Social scientists build case for 'survival of the kindest'

December 8 2009, By Yasmin Anwar

Photo illustration by Jonathan Payne

(PhysOrg.com) -- Researchers at the University of California, Berkeley, are challenging long-held beliefs that human beings are wired to be selfish. In a wide range of studies, social scientists are amassing a growing body of evidence to show we are evolving to become more compassionate and collaborative in our quest to survive and thrive.

In contrast to "every man for himself" interpretations of Charles Darwin's theory of evolution by natural selection, Dacher Keltner, a UC Berkeley psychologist and author of "Born to be Good: The Science of a Meaningful Life," and his fellow social scientists are building the case that humans are successful as a species precisely because of our nurturing, altruistic and compassionate traits.

They call it "survival of the kindest."

"Because of our very vulnerable offspring, the fundamental task for human survival and gene replication is to take care of others," said Keltner, co-director of UC Berkeley's Greater Good Science Center. "Human beings have survived as a species because we have evolved the capacities to care for those in need and to cooperate. As Darwin long ago surmised, sympathy is our strongest instinct."

Empathy in our genes

Keltner's team is looking into how the human capacity to care and cooperate is wired into particular regions of the brain and nervous system. One recent study found compelling evidence that many of us are genetically predisposed to be empathetic.

The study, led by UC Berkeley graduate student Laura Saslow and Sarina Rodrigues of Oregon State University, found that people with a particular variation of the oxytocin gene receptor are more adept at reading the emotional state of others, and get less stressed out under tense circumstances.

Informally known as the "cuddle hormone," oxytocin is secreted into the bloodstream and the brain, where it promotes social interaction, nurturing and romantic love, among other functions.

"The tendency to be more empathetic may be influenced by a single gene," Rodrigues said.

The more you give, the more respect you get

While studies show that bonding and making social connections can

make for a healthier, more meaningful life, the larger question some UC Berkeley researchers are asking is, "How do these traits ensure our survival and raise our status among our peers?"

One answer, according to UC Berkeley social psychologist and sociologist Robb Willer is that the more generous we are, the more respect and influence we wield. In one recent study, Willer and his team gave participants each a modest amount of cash and directed them to play games of varying complexity that would benefit the "public good." The results, published in the journal *American Sociological Review*, showed that participants who acted more generously received more gifts, respect and cooperation from their peers and wielded more influence over them.

"The findings suggest that anyone who acts only in his or her narrow self-interest will be shunned, disrespected, even hated," Willer said. "But those who behave generously with others are held in high esteem by their peers and thus rise in status."
"Given how much is to be gained through generosity, social scientists increasingly wonder less why people are ever generous and more why they are ever selfish," he added.

Cultivating the greater good

Such results validate the findings of such "positive psychology" pioneers as Martin Seligman, a professor at the University of Pennsylvania whose research in the early 1990s shifted away from mental illness and dysfunction, delving instead into the mysteries of human resilience and optimism.

While much of the positive psychology being studied around the nation is focused on personal fulfillment and happiness, UC Berkeley researchers have narrowed their investigation into how it contributes to

the greater societal good.

One outcome is the campus's Greater Good Science Center, a West Coast magnet for research on gratitude, compassion, altruism, awe and positive parenting, whose benefactors include the Metanexus Institute, Tom and Ruth Ann Hornaday and the Quality of Life Foundation.

Christine Carter, executive director of the Greater Good Science Center, is creator of the "Science for Raising Happy Kids" Web site, whose goal, among other things, is to assist in and promote the rearing of "emotionally literate" children. Carter translates rigorous research into practical parenting advice. She says many parents are turning away from materialistic or competitive activities, and rethinking what will bring their families true happiness and well-being.

"I've found that parents who start consciously cultivating gratitude and generosity in their children quickly see how much happier and more resilient their children become," said Carter, author of "Raising Happiness: 10 Simple Steps for More Joyful Kids and Happier Parents" which will be in bookstores in February 2010. "What is often surprising to parents is how much happier they themselves also become."

The sympathetic touch

As for college-goers, UC Berkeley psychologist Rodolfo Mendoza-Denton has found that cross-racial and cross-ethnic friendships can improve the social and academic experience on campuses. In one set of findings, published in the Journal of Personality and Social Psychology, he found that the cortisol levels of both white and Latino students dropped as they got to know each over a series of one-on-one get-togethers. Cortisol is a hormone triggered by stress and anxiety.

Meanwhile, in their investigation of the neurobiological roots of positive

emotions, Keltner and his team are zeroing in on the aforementioned oxytocin as well as the vagus nerve, a uniquely mammalian system that connects to all the body's organs and regulates heart rate and breathing.

Both the vagus nerve and oxytocin play a role in communicating and calming. In one UC Berkeley study, for example, two people separated by a barrier took turns trying to communicate emotions to one another by touching one other through a hole in the barrier. For the most part, participants were able to successfully communicate sympathy, love and gratitude and even assuage major anxiety.

Researchers were able to see from activity in the threat response region of the brain that many of the female participants grew anxious as they waited to be touched. However, as soon as they felt a sympathetic touch, the vagus nerve was activated and oxytocin was released, calming them immediately.

"Sympathy is indeed wired into our brains and bodies; and it spreads from one person to another through touch," Keltner said.

The same goes for smaller mammals. UC Berkeley psychologist Darlene Francis and Michael Meaney, a professor of biological psychiatry and neurology at McGill University, found that rat pups whose mothers licked, groomed and generally nurtured them showed reduced levels of stress hormones, including cortisol, and had generally more robust immune systems.

Overall, these and other findings at UC Berkeley challenge the assumption that nice guys finish last, and instead support the hypothesis that humans, if adequately nurtured and supported, tend to err on the side of compassion.

"This new science of altruism and the physiological underpinnings of

compassion is finally catching up with Darwin's observations nearly 130 years ago, that sympathy is our strongest instinct," Keltner said.

Provided by University of California, Berkeley