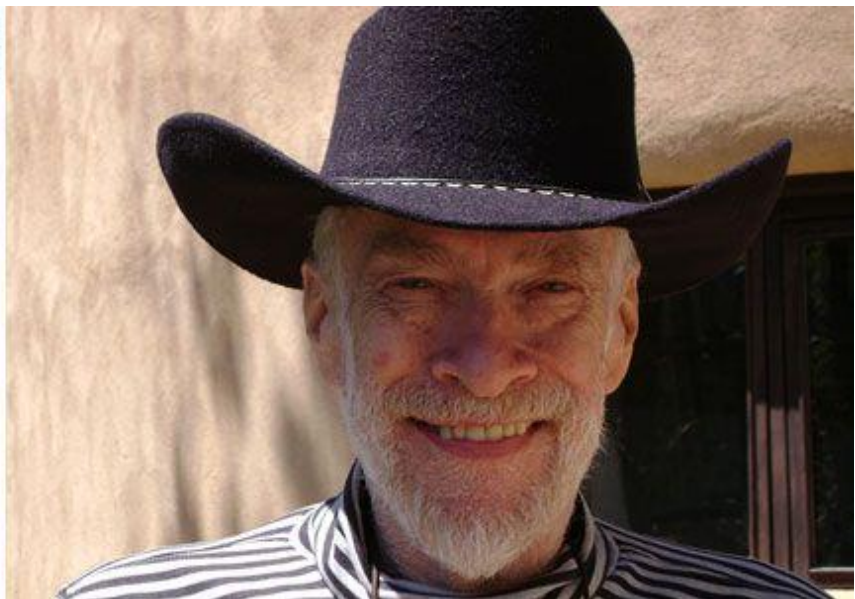
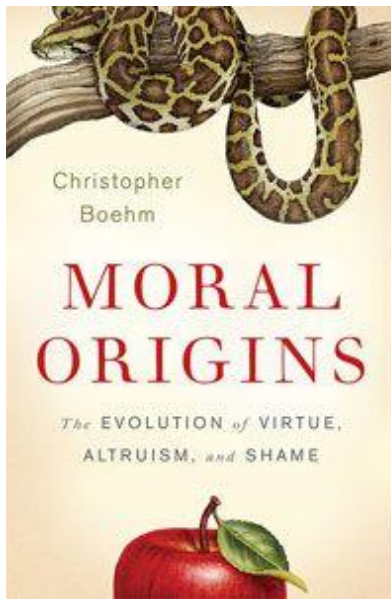


# How Humans Became Moral Beings

In a new book, anthropologist Christopher Boehm traces the steps our species went through to attain a conscience



By Megan Gambino

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Why do people show kindness to others, even those outside their families, when they do not stand to benefit from it? Being generous without that generosity being reciprocated does not advance the basic evolutionary drive to survive and reproduce.

Christopher Boehm, an evolutionary anthropologist, is the director of the Jane Goodall Research Center at the University of Southern California. For 40 years, he has observed primates and studied different human cultures to understand social and moral behavior. In his new book, *Moral Origins*, Boehm speculates that human morality emerged along with big game hunting. When hunter-gatherers formed groups, he explains, survival essentially boiled down to one key tenet—cooperate, or die.

### **First of all, how do you define altruism?**

Basically, altruism involves generosity outside of the family, meaning generosity toward non-kinsmen.

### **Why is altruism so difficult to explain in evolutionary terms?**

A typical hunter-gatherer band of the type that was universal in the world 15,000 years ago has a few brothers or sisters, but almost everyone else is unrelated. The fact that they do so much sharing is a paradox genetically. Here are all these unrelated people who are sharing without being bean counters. You would expect those who are best at cheating, and taking but not giving, to be coming out ahead. Their genes should be on the rise while altruistic genes would be going away. But, in fact, we are evolved to share quite widely in bands.

### **What did Charles Darwin say about this “altruism paradox?”**

Charles Darwin was profoundly perplexed by the fact that young men voluntarily go off to war and die for their groups. This obviously didn't fit with his general idea of natural selection as being individuals pursuing their self-interests.

He came up with group selection as an answer to this paradox. The way it worked, if one group has more altruists than another, it is going to outcompete the other group and outreproduce it. The groups with fewer altruists would have fewer survivors. Therefore, altruism would spread at the expense of selfishness.

The problem with group selection has been that it is very hard to see how it could become strong enough to trump selection between individuals. You need an awful lot of warfare and genocide to really make group selection work.

**And what did Darwin have to say about the origins of the human conscience?**

What he did really was to take the conscience, set it aside as something very special and then basically say, “I throw up my hands. I can’t tell you how this could have evolved. What I can tell you is that any creature that became as intelligent and as sympathetic as humans would naturally have a conscience.”

**Fast-forward a century and half—where are we now in understanding the origins of human morality and conscience?**

Well, there are quite a few books on the subject. But they are almost all arguments out of evolutionary design; that is, they simply look at morality and see how it functions and how it could have been genetically useful to individuals. My book is the first to actually try to look at the natural history of moral evolution. At what time and how did developments take place which led us to become moral? In a way, this is a new field of study.

**Can you tell us about the database you have created to help you draw your conclusions?**

It has been argued that all of the human hunter-gatherers that live today have been so politically marginalized that they really can’t be compared with prehistoric human beings who were hunting and gathering. I think that is flat-out wrong.

Since the 1970s, we have learned that the rate of climate change was just incredible in the late Pleistocene. Therefore, there was plenty of marginalization taking place 50,000 years ago, just as there has been today. Like today, some of it surely was political, in the sense that when there would be a climate downswing, everything would be scarce and hunting bands would be fighting with each other over resources.

What I have done is to look at all of the possible hunter-gatherer societies that have been studied. I simply got rid of all of those that could have never existed in the Pleistocene—mounted hunters who have domesticated horses that they got from the Spaniards, fur trade Indians who started buying rifles and killing fur-bearing animals and some very hierarchical people who developed along the northwest coast of North

America. So far, I've very carefully gone through about 50 of the remaining societies, looking for things that they mostly share. Then, I project the patterns of shared behavior back into the period when humans were culturally modern. Now, that only gets us back to 45,000, maybe 100,000 years ago. If you go back beyond that, then there are problems, because you are not dealing with the same brains and the same cultural capacity.

### **About when did humans acquire a conscience?**

Getting pinned down on a date is very dangerous because every scholar is going to have something to say about that. But let me just give you some probabilities. First of all, there could be little doubt that humans had a conscience 45,000 years ago, which is the conservative date that all archaeologists agree on for our having become culturally modern. Having a conscience and morality go with being culturally modern. Now, if you want to guess at how much before that, the landmark that I see as being the most persuasive is the advent of large game hunting, which came about a quarter of a million years ago.

### **According to your theory, how did the human conscience evolve?**

People started hunting large ungulates, or hooved mammals. They were very dedicated to hunting, and it was an important part of their subsistence. But my theory is that you cannot have alpha males if you are going to have a hunting team that shares the meat fairly evenhandedly, so that the entire team stays nourished. In order to get meat divided within a band of people who are by nature pretty hierarchical, you have to basically stomp on hierarchy and get it out of the way. I think that is the process.

My hypothesis is that when they started large game hunting, they had to start really punishing alpha males and holding them down. That set up a selection pressure in the sense that, if you couldn't control your alpha tendencies, you were going to get killed or run out of the group, which was about the same as getting killed. Therefore, self-control became an important feature for individuals who were reproductively successful. And self-control translates into conscience.

### **Over how long of a period did it take to evolve?**

Well, Edward O. Wilson says that it takes a thousand generations for a new evolutionary feature to evolve. In humans, that would come to 25,000 years. Something as complicated as a conscience probably took longer than that. It has some bells and whistles that are total mysteries, such as blushing with shame. No one has the slightest idea how that evolved. But I would say a few thousand generations, and perhaps between 25,000 and 75,000 years.

### **In what ways is morality continuing to evolve?**

It is very hard to make a statement about that. I'll make a few guesses. Prehistorically, psychopaths were probably easy to identify and were dealt with, as they had to be dealt with, by killing them. And, today, it would appear that in a large anonymous society many psychopaths really have free rein and are free to reproduce. We may need to take further moral steps at the level of culture to deal with an increase of psychopathy in our populations. But this would be over thousands of years.

Morality certainly evolves at the cultural level. For example, the American media in the last year have suddenly become very, very interested in bullies—so have school officials. Our social control is now focused much more than it ever was on bullying. It has been a major topic with hunter-gatherers. So, in a sense, you could say our moral evolution at the cultural level has rather suddenly moved back to an ancient topic.