

Tes focus on...

Learning in hunter-gatherer societies

An anthropologist, who spent months living with the BaYaka community in the Congo, says the way their children pick up skills tells us a lot about the evolution of learning – and offers lessons for schools in the UK, writes **John Morgan**

The infant is holding a machete and tapping it on the ground by her feet. She's learning how to use it from the nine-year-old girl next to her, who has a much bigger machete. It sounds like a scene

from a teacher's nightmare: you look up to see this in your classroom, an Ofsted inspector walks in, then all your teeth fall out.

In reality, it's a perfectly safe and typical educational moment for a hunter-gatherer child in the Republic of the Congo rainforest.

It was filmed by Gul Deniz Salali, a lecturer in evolutionary anthropology and British Academy research fellow at UCL, who – after a combined nine months across three field trips, living with the BaYaka people in the forest – has published a series of studies looking at how they live, including one paper on how they learn and teach.

BaYaka society shares some characteristics with the prehistoric hunter-gatherer societies that humans lived in before the invention of farming. Understanding the BaYaka, says Salali, can shed light on how we evolved and “the behaviour that makes us human: language, culture, cooperation”. She also believes the findings of her research could include lessons for the West about

approaches to teaching, and she wants to connect with teachers and educationalists to explore this.

To carry out their study into education among the BaYaka people, Salali and her colleagues analysed 110 video recordings, totalling nearly six hours, of 21 events involving children. These events included foraging trips to dig out wild yams, a hunting party sharing out meat on its return to camp (an important social code governs how this happens) and children's imitation of an adult ritual aimed at luring benevolent forest spirits into the camp (this involves polyphonic singing by women while men dance, dressed in leaves, as the captured spirits).

They found that children younger than 4 “learn mainly by imitating, copying people around them”, Salali says. But after that age, learning by imitation declines and children move into “play groups”.

Learning from older children

These groups are “really important for hunter-gatherers” because their mixed-age composition brings “a lot of opportunities to learn from older children”, Salali explains.

And teaching among the BaYaka is “really subtle”, she continues. “People allow children to do the task but, while the child is doing it, there is someone more experienced monitoring. Depending on how the child



performs the task, then they may give negative or positive feedback.”

Overall, researchers found that 6 per cent of their recordings involved some kind of teaching; not a huge proportion but, nevertheless, evidence of teaching taking place. That was significant because there is a big debate in evolutionary anthropology about when humans started teaching. Some academics argue that teaching only began after humans invented agriculture, that hunter-gatherers did not use teaching. “But I don’t think that’s the case,” says Salali. That could suggest a bigger role for teaching in humanity’s history than has sometimes been understood.

A key concept in evolutionary anthropology is “cumulative cultural evolution”: the complex knowledge, evolved collectively by humanity over time, which could not be discovered by a single person. This might range from knowing which plants are edible through to developing artificial intelligence. There are key questions around whether humanity is the only species on the planet to show “cumulative cultural evolution” and, if so, why?

“One of the arguments is that you need high-fidelity transmission; that the information or skills need to be transferred accurately from one person to the other so that skill or information stays in the population long enough that other people can tweak it or make small improvements,” says Salali.

The research suggests that, for the BaYaka, teaching is reserved for transmitting abstract information; the things that cannot just be copied, such as social norms and how to behave around others. The evidence gathered in the rainforest suggests that “teaching has co-evolved with cumulative culture”, Salali says. As practices and technology in hunter-gatherer societies “became more complex, they became more opaque, so it required more active teaching”, she argues.

Interwoven with our evolution

So, what does this mean for us in the West today? Lives like those of the BaYaka are actually a recent past for humanity, deeply interwoven with our evolution and thus, perhaps, with our present and future learning. Agriculture is a relatively recent innovation and for “around 95 per cent of our existence as modern humans, we lived by hunting and gathering”, Salali says, and we can “still get inspiration” from such communities.

Her experiences with the BaYaka have made her reflect on her own education. On a master’s course, she realised that, despite years of studying statistics, she “didn’t know anything”.

“I only really learned how to do stats when I needed to do it for my research project,” she



says. “It made me think: what is the value of being told when we lack practice?”

There’s a lot of practice-based learning among the BaYaka, she explains, and adults “rarely interfere with what the child is doing”. An 18-month-old child can play with a machete because they must learn how to use a machete to hack through dense rainforest and dig out food. If the child does something dangerous, an adult will step in.

Salali also observes that learning among the BaYaka is “guided by children’s interests”, while the “majority of the hunter-gather learning we observed occurred through play”. The forest, to BaYaka children, is a “giant playground”. It’s easy to draw a line between this and Western interest in, for example, forest schools, the outdoor learning method increasingly used by UK schools.

Salali is planning another trip to the Congo rainforest, when the pandemic allows, to carry her research further by giving cameras

to BaYaka children, so they can “document their own day-to-day activities” and reveal the “inside story” of their learning. “They always want to teach you things...and they want to understand you as well,” Salali says.

And while she acknowledges that “in practice, things [in schools] may be much more difficult”, she is keen to “brainstorm” with teachers about how to create learning environments where things are “not all coming from the teacher herself, but guided by children’s interests”.

What Salali’s research could also suggest is that, as a teacher, you are part of a big picture of human evolution. You are engaged in the “high-fidelity transmission” of complex knowledge essential to its incremental refinement over generations. You are driving the process of “cumulative cultural evolution” at the very core of humanity’s achievements as a species. You probably deserve a pay rise. ●

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