

## BOOK REVIEWS

**The God Delusion.** Richard Dawkins. Houghton Mifflin. Boston. 2006. 416 pp. Price: US\$ 27.

What are the limits to scientific enterprise? There are on the one hand, technical limits which demand that scientific activity follows a progressive sequence of developments, each of which requires dedicated effort and which more often than not, spills far into the future. On the other hand, the scientific enterprise is also often restricted by its language and by the intrinsic difficulties of communicating scientific ideas, both within the scientific community and also to the rest of the society. It is the price that scientists pay for specialization. Quite naturally, the public understanding of science becomes an important issue in a society increasingly dominated by science and technology. And the limits to scientific activity are also set by the understanding and perception of scientific issues by the general public. Richard Dawkins is the Charles Simonyi Professor for the public understanding of science at Oxford University. The book under review cannot quite be classified as popular science, as perhaps some of his earlier books can be. It is in part a polemic against religion, but the core of the book is written more in the spirit of the philosophy of science. For, it is indeed the philosophy of science that deals with issues of the 'scientific method', and the more or less explicit purpose of the book is to extend the scientific method into the heart of religion and in particular, to provide scientific arguments for the non-existence of God.

Given the facts of authorship, it is easy to guess that the arguments given in the book rely on Darwin's theory of evolution based on natural selection. But before these arguments are detailed, the first three chapters are devoted to setting the stage. Various arguments for the existence of God are discussed and rejected. In particular, the author rejects the separate magisteries of science and religion, proposed by another well-known biologist, Stephen J. Gould (chapter 2, p. 55). In chapter 4, the author discusses the reasons according to which 'almost certainly God does not exist'. To reach this conclusion the author relies on the 'anthropic principle', according to (a planetary version of) which favourable physical conditions – in a statistical sense – exist for

the creation of life on planets in a narrow band of orbits around stars called the 'Goldilocks zone' (pp. 136–137). This is to be seen in contrast to the argument based on intelligent design. The author's claim that 'skyhooks' or arguments invoking the existence of God do no 'bonafide explanatory work' seems doubtful, at least from a historical perspective: the idea of a 'deterministic universe' as embodied in Laplace's God (or even Maxwell's demon!) all arise as some version or the other, of an anthropocentric God. The Darwinian explanation for religion is detailed in chapter 5. Given the repeated emphasis that the author puts on the efficiency of natural selection (pp. 163–164), the 'by product theory' of religion comes as a surprise. Under the circumstances, one expects that religion and such other inessential 'by products' of evolution that natural selection throws up from time to time – if that is the correct interpretation of the view that the author takes – would also have been quickly eliminated, before it became a universal feature of human society? While the by-product theory attempts to explain the 'hard wired' or 'genetic' component of the evolution of religion, the author suggests that another replicator – the so called 'memes' or units of cultural inheritance – may be responsible for the more detailed historical aspects of the evolution of religion (p. 201). In chapter 6, the author discusses Darwinian reasons for moral behaviour. This is an elaboration of the 'by-product theory', explaining our innate moral behaviour (for example, expressions of love and compassion) as having evolved via natural selection from a primitive social environment based on kinship (p. 221). The author uses the term 'misfiring' (as in firing of neurons?) to describe the persistence (or irreversibility) of these moral tendencies in the modern world where, in contrast to kinship, impersonal relationships dominate.

Whatever may have been the original source of our moral behaviour, chapters 7 and 8 are powerful statements on the irrelevance of historical religions in many of the social problems faced by the modern world, while at the same time being the source of many of these problems. Chapter 9 discusses the vulnerability of children to religious indoctrination and makes a strong plea for their right to make independent moral choices based on reason rather than faith. Chapter 10

discusses the special role of religion in providing 'inspiration' and 'consolation' to the faithful and compares this with the role that science plays (or can play) in similar situations.

The issues discussed in the book and moreover, recent developments in science and technology, notably genetic engineering, bring into focus the question of the irreversibility of evolution under natural selection. By 'irreversibility' we mean that adaptations in a species to specific physical conditions may tend to persist well after the conditions that produced them have disappeared (as in the phenomenon of 'misfiring of moral behavior' mentioned above). Extinction is perhaps the ultimate expression of such 'irreversibility'. Both religion and science, in spite of their mutual incompatibility, are manifestations of collective and cooperative behaviour in *Homo sapiens*. Perhaps, the reason that religion continues to be a powerful influence is that cooperation is an equally irreversible condition of our evolution, whether it be due to group selection or any other form of natural selection?

B. RAJEEV

B-9, ISI Campus,  
8th Mile, Mysore Road,  
R.V. College P.O.,  
Bangalore 560 059, India  
e-mail: brajeev@isibang.ac.in



**Birds of Prey of the Indian Subcontinent.** Rishad Naoroji. Om Books International, New Delhi. 2007. 692 pp. Hardcover price £40.

With this book, raptorphiles in the subcontinent can safely consign volume 1 of *The Handbook* to their back shelves without any regret. The combination of an exhaustive literature review (with information compiled from diverse sources)