Lost for Words

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They've no myths, no numbers or colours and few words for past or present. No wonder the Pirahã people defy our most cherished ideas about language.

“How was your world created?” asks the young anthropologist in Portuguese. He awaits the translation into Pirahã. “The world is created,” replies one of the assembled men in his own language. “Tell me how your god made all this.” The anthropologist presses on. “All things are made,” comes the answer. The interview lurches on for a few more minutes, until suddenly, the question-and-answer session is overtaken by a deluge of excited banter as the assembled Pirahã vie to be heard.

“I’ve cracked it,” says the anthropologist as he hands his tape recording to Dan Everett a few weeks later. “Here is the Pirahã creation myth.” Everett is dubious. In the past three decades, the linguist from the University of Manchester, UK, has spent a total of seven years living with the Pirahã in the Amazon rainforest and is one of just three outsiders, along with his ex-wife and a missionary who spent time with them in the 1960s and 1970s, who is fluent in their language. He has long maintained that they are among the few people on Earth who have not devised a story to explain their existence. Others, including this particular anthropologist, find the idea difficult to accept.

Everett listens to the tape. After the short, stilted exchange, he hears some bright spark in the crowd point out that this guy asking them odd questions doesn’t know their language, so he will need to get help from Everett to translate the tapes. “Hello, Dan!” comes a chorus of Pirahã voices. “How are you?” “When will we see you?” “When you come, bring us matches.” “And bananas.” “And whisky.” And so on. Nice try, but no creation myth here.

The lack of mythology is just one small aspect of why the Pirahã are so fascinating to anthropologists. According to Everett, they also have virtually no notion of time, and seem to live entirely in the moment. There is no creative storytelling and no oral history beyond two generations. They have no art except the crude line drawings they use to depict figures from their spirit world.

They are among the least materialistic people in the world, with very few possessions and little desire to attain more. They also have the simplest kinship system yet recorded: the language only has specific terms for “son” and “daughter.” Past that, they talk in general terms about older and younger generations.

Pirahã culture is remarkably resistant to change. These people continue to be monolingual and maintain their traditional way of life despite more than 200 years of regular contact with outsiders.

Until recently, the Pirahã were best known among linguists because of debates over whether their language has any words for colours, and the fact that it has no number terms. Now, though, they have hit the scientific big time with the publication last year of a controversial paper by Everett. In it he takes issue with some of the most influential ideas in linguistics. In particular, he argues that the Pirahã’s peculiar language is shaped not by some innate language instinct, as many linguists attest, but by their extraordinary culture. What’s more, he says that Pirahã language and culture hold fundamental lessons in what it means to be human (Current Anthropology, vol 46, p 621).

There are around 350 Pirahã people, living along a 300-kilometre stretch of the Maici river in the south-west of Brazil’s Amazonas state. Their lifestyle has much in common with other indigenous Amazonian hunter-gatherers, but what really marks out the Pirahã is their attitude to life. They are very laid-back, accepting things as they are, not fretting about the future, and taking great pleasure in life. Above all, these are a people who live for the moment.

For the Pirahã this is not simply an “alternative” philosophy, it is deeply ingrained in their culture, and—Everett argues—in their language. “They confine their talk to subjects that fall within their own immediate experience,” he says. And this here-and-now approach is reflected in their vocabulary and grammar, which largely inhibits talk of abstract concepts and generalisations (see “Sing It to Me”).

This immediate and literal way of seeing the world fits with the Pirahã’s apparent lack of a creation myth, but it seems at odds with one of the most important aspects of their everyday life. They believe in an elaborate spirit world, which takes the form of something like parallel universes, with evil spirits inhabiting their own realms above and below the Earth. It may sound suspiciously mystical for a culture supposed to lack mythology, but Everett notes that the Pirahã’s relationship with their spirit world is remarkably practical. They claim to have direct experience of some of the evil spirits—a notion made only too real to him during his early days in the Amazon when he was awoken one night and asked to ward off an evil spirit nearby. Marching
manfully into the jungle, he soon heard the low growl of the “spirit”: a prowling panther.

The Pirahã also use spirits to make sense of the bad things that happen to them. If someone inexplicably falls ill, for example, they might conclude that he has stepped on a “bad” leaf transported into the jungle by an evil spirit from its own world. Conversely, if a wound heals, they will say that the damaged limb has been exchanged with a spirit for a good one. “You get this picture of lots of mutilated spirits wandering around out there,” says Everett.

Then there is the counting—or lack of it. Back in 1980, when Everett was living in the Amazon with his then wife and their three children, the Pirahã came asking for evening classes. They said they wanted to learn to count so that they would know whether they were being cheated by the outsiders who came to their villages by riverboat to trade for Brazil nuts and other forest produce. Each evening for eight months, enthusiastic men and women sat down with Everett’s entire family to learn, in Portuguese, the rudiments of numeracy. Then one day they suddenly decided to abandon the classes, saying that they could never master numbers—in fact, in all that time, not one of them had learned to count to 10 or even to add 1 and 1.

Reading lessons, which took place at around the same time, ended with similar results. After much tuition the villagers succeeded in reading together, and out loud, the word bigí, which means ground or sky in Pirahã. “They immediately all laughed,” Everett recalls. “I asked what was so funny. They answered that what they had just said sounded like their word for ‘sky’. I said that indeed it did because it was their word. They reacted by saying that if that is what we were trying to teach them, they wanted us to stop: ‘we don’t write our language’. Bemused, Everett asked why they had come. “Their motivation turned out to be that it was fun to be together and I made popcorn.”

Some linguists have interpreted the Pirahã people’s inability to learn to count as support for the idea that the language we speak shapes the way we think. This was proposed in the 1930s by Benjamin Whorf when he was at Yale University, and has become accepted by most linguists in recent years. Since the Pirahã language has no number words, they argue, its speakers are unable to learn how to count in another language.

**Can’t Count, Won’t Count**

Everett sees things differently. In his paper in Current Anthropology, he argues that it is their culture, not their language that constrains the Pirahã’s ability to count. The language, says Everett, lacks words for numbers—and indeed any abstract concept that involves quantification, such as colour and time, because of the culture’s emphasis on referring only to immediate, personal experiences. It isn’t that Pirahã are incapable of thinking in a way that allows counting; rather, argues Everett, they don’t like to be coerced or to be told that there is only one correct way to do things. For example, they are perfectly capable of drawing a straight line when they want to make a spirit stick figure, but they could not learn to write the number 1 consistently. What’s more, although they clearly like the camaraderie of lessons, they do not value western knowledge, and actively oppose its introduction to their lives. So while Whorfians say that language shapes cognition, Everett believes that Pirahã culture shapes their language and the way they think.

If that weren’t enough, Everett also argues that the Pirahã language is the final nail in the coffin for Noam Chomsky’s hugely influential theory of universal grammar. Although this has been modified considerably since its origins in the 1960s, most linguists still hold to its central idea, which is that the human mind has evolved an innate capacity for language and that all languages share certain universal forms that are constrained by the way that we think.

One important example of this universal structure is known as embedding—the stacking of clauses within a single sentence. In English we can say “I think [clause 1] John wants to leave [clause 2]”. In Pirahã, however, there is no embedding and every sentence refers to a single event. So the literal translation of this sentence would split it into two separate parts: “My saying [Pirahã has no word for ‘think’] John intend-leaves.” Chomsky and others argue that embedding in language is what allows “recursion” in thought—the ability to build complex ideas by using some thoughts as subparts of others. Yet Everett suspects

**Sing It to Me**

In theory, Pirahã is a simple language. With only seven consonants and three vowels, the Pirahã women’s dialect has the smallest number of speech sounds, or “phonemic inventory”, of any language. The men, who speak a slightly different dialect, use an eighth consonant, making their inventory the next smallest—tied with Hawaiian and Rotokas, which is spoken in Papua New Guinea. Each sentence refers to just one event, and the language has the simplest known set of pronouns, with no plurals, not even a distinction between “I” and “we”.

Pirahã lacks words for abstract concepts such as numbers and colours, so that speakers cannot talk about things that are beyond their immediate experience. The language lacks quantification terms such as “all”, “each”, “every”, “most”, and “some”. And there is no perfect tense—no way of saying “I have eaten”, for example.

Despite the seeming simplicity of Pirahã, it is fiendishly difficult to learn. The patterns of stress and intonation are highly complex, allowing speakers to express the same syllable in five different ways. Many words have a variety of meanings depending on the inflection—which can be extremely difficult for an outsider to tune in to. Linguist Dan Everett, who has spent years learning the language, also describes how the Pirahã people convert everyday speech into song, using a characteristic exaggeration of the tones in their language, together with a transformation of some of the consonant sounds into others. “The Pirahã people communicate almost as much by singing, whistling, and humming as they do using consonants and vowels,” he notes.
that the Pirahã are capable of recursion even though they lack embedding—an idea that he and others will test later this year.

More fundamentally, Everett says, Pirahã challenges Chomskian theory at its roots. “Hypotheses such as universal grammar are inadequate to account for the Pirahã facts,” he says in his Current Anthropology paper, “because they assume that language evolution has ceased to be shaped by the social life of the species.” And that isn’t the case with Pirahã. Their grammar, he argues, does not come exclusively from any universal mental templates—if such templates exist at all. Rather, they must learn their culture to learn their grammar. He himself only became fluent in Pirahã after years of living alongside them.

Perhaps unsurprisingly, Everett has his detractors. Linguist Brent Berlin from the University of Georgia in Athens calls it an “overstatement” to describe Pirahã as the only language without numbers. Others question the idea that this culture has no words for colors, pointing out that there are expressions such as “blood-like”. Stephen Levinsohn from the Max Planck Institute for Psycholinguistics in Nijmegen, the Netherlands, complains that Everett’s central proposition that “Pirahã live in the present” is too vague a notion upon which to hang all these ideas about their culture and language. He also argues that Everett has misinterpreted the Whorfian idea that language shapes thought, by failing to recognize that language is a part of culture.

There is some support for Everett’s stance against Chomsky, however. Michael Tomasello from the Max Planck Institute of Evolutionary Anthropology in Leipzig, Germany, says: “Universal grammar was a good try, and it really was not so implausible at the time it was proposed, but since then we have learned a lot about many different languages, and they simply do not fit one universal cookie cutter.” Even experts who support Whorfian ideas are sympathetic to Everett’s central message, that we can’t understand language and culture in isolation from one another.

While debate continues, Everett has already succeeded in one goal—of drawing attention to the Pirahã. Bright young PhD students are queuing up to do fieldwork with him in Brazil. This year, some of the world’s top linguists will also visit the Pirahã to investigate, among other things, the connections between speech and song and between language and cognition. Some are keen to disprove Everett’s conclusions about the Pirahã, and he seems ready for a tussle. He argues that his theories are testable—but only by someone who can speak Pirahã fluently, and that will require a big investment of time.

What Everett really fears is that time may be running out for the Pirahã. The good news is that their culture has so far survived outside influences—indeed, their enthusiasm for conjugal relations with outsiders means the group has a healthy genetic diversity. “You are a member if you speak the language and live the lifestyle,” says Everett. Yet despite this, he worries about the ever more intrusive presence of settlers, diseases, alcohol and the inexorably changing world. “This way of life works very well because things are constant. If major change comes, that strategy will fall apart,” he says. “I fear that if it does happen, it will happen very quickly.”