

Part 2. Evidence from the Yanomami Tribe

Excerpt from “Collective Learning in the Amazon Rainforest”

No Author Given

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Generally we don't give nearly enough credit to foraging people. When we think of humans who live as hunter-gatherers, we tend to think of them as “primitive.” We have our caricatures of the “Stone Age” and hairy, unintelligent, club-toting creatures called “cavemen.” How can we see this period more clearly?

The Yanomami still follow the same lifeways they did when they were discovered. They are one of the largest and most traditional intact tribes of the Amazon, and they have become famous among anthropologists because they can help teach us about how earlier human foraging societies might have lived.

In their village along the Amazon River, an elder sits down cross-legged with a 12-year old boy and teaches him how to make an arrow. “It takes a great deal of patience to make an arrow,” the elder says. He shows the boy, slowly, carefully, step by step. He starts with a long arrow shaft cut from a special type of straight, hollow reed called pé de fleche.

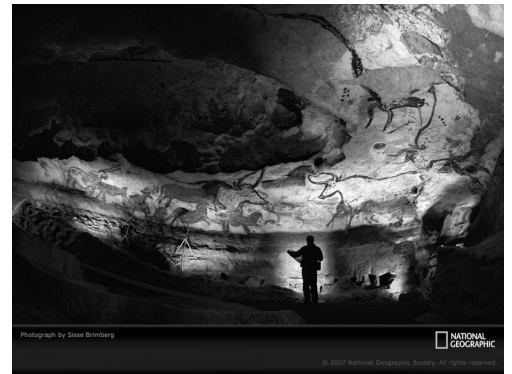
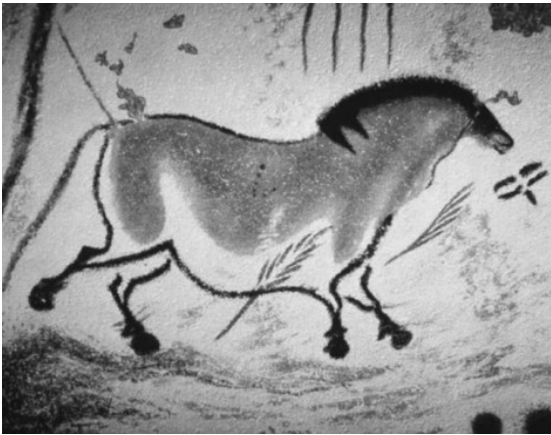
At the non-pointed end of the arrow, he notches the wooden piece with a hand chisel. This is the part into which one nocks the drawn bowstring and that must transmit a great deal of force to the arrow. He rubs the small component with a special tree sap, then carefully turns and inserts this piece into one end of the hollow shaft, wrapping it around with a thin root fiber. He gently applies the arrow's guiding feathers with a vegetable glue, carves a razorlike arrow tip from a thin sliver of bamboo, affixes it to the arrow's other end, and finally paints the arrow with a mixture of forest beeswax and vegetable pigment. The arrow is so long it looks almost like a spear. Later, the arrow-maker can dab its tip with poison concocted from the sap of a certain tree's inner bark, to paralyze the creature the arrow will impale.

It's finished. The arrow-maker picks up his bow, which is as tall as he is, aims the arrow straight into the air, draws it back with powerful arms, and then releases it. The arrow launches high overhead, turns over, and plunges to Earth. Such is the arrow-maker's craftsmanship and skill in shooting a bow that the arrow drops straight down and pierces the foot-packed ground a yard from where he stands.

If you were to do it on your own, you could spend much of your life learning to make an arrow but you wouldn't make one nearly as good or effective as this one. That is because this arrow is the culmination of generations of skill and knowledge, a product of human intelligence and collective learning – like learning to live in the Amazonian forest itself, with its thousands of species of plants and animals that have proved useful for survival. Watch a tribal elder make an arrow, and you won't call him “primitive.”

Part 2. Evidence from the Lascaux Caves, France

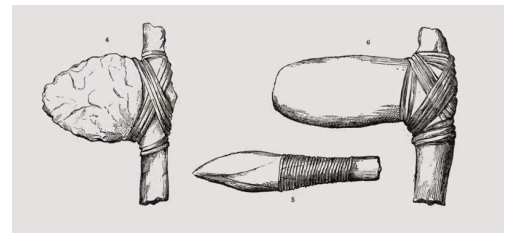
The Lascaux Caves were discovered by a 19 year-old boy in 1940. The caves contain over 2,000 images of different animals, and are estimated to be about 18,000 years old. In *The Creative Explosion* by science writer John Pfeiffer suggests that these paintings are like an early encyclopedia, recording important information.



1. What are the strengths of using cave paintings to support collective learning?
2. What are the weaknesses of using cave paintings to support collective learning?

Part 3. Evidence from John Shea

1. What evidence does John Shea use to support collective learning?



2. What are strengths of his evidence in support of collective learning?



3. What are weaknesses of his evidence in support of collective learning?

Part 4: Thinking Bigger

Claim: Collective learning is what helped humans advance and dominate the planet.

1. Now that you've looked at the claim and some evidence for it, do you believe it? Explain why, using at least two of our four claim testers. (Intuition, Logic, Evidence, and Authority) (4-5 sentences)
2. How can symbolic language increase the speed of collective learning? (2-3 sentences)
3. Write one example of collective learning (either historical or modern. Make sure to explain *why* it is an example of collective learning. (1-2 sentences)
4. What is one question you have from today?

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[http://teconomy.typepad.com/blog/
2010/08/david-christians-teconomy-
talk-how-collective-learning-made-us-
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