MEDICAL PRACTICE

Spring Books

Made a-purpose?

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As recently as 1979 a public opinion poll in the United States found that half of the adults questioned continued to believe that God had created Adam and Eve to start the human race.¹ Throughout America and especially in the southern Bible belt fundamentalist Christians are campaigning for laws requiring schools to teach that evolution is a theory not a fact and to acknowledge that alternative theories to evolution exist. Similar campaigns are being mounted in Australia.²

At the other end of the spectrum theoretical physicists such as Stephen Hawking are "reasonably confident that we know the history of the universe up to one second after the Big Bang. What happens before that is much more speculative, but I think that after one second we're fairly confident." How can it be that Hawking and his colleagues are teasing away at the events of that intellectually challenging first second while in the same world millions of Americans continue to believe that all the geological strata were laid down in one year after the flood described in the Bible?

Faith and works

The Texas engineer who in the 1950s developed the idea of *The Genesis Flood*, Henry M Morris, had found it impossible to believe that such complex and beautiful creatures as butterflies could have developed by chance.⁴ His difficulty had been analysed at length 150 years earlier by the theologian William Paley, author of *Natural Theology—or Evidences of the Existence and Attributes of the Deity Collected from the Appearances of Nature*. Paley's primary argument was that if by chance he found a watch its complexity and its evident design for a purpose would force him to conclude that it must have had a maker. "Every indication of contrivance, every manifestation of design, which existed in the watch, exists in the works of nature," Paley went on, "with the difference on the side of nature, of being greater or more."

Darwin refuted this line of reasoning by showing that complex structures could evolve without a designer, but many people then and since have found his explanations unconvincing. Richard Dawkins's achievement in *The Blind Watchmaker* (natural selection is the blind watchmaker, blind because it does not see ahead, does

God creates light (by Gustave Doré).

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not plan consequences, has no purpose in view) is to expound Darwin's theory with such clarity and elegance that it must surely be understandable by anyone with an open mind. He achieves this,

firstly, by discussing at length the problems that most of us have in comprehending long periods of time; 100 years seems a long time to us because it is longer than our lifetime, but to a geologist it is about 1000 times shorter than he can ordinarily measure. Secondly, he shows us how even a simple computer can simulate the strikingly unpredictable consequences of random mutation. Thirdly, he explains how crystalline clays may well have been the crucial link between the primordial soup and the first self replicating life forms. And, finally, he shows how intellectually arrogant are those opponents of evolution who "cannot understand" how neo-Darwinism can explain, for example, the complexities of animal behaviour. Most of us with an interest in mathematics reach a point in our studies at which understanding comes to an end—but we do not go on to argue that the higher reaches of mathematical theory are false.

By no means all scientists are atheists, however; indeed, any roll call of the greatest would include many who were devout believers in one or other religion. Faith does not require everything to be explained. In *Roger's Version* the hero, a disenchanted professor at a divinity school, is confronted with a young computer enthusiast who wants to be convinced that God was the prime designer. "For galaxies lasting billions of years to exist at all is statistically very strange. Flatness: the total energy, that is, everything in the universe, and the expansion rate of the Big Bang had to be initially in precise balance, virtually, for the ratio to be what they observe it to be today, between 0.1 and 2.0." Further examples tumble from his lips: if the strong force had been 5% weaker there would be no deuterium and the sun could not function; had it been 2% stronger two protons could stick together and hydrogen would be so explosive that the universe would consist entirely of helium. "Everywhere you look," explains the young man, "there are these terrifically finely adjusted constants that have to be just what they are, or there wouldn't be a world we could recognise. God made them that way."

Updike is a novelist not a scientist, and most of his book is concerned with the thoughts and actions of his characters rather than their beliefs. His computer scientist does not find answers to his doubts: instead he is advised to get a girlfriend—"it might clean out the cobwebs." Nevertheless, the fact that one of America's most distinguished writers is concerning himself with the twentieth century equivalents of the Victorians' disputes about Darwin indicates the amount of attention being given in the United States to the activities of the fundamentalists.

Separate issues

Maybe as the genetic engineers continue to develop their technology we shall all need to clear out some cobwebs and try to separate our knowledge, our convictions, and the beliefs to which we are emotionally attached. Medical ethics—or the branch of it that deals with the extent to which society should seek to control and regulate genetic manipulation in man, research on fetuses, and, indeed, sexual behaviour—is based on value systems that were largely developed in a religious context. Both in Europe and in the United States politicians and others are still trying to solve these problems from that same context. Updike's computer buff was hoping to be able to prove that a designer had been responsible for the fundamental laws of physics. Just supposing that such proof became available, what implications would that have for religion? It is a long step from God existing to our knowing that He wants us to worship Him—or that if He does that we should worship Him in one way rather than another. The existence of God and the validity of religious beliefs and teachings are quite separate issues.

We cannot, surely, know where scientific curiosity will lead us or how comfortable or uncomfortable the findings will be. Hawking is not impressed by people who fudge the issues. Those who find theoretical physics and mathematics too hard turn to mysticism, he asserts: people who have this idea about mysticism in physics are people who can't understand the mathematics. Interviewed in *The Scientist*, Hawking was challenged with the beliefs of the seventeenth century scientists Kepler and Newton, who considered

that they were looking at the logical, orderly, beautiful mind of God.

"Since we don't believe that any more what are we looking at when we look at the basic equations of physics?" he was asked.

"We still believe that the universe should be logical and beautiful," Hawking replied. "We just dropped the word God."

1 Anonymous. *Christianity Today* 1979 Dec 21:14.

2 Powel L. Queensland and creationism. *Nature* 1986;324:204.

3 Weber R. God at the edge of the universe. *The Scientist* 1987 Feb 23:15.

4 Whitcomb JC Jr, Morris HM. *The Genesis flood*. Philadelphia: Presbyterian and Reformed Publishing Company, 1961.

The Blind Watchmaker. R Dawkins. (Pp 352; figs; £12.95.) Harlow: Longman, 1986. ISBN 0-582-44694-5.

Roger's Version. J Updike. (Pp 316; £9.95 UK only.) London: Deutsch, 1986. ISBN 0-233-97988-3.

As a successor to Mrs Malaprop, Don Edwards is the very pineapple of perfection—giving English usage a kind of aerobic exercise from which words and phrases emerge pink, puffing, puzzled, and full of life. At the *Reader's Digest*, where he works as a graphic designer, his triumphant skirmishings with vocabulary and syntax were quickly appreciated, so that every time he reached for the phone the other people in his office reached unobtrusively for their pencils. Edwards had no idea that he was surrounded by undercover Boswells until he was diagnosed as having multiple sclerosis and they decided to publish their collection as a practical expression of their concern, respect, and affection for him. The result is *My Pear Tree Has Gone Bananas: the Collected Philosophy of Don Edwards* (£1.25. London: Reader's Digest Association in conjunction with the Multiple Sclerosis Society, 1986. ISBN 0-276-40231-6). Taking its title from his comment on a drawing that wasn't coming out right, the book includes such memorable remarks as:

My doctor says I'm not as young as I should be
The drug I'm on is anti-barbaric
It's not information we want, it's facts
I'm going to stir up the melting pot
You could do that standing on your hat
I've known you too bloody long to understand you

It could well become a cult—followers no doubt wearing teeshirts printed with the Edwards slogan "The world is your lobster"—and if it does this will benefit the Multiple Sclerosis Society, which receives all the proceeds from its sale.