

## All in the Mind

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*The Science Delusion*, **Rupert Sheldrake**, Coronet, 400pp, £19.99  
(hardback)

*The ultimate achievement of reason ... is to recognise that there are an infinity of things that surpass it.*

– Blaise Pascal 1623-62

After reading Richard Dawkins' *The Selfish Gene* I was a convert to Neo-Darwinian genetics. In that best-selling work life is traced to individual genes, each seeking to confer advantage on the 'replicator', which carries the genes, in order to survive through reproduction. 'Successful' genes are passed on, unchanged, to descendents.

Its title alone reveals an analysis that sees human life, and nature more generally, as characterised by competition rather than cooperation. That my actions, thoughts and emotions were reduced to a battle for expression between DNA sequences generated slight despondency; idealism, morality and kindness are simply 'memes': ideas that, like genes, proved durable in evolution.

Intriguingly, *The Selfish Gene* was the favourite book of Jeffrey Skilling, CEO of Enron. He interpreted Neo-Darwinism to mean that selfishness was ultimately good, even for its victims, because it weeded out 'losers' and forced 'survivors' to become strong.

Over time I developed a more nuanced view of the world. An awareness of the limitation of human intelligence (especially my own) and of the historical specificity of any position made me reluctant to accept any one explanation in full.

A powerful scientific voice has emerged to counter the inheritance of Dawkins. Rupert Sheldrake's *The Science Delusion* is an antidote to *The Selfish Gene*. With fascinating insights into the new field of epigenetics he explodes the grim certainty of the Neo-Darwinian analysis.

Sheldrake provides a powerful critique of the present state of scientific research, berating sceptics (including Dawkins) for a dismissive approach to his evidence. He also addresses what he considers the limitations and corruption of Western medicine. Sheldrake's account, if accepted, may radically alter our understanding of nature.

### **Cosmic Resonance**

It is often suggested that physics through mathematics will ultimately yield the organising principles of the universe and all organisms therein. Sheldrake, however, refers to the uncertainty principle in quantum physics, from which it became clear that indeterminism is an essential feature of the physical world. He also refers to the apparent incompatibility of quantum theory with the theory of relativity. He quotes Stephen Hawking and Leonard Modinaw: 'The original hope of physics to produce a single theory explaining the apparent laws of our universe as the unique possible consequences of a few simple assumptions may have to be abandoned.'

Sheldrake poses challenging questions to materialists such as: 'Were all the laws of nature already present at the moment of the Big Bang, like a cosmic Napoleonic Code?' He argues: 'The very idea of a law of nature is anthropocentric', and asserts that 'eternal laws are embedded in the thinking of most scientists'.

His intention is not to dismiss all conventional scientific ideas or cast doubt on every study but instead he insists on their limitations: 'The laws of conservation of matter and energy seem less like ultimate cosmic principles and more like rules of accountancy that work reasonably well for most practical purposes in the realms of terrestrial physics and chemistry, where exotic principles like quintessence and the creation of dark energy can be ignored.'

He contends that we operate in an evolutionary universe in which even the laws of nature are subject to change. He says that the oldest of the

constants, Newton's Universal Gravitational Constant, Big G, 'is also the one that shows the largest variations'.

Sheldrake's 'big idea' is the hypothesis of morphic resonance. He suggests that the habits of nature, organic and inorganic, operate in non-material morphic fields. Ken Wilber defines the concept: *'once a particular form comes into existence, it will have a causal effect on all subsequent, similar forms; and thus the more a particular form has been replicated, the more likely it will be replicated in the future.'* This idea is unsettling to pure materialists as it resurrects pre-Enlightenment ideas such as vitalism which suggests the existence of souls apart from our material bodies.

Sheldrake outlines interesting phenomena that lend weight to his theory. Referring to 'habits of crystallisation', he argues that 'the more a compound crystallises, the easier its crystals should form'. He gives the example of Xylitol which, although believed to be a liquid until 1942, subsequently crystallised at successively higher temperatures. When each new temperature for crystallisation was reached this pattern repeated itself in other laboratories and the old crystals did not show up again. He also refers to Ritonavir, a drug used against AIDS, which baffled its developers by morphing inexplicably from its original form, and has continued in that pattern since.

He cites evidence from 'one of the longest series of experiments in the history of psychology that rats do indeed seem to learn more quickly what other rats have already learned'. He attributes observed improved performances in intelligence quotient (IQ) tests, known as the 'Flynn Effect', to morphic resonance.

We might identify morphic resonance in human history with the independent emergence of agriculture in different continents in close time proximity to one another. Or, more compellingly, the German philosopher Karl Jaspers identified what he called an 'axial age' during which revolutionary ideas such as Platonism, Confucianism and Buddhism emerged simultaneously. On a more basic level, most of us have probably said: 'I was thinking just the same thing.'

The idea of morphic resonance coheres with Karl Jung's notion of a collective unconscious, and even more strikingly with the Taoist idea of Qi

which is seen to define all physical reality. According to Ted J. Kaptchuk, ‘Qi is the thread connecting all being. Qi is the common denominator of all things from mineral to human. Qi allows any phenomenon to maintain its cohesiveness, grow and transform into other forms’. The action of ‘resonance’ is also apparent: ‘The ability for one thing to influence another is called in Chinese *gan ying*, which is usually translated as “resonance”. If Qi is the link, resonance is the method.’

Sheldrake’s hypothesis can thus be situated within a broader constellation that has long been accepted by important and enduring philosophical schools in the East and West. But what is interesting and indeed remarkable about Sheldrake is that he is a professional scientist with more than eighty articles in peer-reviewed journals, including several in *Nature*.

### **Unusual Phenomena**

Sheldrake enjoys drawing attention to phenomena that seem to debunk established scientific ideas. In response, the online *Skeptic’s Dictionary* asserts: ‘although Sheldrake commands some respect as a scientist because of his education and degree, he has clearly abandoned conventional science in favour of magical thinking.’

The first law of thermodynamics says that change in the internal energy of a closed system is equal to the amount of heat supplied to that system. Thus the ‘closed system’ of a human being (that does not photosynthesise) cannot draw energy or ultimately survive without food (heat).

However, Sheldrake draws attention to the case of the Indian yogi, Prahlad Jani, one of numerous individuals through history who have claimed to live without food – a phenomenon known as inedia. Jani says he has lived without food or water since 1940 owing to the intervention of the goddess Amba. He was put under continuous surveillance by a team of thirty-five researchers from the Indian Defence Institute of Physiology and Applied Sciences (DIPAS) in 2010 for a period of two weeks.

Jani had several baths and gargled, but the medical team confirmed that he ate and drank nothing, and, remarkably, passed no urine or faeces. A previous medical examination in 2003 had given similar results. The

director of DIPAS said: ‘If a person starts fasting, there will be some changes in his metabolism but in his case we did not find any.’ Most scientists would dismiss this evidence as an impossible transgression of the first law of thermodynamics. This leads Sheldrake to ask: ‘Is science a belief system or a method of enquiry?’ While inedia is rare and controversial there is at least a possibility that human beings can draw energy from willpower alone. Scientific research should be alive to that possibility rather than dismissing it as ‘magical thinking’ because it does not fit with accepted tenets.

Sheldrake also shows how many pets display psychic connections to their owners, and provides empirical evidence for telepathy in humans, including uncanny abilities to determine the identity of the person from whom a phone call is received.

## **Epigenetics**

The field of epigenetics upsets established Neo-Darwinian ideas. It originates in the research of Dr. Lars Olov Bygren, a Swedish preventive health specialist who explored how the health of grandparents continues to influence their grandchildren. This has been described as ‘ghosts in our genes’ and was hailed by *Time* magazine as one of the top ten scientific discoveries of 2009. Bygren and other scientists gathered historical data for famines and periods of over-abundance and showed how these environmental conditions continued to affect the life expectancy of their children and grandchildren even after adjusting for social class. This astounding research is being used to explain trends in human longevity and supports Sheldrake’s argument that genetic codes are not the full extent of inheritance. Orthodox Neo-Darwinism, particularly that associated with Richard Dawkins, has been cast in serious doubt – if not superseded.

Moreover, doubt has been cast on the whole field of genetics by the limited insights of the human genome project. Sheldrake gleefully seizes on this: ‘The optimism that life would be understood if molecular biologists knew the “programs” of an organism gave way to the realisation that there is a huge gap between gene sequences and actual human beings.’ Recently he entered a public wager with an eminent biologist on whether with the

genome of a fertilised egg or an animal or plant we will be able to predict – in at least one case – all details of the organism that develops within the next twenty years.

## **Will Power**

Sheldrake acknowledges the contributions of Western medicine to human longevity and cites the example of Edward Jenner's discovery of the smallpox vaccine. Yet, he asserts that the 'rate of discovery is slowing, despite ever-increasing investment in research'. He suggests this is a product of tunnel vision that afflicts many scientists who see the body in terms of its component parts rather than as an integrated whole. This is contrary to the Chinese approach which sees pathology in terms of a web of phenomena. In Chinese medicine an illness may be expressed in the liver but the cause may lie elsewhere, even in the mind. The Western approach is usually more successful than the Chinese but it perhaps attends to symptoms rather than underlying causes. This approach arguably leaves a greater likelihood of recrudescence.

Sheldrake says that 'the failure to recognise the power of minds means that Western medicine is weakest when dealing with the healing effects of beliefs, expectations, social relationships and religious faith'. This is despite the acknowledgement by medical researchers of the power of the mind in the placebo effect. He says that attachment to a Cartesian, mechanistic view hinders exploration of the possibility of non-material phenomena. Many doctors will disagree profoundly with his analysis.

Sheldrake also draws attention to the disturbing corruption of the pharmaceutical industry. He shows how prominent scientists are gifted large fees to put their names to articles that have been ghost-written; the multi-million scale of lobbying to the US Congress; the self-regulation of the pharmaceutical industry in the UK leading to delays in the inclusion of safety warnings (by twenty-one months in one instance); and the profitable and usually unpunished sale of drugs 'off-label'.

Most controversially, he contends that there is 'overwhelming evidence that scientists' attitudes and expectations can influence the outcome of experiments'. If correct, this has profound implications for our

understanding of medical research. We already assume a researcher hopes a hypothesis – say that a pill will have a certain effect – will prove correct. If the researcher is actually ‘willing’ a certain outcome regarding the participant in the study then we are entering new, slightly troubling, territory. Sheldrake therefore advocates double-blind testing as an important safeguard.

Rather than fund hugely expensive genetic and molecular studies into the causes of diseases, Sheldrake argues that more attention should be paid to the social factors that lead to pathologies. He cites research showing that those who pray or meditate remain healthier and survive longer than those who do not, and wonders why more prominence is not given to this. He argues that research into genetic or microbial drivers of obesity should be abandoned in favour of focusing on the social factors of a condition already costing the US taxpayer an estimated hundred and sixty billion dollars each year.

Sheldrake argues in favour of complementary and alternative therapies. He attributes their efficacy to the time their practitioners spend with patients compared to conventional doctors, who work under greater time pressure, as well as to an unhealthy preoccupation of many conventional doctors with prescribing drugs. Many doctors will disagree with the latter contention especially. He refers to a review by the World Health Organisation of two hundred and ninety-three controlled clinical trials of acupuncture that concluded that it is an effective treatment for a wide range of conditions.

### **A Moment in Time**

It would be churlish to dismiss the benefits of Western science. The natural sciences, including medicine, have improved the quality of our lives, raised life expectancies, and generated fascinating insights into the natural world. But its aspirations and blind spots give increasing cause for concern.

The attitude of many scientists towards genetic modification, invariably motivated by corporate aggrandisement rather than genuine necessity, is a particular worry. One of the editors of *Nature* proclaimed that by the

end of the twenty-first century, ‘genomics will allow us to alter entire organisms out of recognition, to suit our needs and tastes ... [and] will allow us to fashion the human form into any conceivable shape. We will have extra limbs, if we want them, and maybe even wings to fly’.

*The Science Delusion* exhibits phenomena that belie what are considered the eternal laws of nature. Doubt is cast on established ideas in genetics with important lessons. Perhaps Sheldrake takes his arguments too far at times. While sceptics will undoubtedly dismiss his conclusions, he adduces empirical evidence that is nonetheless worthy of open-minded analysis. This open-mindedness to new, even shocking, discoveries is an important prerequisite for all intellectual enquiry. Spirituality, often disparaged by rationalists, may yield important insights. We have much to learn about our cerebral capacities; Iain McGilchrist estimates that there are ‘more connections within the human brain than there are particles in the known universe’.

Six hundred years ago the Catholic Church claimed to understand the workings of the universe, and most people subscribed to their analysis. Today most of us scorn the preposterousness of their infallibility. Perhaps in another six hundred years our descendants will chuckle at some of our established ideas – unless in the meantime scientific advances bring about the untimely demise of human life on the planet.