

Before the appearance of the earlier edition, skeptics, who even now seldom feel any urge simply to read closely the case studies in their original published forms, often asserted that apart from the absurdity of the belief and the impossibility of calling reincarnation an explanation of the data (because we cannot say how it occurs), a major problem with the research is that it was taken from cultures in which people are generally ignorant or already given to believing in reincarnation as a matter of religious belief. Skeptics often claimed that there were no such compelling cases in the West, where there is little antecedent belief in reincarnation and higher standards of evidence for such claims. In reply, Stevenson discusses in the earlier edition and in this revised edition a number of very strong cases in the West where there is a strong disinclination to disbelieve in reincarnation. Here is not the place to enter into the evidence Stevenson offers for reincarnation and do justice to it. That is what the book does. One can only recommend that everybody read the revised edition and, if necessary, go to the original published papers of the cases discussed for fuller detail. If people have not already made up their minds on this issue before inquiry, then the quiet force of Stevenson's reason and disinterested inquiry should have a remarkable and profound effect upon their view of human nature and death.

In the hands of all those colleagues who are now continuing the same research, and replicating the same results in different cases everywhere in the world, Stevenson's research is nothing less than Copernican in its significance. While this book only shows part of that research, we can all be grateful for its appearance.

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**On Science** by B. K. Ridley. London & New York: Routledge, 2001. x + 225 pp. \$12.95, paper. ISBN 0-415-24980-5.

Curiosity about scientific anomalies and unorthodoxies is best coupled with a good understanding of what science is. Misconceptions about what comprises science are rampant, however, as are misconceptions about what role science plays or should play in the wider society. This book sets to right matters of this sort, about which the conventional wisdom is commonly wrong, and it does so at a level of language and sophistication that should appeal to most readers of this Journal.

Let me get out of the way some barbs at the publishers: for typos that are surely unnecessary in this electronic age; for a few lapses in syntax that copy editors ought to attend to as a matter of course; for a degree of repetitiveness; and for an index that is too perfunctory to be very useful. However, the intellectual substance of the book is so full of interest and insights, some of them uncommon, that it is well worth overlooking those publisher's flaws.

Ridley is unusually sound as well as delightfully forceful in denouncing scientism while appropriately praising science for achievements within its proper domain. The book has useful things to say about reductionism, and about repeatability and the importance in human affairs of unique events. What it means to be human is beyond the ken of science, and Ridley is not willing to accept certain contemporary claims that Artificial Intelligence or physicists' Theories of Everything (ToEs) can or will change that. A ToE, the purported aim of certain eminent or at least prominent theorists, would after all remain just a theory about *matter*.

Ridley includes interesting and pertinent discussion of topics not often covered in such a succinct discussion, whose main focus is science. For instance there is the subject of magic. Not only is the separation of science from magic discussed but also the nature of magic itself, the variety of types of magic, and a description of the continuing role that natural magic plays in this modern scientific age (Chapter 5). The book also offers intriguing insights into connections as well as distinctions between art and science. A discussion of utopias constitutes an intellectually fascinating and calmly logical venture into political philosophy.

The difference between classical and non-classical physics is treated in a particularly clear manner that will be accessible to most audiences: Ridley points out that the distinction resides ultimately in different modes of physical *interpretation*. The book is also clear and correct about the difference between the calculational efficacy of a theory and its equations, on the one hand, and on the other hand the physical significance (if any) of those equations. The nature of mathematics itself comes in for attention and enlightening explanation, as well as the relation between science and mathematics and the role of quantification in social science.

Ridley brings to bear a thorough understanding of technical issues controlled by a high degree of common sense. Each intellectual discipline has its own theoretical stance. Inevitably that is a narrowly blinkered one, and yet each discipline's experts have an inclination to extrapolate their approach as though it could serve to understand all matters human. Theoretical physicists and cosmologists, for example, sometimes lapse into implying that their ToE would really be about *everything*, not just everything within the domain of the science of matter but everything that humankind is concerned with. By contrast, Ridley's common sense comes back always to the realization that humankind is concerned primarily with matters of human scale and human feeling and meaning. So in looking at Artificial Intelligence, Ridley points out that no treatment of consciousness or mind can be satisfactory unless it is given in the language of the arts and humanities. Scientists of cognition may find chemical and mathematical equations to be satisfying, but humankind as a whole demands that human emotions and religious aspirations and responses to art and music be discussed in terms that are meaningful within those realms, consonant with our knowledge of those realms *by acquaintance* rather than merely by description (p. 35).

Having myself written about science, scientism, and the role of science in society (Bauer, 1992, 2001), I found Ridley's book a rare treat, sound in its treatment of matters with which I was already familiar but going well beyond those to expand my understanding in a number of pertinent and significant ways. I recommend the book unreservedly.

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### References

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 Bauer, Henry H. 2001. *Fatal Attractions: The Troubles with Science*. New York: Paraview Press.

**The End of Time**, by Julian Barbour. Oxford University Press, 1999. \$32.50, cloth, ISBN 0195117298. Paperback edition 2001, New York, 384 pp., ISBN 0-19-514592-5 (Pbk).

Julian Barbour states right at the beginning (p. 7) that he has written this book for money. That is okay, and it is better to say it. I remember when I first saw Penrose's first book<sup>1</sup>, I immediately thought to myself "aha, they all want to be like Hawking<sup>2</sup>, to make a lot of money off a popularization". So it is indeed better to say it. And these books are intellectually of much greater value than, say, another mundane long Calculus book, isomorphic to many already written and also written for money.

The fact that well written popularization books can make money is also a positive commentary on the general public. The general public wants to understand the world around it, more now than in the past. That is because in this information age we surf instantly from bombing runs on Afghanistan to Enron scandals to how we evolved from finned fish crawling onto land many millenia ago. Everything now affects everything so we need to know everything.

When I was first asked to review this book I hesitated. Oh god, is it another relativity nut book? I am not a relativity nut, nor even an aficionado of the subject. On the other hand, I have recently expressed my own views on Time<sup>3,4</sup>. Also somehow I remembered vaguely hearing about the book, or the author's name rang a faint bell... so I said, okay, send it to me. It arrived today. I am pleased to report that the book has a wide scope, is not nutty, and immediately caught my attention. As I browsed it this afternoon, I noticed that in Part 4: Quantum Mechanics and Quantum Cosmology, Chapter 14, The Greater Mysteries, the author gets into the EPR Paradox and Bell's Inequalities. Re-