

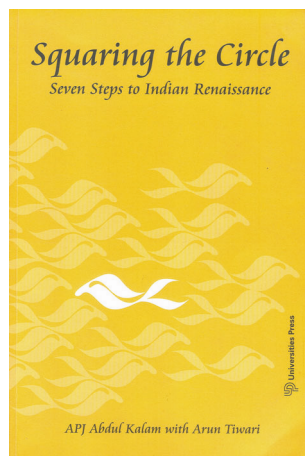
Colibacillosis (chapter 15) is described as a disease of calves, piglets, lambs and foals; thus it is animal disease. The importance of *Escherichia coli* in human disease is not described and when humans are at risk from vertebrate *E. coli* infection, is also not described. Similarly, Glanders (chapter 16) is essentially a disease of horses; its human counterpart, if any, is not described. Paratyphoid A and B are anthroponoses; but the chapter 19 with the title 'Paratyphoid' describes zoonotic salmonellosis caused by agents transmitted from animals.

Every chapter presents a large amount of information, but not organized systematically. The evidence for statements is not referenced. Each chapter ends with a list publications arranged alphabetically and not linked to anything in the text. Thus, they are not helpful in checking on any particular information given in the text. The chapter on 'Hantavirus Infections' (chapter 9) gives nearly 90 citations, but none relevant to the problem in India. Marburg and Ebola virus diseases (chapter 10) are justified in the book even though they are not relevant for India, at least until now.

All these deficiencies detract from the value of this book. If a new edition is made, attention must be paid to accuracy and completeness. Unlinked literature citations must be trimmed to relevant references to support information in the text.

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**Squaring the Circle – Seven Steps to Indian Renaissance.** A. P. J. Abdul Kalam in dialogue with Arun Tiwari. Universities Press (India) Pvt Ltd., 3-6-747/1/A and 3-6-754/1, Himayatnagar, Hyderabad 500 029, India. 2013. 277 pp. Price: Rs 295.

The book under review is one of several other books that deal with the same or a similar set of problems; the most famous of which has been *India 2020 – A Vision for the New Millenium* coauthored by Kalam and Rajan.

Like the earlier books, this book also uses what is termed as a system approach to look at the relationship between human societies with the natural world. Where it differs from other books of the same genre is in the key link in the chain of connections between the human and natural worlds. In this book this link is provided by an omniscient and omnipresent God. This conceptual framework is then used for outlining various prescriptive approaches that will solve current Indian and global problems. It goes on to suggest that such an approach will lead to a new renaissance that will transform and change not only India but also the world.

To deal with this complex system – made somewhat simpler through the introduction of an omniscient God – the book is written in the form a dialogue between the teacher (Kalam) and the student (Tiwari).

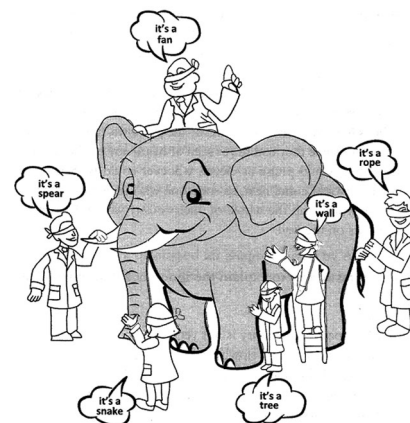
The basic premise is that everything in the world is interconnected. This includes each of us as individuals as well as the material world that are filled with both natural and man-made things. Though this is so people often act as though they did not understand this basic

law – what the authors call the divine law – of cause and effect. If we really understood this causality, given the presence of an omniscient God, we would all of us behave in more moral and ethical ways. This would in turn logically lead to a better world order and system. The first step in the renaissance that the authors advocate would therefore involve an understanding of the interconnectedness and the unity of the world around us and the role of God that facilitates such an understanding.

The book then goes on to discuss the current Indian political system and its close connections with social inequality and the lop-sided development of the Indian economy. The second step in the renaissance is to understand the root causes of the problems of the Indian state. This understanding can then be linked to a process of reconciliation between the various warring factions of the Indian nation state.

Though this is easy to suggest, in practice this involves a transformation in each one of us as well as in the various kinds of groups that constitute any society. The breaking down of our preconceived biases and our narrow world views at individual, organizational and national levels would be a major barrier for bringing about such a change. The authors see the youth of India as those best equipped for bringing about this transformation.

Given these conditions, the authors suggest a revamping of the education system as a necessary third step in the process of transformation. India needs to produce creative well balanced individuals who can contribute usefully to society as outputs from its education system.



Six blindfolded people identifying an elephant.

## BOOK REVIEWS

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They also stress that education should be job-oriented though they do not elaborate on how the balance between the creative and the routine should be achieved within the system of education in India.

In order to deal with the major problems of social inequality, environmental damage and a variety of other economic and social issues such as poverty, caste and various forms of social and economic discrimination, the authors propose a new social enterprise model. A large number of such social enterprises spread out in different variations across the Indian geography will bring about the transformation that is needed. These enterprises will have suitable leaders – who will hopefully come out of the revamped education system – and will use new knowledge made possible by convergence of technologies to bring about change. The author's personal interaction with pioneers of the social enterprise in India such as Verghese Kurien of Amul, Govindappa Venkatswamy of Arvind Eye Hospital provide some kind of form and structure on how the social enterprise system could be made to work in the Indian context. The creation of a large number of ably led social enterprise entities operating on business principles represents the fourth step in the rejuvenation of India.

The fifth and sixth steps in the Indian renaissance are identified as energy security and national security. The creation of national capabilities in the areas of coal, nuclear and solar energy is seen as key components of an energy strategy for India. Indigenous capabilities in telecommunication, information technology and electronics manufacturing are also seen as important elements of a national security strategy. Though agriculture, health, water and environment are not explicitly addressed in these sections of the book, they are well covered in various other parts of the book. The authors obviously see a significant need to develop capabilities in a large number of key areas of national importance. The creation of these national capabilities in which technology is a key component represents the crucial fifth and sixth steps of the Indian renaissance.

Throughout the book, various structural impediments that could affect the transformation process in the political, social and economic domains are covered in detail. The authors are particularly concerned about the post-1991

liberalization process which seem to have increased various kinds of inequalities in the system. They are also concerned about the political and governance systems currently in place. In their view, they represent powerful vested interests that need to be dealt with, if India has to emerge as an advanced country.

The transformation of India as carried out through steps one to six, will see the emergence of India as an advanced country. If and when it does this, the Indian approach that places societal and national interest as the primary drivers of relevant change, could exert significant influence on the world stage and create a new world order. This new world order would be based on moral and ethical principles that promote equity and equality within the human species that inhabit this planet. This is the final message that the authors want to communicate.

The solutions and the approaches needed for the renaissance are based upon the presence of an all-knowing and all-seeing God. Human awareness about God's existence and his role in fashioning the world would significantly simplify the relationships between various components of the human-nature system. Such awareness would also provide a kind of unified social response to the problems of the world that would move the overall system into a stable state. In a sense this is a replication of a dominant mode of thought, influencing the behaviour of a nation state and through it the world. The world's great religions have exercised such domination over large parts of the world for brief periods of time through force, complemented by a variety of other political and governance mechanisms. The authors suggest that such a solution could emerge and become dominant, even without the use of force or other political means, if suitable steps like those proposed by them are taken.

Real world experiences however suggest that human behaviour both at the individual and collective levels is far more complex than the God model would suggest. The stability of empires and nation states is a transient phase in a larger evolutionary framework. It is this larger more complex system that we have to understand if we are to even think of possible solutions to the problems that India or the world face. Though the proposed solutions may appeal to the more ethically minded, it may not capture the

essential aspects of human behaviour as individuals and collectives.

The canvas of issues covered by the book is vast. Given the nature of the theme this is indeed necessary. The dialogue structure also provides flexibility in terms of going back and forth between the various steps that is necessary to link up different aspects of a complex relationship. This of course leads to some amount of duplication and repetition that is to be expected.

The interesting parts of the book are those that deal with the experiences of Kalam in the space and missile programmes and later on as the President of India. Though the various snippets in the book provide us glimpses of the kinds of issues and problems he must have faced in ISRO, DRDO and as President, they titillate, rather than satisfy the more discriminating reader.

The book does provide an easy to understand approach to resolving India's problems in terms of seven steps. In attempting to do this it wishes away number of issues and problems related to how human beings function in the real world. Unlike the Vision 2020 effort which was anchored on the organization of large amounts of empirical data before providing prescriptions, this narrative is based on a limited sample of one person's personal experiences. The solutions that seem to come about from this effort, though laudable at the individual level, may not be practical to implement at the larger national level.

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