

## 02 Charles Darwin and Evolution

Market liberalism has dominated much of economics since the beginning of the nineteenth century, and is based upon the belief that the well-being of humanity depends upon allowing self-interested individuals to pursue their own gain in free markets.

In the previous talk I examined the views on human nature of the Buddha from the axial age, and of Adam Smith from the time of the emergence of capitalism, to see how they related to the ideas of market liberalism.

I showed how the Buddha, whilst recognising that humans have the potential to be selfish, also saw that they equally have the potential to be selfless. For the Buddha the future of humanity depended upon the cultivation at the level of the individual and at all levels of society of ethical behaviour guided by empathy and compassion.

And I showed how Adam Smith, despite being an advocate of the operation of self-interest in economic markets, also eloquently extolled the value of empathy and compassion amongst human beings. I suggested that his defence of empathy and compassion in his “Theory of Moral Sentiments” sits in an unresolved tension with his emphasis on self interest in “The Wealth of Nations”.

In this talk I am going to focus on Charles Darwin and his theory of evolution. How do his ideas compare to those of the Buddha and Adam Smith? More generally, what light can evolution throw on human nature and economics?

Darwin expounded his theory of evolution in his book *Origin of the Species*, published in 1859. He transformed how we view the place of humanity in the world.

Darwin’s theory of evolution is strongly associated in people’s minds with the phrase ‘survival of the fittest’.

But Darwin did not use the term ‘survival of the fittest’ until the fifth edition of his book ‘On the Origin of Species’. Before that he used the term ‘natural selection’.

Darwin borrowed the phrase ‘survival of the fittest’ from a man called Herbert Spencer. Because Spencer was a strong advocate of market liberalism, Darwin may have inadvertently encouraged a narrow interpretation of his theory by economists and others.

The word ‘fittest’ came to be associated with the strongest, the most selfish, the greediest.

Actually Darwin simply meant that those best fitted, or suited, to their environment would be the ones that survived.

And in reality Darwin also had a broader view of evolution that did not just depend on the selfish individual.

In his book “The Descent of Man” Darwin argued that the human species had succeeded because of characteristics like sharing and compassion.

“Those communities,” he wrote, “which included the greatest number of the most sympathetic members would flourish best, and rear the greatest number of offspring.”

In Darwin’s time (as in Adam Smith’s time) the word ‘sympathetic’ had a meaning close to the modern use of ‘empathic’. So we could read Darwin as saying;

“Those communities which included the greatest number of the most empathic members would flourish best, and rear the greatest number of offspring.”

And more fully, he wrote:

“...although a high standard of morality gives only a slight or no advantage to each individual man and his children over men of the same tribe ... an advancement in the standard of morality will certainly give an immense advantage to one tribe over another. A tribe including many members, who, from possessing a high degree of spirit of patriotism, fidelity, obedience, courage, and sympathy [or empathy] were always ready to aid one another, and to sacrifice themselves for the common good, would be victorious over most other tribes, and this would be natural selection.”

In other words natural selection operates at the level of the individual **and** at the level of the group.

Darwin described two sides to human nature; the selfish individual seeking to out-do others in their group, and the co-operative, empathic individual combining with others for the success of the group.

At the level of natural selection within groups selfishness was favoured, at the level of natural selection between groups empathy and co-operation were favoured.

**The success of the human species depended upon empathy and co-operation overcoming selfishness.**

Not all modern evolutionary biologists are comfortable with Darwin's two level approach to natural selection.

In his book 'The Selfish Gene' Richard Dawkins writes:

“Let us try to teach generosity and altruism, because we are born selfish.”

The core idea behind Dawkins' words, one that lies behind the emphasis on selfishness in economics, is that unselfishness or altruism is somehow less 'natural' than selfishness.

However, others take a different view. Two recent books, one by an evolutionary anthropologist and the other by an economist and a behavioural scientist, seek to show how our distant ancestors' behaviour changed such that group selection for altruism could outweigh individual selection for self-interest.

Evolutionary anthropologist Christopher Boehm argues that our ancestors' survival became a team activity probably around 250,000 years ago when they discovered that driving big animals towards teammates yielded more meat than solo hunting.

But for this approach to survive required more than just a new way of co-operative hunting, it required an acceptable and consistent way of dividing up and distributing the spoils.

From extensive study of modern hunter-gatherers Boehm concludes that rules and practices must have developed to ensure a more egalitarian approach.

In his research Boehm noted that modern hunter-gatherers are particularly watchful for any tendency for individuals to 'free-ride' (take their share of the spoils without fairly contributing to the hunt) or for stronger individuals to claim more than others.

Social rules are developed to ensure that those best at co-operating fare better than those who act selfishly. For example, meat is not distributed by whoever makes the kill, but by another member of the group.

Enforcement of the social rules can be by ridicule, shaming, shunning, and ultimately exile or even execution.

Boehm argues that socially enforced rules create powerful environmental pressures in favour of pre-emptive self-control to avoid social penalties.

In this way the pressure for self-control shaped our moral sense, internalising behavioural rules such that certain behaviours came to feel clearly right or wrong.

Shame and guilt emerged as evolutionary signals of this process.

Our previously fear-based social order changed to one where social selection for collaborative activities became dominant.

Those who had the reputation of being poor co-operators would not be selected for joint ventures, especially for raising new humans.

In this way the human species bred itself for co-operation. Because of the interaction between the development of cultural rules and human breeding, altruistic tendencies were strengthened and became a natural part of our evolutionary inheritance.

Economist Samuel Bowles and behavioural scientist Herbert Gintis also take issue with the conventional assumption in economics that natural selection must produce selfish organisms.

They argue that the empirical evidence from present-day psychology, anthropology, archaeology and game theory contradicts this conventional assumption.

Moreover, like Boehm they provide detailed explanation of how genetic and cultural co-evolution worked to produce a co-operative characteristic in human beings that could outweigh selfishness and greed.

Boehm located the key to this shift in new methods of hunting. However, Bowles and Gintis admit that they at first recoiled from their 'unpleasant and surprising' conclusion that war contributed to the spread of human altruism.

They argue that hostility between groups - attested to by the evidence in the archaeological record for frequent episodes of co-ordinated violence - generated and sustained solidarity and 'strong reciprocity' within groups.

In this way they argue that selfishness is not a necessary outcome of natural selection.

Charles Darwin, and other evolutionary specialists like Christopher Boehm, and Samuel Bowles and Herbert Gintis, side with the Buddha in believing that humans have the natural inherited potential for both selfishness and selflessness, and oppose the market liberals who believe that humans are selfish.

A strong argument can therefore be made that the human species has progressed as far as it has because of co-evolutionary processes of natural and cultural selection, such that altruistic or co-operative tendencies operating at the level of group selection have won out over the selfish tendency operating at the level of individual selection.

However, there is no guarantee that this must continue to be so.

The world described by Darwin, Boehm, and Bowles and Gintis of between group competition, meant that selfish individuals seeking to take power for themselves would be stopped by various social pressures within the group.

But in the last few thousand years the world has changed with the emergence of increasingly large societies of unrelated individuals who are unknown to each other. Such societies can be held together not only by an inherited disposition to co-operation, but also by social institutions run by individuals who have the power to control the behaviour of the many by force.

History has changed such that, as one commentator has put it:

“The self-seekers could now dominate their fellows by force or the threat of force, provided they could appropriate the resources with which to reward their chosen friends, punish their chosen enemies, and organise and direct for their own self-regarding purposes the labour of fellow members of their society with whom they stood in the novel relationship of rulers to ruled.”

The Buddha lived two and a half thousand years ago. Like other radicals of the axial age he lived at a time of social and political change, of war, and of uncertainty and suffering. He was very aware that self-seekers could now dominate people by force.

He well understood that there are competing potentials within individual human beings for greed, hatred and delusion and for generosity, kindness and wisdom. Greed, hatred and delusion lead to strife and war. That is why he taught that individuals should cultivate generosity, kindness and wisdom.

The Buddha also understood the importance of government institutions, and of the relationships between the ruler and the ruled, and advocated the ethical exercise of power in society derived from principles based on generosity, kindness and wisdom.

The Buddha sought positive change at the level of the individual and at the level of the group.

And, critically, like other axial age thinkers, he saw the necessity of reaching out with compassion beyond the group to the wider world.

Of course the world we live in is vastly different from, and much more complicated than that of the Buddha. The co-evolutionary processes of natural and cultural selection don't just operate at the level of the individual and the group, but now operate at multi-levels of individuals, groups, states, regional and other blocs, all existing in an increasingly integrated global world.

How can we scale up the co-evolutionary processes of the group to the level of the nation state, and even to that of the world? Our ability to continue to live successfully on this planet will depend on whether we can find the answer to this problem.