

Altruism: Genetic or Cultural Evolution?

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(PhysOrg.com) -- The origins of altruism, the willingness to make personal sacrifices for the benefit of others often unknown to us, has perplexed evolutionary social scientists and biologists for years.

Why do people willingly to go to war, give blood, contribute to food banks and make other sacrifices often at considerable risk to themselves and their descendents? Evolutionary explanations based on both genes and culture have been proposed for this [human behavior](#), which is unique among vertebrates.

In all likelihood, it is evolutionary forces acting on socially learned behavior (culture), a group of UC Davis researchers argue in a paper published this month in the [Proceedings of the National Academy of Sciences](#).

The group, led by Adrian Bell, a doctoral candidate in ecology, based its conclusion on estimates of the degree of genetic and cultural variation found between groups versus within groups. Natural selection acts and depends on variation.

“Our numbers show ... and we argue that socially learned beliefs, or our culture as we define it here, is a much better candidate to explain the pro-social tendencies that humans have in large-scale societies,” Bell says. The main reason for that is that [cultural differences](#) between groups are much greater than genetic differences.

Bell prepared the paper, which appears in the Oct. 13 issue, with co-

authors Peter J. Richerson, a professor emeritus in the Department of Environmental Science and Policy, and Richard McElreath, an associate professor in the Department of Anthropology.

More information: [Culture](#) rather than genes provides greater scope for the evolution of large-scale human prosociality, *PNAS* 2009 106:17671-17674; published online before print October 12, 2009, [doi:10.1073/pnas.0903232106](https://doi.org/10.1073/pnas.0903232106)

Provided by UC Davis ([news](#) : [web](#))

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