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The evolution of morality☆

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Abstract

Complex animal societies are most successful if members minimise harms caused to one another and if collaboration occurs. In order to promote this, a moral structure inevitably develops. Hence, morality has evolved in humans and in many other species. The attitudes which people have towards other humans and individuals of other species are greatly affected by this biologically based morality. The central characteristic of religions is a structure which supports a moral code, essentially the same one in all religions. A key obligation to others is to help to promote their good welfare and to avoid causing them to have poor welfare. Human views as to which individuals should be included in the category of those to whom there are moral obligations have broadened as communication and knowledge have progressed. Many people would now include, not only all humans but sentient animals, e.g. vertebrates and cephalopods, as well. Amongst sentient animals, coping with adversity may be more difficult in those with less sophisticated brain processing.

Keywords: Morality; Ethics; Religion; Altruism; Evolution; Sentience; Welfare

1. Concepts and attitudes

Morality is not an obscure topic which is difficult to comprehend. *Something is moral if it pertains to right rather than wrong* (Broom, 2003). Every person has ideas about what is right and some actions are considered to be right by a very high proportion of people. People take account of morality in their actions and most discuss moral issues with others. *Ethics is the study of moral issues*. Is morality an issue related to biology and are there links between the functioning of humans and non-humans in relation to decisions about which actions to carry out because they are moral and which to avoid because they are not?

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There are many ideas which biologists would take as axiomatic but which other people do not necessarily accept. The arguments presented by biologists can lead to conclusions which are initially regarded as surprising by some members of the general public but which may well come to be more widely accepted as time goes on. One example of such a biologically based statement, which seems entirely normal to all biologically trained people but which is not part of normal thinking for many people even now, is that humans are animals. Another is that the organ involved in decision-making in humans and other animals is their brain and that the heart is not involved in decision-making. These and many other biological facts are relevant to the discussions about the biological basis of morality which are presented here.

The topic of morality is one which some people would not accept as suitable for discussion, from a biological or other perspective, because it is thought of as sacred or God-given. The influential philosopher Moore (1903) went so far as to state that: ''It is illegitimate to argue from the facts of nature to human values''. Even a biologist might regard morality as in some way outside biology. In the midst of a strong argument about the importance of evolution by natural selection in social life, Dawkins (1976) said: ''We, alone on earth, can rebel against the tyranny of the selfish replicators''. Somewhat similar views are stated by Alexander (1979) and Williams (1988).

The idea of the ''selfish gene'' proposed by Richard Dawkins was embedded in a very illuminating and influential book which promoted the understanding of genetic and behavioural mechanisms. However, the term itself is misleading. *Selfish describes an individual acting in a way which increases its fitness at the expense of the fitness of one or more other individuals whilst being aware of the likely affects on itself and on the harmed individual or individuals* (Broom, 2003). The word selfish is thus limited to individuals and it could not describe a gene. If there is no awareness, it is not selfishness. As Midgley (1994) points out, a word which is widely used with one set of connotations cannot be transferred to another set without causing the reader or hearer to misunderstand either the breadth of its implications or the concept itself. One consequence of Dawkins' usage of ''selfish gene'' is that people will argue that we are not responsible for the effects of our genes, genes are often selfish, and hence there is nothing wrong with being selfish. It would be better to produce another term to refer to genes that promote the fitness of the bearer, i.e. the actions benefit the subject, at the expense of others that are harmed by the action. The terms ''harmful subject-benefit'' (Broom, 2003), or ''subject-benefit at the expense of others'', are more accurate if more cumbersome.

The desirability of considering the biological basis for morality has been expounded by many authors, for example, Kropotkin (1902), Kummer (1978), de Waal (1996) and Ridley (1996). Wilson (1975) said: ''the time has come for ethics to be removed temporarily from the hands of philosophers and biologicized''. The idea that consideration of the biological basis of morality is at odds with the concept of humans being able to take important ethical decisions, was criticised by Midgley (1978): ''The notion that we 'have a nature', far from threatening the concept of freedom, is absolutely essential to it. If we were genuinely plastic and indeterminate at birth, there is no reason why society should not stamp us into any shape which might suit it''.

In order to explain the basis for morality we often refer to altruism. An *altruistic* act by an individual is one which involves some cost to that individual in terms of reduced fitness but increases the fitness of one or more other individuals. Trivers (1985) said: ''There can hardly be any doubt that reciprocal altruism has been an important force in human evolution''. *Reciprocal altruism* occurs when an altruistic act by A directed towards B is followed by some equivalent act by B directed towards A or by an act directed towards A whose occurrence is made more likely by the presence or behaviour of B.