



W. EUGENE SMITH/MAGNUM PHOTOS

A US soldier assists a member of his unit during the Battle of Okinawa in the Second World War.

SOCIOBIOLOGY

Altruists together

Herbert Gintis applauds two books that powerfully enrich the dialogue on behavioural science.

Are humans basically selfish yet browbeaten by society into curbing their instincts? Or are they basically altruistic but corrupted by unjust societies? These age-old questions are now asked by behavioural scientists and discussed in journals such as *Nature*. Evolutionary biologist David Sloan Wilson's *Does Altruism Exist?* and science historian Michael Shermer's *The Moral Arc* are brilliant contributions to this branch of sociopolitical discourse.

Applying scientific principles to human society is hard. Society is a complex dynamical, adaptive nonlinear system. Moreover, rapid technical change, increased population density and globalization mean that we cannot reliably predict the future from the past. Even human nature, forged tens of thousands of years ago, turns out to be stunningly plastic.

Wilson's question is: do actions that mainly benefit unrelated others at personal cost exist? Could anyone doubt it? We give to charity,

vote for public education even when we have no children, and volunteer to fight and die in war. People conform to social norms even when no one is looking, and punish the anti-social behaviour of others even when it is costly to do so. Yet for decades, a countervailing theory has held in biology and economics.

Richard Dawkins, in *The Selfish Gene* (Oxford University Press, 1976), reflected the opinion then current among biologists: "Let us try to teach generosity and altruism, because we are born selfish." Some 35 years later, in *Nature*, 137 evolutionary biologists

Does Altruism Exist?: Culture, Genes, and the Welfare of Others

DAVID SLOAN WILSON
Yale University Press: 2015.

The Moral Arc: How Science and Reason Lead Humanity toward Truth, Justice, and Freedom

MICHAEL SHERMER
Henry Holt: 2015.

petitioned that "natural selection leads organisms to become adapted as if to maximize their inclusive fitness" (P. Abbot *et al. Nature* 471, E1–E4; 2011) — even in the most highly social species, individuals primarily help relatives. In fact, inclusive-fitness maximization is a pious wish of many population biologists that has never been validated in theory or fact.

Wilson's basic principle is the group-selection credo: "Selfishness beats altruism within groups. Altruistic groups beat selfish groups. Everything else is commentary" (D. S. Wilson and E. O. Wilson *Q. Rev. Biol.* 82, 327–348; 2007). As Charles Darwin noted in *The Descent of Man* (Murray, 1871), a hunter-gatherer band with many brave, altruistic soldiers will triumph over a group made up mostly of selfish cowards, even though the best thing of all for an individual is to be a coward surrounded by brave compatriots. The mathematics supports this scenario.

It is fashionable to question this view, but the theoretical issues have been resolved for decades. Groups do not mate or produce offspring, and so do not have biological fitness. Rather, the social organization of a species, its mating patterns and social groupings, is inscribed in the genomes of species members. Groups with successful social organization tend to enhance the fitness of their members, whose genomes code for this organization. Altruism can evolve in such groups, provided that altruists tend to be grouped preferentially with other altruists, in which case their biological fitness can on average be at least as high as that of selfish types.

As Wilson shows, another important source of human success is that cultures stress cooperation within the group, and so punish antagonistic individuals. This has led to humans 'domesticating themselves,' favouring a human nature that is relatively docile and dependent on the company and approval of others. Moreover, humans have evolved to coordinate their behaviour, each member of a team 'reading the minds' of the others and identifying with common goals (see Michael Tomasello's *A Natural History of Human Thinking*; Harvard University Press, 2014).

Shermer's *The Moral Arc*, although grounded in behavioural game theory and social psychology, is the more speculative book. He offers a defence of science and reason as emancipatory tools in the face of bigotry, pseudoscience and faith. He, too, argues that humans are basically moral and cooperative, but adds that they are parochial. When their community is threatened, people turn compassion for kin into hatred for outsiders.

Shermer's central point is that even evil people are generally motivated by their own particular morals. In the perpetrators' minds, violence against outsiders is the application of justice. This requires that the enemy be deemed inferior and the cause of problems — an excuse historically manipulated by

Books in brief

Machiavellian leaders to gather support for their ambitions, as when the Nazis blamed the Jewish people for Germany's economic woes.

This is where science, technology and reason come into play, Shermer argues: the growth of global information and communications networks has rendered it increasingly difficult to perpetrate the falsehoods that let authoritarian leaders maintain their rule. For Shermer, an increasingly educated populace with access to information undermines parochialism and pseudoscience, by allowing people to judge for themselves. The role of smartphones and social media in fuelling the 2011 Arab Spring uprisings is a case in point.

This is a welcome turnaround from *The Believing Brain* (Times, 2011), in which Shermer argued the rather nihilistic position that “beliefs come first, explanations for beliefs follow”. In *The Moral Arc*, Shermer, founder of the Skeptics Society, adheres to Enlightenment thought. His subtitle, *How Science and Reason Lead Humanity Toward Truth, Justice, and Freedom*, evokes the call to arms of philosopher Immanuel Kant in his 1784 *What is Enlightenment?*: “Have the courage to use your own understanding.”

Some of Shermer's positions would have surprised Enlightenment writers. Kant, for instance, believed that the oppressive state and authoritarian church were the sole impediments to truth and justice. We know now that even people with access to the ballot box and free expression can embrace intolerant and obscurantist doctrines. Moreover, Voltaire and others believed that the uneducated could not apply reason to the affairs of life. Shermer, by contrast, is a vigorous proponent of political democracy and equal rights.

Shermer's is an exciting vision, but he is mistaken in thinking that truth, freedom and justice are the inevitable by-products of scientific advance. Modern liberal democracy is the product of masses of people collectively throwing off the yoke of authoritarian states. But the power of popular action was made possible by a military technology: the handgun. This displaced elite cavalry and required nations to give the vote to peasants and citizens, who became the lifeblood of military defence. Even today, the United States, with its formidable drones and missiles, cannot win a war without ‘troops on the ground’.

We must be on constant guard against new instruments of information control, persecution and death that could once again render secular and religious totalitarianism a viable social alternative. Constant vigilance by altruists such as Wilson and rationalists such as Shermer may in the end win the day. ■

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