War and Parochial Altruism

Background for Bowles, Samuel. 2009. "Did Warfare among Ancestral Hunter-Gatherer Groups Affect the Evolution of Human Social Behaviors." *Science*, in press.

Warfare was sufficiently common and lethal among our ancestors to favor the evolution of what Bowles calls parochial altruism, a predisposition to be cooperative towards group members and hostile towards outsiders.

Biologists and economists have doubted that a genetic predisposition to behave altruistically (help others at a cost to oneself) could evolve (excepting the help extended to close genetic relatives). Skepticism among biologists arose primarily because most think that groups are not sufficiently different genetically to favor group selection (the most obvious evolutionary mechanism promoting altruism beyond the family). But both observation in natural settings and experiments (some of them by Bowles and his co authors) show that altruism is quite common among humans (much more so than in most other animals).

In a series of recent papers Bowles shows that altruism could have evolved among humans as a result of the advantages that altruistic groups have in military and other competition with other groups.

In Bowles, Samuel. 2006. "Group competition, reproductive leveling and the evolution of human altruism." *Science*, 314, pp. 1569-72, he provided a mathematical model of this process and showed that genetic differences among historical and recent hunter gatherers were much larger than was heretofore thought, suggesting that group selection might have been a powerful evolutionary force. This especially true given that egalitarian practices (reproductive leveling) among ancestral humans (food sharing for example) reduced the force of individual selection against altruists, while frequent warfare made altruistic cooperation among group members essential to survival.

In Choi, Jung-Kyoo and Samuel Bowles. 2007. "The coevolution of parochial altruism and war." *Science*, 318:26 October, pp. 636-40, he and Choi used evolutionary game theory, agent based computer simulations, and data on ecological and other conditions of ancestral human life to show that a propensity to help group members and harm outsiders ("parochial altruism") could have evolved, thus accounting for the frequency and highly lethal nature of group interactions.

In his most recent paper (above) he uses archaeological and ethnographic data and an extension of his earlier models to establish the fact that ancestral groups engaged in frequent and highly lethal warfare (with morality rates far in excess of Europe during the last century) and shows that mortality during warfare of this magnitude could have promoted a predisposition to help other group members (not only close family members) even at considerable cost to the actor.

Bowles, Samuel. 2008. "Conflict: Cooperation's Midwife." *Nature*, 456, pp. 326-27 provides an overview of the argument and some of its implications (without the most recent data)