

Popular Mechanics: Human Consciousness Is a Side Effect of Psychedelics, Scientists Say

By Manasee Wagh



The psychedelic compound psilocybin has played a role in hominid lives and perceptions for millions of years.

About 300,000 years ago, an early human was foraging for food in an expanse of grassland. She spied a cluster of mushrooms poking out of dark soil, picked one of the brown caps, and examined its darker brown borders and whitish-gray stem.

Tentatively, she ate it. The mushroom's naturally occurring psilocybin, a psychedelic compound, hit her bloodstream and eventually traveled into her brain. Scanning her environment rapidly, the human noticed minute details among the waving grasses. More quickly than usual, she identified several different edible plants and deftly caught fast-moving game for her next meal.

What this early *Homo sapiens* individual couldn't have known was that she was profiting from an activity her distant ancestors had been repeating for millions of years.

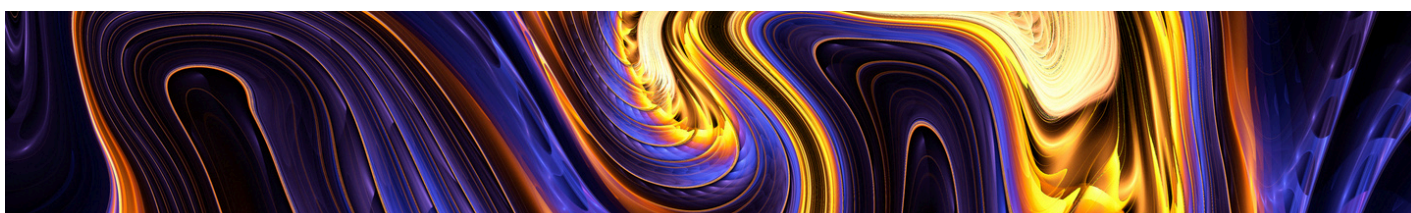
Evidence indicates that early hominids—our extinct ancestors—had been picking and eating “magic mushrooms” up to six million years ago. The practice likely influenced the development of human cognition and awareness, according to a recent review examining psilocybin's effect on human consciousness.

Published in June 2024 by the Miguel Lillo Foundation, a research organization in Argentina, the review concludes that psilocybin not only influenced an individual's perceptions while under its effects, but shaped human consciousness as a whole over the thousands of generations that humans had been eating psychedelic fungi.

Recent studies have shown that psilocybin enhances cognitive functions, our set of brainy tools for understanding our environment through our experiences, our

senses, and our thoughts. Such thoughts include our feelings, intentions, beliefs, and desires. This kind of chemically assisted brain boost happens because psilocybin “increases connectivity between networks in the frontal region and raises the level of awareness of states of consciousness,” says Fatima Calvo of the Pontifical Catholic University of Peru, a biologist and co-author on the review paper, in an email translated from the original Spanish. Specifically, psilocybin affects the prefrontal cortex, hippocampus, and anterior cingulate cortex, which can affect memory and decision-making, the authors wrote.

“From an evolutionary perspective, it is proposed that the ingestion of psilocybin could have contributed to the improvement in visual abilities and the reproductive success of communities that made use of these mushrooms,” according to a translation from the original review in Spanish. The review encompasses psilocybin studies in multiple fields, including neuroscience, biology, and ethnobotany.



However, the biological mechanisms that could explain exactly how and when the human race changed over time through ingesting magic mushrooms is still complex and hard to understand. Perhaps future studies on psilocybin could shed light on it, the authors say. And tracking exactly when human consciousness could have undergone significant changes due to the psychoactive compound is still vague.

“To my knowledge, there is no exact evidence or figure specifying the number of years required for a change in consciousness due to the consumption of mushrooms,” biologist and co-author Jehoshua Macedo-Bedoya of the University Nacional Mayor de San Marcos in Lima, Peru, says in an email translated from the original Spanish. The earliest hominids likely first began consuming psilocybin mushrooms after they descended from living in trees, between about five to six million years ago during the Pleistocene Epoch, a geological time period that includes the last ice age. Around that time, *Ardipithecus ramidus*, our earliest known ancestors, explored forests that are part of modern-day Kenya, Ethiopia, and Nigeria. They found mushrooms in various environments, including both forests and grassland, where the fungi grew well in the decomposing soil containing the feces of roaming bovids, a category of hoofed animals that includes today’s cows.

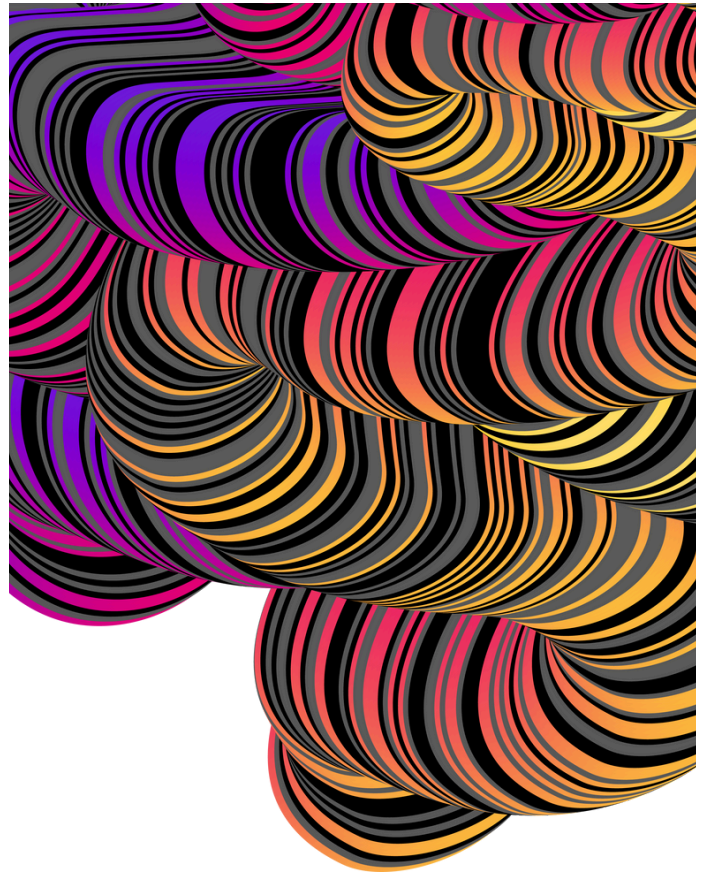
Having evolved potentially to combat insects and other pests, psilocybin in mushrooms could have enhanced early humans’ visual skills when eaten, augmenting their hunting and gathering missions. The compound also could have boosted sexual stimulation, thereby increasing chances of mating. The enhanced search for both food and sex would both have been a boon to reproductive rates.

Of course, psilocybin is also a hallucinogenic compound. It’s difficult to know exactly what mind-expanding impressions magic mushrooms left on our ancestors. That the mushrooms could have been “catalysts of mystical experiences or as drivers of cognitive processes, raises profound reflections on the ancestral interaction between human beings and their natural environment,” the authors wrote.

Over the following millenia, humans kept encountering magic mushrooms and developed cultural uses for them. For example, shamanic practices and religious rituals in various parts of the world allow those who ingest the fungi to have sensory experiences we would otherwise never know, Macedo-Bedoya says. Without the influence of psilocybin, even our current culture might be different than what we are familiar with, he adds.

Research that the review authors cite shows that humans developed the CYP2D6 gene, allowing us to synthesize certain psychoactive substances, including psilocybin. The chemical compound has low toxicity, which means that, if used responsibly under a professionally administered plan, this ancient tool for enhanced consciousness could reap rewards for modern-day humans.

We can learn from our ancestors about how we might benefit from a little psilocybin treatment today—medical professionals have already been using **psilocybin-assisted therapy** for decades for conditions such as severe addiction, **with some success**.



“[Learning] from our ancestors, we can use psilocybin today to connect with parts of ourselves we didn’t know, to face our fears, and to heal our traumas,” Macedo-Bedoya says. And studying the responsible use of psilocybin can allow us to “achieve a connection between different levels of consciousness and enhance creativity in the face of new challenges,” Calvo adds.