

How we got a head start on our animal natures

# How we got a head start on our animal natures, - Our selfish genes made brains that turned the tables on them--The Sunday Times Dec 29, 1996

Do we need God to be good? The question means two very different things. First, does religion provide an explanation for why we are good (to the extent that we are)? Second, do we need the inducements and threats, the carrots and sticks, the heavens and hells, that God can offer, in order to persuade us to be good? A similar ambiguity arises about science. Can science explain why we have impulses to be good? And can it advise us what is a good thing to do?

If you must use Darwinism as a morality play, treat it as an awful warning. For this reason I have sometimes jokingly put myself in the vanguard of a passionate anti-Darwinism movement. Nature really is red in tooth and claw. The weakest really do go to the wall, and natural selection really does favour selfish genes. The racing elegance of cheetahs and gazelles is bought at huge cost in blood and suffering of generations of ancestors on both sides. The end product of natural selection, life in all its forms, is beautiful and rich. But the process is vicious, brutal and short-sighted.

As an academic fact we know that we are Darwinian creatures, our forms and our brains carved into shape by natural selection, that indifferent, blind old sculptor. But this doesn't mean we have to like it. On the contrary, a Darwinian society is not a society in which any friend of mine would wish to live. Darwinian is not a bad definition of precisely the sort of politics I would run a hundred miles not to be governed by, a sort of over-the-top Thatcherism gone native. I should be allowed a personal word here, because I am tired of being identified with a bleak politics of ruthless competitiveness. I still reel at the memory of an article titled "The Thatcher view of human nature" in the New Scientist in May 1979, which all but accused "selfish genery" of responsibility for the Iron Lady's recent election! Similar accusations recur to the present day.

Simplistic (for once the word is appropriate) analysts see only a continuum being hard and soft, nasty and nice, selfish and altruistic. Each of us, on this view, sits at some point along the spectrum. Perhaps there is a linear spectrum in politics, in which case I think I am at the soft end. Scientifically, I suppose I seem ultra-hard, but actually Darwinian theories should not be classified along a hard/soft spectrum at all. Instead, they disagree about where, in the hierarchy of life, natural selection acts.

Does it choose among individuals (Darwin's view), groups or species (the view of many of Darwin's lesser successors), or among units at some other level? I am associated with the view that natural selection chooses among alternative genes. But this does not, as we shall see, cash out as a necessarily hard or soft position.

Baroness Thatcher is, of course, tame compared with the Social Darwinists and other enthusiasts of the early 20th century. Listen to H G Wells's utopian vision (and he was supposed to be socialist) of *The New Republic*: "The theory of natural selection . . . has destroyed, quietly but entirely, the belief in human equality which is implicit in all the 'liberalising' movements of the world . . . It has become apparent that the whole masses of human population are, as a whole, inferior in their claim upon the future."

It is stuff like this (and there's lots more from Wells's contemporaries) that tempts one to lead a crusade against Darwinism. But it is better not to use the facts of nature to derive our politics or our morality one way or the other. I prefer to side with the philosopher David Hume: moral directives cannot be derived from descriptive premises or, put colloquially, "You can't get an 'ought' from an 'is'." Where, then, on the evolutionary view, do our "oughts" come from? Why are you and I so much nicer than our selfish genes ever programmed us to be?

The problem is not as acute as it might naively appear. Genes may be selfish, but this is far from saying that individual organisms must be selfish. A large purpose of the doctrine of the selfish gene is to explain how selfishness at gene level can lead to altruism at the level of the individual organism. But that only covers altruism as a kind of selfishness in disguise: first, altruism towards kin (nepotism); second, boons given in the expectation of reciprocation (you play ball with me and I'll repay you later).

I think that, uniquely in the animal kingdom, we make good use of the priceless gift of foresight. Contrary to popular misunderstandings of it, Darwinian natural selection has no foresight. It couldn't have, for DNA is just a molecule and molecules cannot think. If they could, they would have seen the danger presented by contraception which means we still enjoy sex, even though the original genetic consequence of it has been subverted and nipped it in the bud long ago. But brains are another matter.

Brains, if they are big enough, can run all sorts of hypothetical scenarios through their imaginations and calculate the consequences of alternative courses of action. If I do such-and-such I'll gain in the short term. But if I do so-and-so, although I'll have to wait for my reward, it'll be bigger when it comes. Ordinary evolution by natural selection, although it seems such a powerful force for technical improvement, cannot look ahead in this way.

Our brains were endowed with the facility to set up goals and purposes. Originally, these goals would have been strictly in the service of gene survival: the goal of killing a buffalo, finding a new waterhole, kindling a fire, and so on. Still in the interest of gene survival, it was an advantage to make these goals as flexible as possible. New brain machinery, capable of deploying a hierarchy of reprogrammable subgoals within goals, started to evolve. Skin an animal to roof a shelter to keep wood dry so that, in the future, you will be able to light a fire to scare away the terrible sabretooth.

Imaginative forethought of this kind was originally useful but (in the genes' eye view) it got out of hand. Brains as big as ours can actively rebel against the dictates of the naturally selected genes that built them. Using language, that other unique gift of the big human brain, we can conspire together and devise political institutions, systems of law and justice, taxation, policing, public welfare, charity, care for the elderly and disadvantaged. Such ideals and institutions are too forward-looking for natural selection to achieve, unaided. Natural selection can give rise to them, at second remove, by making brains that grow big. From the point of view of the selfish genes, our brains got out of hand and that is our saving grace.

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