

so far as it can be viewed as some sort of a machine. They devoted attention to understand the immutable laws or principles according to which the machine functions now, and has functioned for billions of years in the past. Many of these scientists were religious in their personal lives. In balancing their religion with science, they deliberately avoided the question of why these laws exist, or who made them so. These questions have traditionally been part of metaphysics, philosophy, culture, and religion.

Darwin's contribution was extraordinary in that it took science from its comfortable position of studying inanimate objects subject to immutable laws of nature, and placed it in the difficult position of studying living things. Darwin introduced concepts such as "selection", "survival", and "adaptation" that go beyond inanimate objects into the abstract realm of mind and instinct. In doing so, he ventured into unexplored territory, pushing the limits of the physical sciences. The daunting question about life's origin on the Earth, of which Darwin's evolution is a part, motivates us to reach out to other branches of human knowledge.

The nature of life and its role in the scheme of the world around us have been addressed with remarkable sophistication throughout human history. Specifically, should one believe in evolution or should one believe in a Creator? In a comparative study of religions, Max Müller (Müller, F. M., *Natural Religion*, The Gifford Lectures of the University of Glasgow, Longmans, Green and Co., London, 1889., pp. 244-247) examines the Hindu perception of creation from the Rig-Veda, in which two ideas of an uncreated and self-developing world, and of a creator or maker run side by side. The world is spoken of as having

been originally water without light (*salilam apraketam*; Rig-veda, X.129.3). The water contained an egg from which everything else sprang forth (Rig-veda, X.82.5). The poet says that no one knows whence this creation sprang. Even the gods came after it. He who is called the seer in high heavens, he may know, or even he may not. This speculation of ancient Hindus is surprisingly compatible with our current understanding of origin of life on the Earth. Based on fossil evidence from Western Australia, eastern South Africa, and elsewhere, current belief is that single-celled bacteria and stromatolite colonies flourished in primitive oceans some 3.5 billion years ago. Just as the ancients, modern science has not quite figured out how first cell from which everything else sprang came to possess that abstract attribute known as "mind" which appeared when the egg was alive at one instant, and disappeared at the next instant when it died.

It seems to me that in order to bring life fully into its fold, science has to bring the abstract attributes of life within the scope of observation, measurement, quantification, and testability. Or, science has to redefine its own scope by going beyond its currently held notions of observation, measurement, and testability.

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## Announcement

### 3rd INTERNATIONAL CONFERENCE AND EXHIBITION – ASSOCIATION OF PETROLEUM GEOLOGISTS

This conference is scheduled to be held at Goa during 22-24 September, 2006. For further information, please contact: Convenor, Association of Petroleum Geologists, 3rd Floor, Geology Division, KDMIPE, ONGC, 9, Kaulagarh Road, Dehra Dun - 248 195. **Phone:** 0135-2795187, 2795567; 022-24045330, 09869222409; **Email:** apg\_india@rediffmail.com; **Website:** www.apgindia.org