

## From 'The Book of Life' to 'Freedom of Belief'

**GANGAN PRATHAP**

Director, CSIR-NISCAIR

Dr K S Krishnan Marg, New Delhi - 110012

E-mail: gp@niscair.res.in

### ABSTRACT

India continues to stand at the cross-roads of having to choose from the two roads that lead to Belief. For Belief can be founded on Faith, or it can be founded on Reason. Faith is a non-rational belief system. Science is a rational belief system. One of the ironies of life that is seriously emerging from recent research in evolutionary biology is that the acceptance of non-rational belief systems confers a greater ability to survive. At the same time, a society that has no rational thinkers will probably be wiped out. Therefore, for long term survival, every social group needs a small group of individuals who have the rational compass to guide the rest on the Road to Reason, and away from the Road of Faith that is pot-holed with mindless superstitions and rituals. Without this, we would be condemned to lead narrow-minded lives of quiet desperation.

**Keywords:** Superstitions, Reason, Rational, Evolution

A theme, both universal, and contemporary, is the case for freedom of belief. Yet, there has been very little examination of how much we can learn about freedom of belief from the book of life.

As we know it, something that appeared a hundred and fifty years ago, has completely changed the way reasoning people look at themselves. I say, reasoning, and not reasonable. I choose Voltaire's definition to make this subtle distinction. A 'reasonable' person is one who can always find a 'reason' to justify what he or she does or believes in. A 'reasoning' person is one who conducts his or her life based on the dictates of reason. Is this possible?

More than 2500 years ago, Gautam Buddha believed that this was possible. That one can create a moral universe based on 'Reason' alone. He had everything in place, as far as a moral universe was concerned, except for one idea. That idea came only 2400 years later, i.e. a little over 150 years ago. Until that happened, it was believed that the natural world was governed by a few basic forces — this list has grown from two (gravitation and electromagnetism) to four (now including the weak and strong nuclear forces). However, the social and moral universe needs a dimension that the four forces cannot anticipate — that of intelligence that makes it necessary to bring in the contingency of the many independent acts of judgment that make the conduct of life so rich and yet so unpredictable. This is the Book of Life.

Two people made this understanding of the Book of Life possible. Both were born in a small island in the same period. Both came up with the same idea at the same time. On 1<sup>st</sup> July 1858, these ideas were presented in public, to the Linnean Society in London. Modern biology began on this day, when the members of this society listened to the reading of a joint paper on how natural selection accounted for the evolution and variety of species (Darwin, 1859) and (Wallace, 1870).

Darwin was the son of a doctor, and was himself trained as a doctor. He was uncomfortable with the idea of continuing in that profession. He was inclined to work as a naturalist, and signed on for the voyages on the HMS Beagle, between 1831 and 1836. Then, in 1837, he began his next epic journey that would last twenty years and would help decipher the Book of Life. Many scientists of his day were persuaded that evolution had taken place (Huxley, 1860a). This was already clear from the evidence, which revealed life forms that once existed but were no longer found. The question was, how did it occur? Also to be explained was the huge variation in life forms, how complexity could emerge from the simplest beginnings. Darwin was not content with recording what he saw; he wanted also to explain how it came to be.

Darwin was a very cautious person and wanted to collect as much evidence as he could before he ventured out to present a theory on his idea of natural selection. Unknown to him, a young man named Alfred Russel Wallace, also a naturalist, living in what is now known as Malaysia, was working on the same theme. Wallace wrote to him in June 1858, of an outline on natural selection as the basis for the evolution of life (Wallace, 1870). This is a nightmare for any scientist, to lose priority and credit for something that he has worked on for more than twenty years. As a compromise, it was arranged that a joint paper would be read at the next meeting by the secretary of the Linnaean Society of London.

Coming back to our main story, neither Darwin nor Wallace was present when their work was read out by the secretary of the society. Nor did the work inspire much comment immediately, although it was accepted for publication in the society's Proceedings (Darwin and Wallace, 1858). Darwin went ahead with a one-volume summary of his work<sup>1</sup>, *On the Origin of Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life*, in 1859. It is now no longer fashionable to talk of Races; as a result of ideas and techniques that grew from Darwin's inspiration, we know that we all owe our origin to a single mother, who lived maybe a 150,000 years ago, in Africa (*Recent African Origin of Modern Humans*, wikipedia.org). For nearly 140,000 years, there was no religion, nor a science, to give an alternative explanation to what we were, or are, or would be.

Darwin's book was to produce the greatest intellectual ferment of the 19<sup>th</sup> century. It was quickly recognised that Darwin's theory offered a mechanism for evolution without supernatural involvement, just as Laplace's theory for the physical universe offered a mechanism for the motion of the planets without having to bring a supernatural agent into the hypothesis. In 2008, we celebrated the sesquicentennial of the simultaneous announcement of Darwin's and Wallace's theory, and the year after that, a large number of events were held to

celebrate the bicentennial of Darwin's birth, and sesquicentennial of the book. Richard Dawkins has called this "...the most momentous idea ever to occur to a human mind" (Dawkin, 2007). Stephen Jay Gould called it "the greatest ideological revolution in the history of science".

In 1858, the theory was in place, but not an understanding of the actual mechanism by which evolution took place. Today, what is known as neo-Darwinism, is inspired partly by the work of an Austrian monk named Gregor Mendel, whose paper, "Experiments on Plant Hybridization", was read in 1865, and published the following year (Mendel, 1866), and by the work of Watson and Crick, whose unravelling of the structure of DNA, allowed us to take natural selection to the molecular level (Watson and Crick, 1953).

We would like to believe that Darwin's achievement changed human history, and human attitudes and understanding, not only of the natural world but also of the complexity of human behaviour and the foundations of society. He may have convinced the thinking and reasoning world, that evolution, or as Darwin preferred to call it, "descent with modification", occurred (Darwin, 1859). Darwin's theory is the basis of modern biology and almost all of medical research.

So what is it that these new advances can tell us about our own Indian heritage. We know that genetically, and therefore not surprisingly, culturally, we are the most diverse population in the world. We comprise people who came in waves of migration, some perhaps as early as 65,000 years ago who were Austric language speakers, others who spoke Dravidian languages around 6,000 years ago, then the Indo-European speakers about 4,000 years ago, and the Sino-Tibetan speakers in waves from 6,000 years ago (*Peopling of India*, wikipedia.org). As a result, a unique feature about India is that it is also the most fragmented society in the world, with tens of thousands of tribe-like endogamous groups, who retain virtually their hunter-gatherer fragmentations in spite of India having progressed through stages into a complex industrial, and now, post-industrial society.

Evolutionary biologists now tell us that fragmented societies are unfair societies and that unfair societies lead to even more fragmentation. It is this that is the curse of India.

Over the last thirty years, a new synthesis called 'evolutionary biology' has emerged (*Evolutionary Biology*, wikipedia.org). As early as 1871, Darwin argued that the differences between the human mind and the minds of the higher animals were a matter of degree rather than of kind. We know now that at the level of a group, evolution that proceeded only by the competitive survival of the fittest (i.e. Nature red in tooth and claw) would favour only those individuals within a group who were demonstrably selfish and evil. Yet, at the level of groups, trust, generosity and morality emerged only because these traits were beneficial to animals that lived in social groups that had to compete with other groups.

If one thinks of India as a nation state, the fragmentation that overtook India over the last thousand years probably accounted for why India lost out to the rest of the world. There was a respite for a few hundred years because of the fortune we had to have among us, of colonial influences that gave us modern institutions and great statesmen and reformers who earned us our freedom. But what they did for us seems to be getting undone over the recent past and even with growing affluence and improving quality of life we see that these social gains are getting reversed and the voices of intolerance and fragmentation are getting more strident.

The "Mathamillatha Jeevan" story from Kerala is a good contemporary example for us to learn of how religious fragmentation leads to intolerance. It is a chapter of a seventh grade text book that led to a controversial episode in Kerala polity in 2008 (Kerala Seventh Standard Social Science Textbook, 2008). The words 'jeevan' and 'matham' in Malayalam mean life and religion. Since Jeevan was the name of a young child being brought by his parents to enrol in a school, the insinuation of the title is that the boy is being registered without admission of a formal religion.

The narrative proceeds thus: When the headmaster of the school asks the boy his name, the boy replies, "Jeevan". The headmaster ascertains from the parents that their names are Anwar Rasheed and Lakshmi Nair. Since Anwar was a name that was identified with the Muslim community and Lakshmi a Hindu name, the father was asked about the religion of the child. The father's thoughtful reply was, "Jeevan has no religion". A similar response was given regarding the caste of Jeevan. The headmaster points out that the child will be without religion. The father replies, "Let him choose his own religion when he grows up."

The message of the lesson was simple; there is much merit in a life lived according to the dictates of reason and very little merit where narrow orthodoxy rules one's life. Yet there were violent protests supported by major religious denominations and the student groups of many political parties (*The Hindu*, 5 July 2008). The then ruling dispensation, which was committed to secularism, was forced to retract the textbook.

Kerala is a highly literate state in India and its citizens are known to be politically and socially conscious. Yet, partisan, communal and religious orthodox groups acting in concert orchestrated a position that implied that freedom of belief is consistent only with freedom to choose from one of the institutionalized religions. Faith, therefore, outweighs Reason when it comes to this choice.

India, like the Kerala we witnessed in 2008, continues to stand at the cross-roads of having to choose one path over the other. There is no greater choice more difficult than to choose from the two roads that lead to Belief. For Belief can be founded on Faith, or it can be founded on Reason. Faith is a non-rational belief system. Science is a rational belief system.

One of the ironies of life that is seriously emerging from recent research in evolutionary biology is that man has evolved not to believe in evolution. Apparently, the acceptance of non-rational belief systems confers a greater ability to survive. At the same time, a society that has no rational thinkers will probably

be wiped out. Therefore, for long term survival, every social group needs a small group of individuals who have the rational compass to guide the rest on the Road to Reason, and away from the Road of Faith that is pot-holed with mindless superstitions and rituals. Without this, we would not have learnt from the book of life, and would be condemned to lead narrow-minded lives of quiet desperation.

Only then would we rediscover the beginning of what ancient Indian sages had hoped for, a basis for the moral universe that was based entirely on evidence and reason and not on the authority of a teacher or text. True Freedom of Belief is possible only when one chooses to travel on the Road of Reason. This is what even the Book of Life teaches us.

### References

- Darwin C (1859) *On the Origin of Species*, John Murray, London.
- Darwin C and Wallace A R (1858) On the Tendency of Species to form Varieties; and on the Perpetuation of Varieties and Species by Natural Means of Selection, *Journal of the Proceedings of the Linnean Society of London*, Zoology, 3:46-50.
- Dawkins R (2007) Inferior Design, Book Review in *New York Times*, 1 July 2007 at [http://www.nytimes.com/2007/07/01/books/review/Dawkins-t.html?pagewanted=all&\\_r=0](http://www.nytimes.com/2007/07/01/books/review/Dawkins-t.html?pagewanted=all&_r=0).
- Evolutionary biology at [http://en.wikipedia.org/wiki/Evolutionary\\_biology](http://en.wikipedia.org/wiki/Evolutionary_biology).
- Huxley T H (1860) On species, and races and their origin, *Proc. Roy. Inst. 1858-62* (III):195.
- Kerala Seventh Standard Social Science Textbook (2008).
- Mendel J G (1866) Versuche über Pflanzenhybriden Verhandlungen des naturforschenden Vereines in Brünn, Bd. IV für das Jahr, 1865 *Abhandlungen*:3-47.
- Peopling of India at [http://en.wikipedia.org/wiki/Peopling\\_of\\_India](http://en.wikipedia.org/wiki/Peopling_of_India).
- Recent African origin of modern humans at [http://en.wikipedia.org/wiki/Recent\\_African\\_origin\\_of\\_modern\\_humans](http://en.wikipedia.org/wiki/Recent_African_origin_of_modern_humans).
- The Hindu*, 5 July 2008 at <http://www.hindu.com/2008/07/05/stories/2008070555290100.html>.
- Wallace A R (1870) *Contributions to the Theory of Natural Selection*, Macmillan and Company, New York.
- Watson J D and Crick F H C (1953) Molecular Structure of Nucleic Acids: A Structure for Deoxyribose Nucleic Acid, *Nature*, 171 (4356): 737-738.