

The Origin of Faith

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As for pointing to our mental failures with scorn or dismay, we might as well profess disappointment with the mechanics of gravity or the laws of thermodynamics. ... the degree of disillusionment we feel in response to any particular human behavior is the precise measure of our ignorance of its evolutionary and genetic origins.

The Spirit in the Gene (1999)

After a long series of experiments with patients whose brain hemispheres had been surgically separated (by cutting the strap-like corpus callosum that directly links them), neurobiologist Roger Sperry found himself forced to conclude that: 'surgery has left these people with two separate minds, that is, two separate spheres of consciousness.' He added that 'this mental dimension has been demonstrated in regard to perception, cognition, volition, learning and memory.' In most cases, severing the corpus callosum separated the right hemisphere from its only means of communication with the outside world, the left hemisphere's speech factory. In one extraordinary case however, a split-brain patient who had sustained some left-hemisphere brain damage as a child revealed verbal competence in both hemispheres after surgery. Sperry and his colleagues were then able to communicate with each hemisphere separately and discovered, during extensive tests designed to reveal the patient's personality, that two entirely separate characters inhabited the two hemispheres.¹

Equipped in this fashion with the capacity to operate on two levels of awareness while being 'conscious' of only one, our hominid ancestors were sitting ducks for the evolutionary sting that followed. It is hard to imagine a shrewder mental 'flaw', even if evolution had intended it. That shadowy gap between the two spheres of human awareness left genes with precisely the loophole they needed to retain ultimate control of the body's entire communications system. If the analytical, constructive and lucid hemisphere, the left, was not at all times fully aware of the wide range of perceptive activity occurring in the right hemisphere, then here was a gap in the cortical defences through which whole truckloads of mystical nonsense might pass virtually unchallenged.

However, in order to properly accommodate this vital streak of insanity in an increasingly rational brain it was first necessary for people to perceive, quite accurately, that their genetic imperatives—instincts, feelings and desires—represented a source of considerable wisdom and 'super-natural' power; and second, to believe, less accurately, that this inner

source had its roots in an invisible world of super-intelligence, a mystical world that lay beyond rational comprehension.

Here, evolution had hit upon the sweetest of solutions. Such perceptions were guaranteed to produce a faith-dependent species that believed itself to be thoroughly separate from the rest of the animal kingdom, but followed its genetic instructions to the letter—and left more offspring as a consequence. Here was a gene-driven animal just like any other, yet one that believed itself to be under special guidance—guidance that was not merely ‘spiritual’, but in most instances ‘divine’. Here was a wonderfully practical insanity, an invincible, hereditary madness that eventually enabled this under-endowed paragon of animals to devour the planet like a ripe fruit.

This breathtakingly innovative derangement—present in all mammals to some slight extent—seems to have switched into overdrive in humans to minimise the immense risks inherent in the major brain enlargement that began almost three million years ago. The human brain has doubled its volume and quadrupled the surface area of its rational cortex in that time, a degree of enlargement unprecedented in the evolution of any other species.² If behavioural control had gradually transferred from the ‘instincts’ to the rational brain during this period—as is commonly assumed—I believe our end would have been bloody and swift. Even today, given our tenuous grasp of evolution and its complexities, the most genetically advantageous behaviour usually lies far beyond the scope of instant rational computation. A million years ago too much rational thought would have been suicidal.

To put it yet another way, our neuronal circuitry remained ‘hot-wired’ to our genes so that we would not be handicapped by logic when genetic responses were called for. That is why, under the spell of our carefully programmed ‘spirituality’, we cannot help falling in love, yearning for idealised sexual gratification, nurturing our children, forging tribal bonds, suspecting strangers, uniting against common enemies, and on occasions, laying down our lives for family, friends or tribe. No gene could ask for more.

Precisely what we believe is immaterial; what matters is the kind of behaviour that belief generates. As far as our genes are concerned we can believe that the universe is driven by an overweight fairy on a green cheese bicycle provided that such belief effectively coerces us into adopting tribal behaviour in all matters of evolutionary consequence, such as feeding, mating, nurturing, bonding, and protecting family, tribe and territory.

In other words, whenever cultural belief systems and emotional feelings arise we may be sure that our genes have assumed control and our rational cortex has been bypassed. There is no reason to suppose it was any different 10,000 years ago, or even a million years

ago. In fact, the deeper we probe into the past the clearer it becomes that the massive complex of customs, rituals, faiths, and social mores which help to regulate our lives under the banner of culture, are simply relics of previously successful genetic behaviour—behaviour that contributed so significantly to human survival that it became embedded in the society's cultural foundations. The iconography, symbolism, art, ritual, and other embellishments of a culture might alter continually and dramatically with the passage of time, but the underlying theme and central purpose remains invariable: to reinforce pair bonds and tribal bonds, to coordinate the tribal group, and to inspire altruism—and in some instances, extreme aggression—in order to achieve genetic survival.

So although our species' conquest of the planet might appear to represent the gradual triumph of the intellect over our brutish nature, in fact precisely the reverse is true. Being primarily founded on, and driven by, mystical beliefs of one kind or another, human civilisation represents not a triumph of the rational mind over the bestial body, but the triumph of the gene over gene-threatening rational thought.

Most humans believe that a major neuronal power shift occurred in the human brain more than 30,000 years ago and that our rational cortex is now able to override our ancient genetic imperatives—'our animal instincts'—at will. It's a feature that supposedly distinguishes us from all other species.

Yet brain-scan imaging suggests otherwise. In response to any stimulus the brain's core structures light up about 500 milliseconds before the rational cortex, which suggests that the parliament of genes sitting in the basement of the brain pre-checks the incoming data to decide what is 'right' or 'wrong' for our immediate evolutionary circumstances. It then transmits its judgement and its behavioural directive to the conscious cortex for repackaging in rationally acceptable terms. Where the genetic directive fails the test of logic however, the directive is re-labelled as originating from some supra-natural source and accepted as mystical guidance, or even divine intervention.

Since our genes frequently demand that we behave non-rationally, this repackaging of genetic directives under various mystical labels is a process that has contributed to our species' survival for a million years or more. Here is the mental crevice that conceals humanity's 'indomitable spirit'. No one knows the real 'Me', not even me, the writer of these words. For the real Me is spelt out with four enigmatic code letters: ATGC. They stand for the nucleotide bases of our DNA: adenine, thymine, guanine and cytosine, but they are arranged in a wholly unique sequence, three billion letters long. It's my peculiar sequence, a sequence that has never existed before and will never appear again. Here is a Me that no other human can ever know or control; here is the ultimate guarantee of individuality

and the last redoubt of human free will.

To summarise then: the ultimate origin of all human behaviour resides in our genes, just as it does for all Earthly organisms. However, for sound evolutionary reasons, it is vital that we do not see it this way. So in order to maintain non-rational, genetically determined behaviour in all matters of evolutionary consequence our genes are forced to strut their stuff behind a mask of emotion-laden 'morality'. In this sense it could be said that our mystically based cultures evolved specifically to counter the massive expansion of the human cortex, and to offer our genes the perfect antidote to critical analysis and reasoned thought in gene-threatening circumstances. Linked to language, here at last was a substitute for the fur, claws and fighting teeth that evolution had failed to provide. Here was the Excalibur, that would launch *Homo sapiens* to evolutionary stardom.

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The gaudy heroes, villains, gods and monsters that regularly strut the tiny stage of our perceptions may be a poor substitute for the majestic surge of biological reality that washes over, through and about us every second of our lives, but those fantasies are all we have to play with. Caught in the spotlight of our 'conscious' existence, we can only guess at what is really happening in the genetic darkness that whispers all around us, and only rarely can we catch a glimpse of its cosmic immensity. But despite the folly and the pain that mysticism breeds, we should dread its disappearance. We, and the whole animal world, utterly depend on that vital streak of genetically engendered insanity. Without it, no dingo would howl nor nightingale sing. Spring, and all life, would be a silent thing indeed.

So let us recognise human mysticism for what it really is: the rusting Excalibur of our species, an old and vital streak of genetic madness that once rescued our kind from the brink of extinction, took us to the stars, and will run us through with due dispatch when our little play is done. Ultimately then, I guess I have no real argument with mysticism, nor even with the fear and ignorance on which it feeds. The frail, the fearful and the foolish, these are my kind of animals.

Most of this material consists of edited extracts from *The Spirit in the Gene* (Cornell University Press, NY, 1999.) See chapters 8 and 9.

The Spirit in the Gene was revised and republished in Australia in 2003 as *Plague Species: Is it in Our Genes?* (Reed New Holland, Sydney).

NOTES

¹ R.W. Sperry, "Lateral specialisation in the surgically separated hemispheres." *Neurosciences: Third Study Program*, 1974, pp.5-19. Sperry was awarded the Nobel Prize in 1981 for his work with split-brain patients.

² Richard F. Thompson, *The Brain*, 1985, p.26.