

Evolution helped turn hairless skin into a canvas for self-expression

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(Phys.org)—Hairless skin first evolved in humans as a way to keep cool—and then turned into a canvas to help them look cool, according to a Penn State anthropologist.

About 1.5 to 2 million years ago, [early humans](#), who were regularly on the move as hunters and [scavengers](#), evolved into nearly hairless creatures to more efficiently sweat away excess body heat, said Nina Jablonski, Distinguished Professor of Anthropology. Later, humans began to decorate skin to increase attractiveness to the opposite sex and to express, among other things, group identity.

"We can make a visual impact and present a completely different impression than we can with regular, undecorated skin," said Jablonski, who reports on her research today (Feb. 16) at the annual meeting of the American Association for the Advancement of Science in Boston.

Over the millennia, people turned their skin into canvases of self-expression in different ways, including permanent methods, such as tattooing and branding, as well as temporary ones, including cosmetics and body painting, according to the researcher.

Jablonski said both [males and females](#) use forms of skin decoration to become more attractive to the opposite sex. Women, for example, may use makeup to increase the size of their eyes, a cue that is considered attractive in most cultures. Males in some cultures also use skin decoration as a way to bring out [facial features](#) to appeal to women, or to

look more menacing and warrior-like.

"We can paint a great design on our bodies and use those designs to send all sorts of messages or express group memberships," said Jablonski.

While parents may still fret that their children are choosing tattoo designs frivolously, Jablonski said people have traditionally put considerable time and thought into the tattoos.

"Usually it is something with deep meaning," Jablonski said. "When I talk to people about their tattoos they, tell me they've spent months or years choosing a design that is incredibly meaningful and salient to them."

Prior to the evolution of mostly naked skin, humans were furry creatures, not unlike chimpanzees are now, Jablonski said. Skin decoration would not be possible if humans were still covered with fur.

Studying skin is difficult because it can be preserved only for a few thousand years, unlike bones and fossils, which last millions of years.

Jablonski said that she and other researchers based their estimate on when humans evolved hairless skin on the study of the fossil record and an examination of the molecular history of genes that code proteins that help produce skin pigmentation.

"We find a lot of evidence of when humans began to lose hair based on molecular genetics," said Jablonski.

Humans are the only primates that are essentially hairless, although aquatic mammals, like whales and dolphins, have no hair. Prior to the idea that humans evolved hairlessness as a mechanism to cope with body heat, some researchers believed that hairlessness resulted from evolution

from a common aquatic ancestor, Jablonski said. However, the theory, often referred to as the aquatic ape theory, does not match the genetic, fossil and environmental evidence, she said.

While it is difficult to exactly say when humans began to decorate their skin, Jablonski said that some of the earliest preserved [skin](#) shows signs of tattooing.

Provided by Pennsylvania State University

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