

For Goodness' Sake

By Frans de Waal

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Secure your own oxygen mask before assisting anyone else, we are urged at the beginning of every flight. Altruism often requires that we take care of ourselves first, which is exactly what the subject of Oren Harman's enthralling book "The Price of Altruism" tragically failed to do. The scientist George Price was an obscure and enigmatic figure, unknown outside his field of study. Born near New York City in 1922 and originally trained as a chemist, Price worked on the Manhattan Project, at Bell Labs and at I.B.M. before moving to London in 1967, after botched surgery for thyroid cancer. There he became a population geneticist and tried to solve the mystery of altruism with brilliant mathematical formulas. He had trouble solving his own problems, though. Having shown little sensitivity to others in his previous life (he abandoned his wife and daughters and was a lousy son to his aging mother), Price swung to the other extreme. Long a staunch skeptic and atheist, he became a devout Christian, gave up all his possessions and dedicated himself to caring for the city's vagabonds. By the age of 50, he was as gaunt as an old man, with rotting teeth and a raspy voice. He killed himself in 1975.

But "The Price of Altruism" is about far more than Price himself. It covers the entire 150-year history of scientists' researching, debating and bickering about a theoretical problem that lies at the core of behavioral biology, sociobiology and evolutionary psychology: Why is it that organisms sacrifice themselves for the benefit of others? As a scientist, Price, following longstanding tradition, loved to pit altruism against selfishness. The sharper the contrast, the deeper the mystery of how altruism might have evolved. Why would animals worry about the survival of others, sometimes even nonrelatives? Is this not against the law of nature?

Extremely well researched and written with great love of the subject, "The Price of Altruism" reveals all sorts of personal details of momentous events in the history of science. There is, for example, the delicious fact that John Maynard Smith, the famous

British evolutionary biologist, brought to the deathbed of the even more famous J. B. S. Haldane a book arguing that flocks of birds prevent overpopulation by curtailing their own reproduction, in an attempt to give themselves an advantage over other flocks. This idea, known as group selection, was to become the focus of much passionate debate and ridicule over the years. Despite his grave condition, Haldane immediately saw the problem, which he summarized to visitors with a mischievous smile:

“Well, there are these blackcock, you see, and the males are all strutting around, and every so often a female comes along, and one of them mates with her. And they’ve got this stick, and every time they mate with a female, they cut a little notch in it. And when they’ve cut 12 notches, if another female comes along, they say ‘Now, ladies, enough is enough!’ ”

Haldane was one of the architects of the now familiar “gene’s-eye view” of evolution. Looked at from the gene’s perspective, altruism seems a little less perplexing. When an organism sacrifices its life to save a relative, it helps perpetuate the genes they share. Haldane is said to have hit on this insight sitting in the pub, exclaiming, “I’ll jump into a river for two brothers and eight cousins,” thus foreshadowing the theory of kin selection proposed by William Hamilton, one of the brightest — and nicest — biologists since Darwin himself.

I add “nicest,” because Harman reveals some of his scientist characters to be less than altruistic. The descriptions of Maynard Smith, in particular, are not too flattering. Maynard Smith coined the term “kin selection” in an article that ran off with Hamilton’s idea without giving him much credit. In the meantime, Maynard Smith was one of the anonymous reviewers on Hamilton’s seminal 1964 paper elaborating on the idea, which was delayed for nine months while Hamilton made the requested changes, thus allowing Maynard Smith’s article to appear first — something Hamilton harbored a grudge about his whole life. Price almost suffered a similar fate but instead ended up as Maynard Smith’s co-author on the 1970 paper about ritualized combat (why don’t venomous snakes use their fangs against each other?) that made him famous.

Illustration by Timothy Goodman

Contrast this with the gentlemanly treatment Price received from Hamilton when Hamilton learned of a brilliant formula that Price had derived but not yet published. Hamilton insisted to the editors of *Nature* that his own paper on the same topic not appear without Price's, which is how the journal ended up publishing both in 1969. After Price's funeral, Hamilton went to rescue documents of his from a squatter's flat, saying how much kinship, a sense of "intellectual redundancy," he felt with the man who by the end of his life was talking to God.

Even as Price's most important papers were appearing, he was turning away from science and embracing a life of Christian asceticism. Harman writes that Price, who was obsessed by numerical coincidences, "may have stood somewhere on the slippery spectrum between normal and autistic social behavior" and notes that three years before his death he stopped taking medication for his thyroid condition, which has been known to lead to depression. But he also speculates that Price may have despaired at his own failure to transcend biology and find unadulterated self-sacrifice, untinged by selfishness.

Never mind that most human altruism does not operate this way. It grows out of empathy with those in need or distress, a capacity that probably evolved when female mammals began to nurture their young. This would explain why women are more empathetic than men, and why empathy is affected by oxytocin, a hormone involved in birth and breast-feeding. Both men and women display strikingly more empathetic responses in lab experiments after oxytocin has been sprayed into their nostrils.

Since oxytocin makes us feel good, there is no sharp line between care for others and self-love. But it should be added that the great thinkers populating "The Price of Altruism" took a broader view, focusing on a huge variety of species, not just mammals. Moreover, their concern was not with how altruism works, but how it evolved in the first place — a question that remains hotly debated today.

Most players in the long quest for an answer were politically opinionated. Some, like Haldane and Maynard Smith, were card-carrying Communists, and Harman devotes a

chapter to Peter Kropotkin, the Russian anarchist who (inspired by Darwin) argued that humans and other animals were naturally inclined toward mutual aid. So much for the outcry over sociobiology in the 1970s, when anyone interested in the evolutionary roots of human behavior was accused of being fascist. Historically, the debate over altruism has taken place more on the left than on the right side of the ideological spectrum.

This is a book for anyone interested in the question, first posed by Darwin himself, of how we ended up with so much kindness in a natural world customarily depicted as “red in tooth and claw.” Price struggled with it on an intensely personal level. His story is highly relevant at a time when greed as the basis of society has lost much of its appeal.

THE PRICE OF ALTRUISM

George Price and the Search for the Origins of Kindness

By Oren Harman

Illustrated. 451 pp. W.W. Norton & Company. \$27.95

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