

UC SANTA BARBARA

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## **Researchers Examine Development of Large-Scale Cooperation in Human Societies**

A study conducted by an international team of social scientists that includes Michael Gurven, professor of anthropology at UC Santa Barbara, suggests that cooperative behavior among strangers has been influenced more by norms and institutions -- such as socioeconomics and world religions -- than by misplaced preferences favoring kin or friends. The group's findings appear in an article published in the March 19 issue of the journal *Science*.

The paper's lead author is Joseph Henrich of the University of British Columbia. Co-authors, in addition to Gurven, include anthropologists and economists from UC Davis, UCLA, Oxford University, the California Institute of Technology, Florida State University, University of Colorado, Boise State University, Universidad de los Andes in Bogotá, Washington University, Guilford College, and College of DuPage.

A news release issued by the University of British Columbia explains the study's findings in detail. The text follows:

Members of large-scale, complex human societies have learned to play nice with strangers through the norms that are associated with market participation and world religions, and not solely due to an evolved psychology for cooperation in small groups as previously believed, according to UBC-led research.

In a paper published in the March 18 issue of *Science*, lead author Joseph Henrich and a 13-member research team explore the evolutionary underpinnings of human societies.

Fifteen years in the making, the study combines two major, comparative cross-cultural projects that examine how motivations for fairness and punishment influence economic decisions, and how these motivations relate to variables that differ across societies, such as community size, adherence to a world religion and market dependence and exchange.

"Our results contradict previous theories that humans learned to treat strangers fairly by transferring behavior and norms developed in their actions and attitudes toward family and kin," said Henrich, an anthropologist who holds the Canada Research Chair in Culture, Cognition and Coevolution and teaches in the UBC Departments of Psychology and Economics.

The interdisciplinary team of anthropologists and economists conducted behavioral experiments with 2,100 respondents from 15 societies, whose communities ranged in size from 20 to 10,000 people. These small-scale societies, from Africa, North and South America, Oceania, New Guinea, and Asia, included hunter-gatherers, marine foragers, pastoralists, horticulturalists, and wage laborers.

"Our findings suggest that the evolution of societal complexity, especially as it has occurred over the last 10 millennia, involved the selective spread of those norms and institutions that best facilitated successful exchange and interaction in socioeconomic spheres well beyond local networks of durable kin and reciprocity-based relationships," said Henrich.

The study measured participants' motivations for fairness and their willingness to punish unfairness in interactions with an anonymous other. These experiments took the form of games played with real money where participants would give a portion of the cash to the second player, someone unknown to them. Some of the games allowed the second player or a third-party participant to pay some of their money to punish the first player for making low offers.

The findings show that people living in small communities lacking market integration or a world religion -- absences that likely characterized all societies until about 10,000 years ago -- display relatively little concern with fairness or punishing unfairness in transactions involving strangers or anonymous others, a pattern that

makes sense given how local norms and institutions actually function in these societies.

Third-party observers, for example, from the smallest-scale, purely face-to-face, communities from Tanzania and Kenya to Amazonia and Oceania, show little willingness to pay to punish those making unfair offers.

"It's a pattern that makes sense given how local norms and institutions actually function in these societies," said Henrich. "Small-scale communities have local norms governing all kinds of interactions, but they often don't have default social norms of dealing with strangers or anonymous others in monetary transactions."

In contrast, the largest societies with the highest levels of market integration and participation in world religions show both a greater willingness to make fair offers and the most willingness to punish unfair offers.

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