Remarks on

Moral Judgment: Evolutionary and Psychological Perspectives

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David Hume, the 18th century Scottish philosopher-economist advised that

> *in contriving any system of government...every man ought to be supposed to be a* knave *and to have no other end, in all his actions, than his private interest. By this interest we must govern him, and, by means of it, make him, notwithstanding his insatiable avarice and ambition, cooperate to public good.*

His student, Adam Smith offered the 'invisible hand' of competition as the basis of this alchemy that would turn base motives to valued social ends.

This paradigm was an extraordinary advance for science and for public policy, but its psychological foundation is contradicted by a growing body of experimental and other evidence and it supports policies inadequate to our future.

All animals are knaves, us included, but humans succeeded because we sometimes are not. Perfecting the art of cooperation may be the key to why a tiny group – the ancestors of all of us – spread from the upper Rift Valley in Africa eventually to populate the world. Today, our flourishing, even survival, depends more than ever on cooperation than it did among our ancestors.

I would like to address moral behavior as a form of altruism and to advance the position

- that a substantial fraction of most human communities behave altruistically towards individuals beyond their immediate families,

- that altruism became common among humans because of our capacities as institution builders – including such quintessentially human activities as sharing food and of making war – and

- that those who ignore the generous and civic minded human predispositions – policy makers and academic disciplines alike – are doing a disservice to science and to the well-being of humanity.

All of the points I will make are based on recent papers(many of them jointly with Herbert Gintis) in the Journal of Theoretical Biology, the Journal of Population Biology, Nature, and Science (most of these are available on my web page at the Santa Fe Institute). Our forthcoming book *A cooperative species* will address these points in detail.

1. Seemingly generous and civic minded behavior is found in substantial fractions of subject pools in literally hundreds of experiments in dozens of different cultures. The same is evidenced in natural settings.

2. This behavior cannot be explained as 'self interest with a long time horizon" that is, by the benefits of reputation or anticipated reciprocation. . Nor does it reflect favoritism towards close genetic relatives.

3. Instead, other regarding motives provide a plausible explanation of both giving to others and punishment of those who do not share or who violate other norms. The term strong reciprocity captures both a predisposition to cooperate with others and to punish those who violate cooperative and other social norms, even at a cost to one's self and with no expectation of subsequent recuperation of these costs.

4. If humans are genuinely altruistic, then the problem for the behavioral sciences is not to explain how self regarding individuals would act (as if they were) unselfish (when they really are not) as has been the standard in both biological and economically based models of human social behavior.

5. Rather it is to explain how the species evolved so that a substantial fraction of its members would act altruistically, meaning that they undertake actions which if abandoned would raise their payoffs (either material or genetic). How could altruistic preferences (preferences that motivate altruistic actions) proliferate given that they are associated with lower payoffs?

6. The most plausible explanation is that humans (then, as now) occupied environments that made cooperation among substantial numbers of individuals essential to survival – in predation, risk pooling, defense. Groups with a preponderance of altruists exploited these gains to cooperation and did better in competition with other groups.

7. Four distinctly human characteristics contributed to this outcome by lessening the selective pressures against altruists within groups and heightening the stakes of group competition in which groups with many altruists were favored.

a. Food sharing, monogamy, and other forms of reproductive leveling within groups

b. Low cost and contingent punishment of deviant individuals.

c. The capacity to internalize social norms and to build institutions to teach altrusim

d. Frequent and lethal intergroup competition favoring groups with more altruistic members.

8. The fact that other species do not exhibit this suite of characteristics may explain the distinctively moral and cooperative nature of humans.

9. Between group competition favored not only altruistic individuals but also group level institutions supporting the above practices. Thus culturally transmitted institutions co-evolved with culturally and genetically transmitted individual behavioral predispositions.

10. The empirical plausibility of this interpretation is based on climatic, genetic, archaeological, ethnographic and other data suggesting, for example that ancestral groups were likely to have been genetically quite sufficiently different one from another and that environmentally induced crises and warfare were significant causes of mortality.

11. Alternative explanations hold that contemporary (genuinely or seemingly) altruistic behavior is common because, first, our ancestors lived under conditions – closed communities of mostly close kin – in which these behaviors were in fact self interested, and second, we did not adjust our behavior to the new conditions. These explanations are not convincing:

    a. If the closed community of kin ever did exist, it ceased doing so for most of humanity at least 7,000 years ago, which is ample time to adapt to the new conditions. In experiments subjects readily distinguish between interactions that are to be repeated and those which are not.

    b. Groups were far to large, and genetic relatedness within groups to small to motivate any but the most low-budget forms of altruism

    c. Individuals not sharing a recent common ancestor – trade, marital matching – warfare – were quite common, and had significant consequences for fitness and material rewards. Failing to distinguish between immediate family and others would be a serious disadvantage in this environment.

    d. Models based on repeated games work well for dyads, but are implausible when applied to band-sized or larger groups as is needed to explain essential forms of human cooperation such as information and risk pooling, defense and predation.

12. Reflecting their provenance, the behavioral motives in today's populations include strong reciprocity often conditional on racial, religious, linguistic and other group membership, what I have termed 'parochial altruism'.

13. Altruistic cooperation is no less essential to human survival and flourishing today than it was among our ancestors whether it be in the governance of the information-based economy, or in coping with the challenges of epidemic disease, political violence or climate change.

14. The economists' ' holy grail' – to discover the institutions and policies that direct selfish citizens towards public ends cannot address the challenges arising from the drastically enhanced connectedness of the entire world. For this, harnessing self interest will be necessary but insufficient: the moral nature of humans must also be recognized, cultivated, and empowered..

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