



**Dr Johnston Birchall
Memorial Lecture**

'The Origin of Co-operation'

David Rodgers 30 June 2022



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Dr Johnston Birchall Memorial lecture
The Origin of Co-operation
(David Rodgers, 30 June 2022)

It is an honour to be invited to give this annual lecture as a memorial to honour the memory of Dr Johnston Birchall.

I had the pleasure of knowing and working with Johnston over many years during my tenure as chief executive of CDS Co-operatives, while on the board of governors of the Co-operative College and as President of Co-operative Housing International, the specialist global co-operative housing sector organisation within the International Co-operative Alliance.

For my generation of Co-operators, Johnston was the premier academic and historian of the co-operative movement. His influence on the understanding of Co-operatives in the UK and globally was beyond measure.

The list of Johnston's influential publications is vast. Two, in particular, influenced me. The first is his seminal book 'Co-op the people's business' to which I still frequently refer. (Birchall J, 1994 Manchester University Press). It was published in 1994 to mark the 150th anniversary of the founding of the Rochdale Equitable Pioneers Society. Chapter 2 on the philosophy of Co-operation is essential reading for all Co-operators. The second is 'Resilience of the Cooperative Business Model in Times of Crisis' written jointly with Lou Hammond Ketilson and published by the International Labour Organisation. This report documents the strength of the co-operative movement during the global 2008/2009 banking and economic crisis.

Johnston was more than just a Co-operative academic. Ed Mayo tells me that Johnston was also a talented composer and I look forward to listening to his music. As Nick Mathews, Co-operatives UK's former Chair, said in his Co-op News tribute last year to Johnston:

"There is no doubt that the UK movement has lost one of the great co-op advocates with the passing of Professor Johnston Birchall. Everyone who knew him and his work across the global co-operative movement will mourn his loss. Fortunately, he leaves a tremendous body of incredibly valuable work as anyone looking through his dozens of publications will testify."

More than this, Johnston was simply a truly delightful person to be with and work with. He was a dedicated Co-operator with a clear personal commitment to our Co-operative Values and Principles which shone through his academic work. Grief at the death of such a delightful person never goes away. I pay tribute to him and renew our condolences to all his family and friends.

Co-operation is as old as our human species

In the preface to 'Co-op the people's business' Johnson says that: "Co-operation is as old as our human species". In support of this he refers to a series of late 19th and early 20th century essays 'Mutual Aid: a Factor in Evolution' (Kropotkin P, 1902) by the Russian evolutionary biologist Peter Kropotkin who examines the role of mutually beneficial co-operative behaviours in Darwin's theory of 'natural selection' and the Darwinian 'struggle for existence'.

Johnston's reference to evolution in the preface of his seminal history of our movement immediately struck a chord with me. During this Co-operative's Fortnight it is an aspect of Co-ops that merits more detailed analysis and unwrapping. It will help us understand Co-ops and why we are Co-operators.

Citing the enormous impact of the Industrial Revolution Johnston explains that this manufacturing revolution led to old forms of co-operation (with a small 'c') – villages, tribes, clans, extended families and medieval guilds - breaking down and new forms of co-operative developing. Some of these new forms failed – leading to renewed poverty and despair, but some survived and became part of a movement for Co-operation (with a large 'C'), *"Suddenly, people were part of a conscious and deliberate 'Co-operative Movement'; they had learned to be 'co-operators'.* (Birchall J, *ibid* p. viii).

But what makes a man like Johnston, and indeed me, you and a billion other Co-operators around the world, discover and retain a lifelong commitment to Co-operatives and Co-operative Enterprise as a better, more human, way of doing business? What motivates us to be Co-operators? Are our Co-operative Values and Principles an expression of our humanity? Are these values attractive to us and others across the globe because they resonate with our very nature as conscious, cognisant beings? Is it an heritable part of our evolutionary heritage as social primates? I think these are key questions that merit 'unwrapping' during this Co-operative Fortnight.

I should explain that before I became a Co-operator and dedicated forty years of my working life to co-operative housing, I qualified as a biology teacher with a special interest in evolutionary biology.

This lecture takes Johnston's theme '**Co-operation is as old as our human species**' and explores the evolution of co-operation in our species, Homo sapiens, in six sections:

1. Understanding Darwin's theory of natural selection.
2. The attacks on Darwin's theory.
3. Mutual Aid as a factor in evolution and the inheritance of instinct.
4. The misinterpretation and misapplication of Darwin's theory to society and economics.
5. The origins of Co-operation and virtue.
6. What an understanding of this means in practice for Co-operators

This gives me a lot of ground to cover in the hour so I will crack on!

1. Understanding Darwin's theory of natural selection.

Charles Darwin is my greatest scientific hero. Only Einstein and Galileo come close in my pantheon of scientific greats. I have a copy of the first edition of Darwin's 'On the Origin of Species' which I re-read at least once a year.

I also endeavour to keep up to date with developments in palaeontology, evolutionary biology and genetics. I particularly like the books and essays of the late American evolutionary biologist and palaeontologist Stephen Jay Gould that have advanced my understanding of the nature of biological evolution and the place of our species within it.

In early 19th century Victorian England the orthodox view of natural history and the origin of species was creationist, all species were uniquely created by God. Some natural historians considered the possibility of species with common characteristics being related by descent, but ideas about species evolving from a common ancestor were considered heretical. Darwin's genius was his patient observation, diligent experimentation, meticulous research and deductive insights that led, over many years, to the formulation of his theory on the origin of species.

Darwin's theory of evolution – or to give it its proper description 'natural selection' - was revolutionary and ushered in a new epoch of scientific understanding. It changed fundamentally our understanding of life earth on and our place within the natural world. According to Darwin, natural selection leads to the emergence of new species through a process he called "descent with modification". It is descent with modification that is the source of the adaptive variations that create an advantage in the struggle for existence and reproductive success within what Darwin describes as "the economy of nature". (The Origin, 312)

There is no better way of summarising Darwin's theory than his last sentence in 'The Origin':

"There is Grandeur in this view of life, with its several powers, having been originally breathed into a few forms or into one; and that, whilst this planet has gone cycling on according to the fixed laws of gravity, from so simple a beginning endless forms most beautiful and most wonderful have been and are being evolved". (Darwin, The Origin, p. 369)

Darwin, a man of his time

After returning from his near five year voyage on HMS Beagle, during which he began to formulate his theory of natural selection, Darwin married Emma Wedgwood, his first cousin. With wealth inherited from his father and Emma's famous Wedgwood pottery family, Darwin settled into life as a country gentleman at Downe, in Kent, and devoted himself to a wide ranging study of natural history. He had a particular interest in studying the breeding of varieties in domestic animals, particularly pigeons, that enabled him to develop and consolidate his theory of natural selection that began to take shape during his voyage on HMS Beagle.

As a wealthy country gentleman, Darwin was a man of his time, subject to the political, social, and economic views and influences of Victorian England.

There were two conflicting views of the causes of poverty among the working classes in the late 18th and early 19th centuries. The first was promulgated by the cleric and economist Thomas Malthus, the second by the French philosopher Jean-Jacques Rousseau. This was a debate between 'reactionary' and 'radical socialist' thought. Malthus's reactionary work, 'Essays in the Principles of Population' created an economics of scarcity and austerity that served to promote inequality and the defence of the landed gentry (Horner, J, 1977 p. 595-607). The radical view came from Rousseau, who saw people in the state of nature as essentially good until corrupted by the unnaturalness of civilization. Rousseau's views fuelled the French Revolution, leading to the landed class in England to fear a dual threat: an armed and an ideological one. Malthus provided the countering doctrine in defence of the status quo. Malthus saw little hope that the human race could overcome its natural tendency towards vice and the limits of nature. For Malthus, natural laws rule out equality, as some individuals are inevitably condemned to misery. According to Malthus, these "unhappy" souls have "drawn a blank" in the "great lottery of life" and in no way does justice require that they receive an "equal share in the produce of the earth" (Horner, J, ibid p. 597)

Malthus's view was that the population would always increase more rapidly than food supply, which could only increase in a straight-line arithmetic rate. This meant that large numbers of people would always suffer from starvation and poverty. This pernicious view of human nature and the impossibility of society meeting the needs of all citizens was influential in the establishment of the Poor Laws and in resisting the abolition of the Corn Laws that imposed tariffs on the import of grain to maintain the price of bread for the benefit of landowners at the expense of the poor. Malthus's views also helped fuel the abolition of parish outdoor poor relief and the establishment of harsh workhouses for the poor.

Malthus influenced Darwin. In his autobiography Darwin wrote:

"In October 1838, that is, fifteen months after I had begun my systematic enquiry, I happened to read for amusement 'Malthus on Population,' and being well prepared to appreciate the struggle for existence which everywhere goes on from long-continued observation of the habits of animals and plants, it at once struck me that under these circumstances favourable variations would tend to be preserved, and unfavourable ones to be destroyed. The result of this would be the formation of new species. Here then I had at last got a theory by which to work; but I was so anxious to avoid prejudice, that I determined not for some time to write even the briefest sketch of it." (Darwin C. 'Autobiography', 1958, p. 120)

At Downe, Darwin continued his studies and experiments to refine his theory of natural selection. Realising that its radical nature risked undermining the certainties of the Victorian scientific, political and religious establishment Darwin hesitated for over 20 years before he published his theory. He was finally prompted to publish when another biologist, Alfred Russell Wallace, wrote to Darwin setting out his similar view of natural selection as the

origin of new species. Wallace asked Darwin if he considered it appropriate to send a copy of his letter to the eminent geologist, Charles Lyell, who was a friend of Darwin. With advice from Lyell, Darwin was persuaded to allow a joint presentation of his theory with Wallace's, but with Darwin rightly claiming pre-eminence as first having articulated it in private writings. So it was that on 1st July 1, 1858, at the Linnean Society of London, a summary of the theory of natural selection was presented. Darwin's 'The Origin' explaining the theory in greater detail was published a year later in 1859.

Darwin's theory turned the Victorian world and its sense of the place of our species, Homo sapiens, within it upside down. It challenged the very nature of humanity, Darwin stating cautiously that "*Light will be thrown on the origin of man and his history*". According to Darwin's theory, our species is the product of adaptive change over millions of years of descent with modification from a common ancestor of all creatures, not the unique creation made in the image of a benign deity that gave mankind dominion over the Earth and all creation.

Resisting the use of the term 'evolution'

You will note that I have resisted using the term "evolution" to describe Darwin's theory. That is because in his first edition of 'The Origin' Darwin did not use it. The closest he came was on the last page in which he concludes his theory with his famous last sentence, quoted above, in which he used the past tense "have evolved". There is a sound scientific reason for this. "Evolution" implies that 'natural selection' has an in-built driver to greater complexity of life and the 'evolution' of higher beings, with Homo sapiens as the pinnacle of that process. I am persuaded that there is no progressive driver in evolution. Gould notes that:

"evolution entered our language for what Darwin called "descent with modification" because most Victorians equated such biological change with progress - and the word evolution propelled into biology by the advocacy of Herbert Spencer, meant progress, (literally unfolding) in the English Vernacular.... After long reflection, I cannot avoid the conviction that no innate tendency to progressive development exists.... Humans are here by luck of the draw, not by the inevitability of life's direction or evolution's mechanism" (Gould, S. 'Life's Grandeur' 1996, p 137 and 175).

As Gould explains, life on earth began at a unicellular left wall of simplicity: the only space open to natural selection and descent with modification is towards the right wall of a standard distribution curve - from minimal to greater complexity. We are towards the long right tail of that distribution curve. If the history of life on earth were to repeat itself, there could be no guarantee that complex intelligent life would evolve. The modal form of life of earth for the last 3.5 billion years is, was and forever shall be, bacterial.

We also delude ourselves if we think we are the top branch of the evolutionary tree of life on Earth. Even within our mammalian order of primates we were not the latest to evolve. Gorillas branched off the mammalian primate evolutionary branch first, then Homo species - including us, and finally, later in the evolutionary timescale, chimpanzees.

2. Attacks on and defence of Darwin's theory of natural selection

Darwin's theory of 'natural selection' shocked the Victorian world. Many from the Church and the scientific establishment railed against this new view of humanity's place within nature. It undermined the certainty that God had placed white European males at the pinnacle of his creation. The idea that men and women of all races were descended from apes rather than uniquely God's special creation challenged Victorian society's fundamental view of human nature, its social norms and the social hierarchy and inequality inherent within it.

The attacks on Darwin and his theory from all quarters of the religious, political and scientific establishment were vociferous. With Darwin suffering repeated bouts of ill health, possibly from a parasitic infection acquired while onboard *The Beagle*, and living in semi-seclusion at Downe, it was others who publicly sprang to the defence of his theory. Prominent among these were the writer and Victorian philosopher, Herbert Spencer, and the combative biologist and friend of Darwin's, Thomas Henry Huxley, often described as Darwin's bulldog.

It was Herbert Spencer who coined the phrase '**survival of the fittest**' to describe' natural selection. Darwin only used 'survival of the fittest' in later editions of 'The Origin' at Wallace's suggestion to avoid readers thinking that the phrase "natural selection" personified nature as "selecting". It was first used by Darwin in chapter 4 of the 5th edition of 'The Origin' published ten years later in 1869.

Darwin's phrase "Struggle for Existence" was more nuanced. Darwin states quite clearly that:

*"I should premise that I use the term 'Struggle for Existence' in a large and metaphorical sense, **including dependence of one being on another**, - (bold, my emphasis) - and including (which is more important) not only the life of the individual, but success in leaving progeny."* (The Origin, ibid p.50)

3. Mutual aid, a factor in evolution and the inheritance of instinct.

I now turn to mutual aid as a factor in evolution and the inheritance of instinct.

It is clear from Darwin's more nuanced description of the struggle for existence, that included the phrase '**including the dependence of one being upon another**', that Darwin recognised that competition was not the only factor active in 'natural selection'. There are, in fact, many examples of mutually beneficial adaptive behaviours in the economy of nature. Darwin gives the classic example of the mutually beneficial farming of aphids by ants ('The Origin', p. 162). Anyone who grows runner beans or broad beans will know that when ants are seen climbing up the bean stem it is time to act against an aphid attack that will inevitably come. This is because the ants will be farming the aphids. The aphids benefit from the protection of the ants, who hold their eggs in their nests over winter and the ants benefit by stimulating the aphids to excrete sugary sap that feeds the ants.

As Johnston Birchall explains in his preface to 'Co-op the people's business', it was the radical Russian anarchist and former Prince, Peter Kropotkin, who challenged the exclusive dominance of competition in the process of natural selection. In his collection of essays published in 1902, 'Mutual Aid: a Factor in Evolution', Kropotkin gives numerous examples of mutual aid among animals (Kropotkin, *ibid*, chapters 1 and 2 pp 9 – 48). Kropotkin also documents the social lives of animals and how sociability leads to mutual aid benefits (Kropotkin, *ibid* p. 35). He also explains how weather, habitat loss through climate change and contagious diseases interact with natural selection, "*all tending to reduce the importance given to competition*" (Kropotkin, *ibid*, p. 47).

Kropotkin concludes that:

"the war of each against all is not the law of nature. Mutual aid is as much a law of nature as mutual struggle ..."

Since Darwin and Kropotkin's time our understanding that symbiotic and mutually beneficial behaviours are a factor in natural selection has grown. An integral part of our human nature, essential for our life and health, is the mutually beneficial action of bacteria in our gut that helps us digest food that feeds what we call our 'gut flora'. One of my favourite examples of mutual aid is the relationship of the Greater Honeyguide, an African bird that for millennia has led human hunter gatherers to wild bee nests, giving hunters access to energy rich honey and enabling the bird to eat the protein rich bee larvae, pupae and wax.

Present day evolutionary biologists understand that within and between species both competition and mutually beneficial behaviours play a part in the economy of nature. We know for example, that fungi and trees in what is described as the "Wood wide web" benefit each other; the fungi by breaking down and enabling the trees to access essential nutrients in the soil, sharing in return sugar rich sap from the tree. The fungal web also enables trees to share resources by making mycelial connections between them, particularly between mother trees and their younger offspring. (Sheldrake 2020 and Simmard 2021).

There is also little evidence that direct competition between individuals, populations and species has been a driving force in large genera such as reptiles, molluscs, and amphibians. These have flourished by adaptations that enable them to live in a wide range of habitats and have survived and thrived by finding what Stephen Jay Gould describes as "*their niche on the log of life*".

Also, it is wrong, as is so often done, to apply "survival of the fittest" to individuals within a species. Natural selection works at the species level not the level of the individual. It is through descent with modification of species through successive generations that beneficial adaptations and reproductive success operates.

This understanding of mutually beneficial behaviours leads modern evolutionary biologists to avoid the phrase "*survival of the fittest*" because competition is not the only factor in evolution and it distorts Darwin's great insight. In an article entitled "Kropotkin was no crackpot", Stephen Jay Gould admired Kropotkin's observations, noting that co-operation, if

it increases individual survival, is not ruled out by natural selection, and is in fact encouraged. (Gould, S. J. *Natural History*, USA, No. 106. pp. 12–21).

The inheritance of instinct and mutually beneficial behaviours.

The inheritance of instinct and its role in mutually beneficial behaviours is fascinating. It too is relevant to the subject of this lecture, the evolution of Co-operation.

In 'The Origin', Darwin devotes a whole chapter to the inheritance of instinct (The Origin, chapter VII, pp. 159-186). Darwin shows that instincts too, like the adaptation of physical characteristics, are heritable and subject to the processes of natural selection and adaptive variation. He clearly describes instincts that are inherited rather than learned behaviours giving, as his principal example, "*the most wonderful of all known instincts, that of the hive-bee*" that builds the most efficient hexagonal shaped wax cells in which to store honey (The Origin, p 280). He also explains how some instincts can be lost under domestication, for example domestic chickens that do not sit to incubate their eggs being a prime example.

Are mutually beneficial behaviours instincts that are inherited like the instincts that lead bees to build honeycombs and birds to build their nests in a particular size and shape? Are they, as we would say today, written in the genes of species – rather than learned behaviours? These are key question for us as Co-operators.

Darwin says that "*The instinct of each species is good for itself, but has never, as far as we can judge, been produced for the exclusive good of others.*" ('The Origin', pp. 161/162). This may be true about mutual behaviours between different species, but there are certainly examples of altruistic behaviours that operate for the benefit of others within species and aid the survival of the species and reproductive success. A prime example is the sharing of blood meals by vampire bats when they come home to roost and find other members of their colony have not succeeded in feeding. (Wilkinson, 1988). This is a particularly interesting example because a bat will only share a blood meal with another in their colony who reciprocates and shares with them: a genuine co-operative form of behaviour.

4. The misinterpretation and misapplication of Darwin's theory of natural selection to society and economics.

I now turn to the two most egregious examples of the misinterpretation and misapplication of Darwin's theory of natural selection, both of which led to and continue to be the sources of the great economic and social injustices that plague us today: **Social Darwinism** and **Biological Determinism**.

Social Darwinism is the theory that individuals, groups and peoples are subject to the same laws of natural selection as species. It has deep roots in English philosophy that goes back to the Restoration philosopher Thomas Hobbes who believed that people were basically greedy and selfish and that human nature was fundamentally corrupt, engaged in '*war of all against all*'. It was also influenced by the writing of Thomas Malthus and advocated by Herbert Spencer, aided by Thomas Henry Huxley – Darwin's Bulldog - and used to justify political conservatism, capitalist economic practices, imperialism and racism and to

discourage political reform. Later in the 19th century these extreme Spencerian views came to be known as 'Social Darwinism'.ⁱ

Spencer's extreme Malthusian views pre-date Darwin. He clearly saw Darwin's theory of natural selection as a theory he could co-opt to support his 'Theory of Population deduced from the General Law of Animal Fertility' published in The Westminster Review in 1851 (Spencer, H, Westminster Review, no. 2, 1851).ⁱⁱ

In 'Social Statistics', Spencer's 1851 treatise on social and political theory, he showed a callous indifference towards the poor and weak, describing the poor and weak as suffering from fatal non-adaption, saying that: "*If they are sufficiently complete to live, they do live, and it is well that they should live. If they are not sufficiently complete to live, they die, and it is best they should die*". (Spencer H,' Social Statistics', 1851)ⁱⁱⁱ

Spencer used Darwin to support his extreme social and Malthusian economic views. Hence, 'natural selection' and 'descent with modification', became '**survival of the fittest**' and the concept of competition began ruthlessly to be applied by Spencer, Thomas Henry Huxley and others to human society and economic policy rather than just to the origin of species, Darwin's original thesis. Spencer opposed taxation for any form of government intervention to alleviate the conditions of the poor, even opposing the construction of sewers to protect public health. Spencer was willing to permit the genetically weak and undeserving poor to live and die in abject poverty. This was a severe distortion and misapplication of Darwin's theory.

Darwin did not wholly oppose Spencer's views. In the 'Descent of Man' Darwin's thesis is decidedly Malthusian, though unlike Malthus, Spencer and Huxley, Darwin's view was tinged with humanitarianism and empathy. For Darwin, the '*noblest part*' of human nature dictates sympathy for the '*inferior members of society*'. The bad effects of the weak surviving and propagating their kind '*are to be borne without complaining*'. (Darwin, C. 'Descent of Man' quoted by Desmond and Moore, *ibid* p. 580).^{iv}

Jeff Wallace in his introduction to the 1998 reprinted first edition of 'The Origin' (The Origin, pp. xvi-xvii) explores the trend of Darwin's theory being applied to society. In particular, he decries reading Darwin as if the text of 'The Origin' embraces the rise of free-market neo-liberalism and capitalist economic relations as more 'natural' than others. Wallace questions the legitimacy of drawing with ease parallels between the natural and human world and questions the trend from the 19th century to today of mapping Darwin's theories onto human behaviour whether individual or social behaviours. Wallace concludes that:

"it seems undeniable that the tropes of new right managerialism – the streamlining and rationalising, in order to create leaner and fitter organisations capable of competing in a ruthless business world in which the strongest survive and the weakest go to the wall – have taken their colouring from natural selection which 'will always succeed in the long run in reducing and saving every part of the organisation, as soon as it is superfluous' (Wallace J, Origin xvii, quoting Darwin, 'The Origin' p. 115).

There is a direct link via a chain of political and social policy thinking between Spencer's extreme views and modern neo-liberal capitalist thinkers like Friedrich A. Hayek. Hayek promoted laissez faire capitalism and a libertarian economic system, in which individuals are able to pursue their self-interest with a minimum of direction from above; a philosophy so beloved by Regan, Thatcher and current right wing politicians

Daily we see the social injustice, poverty and distress which my late friend and MP, Tessa Jowell, described as 'cowboy capitalism' creates :

- the growth of low wage work, in-work poverty and dependence on inadequate state welfare provision,
- the weakening of employment rights and the growth of the gig economy and zero hour contracts,
- wages decreasing in real terms whilst executive pay soars,
- the greater share of economic activity going to capital rather than labour, ^v
- housing and other assets inflating in value beyond the reach of middle income households, with people in full time work dependent on housing benefit, - which in reality is a subsidy to landlords, not tenants,
- increasing dependence on food banks with NHS nurses forced to use them,
- selfishness, lies and cronyism eating away at the heart of our democracies funded by the rich and powerful and dirty money,
- increases in health inequalities and child poverty, and
- outsourcing of costs for the sake of profit damaging the environment and exacerbating climate change, the classic examples being CO2 emissions, plastic pollution and water companies discharging raw sewage into our rivers and seas.

To understand fully these adverse economic outcomes of neo-liberal laissez faire capitalism, I recommend reading 'The Price of Inequality: how today's divided society endangers our future' by Joseph E Stiglitz, the Nobel Prize winning economist and former chief economist at the World Bank. The extent of inequality in the UK has also been highlighted in the report 'Income Outcomes' published this week by The Resolution Foundation.

The second misuse of Darwin, The Hereditarian Theory of Human Intelligence.

The second egregious misuse of Darwin is the deterministic **Hereditarian theory of Human Intelligence**. This is the theory that intelligence is a defined and measurable reified 'thing' that is determined through biological inheritance, with some races and the poor in society being genetically less intelligent. They are therefore condemned to maintain a lower status and fewer rights in society and a lesser share in the benefits of economic activity. This, in combination with Social Darwinism, is the origin of the persistent concept of the 'undeserving poor' that drives right wing political thinking on low taxes, the "small state" and cuts to education, social welfare and the acceptability of income and wealth inequality that dominates neo-liberal capitalist economics today. It was also the pernicious misapplication of Darwin that led to the development of eugenicist population theories and, ultimately, to racism and the holocaust.

To understand how persistent, pernicious and dangerous this ignorant and racist hereditarian theory of intelligence is, please search You Tube for the video of Boris

Johnson's 2013 speech while he was Mayor of London in which he uses this unscientific and discredited theory to justify inequalities in Society as essential. ([Boris Johnson on why inequality is essential - YouTube](#))^{vi}

There is no better critique of this pernicious racist anti-egalitarian theory than Stephen Jay Gould's majestic exposé of its biological and evolutionary flaws in 'The Mismeasure of Man' (Gould, W W Norton and Company, New York 1996).

It is impossible to do justice to Gould's exposé in this lecture, but I also highly commend his seminal book on this subject to you. It is important to us as Co-operators because he explains why there is no justification in seeing intelligence as an heritable 'thing' – a fixed attribute of every person that can be objectively measured, - and which is not influenced by environment, education, poverty or social disadvantage. Gould shows conclusively that all humanity shares a common evolutionary heritage and that every person should be treated equally and without discrimination. His analysis resonates with our First Co-operative non-discriminatory principle.

Professor Steve Jones gives a fair summary of these hereditarian issues in 'The Language of the Genes' when he says that:

"Although genetics is all about inheritance, inheritance is certainly not all about genetics. Nearly all inherited characteristics more complicated than a single change in the DNA involve gene and environment acting together. It is impossible to sort them into convenient compartments. An attribute such as intelligence is often seen as a cake which can be sliced into so much 'gene' and so much 'environment'. In fact, the two are so closely blended that trying to separate them is more like trying to unbake the cake. Failure to understand this simple biological fact leads to confusion and worse". (Jones S, 'Language of the Genes, Flamingo/Harper Collins, 1993, p 226/7).

5. The Origin of Co-operation and Virtue

I now turn to the origin of co-operation and virtue.

Studying and understanding Darwin's wider metaphorical meaning in his theory of 'natural selection' and 'descent with modification' shows that our social species owes part of its success in the struggle for existence to our ability to work for common goals that are mutually beneficial. It provides clear evidence that the ability to recognise the needs of others and respond to them empathetically is a basic inherited human instinct. If a person has an accident or needs help, for example a mother with a child in a pushchair facing a flight of steps, the most common response is for strangers immediately to offer assistance. A minority don't of course, for a variety of reasons, some understandable and others for selfish reasons, but that does not detract from our common instinctive empathetic response.

One of my favourite places where the nature of this instinct to help others is clearly shown is at the Postman's Park, a small park opposite the Museum of London by the Barbican in the City of London. In the middle of this small green space is a wall protected from the weather by a tiled roof with an open colonnade. On the wall are dozens of individually made

ceramic tiles commemorating Londoners who gave their lives saving or attempting to save others. Even a dog is commemorated. It is a poignant reminder of our empathetic instincts. Kropotkin too extols courageous virtue, citing RNLI volunteer lifeboat crews who risk death to save others and miners in the Rhonda Valley risking life and limb to save trapped comrades (Kropotkin, *ibid*, p. 148)

In the prologue to 'The Origins of Virtue' (Ridley M, 1996, Viking) science writer, journalist and now an hereditary Conservative Peer, Matt Ridley, says that:

"Society was not invented by reasoning men. It evolved as part of our nature. It is as much a product of our genes as our bodies are. To understand it we must look inside our brains at the instincts for creating and exploiting social bonds that are there. We must also look at other animals to see how the essentially competitive business of evolution can sometimes give rise to co-operative instincts". (Ridley, *ibid* p 9).^{vii}

Ridley analyses the biological and anthropological origins of human ethical behaviour. Ridley points out that in the 'Selfish Gene' (Dawkins R, 1976, online PDF, pp 182-196) Richard Dawkins uses the prisoner's dilemma to show how while individual cheats may prosper, on the whole trustors do better than cheats and are therefore more likely to pass on their genes to the next generation. Ridley extends Dawkins analysis to demonstrate how through game theory, played on computers, mathematicians have shown that co-operative strategies produce greater benefits for the participants than selfish ones, providing the game was played more than once and defection from co-operation is punished.

Ridley explains that the most effective game theory strategy to be devised is one called firm but fair, a programme written by Marcus Frean of Cambridge University. Firm but fair co-operates with co-operators, is forgiving by returning to co-operation after defection by an opponent (rather than indulging in repeated recrimination), destroys free-riders (the hedonists who look only to their own self-interest at the expense of others) and punishes suckers who do not retaliate when a defection from co-operation occurs.

Given that human relationships mostly involve frequent and repeated interactions, co-operative strategies lead to the greatest benefits for all. The more casual and opportunistic encounters between individuals the less likely it is that co-operation will occur.

This analysis is supported by the work of others, in particular Robert Axelrod in 'The Evolution of Co-operation' (Axelrod R, Penguin 1990) and the mathematician George Price whose work and tragic short life story is told by in 'The Price of Altruism: George Price and the search for the origin of kindness' (Harman O, Vintage 2011).

Encounters and interactions with others that are beneficial and reciprocal builds trust. Trust is a tradeable commodity: **I trust him, - he trusts you, - so I can trust you**. Trust is the currency of co-operation and the foundation of virtue. By co-operating life becomes more than just a zero-sum game.

The ability to use language is fundamental to our ability to cooperate. It enables us to formulate desired outcomes of our actions, to explain these to others and agree or modify

them in concert, and to adjust behaviour through communication during mutual endeavours. When communication breaks down the first casualty is co-operation. The inability to communicate effectively with others goes hand in hand with an inability to cooperate.

Our evolutionary past is not a Hobbesian “war of all against all” or a Spencerian conflict in which the fittest survive and the devil of poverty, disease and distress take the hindmost. Our natural history and place in the economy of nature is much more complex than that. It is a complexity in which our instinct to avoid conflict and seek to co-operate for mutually beneficial outcomes has been and will continue to be a vital part.

To understand this interactive origin of human co-operation is not to fall into the deterministic trap of reifying co-operation as an inherited ‘thing’ that can be assessed and measured. Whilst it is a manifestation of an inherited instinct, that instinct is a complex one that interacts with the physical and social environment in which we all function. But it does tell us that, if we wish to achieve the best outcomes for all our citizens, we should build our institutions, our democracy, and our economy to be co-operative rather than ruthlessly competitive. Our Co-operatives and the Co-operative enterprises we build are exemplars of this.

To understand this does not make us naïve. Nor does it remove or restrain the capacity of some members of our species to work with evil intent for their own selfish ends or some perceived higher political purpose. How we behave in any situation, whether as hedonists, defectors, co-operators or suckers, depends on our education, socialisation, and the choices we make as well as our genes. History is littered with examples of megalomaniacs who usurp and hold onto political and economic power and destroy the lives of others, still emboldened perhaps by Spencerian Social Darwinism. Putin and the unleashing of his immoral, unjust, aggressive and destructive war in Ukraine is but the latest egregious example. As Peter Kropotkin said:

“one single war - we all know - maybe productive of more evil, immediate and subsequent, than hundreds of years of unchecked action of the mutual aid principle may be productive of good”. (Kropotkin, *ibid*, p 158).

It is also worth noting what Stephen Jay Gould says about the development of human society:

“Using the same term – evolution - for both natural and cultural history obfuscates far more than it enlightens. Unfortunately, when we speak of “cultural evolution” we unwittingly imply that this process shares essential similarity with the phenomenon most widely described by the same name --- natural, or Darwinian, change. The obvious main difference between Darwinian evolution and cultural change clearly lies in the enormous capacity that culture holds – and nature lacks -- for explosive rapidity and cumulative directionality. In an unmeasurable blink of a geological eyelash, human cultural change has transformed the surface of our planet as no event of natural evolution could ever accomplish at Darwinian scales of myriad generations.” (Gould, S J, ‘Life’s Grandeur’ pp 219-220)

6. What this understanding means in practice for Co-operators.

I now turn, finally, to what this understanding means in practice for us as Co-operators.

Understanding the science behind the evolution of mutually beneficial behaviours gives us a firm rational foundation for supporting and promoting co-operatives. But how do we do this in practice to realise the development of a Co-operative commonwealth in which economic and social justice builds a better world that creates wealth for the many not the few?

Like Robert Owen, we reject the view of society that considers man to be responsible for his own character and condition in life. Owen's view was the polar opposite. In his autobiography Owen said:

"My own reflections compelled me to come to very different conclusions. My reason taught me that I could not have made one of my own qualities, - that they were forced upon me by Nature; - that my language, religion and habits, were forced upon me by Society; and that I was entirely the child of Nature and Society; - that Nature gave the qualities, and Society directed them". (Owen R. 'The Life of Robert Owen' p. 22)

The Rochdale Pioneers turned Owen's vision in to a practical reality. They and other early Co-operative Pioneers in other countries sought to build a Co-operative Commonwealth. We should follow their example by developing the Co-operative economy in whatever way we can. Support for Co-ops is not some wishful, pious WOKE thinking. It is fundamentally in tune with human nature, with what we are, and what human society should strive to be. I like to think that by supporting Co-operative enterprise we are like worms tunnelling under the foul dung heap of neo-liberal capitalism, turning the economy into the fertile soil for Co-operation. I think this an appropriate simile given that the last book Darwin published before his death in 1881 was his research into the actions of earthworms.

We should also be very practical in our endeavours. We should co-operate (with a small 'c') with all those who are sympathetic to us and support other organisations that strengthen democracy and civil society. We should also support and encourage the development of new forms of Co-operatives, such as housing, energy and care co-operatives. Democratic participation in the life of co-operatives we are members of is vital. So is participation in sectoral, national organisations and the International Co-operative Alliance. By participating we should seek to ensure that our Co-operatives are democratically accountable and comply with our Co-operative Values and Principles. This is particularly important in our larger consumer Co-operatives so that they do not become what Kropotkin criticised as examples of *"joint stock individualism"* (Kropotkin, *ibid* p 145) which they are in danger of becoming if high paid executive control takes precedence over member democracy.

We need also to apply the 5th Co-operative Principle, using our history and heritage to educate our members, the general public, our co-operative leaders and executives, politicians and young people to understand the principles and practice of Co-operation. This requires political engagement to ensure that the specific nature of co-operatives is

recognised in national laws and that international agreements on the promotion and encouragement of co-operatives are enacted.^{viii}

This is a challenging task, but we should recognise that the very survival of our species depends on it.

I hope that I have unwrapped your thinking about the origin of Co-operation and what makes us Co-operators. Johnston Birchall too was a practical Co-operator. In honouring Johnston's memory we recognise that death, too, is an inevitable part of our evolutionary heritage.

But I will leave you with a final quote from Charles Darwin to help us understand why we must rise to this challenge.

In his chapter on the evils of slavery in 'The Voyage of the Beagle' Darwin said:

"If the misery of our poor be caused not by the laws of nature, but by our institutions, great is our sin."

Thank you for listening.

David Rodgers
30 June 2022

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Endnotes

ⁱ For a critique of 'Social Darwinism', which Stephen Jay Gould says ought properly be called 'Social Spencerism' see Gould's essay 'A Tale of Two Work Sites', reprinted in 'The Richness of Life', (Gould S., pp. 540-557). Gould quotes the Encyclopaedia Britannica's definition of 'Social Darwinism', which is worth repeating here:

"Social Darwinism, the theory that persons, groups, and races are subject to the same laws of natural selection as Charles Darwin had perceived in plants and animals in nature The theory was used to support a laissez faire capitalism and political conservatism. Class stratification was justified on the basis of 'natural' inequalities among individuals, for the control of property was said to be a correlate of superior and inherent moral attributes such as industriousness, temperance and frugality.

Attempts to reform society through state intervention or other means would, therefore, interfere with natural processes; unrestricted competition and defence of the status quo were in accord with biological selection. The poor were the 'unfit' and should not be aided; in the struggle for existence, wealth was a sign of success.

ⁱⁱ Interestingly for Co-operators, George Jacob Holyoake, the great historian of the early Co-operative movement who was also a Westminster reviewer and working class sympathiser demurred. For Holyoake, Malthus's Principle of Population was an evil invention (Darwin, p.392 Desmond, A. and Moore J, Penguin 1991).

ⁱⁱⁱ Quoted by Zwinowski, in 'Social Darwinism and Social Justice: Herbert Spencer on Our Duties to the Poor' in 'Distributive Justice Debates in Social and Political Thought: Perspectives on Finding A Fair Share' (Routledge, 2015)

^{iv} As Dr Johnston Birchall explains, Dr William King, the early promoter of co-operatives in Brighton, whose monthly newsletter 'The Co-operator' influenced the Rochdale Pioneers, turned Malthus's doctrine, the source of much of what became Social Darwinism, on its head:

"King sees it as bitterly ironic that as soon as they have made the food, clothing or houses, or beat the enemy they are no farther use – and the state is overpeopled. He neatly reverses Malthus's argument, conceding that:

"It is possible there may be an overpopulation of servants, managing people, head men, stewards, bailiffs, double and triple establishments – but of producers, of working men, there cannot, in the nature of things, be an over-population for ages to come." (Birchall, *ibid*, p 27).

^v For the economic and social impact of the inequality being created by the increase in the share of economic benefits going to capital rather than to Labour and dangers it creates for society and democracy, read the excellent lengthy treatise by Thomas Piketty. 'Capital in the Twenty-First Century', 2013, Belknap/Harvard.

^{vi} See also <https://www.theguardian.com/politics/2013/nov/28/boris-johnson-iq-comments>

^{vii} Matt Ridley was an interesting person. He is an aristocratic Conservative hereditary peer, whose brother was Sir Nicholas Ridley a cabinet member in Margaret Thatcher's government. He is a journalist and writer of popular science books. He is also the former chairman of Northern Rock that had to be bailed out by the taxpayer at the start of the 2008/9 banking crisis. I sent Mr Ridley a copy of the text of 'The Third Estate' (Rodgers D. Co-operative Party 1999) because it quoted him extensively. He kindly responded to say that he agreed with most of my analysis.

^{viii} The International Labour Organisation (ILO) was established in 1919 by the Treaty of Versailles after the horrors of the First World War because it was recognised that *"universal and lasting peace can be established only if it is based on social justice"*. For more information about the ILO and the importance of ILO Recommendation 193, see the International Co-operative Alliance's 'Guidance Notes to the Co-operative Principles', 2015, pp 48-49.