

## SOCIAL PSYCHOLOGY

# Love thy stranger as thyself

Extraordinary altruists risk their own health and life to help anonymous strangers. A study now shows that extraordinary altruists are motivated to do good to distant others not because they feel socially closer to them, but because they genuinely care more for the welfare of strangers.

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In Jasper, Michigan, July 2015, Wayne Trivette and Timothy Holtz forced open the door of an ablaze vehicle, flames already spreading out of the windows, and saved the trapped driver from burning, sustaining injuries to themselves in the process<sup>1</sup>. In January 2014, *The Huffington Post* journalist Wray Herbert reported the case of his colleague who survived a kidney failure because a complete stranger volunteered to donate a kidney to her<sup>2</sup>.

These are two real-life examples of extraordinary altruism. But as elating as it may be to read of such acts of self-sacrifice, most of us are admittedly not extraordinary altruists. Although we help relatives or close friends in the blink of an eye, only very few of us would be ready to engage in extreme acts of altruism for the benefit of distant strangers, especially if the costs are as exceedingly high as, say, with organ donations.

What distinguishes extraordinary altruists from ordinary people, and what motivates them to risk their own health and life to help total strangers? Most perspectives on the drivers of altruism invoke kin selection (supporting the survival of genetically related others), or direct or indirect reciprocity (mutual or generalized systems of exchange). However, such rules of cooperation cannot explain the motivation underlying extraordinary selflessness, such as organ donations to strangers, because its recipients are neither related or known to the donor, nor are these acts part of a perpetuated generalized exchange system. Another possibility is that moral sentiments, social norm adherence, or the desire for social approval, might prompt organ donations and other acts of extraordinary altruism. However, while social norm compliance certainly explains some forms of costly cooperation<sup>3</sup>, altruistic organ donations, as an example again, are not necessarily regarded as desirable, and are occasionally even frowned upon<sup>4</sup>. A third possibility is empathic concern for others. But, while most people share the joys and pains of their close friends and



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kin, their empathic sensitivity is typically much less pronounced toward anonymous strangers. Hence, the most puzzling facet of extreme altruism, the altruists' readiness to sacrifice their own health and life to do good to socially remote strangers, remains mysterious.

In this issue of *Nature Human Behaviour*, Kruti Vekaria and colleagues<sup>5</sup> shed light on this enigma by comparing social preferences in a money allocation game of ordinary people with those of a very special population of extreme altruists: living donors who gave a kidney to an anonymous stranger. The authors stipulated two hypotheses that could explain why altruistic kidney donors show so much more generosity toward total strangers than ordinary people: it is possible that altruists have a skewed construal of social distance such that they behave toward strangers as they would toward close friends and relatives. Alternatively, it is equally plausible that altruists perceive strangers as strangers,

like everyone else, but place higher value on distant others' well-being.

To test these hypotheses, the experimenters adapted two tasks, one that assessed the construal of social distance, and another that quantified the decline of generosity toward others with increasing social distance between benefactor and beneficiary, a phenomenon dubbed social discounting<sup>6</sup>. In the social distance construal task, participants indicated the physical distance, as a proxy for social distance, between avatars representing themselves and other people of variable social relationships (blood relatives, unrelated family, friends, neighbours, and so on) on a computer screen. In the social discounting task, participants were first prompted to imagine a list of 100 people in their social environment and rank them according to how close they felt to them. Subsequently, they played several rounds of a money allocation game against hypothetical individuals from this list.

In each round, they could either behave selfishly by keeping a large sum of money to themselves, or generously by sharing money with the other individual, leaving them with a lower amount to themselves. The experimenters then determined the social premium for different individuals varying in social distance, that is, the sum participants were willing to forego to give money to the beneficiary. This allowed them to psychometrically quantify the decline in the valuation of the others' material well-being across social distance — the social discount function<sup>7</sup>.

The experimenters first asked if kidney donors differed from control participants in their construal of social distance between self and others. They found virtually no difference between donors and controls in the perceived social distances for any of the different relationship categories. The lack of difference in social distance construal makes it unlikely that a distorted representation of the social distance toward strangers accounts for the donors' extraordinary generosity. Interestingly, the picture changes entirely with the inspection of the participants' social discount functions. While controls showed social discounting as observed in many previous studies, the donors' generosity toward others decreased only minimally with larger social distance. The difference between controls and donors was most drastic for very distant others: the value donors placed on the financial welfare of a complete stranger was identical to the value controls placed on the welfare of a moderately close beneficiary, such as a good acquaintance.

The study by Vekaria and colleagues is exciting and important not only because it elucidates the psychology of extreme altruism, but also because it yields insights into the nature of altruism in general. Sceptics have argued that a strongly skewed social distance representation may result in a fuzzy distinction between self and others. If true, such blurred self–other distinctions would require a conceptual revisit of altruism because an overlap of one's self- and other-concepts would leave no space for other-regarding preferences, given that there would be no distinct other category anymore. But the observation that

extraordinary altruists and ordinary people perceive social distance equivalently, yet still differ in how they value the welfare of strangers, challenges the possibility that the altruists' behaviour was merely steered by self-serving motives, resulting from blurred self–other distinctions. Rather, these results support the notion of the existence of genuine other-regarding motivation.

The study answers many questions, but several issues remain open. It cannot provide a clear insight into why extreme altruists value the welfare of strangers more than ordinary people. Greater empathic sensitivity in altruists may account for a stronger concern for distant others, but empathic concern, or its inverse, cold-heartedness, only explained a relatively small part of the variance in social discounting in this study. Another possibility is a stronger propensity for spiritual belief and religiousness in kidney donors<sup>4</sup>, but this possibility was not considered and thus remains to be further explored. Also, the study yields no insights into the ultimate evolutionary reasons for altered social discounting. It is a riddle why natural selection has not eradicated the propensity for extraordinary altruism, given its extreme burden on the individual's fitness. It is possible that extraordinary altruism provides adaptive advantages on the group level. But, for it to increase fitness of the group, the survival and reproduction benefits for the group must outweigh the costs to the individual. Several possible group benefits of individual altruism have been proposed, including the stimulation of cultural, ethical and social norms that promote cooperation among group members. It is thus possible that hyperaltruism represents the extreme of a natural variation in the proclivity to cooperate. But given that the evolution of extreme altruism was not the subject of this study, these propositions remain purely speculative.

Finally, one downside of the experimenters' design is the fact that they did not incentivize their tasks, as all payoffs were purely hypothetical. There is an ongoing debate whether real and hypothetical social interaction scenarios measure the same thing<sup>8</sup>, raising doubts about the validity of games relying on

purely fictional answers with imaginary consequences. Certainly, the special population tested here, altruistic organ donors, have already proven to be selfless in real-life, even when facing drastic sacrifices. But since the donors presumably knew that they were being studied for their extreme altruism, it remains to be shown if their choices in the social discounting task reflected their true social preferences, or merely met the expectations and hypotheses of the experimenters.

The potential implications of the present study for the advocacy of organ donations from living anonymous sources are obvious: address their altruistic intentions. But the majority of transplanted organs are obtained from deceased, not living, donors. The motivations to consent to deceased organ donation are probably different from living donations<sup>9</sup>. Therefore, an exciting direction for future research is to determine if the current study could be generalized to inform policy development targeting deceased donations. But independent of its practical implications for transplant advocacy, the study's evidence for the existence of genuine altruistic motivation in extreme altruists is exciting for scientists and the general public alike. In today's Zeitgeist of nationalist protectionism and populist individualism, this news inspires hope for the future. □

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## Competing interests

The author declares no competing financial interests.