was featured in a 1999 profile of the emerging Nicaraguan Sign Language, Felicia Ackerman, a philosophy professor from Brown University, wrote a bitter critique.

"Evidently, [Kegl] would rather kill the life prospects of these children, by leaving them unable to communicate with the outside world," Ackerman wrote. (I asked Ackerman if she had changed her ideas; she did not reply.)

For some linguists, the idea of a language popping out of nowhere was too neat – it gave ammunition to controversial theories about innate human abilities that seemed too convenient. Critics responded by wondering whether there may have been some early, unseen contact between the first generation of Nicaraguan signers and other sign languages. To avoid such suspicions, later linguists like Connie de Vos also hewed to the strict 'prime directive' approach.

De Vos knew Bengkala wasn't as isolated as other places, and wanted to avoid any hint of possible contamination. She had come knowing International Sign, British Sign Language and Dutch Sign Language, and

didn't want bits of those languages to slip out unawares.

"I sat on my hands for the first couple of months, before I felt like I was ready to not use too many of my own signs," she says. "I was trying not to influence them too much." She was afraid that people might pick up her signs inadvertently, and that she then wouldn't be able to claim that this was Kata Kolok's natural evolution.

This isn't the only way to build a pure origin story – an alternative is to find a village sign language used in a truly isolated community.

In 2012, Rabia Ergin, a young Turkish student, was sitting in a graduate class at Tufts University. She'd come to the USA to study Turkish syntax, but all that was about to change. She and her classmates were discussing home sign – ad hoc collections of gestures invented by deaf people and their families. Did home sign count as a language, even if it didn't have stable rules for making a question or indicating a verb?

Ergin didn't see what the big deal was. She told the others about her deaf family members back in Turkey who had invented a sign language, which everybody in their village used to communicate with them.

Her classmates' jaws dropped.

Ergin had nonchalantly described a village sign language in an isolated community that no one else had ever heard about before.

Shortly afterwards, she switched research directions to focus on this sign language, which she dubbed Central Taurus Sign Language, or CTSL. "The fact that I'm part of this community, that I grew up with this language, that gives the story some electricity," Ergin tells me.

When Ergin showed up to do her research, CTSL was in its third

generation, which had added new structures to the language, including more fixed ways to indicate action. It was a rare, exciting time – she was getting to watch a language grow and change, and because the previous generations of signers were still alive, she could trace its development over time.

It is still a young language, but she doesn't think that makes it more vulnerable to her presence. She says it's not like CTSL signers, especially the older generations, would be more prone to, say, adopt a timeline construction from another language. She sees people using CTSL for everything, without struggling at all to make themselves understood. "The language functions perfectly well," she says.

At the same time, the language is so loose that each individual has their own version of CTSL, which means that some aspects of the language are shared while others are improvised on the spot. It also means that signers shift what they do.

And so even though CTSL arose in isolated circumstances, it's now undergoing rapid changes.

Ergin, now at the Max Planck Institute for Psycholinguistics, has been following a family of five, all of whom are deaf and CTSL signers, who moved to the neighbouring city of Anamur a couple of years ago. As a result of that move, their signing reflects the contact they've had with Turkish Sign Language and they no longer sign like the core CTSL group back in the village. One of Ergin's cousins met a deaf man from another town and they got married; now her CTSL is changing.

"That's why I've been trying to collect as much data as I could before it's too late," Ergin adds.

Another strategy has emerged that treats village sign languages in a

wholly new way. Ulrike Zeshan, at the University of Central Lancashire in the UK, was the first linguist to treat them no differently from sign languages like ASL. In this strategy, village sign languages don't have special status; they're not seen as embryonic semi-languages that you're obliged to watch or protect until they mature – you can compare them to other sign languages straight away.

Only after this shift in thinking was it possible to see that some presumed 'universals' of sign languages were absent in village sign languages, and so weren't universal after all. For example, something everyone had assumed to be universal was making the space in front of the body a stage and using the hands as puppets. In the sentence 'The cow crossed the road in front of the car', most sign languages would have a 'cow', a 'road' and a 'car' interacting in front of the speaker's body.

But in some village sign languages, the speaker isn't a puppeteer standing outside of the action. In one Ghanaian sign language, the cow, the road and the car would be described from the perspective of the speaker. So linguists had to broaden their sense of what's possible in a sign language.

Linguists still had to behave responsibly, however. A few years ago, Zeshan and some colleagues decided to write an academic article full of advice for researchers who might stumble upon a village sign language.

But they hit a snag when they considered researchers' ethical responsibilities to the communities. What would research interest in a village sign language bring? Should they alert the authorities? What if the authorities then sent in hearing aids or some other technological intervention? Would they force a national sign language on the villagers? Such responses are considered deeply offensive from a Deaf worldview because they violate people's bodily autonomy and threaten the local language.

"We couldn't agree on the ethical way of proceeding," Zeshan says. Ultimately the team stopped working on the paper.

Doesn't that mean that science will miss out on undescribed languages? It does, she admits, but in her mind the ethical concerns outweigh the costs to scientific knowledge. "In a sense, it's more immediately worse for your conscience if you can be responsible for a bad intervention [rather than] being responsible for something never being done," she says.

Without explicit ethical guidelines in place for linguists or anthropologists to follow, they're left to decide for themselves how to manage interactions with other languages.

But as the study of village sign languages has matured, researchers have found their individual impact on a language can be smaller than they fear. Sometimes they discover this only in the wake of a mistake.

In 2012, Lina Hou and Kate Mesh were researching Chatino Sign Language, a village sign language used in two small communities in Oaxaca, Mexico. Hou, now an assistant professor of linguistics at the University of California, Santa Barbara, is Deaf; Mesh, now at the University of Haifa in Israel, is not – but both are signers of ASL.

"We started out only writing to one another to avoid using ASL in the community," says Mesh, but the two slipped up. A lot.

They couldn't hide it – adult signers in the community noticed the foreign signs immediately.

How did they react? "They thought [ASL signs] were amusing," Mesh remembers, but she says they never used those signs other than to talk about what the two researchers had done. So she and Hou loosened up around adults, which made communication easier and didn't affect

Chatino signing.

She inadvertently brought other aspects of ASL into her Chatino signing. One day, she was talking with a signer about a basketball contest in the village, in which the prize money came from contributions paid by the contestants.

"Does everybody pay?" Mesh asked. Although she used Chatino signs, she used them with ASL grammar, signing the verb 'pay' two times in two different places in front of her body to indicate more than one person paying.

Because Chatino signers don't have this kind of construction, the man she was speaking to called over his wife, also a signer, and demonstrated what Mesh had done. He liked it, he said. But Mesh says she never saw him sign that way again, not with the verb 'pay' or any other verb. To Mesh, it indicated how impermeable signers can be.

Every language has gaps, points out Marie Coppola, a linguist at the University of Connecticut. Even big spoken languages like English, Italian and Chinese do some things well and others not at all. Kinship terms in English aren't very sophisticated, for example, and there's always a list circulating on the internet about useful concepts for which English has no word.

In most cases, the people who use those languages may not even recognise what their languages don't allow them to do – and signers of small sign languages are no different. "All they know is that they have miscommunication, but that's their whole life," Coppola says. "They don't have anything to compare it to."

Adults are particularly resistant to change, even to external solutions to communication problems they face. This is likely due in part to the

challenges of learning new grammar patterns as we get older, though learning new vocabulary is less of a hurdle.

But if, as Mesh discovered, individual outsiders have little influence on emerging sign languages, broad social and cultural trends most certainly do. As previously isolated communities become more connected, speakers adapt their sign languages, and some may even stop using them or passing them on.

And the conditions of contemporary life are ever more hostile to small languages. When Connie de Vos went back to Bengkala in 2012, just six years after her first visit, a lot had changed. Several hundred tourists a year now come to see the signing village, and they pay for food and lodging or make donations to the village.

This newfound wealth means everyone in Bengkala has a motorbike, which many use to work farther from the village – it also means younger men are more likely to marry women outside the community than before. Some deaf kids started attending a school where they learned BISINDO, the national Indonesian sign language. It's hard to see how one researcher could have had anything like the influence of the changes resulting from the tourists. Ironically, many of these tourists are themselves deaf.

Will Kata Kolok survive? The history of human language itself is littered with unique varieties that spring up, flourish and then wither. The example of another village sign language shows that for some, isolation from the outside world ensures their survival, and that active new strategies will be needed to keep them alive when that isolation disappears.

Uiko Yano is a lifelong user of Miyakubo Sign Language, which emerged on the Japanese island of Ehime-Oshima back in the 1920s or

1930s. Yano, a graduate student at Tsukuba University of Technology, is also the first linguist to look at the language through a scientific lens.

She says a TV documentary about Kata Kolok reminded her of home because everyone there signs as well. "It's a community where it doesn't matter if you're deaf or hearing, everyone just signs naturally, and that's fairly rare," she tells me through an interpreter.

The originators of Miyakubo Sign Language were a group of about 15 people who worked on fishing boats. Because of that, the language never developed a numeral system that could express exact numbers over 30 or 40, nor round numbers over 200. Yano asked her father: "How would you say 225?"

"We'd say more than 200," he told her.

"But if you had 223 bottles of juice," she asked. "How would you say that?"

"Why would anyone need that many bottles of juice?" he replied.

Over the years, he and his siblings, all deaf, have been approached by deaf associations from the Japanese mainland, but they have rejected the contact, Yano says.

"We're not interested in fixing our sign language or being told we're making mistakes in our own language," her father told her. "If we matched their standards, we wouldn't be able to talk to our grandparents."

For decades, the only way to get to the mainland was a ferry that ran several times a day, and people would gather to wait for it, talking and signing.

Then, in 2004, a bridge opened from Ehime-Oshima to the mainland and the ferry service was halted. More people got access to the internet on computers and then smartphones. Marriages with people from other islands increased.

While this meant the island's population of about 7,000 people were more connected on the whole, deaf people using Miyakubo Sign Language became more isolated. No ferry meant no opportunity to meet and swap information; the internet reduced the need to ask each other for help; and when hearing people left the island for jobs, it reduced the overall number of signers on the island.

There are around 15 deaf people on the island today. Yano likes to bring friends from Tokyo to introduce them to the place where she grew up, but it makes her aunt, who is in her 70s, sad. "When I look at you, it makes me lonely," she told Yano, who asked her why.

"Because when people from Tokyo come… we end up having to sign like them and help them understand," she replied.

The outside world intrudes on her peaceful, insular world. "Before, we could talk and understand freely, so we were able to share all the pleasures and pains of life. These days, no one knows the sign language. There are many sign words new to me, so I don't even know what other deaf people are saying."

When we think of a young person, we think of someone impressionable and not fully responsible for themselves. Young sign languages aren't like that. They're used by people who are practical, attached to what they know, and living their lives. Often, linguists' concerns about unduly influencing an emerging sign language have to do with the language as an object of scientific interest, and are less connected to the experiences of the people who use it.

But all human languages evolve as people come into contact with each other through trade, work, play and marriage. Words and even grammatical patterns can pass from one language to another. As the global village gets ever smaller, linguists are learning how to keep up with accelerating changes that influence the languages they study and also contribute to their development.

Looking back, Connie de Vos admits she may have overreacted by not signing during those early nights on the patio.

Later, she talked directly to people about the outside influences that could change their sign language. "It's more about informing them and raising their awareness," she says. There are deaf people all over the world, she would tell them, and they talk differently to how you do, and I'm interested in finding out the differences.

Eventually, she helped to set up a school where children are educated in Kata Kolok.

"Maybe I was overly careful at the beginning," she says, although she also credits her commitment to initially working only in Kata Kolok with giving her access to local stories she might not have heard otherwise.

One of those stories was an origin tale about why there is so much deafness in Bengkala. A couple desperate for a child made offerings at a cemetery for infants and fetuses, and a ghost living there gave them their wish. The ghost was deaf, and so the child was deaf too.

Young sign languages desperately need young signers. On Ehime-Oshima Island, Yano's hearing nephew is the youngest user of Miyakubo Sign Language. She doesn't want him to be the last, and is still trying to figure out ways to help the language survive.

"Do you feel like you have any responsibilities to the language?" I ask.

She pauses, then begins signing. "People on the island don't think much about Miyakubo Sign Language," she says through the interpreter. "On the surface, it's nothing special, but in our hearts part of us knows that it's special, and we do want to hold on to it and not leave it."

This article first appeared on Mosaic and is republished here under a Creative Commons licence.

Provided by Mosaic