

The temporal enigma, again

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The Mind of God: The Scientific Basis for a Rational World. By Paul Davies. Simon and Schuster: 1992. Pp. 254. \$22, £16.99.

The Matter Myth: Dramatic Discoveries that Challenge our Understanding of Physical Reality. By Paul Davies and John Gribbin. Simon and Schuster/Viking: 1992. Pp. 320. \$12 (pbk), £16.99 (hbk).

The Mind's Sky: Human Intelligence in a Cosmic Context. By Timothy Ferris. Bantam: 1992. Pp. 281. \$22.50, £16.99.

The Capricious Cosmos: Universe Beyond Law. By Joe Rosen. Macmillan, Inc. (USA): 1992. Pp. 224. \$19.95.

PAUL Davies presents us with a temporal enigma. Twenty books in as many years, a successful career as a 'serious' physicist, and a very active round of broadcasts and public lectures — how on earth does he find the time? Whatever his secret, it works as well in Australia as it used to in the United Kingdom. Davies has become a frequent contributor to the scientific side of Australian cultural life in the past couple of years, and a very popular one: his most recent public appearance at the University of Sydney filled three or four large lecture theatres.

In his twentieth book, *The Mind of God*, Davies tackles some of the traditional Big Questions that generate this public interest, and some interesting new ones: Can science explain everything? Why is it that science can explain anything, and what does this tell us about our relation to the Universe? Does the existence of the Universe need any external cause or creator? Could it have been otherwise? Is it a giant computer? It is not easy to write intelligently and accessibly about issues at this level, but Davies here does it exceptionally well. As a whole, the book is an impressive and rather moving reflection on physics, humanity and the Universe, as it appears to one of the discipline's most able communicators towards the end of the twentieth century.

Let me mention three points of detail that left me unsatisfied. First, the suggestion that physical systems might be computers calculating their own behaviour seems uncomfortably close to the idea that the world is a language describing its own state (as it would be for the professors of Swift's Academy of Lagado, for example, who proposed eliminating words in favour of the things themselves). Does the Solar System



Humans have hunted whales for around a thousand years, killing millions of them for their valuable meat, oil and bones. These illustrations are just a sample from the many more that appear in *Men and Whales* by Richard Ellis (Robert Hale, price £25), the "first comprehensive history of the whale's turbulent — and always controversial — relationship with humankind".

really compute its planetary orbits in any more interesting sense than a cat on a mat describes its own location?

Second, the question of why the Universe is comprehensible at all — why it is not a *P2C2E*, in Rushdie's useful technical notation* — seems to me more slippery than Davies allows. How do we know that the Universe is significantly comprehensible? What would it look like if it wasn't, by and large? Could we tell?

Third, the book's concern with the question of whether the Universe requires a creator to get it started seems to me a little laboured. Davies describes the Augustinian viewpoint, which neatly sidesteps our usual obsession with *beginnings* by placing the creator outside time. If modern cosmology tells us anything it is that this is the right move: the idea that the Universe needs to be externally started has no more objective basis than the idea that it needs to be externally stopped. After all, if there were a place for a non-Augustinian creator, there would also be a place for the question of at which end He started: did He create the Universe at the Big Bang and let it run forward, or create it at the Big Crunch and let it run back? Cosmology does not take the latter possibility

seriously, and neither should it the former.

Far from detracting from the book, however, points of this kind illustrate one of its virtues. Despite its scope and accessibility, it is sufficiently thorough to permit critical engagement about points of detail. *The Mind of God* would thus make an excellent basis for an undergraduate philosophy course on Science and the Big Questions, and may also be warmly recommended to the general reader.

I found *The Matter Myth* less satisfying. Here, Davies and John Gribbin claim to describe a revolutionary change taking place as a result of recent developments in science: the overthrow of materialism, and liberation from the alienation and depersonalization that has so long accompanied it. It turns out that 'recent' is being used rather liberally: two of the key ingredients of this claimed revolution are our old friends relativity and quantum mechanics. It has long been commonplace that relativity views the Universe as a 'static' structure incorporating time, rather than as a dynamic entity changing in time; and that quantum mechanics leads to indeterminism. More importantly, it has long been obvious that there is no comfort for humanism in any of this. Quantum indeterminism does nothing for our free

*"A Process Too Complicated To Explain"; see *Haroun and the Sea of Stories*, page 57, Granta, 1990.