



Greater than the sum of its parts

Joseph Henrich is uncovering why the nature-nurture debate no longer applies and how defining human behaviour is not as straightforward as previously assumed

How fair and cooperative are people with strangers? How much of a personal payoff is an individual willing to sacrifice in a social interaction to guarantee fair, cooperative behaviour among others? According to Dr. Joseph Henrich, Associate Professor of Psychology and Economics at UBC Vancouver, the answer strongly depends on the cultural background of the individuals in question.

A scenario known as the ultimatum game is giving evolutionary researchers like Henrich clues on how culture and institutions influence human behaviour. In the game, two players are given the opportunity to divide a sum of money between them. The first player must make a one-time proposal on how much each should receive; the second player then has the choice of either accepting or rejecting this offer. If accepted, the money is split according to the original offer but if rejected, neither player receives anything. Because this is a one-shot, anonymous interaction, reciprocity doesn't influence the offer.

When played in industrialized societies, results indicate that the first player almost universally has to offer close to half the amount in order to secure the deal. But working deep in the Peruvian Amazon with the Machiguenga people, Henrich first demonstrated that the behaviour exhibited by people from industrialized societies isn't innate, and in fact, the behaviour of both cultures deviates from the canonical predictions of traditional game theory.

"The Machiguenga would never reject any offer except zero and their mean offer was 26 per cent, which is half of the westerners' mean," Henrich says. "What these cross-cultural experiments show us is that people in industrialized societies have social behaviour that you don't find anywhere else."

Henrich would know: Besides studying the behaviour of communities from Fiji to Peru to rural Chile using a combination of ethnographic and experimental tools, he has spearheaded two large-scale comparative projects in which a variety of experiments like the ultimatum game were deployed in 15 small-scale societies. His analysis of human cooperation and fairness in these diverse



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human communities is giving insight into how people acquire beliefs and values from other members of their social groups, the results of which are slowly dismantling preconceived notions about either the primarily genetic or primarily cultural foundations of human behaviour.

“Humans are unique in that, unlike other primates, we cooperate in large groups. But not every society cooperates this way so it’s ripe for cultural evolutionary analysis,” says Henrich. “A lot of how we think are products of a particular cultural evolutionary trajectory and can get confused with human nature. That’s not to say you can’t sensibly say something is due to human nature but if you don’t do the proper cross-cultural research, you can be fooled.”

In his quest to dissolve the nature-versus-nurture dichotomy, Henrich has centered his research on evolutionary approaches to human behaviour, which uses evolutionary models to understand how cultures and societies have developed over time. While many evolutionary researchers are split between acknowledging either the “hard-wired” behavioural responses transmitted through the genes or the traits shaped by environmental factors as determinants of human behaviour, Henrich’s research is pioneering a co-evolutionary view that suggests behavioural adaptations in human evolution arise from both psychological mechanisms and cultural influence.

This evolutionary approach to culture, however, has not come without its criticism, specifically through the question: If culture does not replicate like genes, can it still evolve? Some anthropologists have argued that since cultural ideas rarely, if ever, are transmitted intact, cultural ideas cannot evolve in a Darwinian sense.

For Henrich, the solution to this theoretical challenge was simple: “One of the problems with how people look at cultural evolution is that our intuitions have been schooled by too much

thinking about genes but there is no requirement that things replicate to have evolution. Richard Dawkins claimed this, but that turns out to be dead wrong and our models show that. It’s easy to falsify because you just build a model with no replicators and show how adaptive evolution can still occur.”

Equipped with this arsenal of theoretical and methodological tools, Henrich has begun the daunting task of overhauling the nature-nurture dichotomy in favour of an integrated approach to human behavioural evolution that reflects upon social and cultural influences as well as psychological and genetic influences.

Ultimately, Henrich hopes to use his research to completely restructure the way academia approaches the human sciences: “From early on in graduate school, I started ignoring disciplinary boundaries and I would study whatever was necessary for the problem. Unfortunately with the human sciences today, everything is hived off into specific disciplines like psychology, anthropology or economics and they don’t talk to each other or read each other’s journals. Economics and psychology have completely different models of behaviour so part of what we’re trying to construct is something that speaks to both which can then provide a unifying framework for approaching human behaviour that takes seriously that we’re products of evolution and that cultural evolution is a crucial part of our phenotype.” ■■■

Dr. Joseph Henrich is the Canada Research Chair in Culture, Cognition and Evolution (Tier 1). In 2004, he received a Presidential Early Career Award, the highest award bestowed by the United States to scientists early in their careers. He has received funding from the National Science Foundation (NSF), the Social Sciences and Humanities Research Council (SSHRC), the Hampton Fund and the MacArthur Foundation.