

atics in the natural sciences". But there is no reference by either author to Einstein's aphoristic remark that "As far as the propositions of mathematics refer to reality, they are not certain; and as far as they are certain, they do not refer to reality." Or indeed to Einstein's change of mind later in life, which led him to claim that "Our experience hitherto justifies us in believing that nature is the realisation of the simplest conceivable mathematical ideas...In a certain sense, therefore, I hold it true that pure thought can grasp reality, as the

ancients dreamed." Given Einstein's stature and his adoption of mathematical ideas such as Riemann's geometry of curved space in his formulation of general relativity, the omission of his many published views on mathematics seems puzzling.

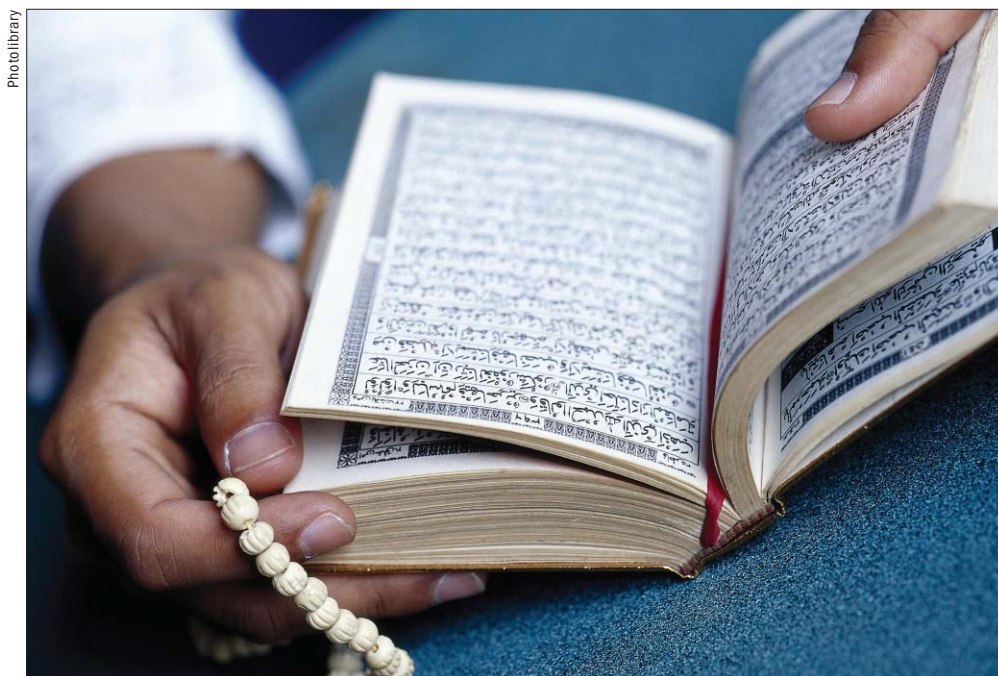
Both books contain a few significant errors when the authors step outside their fields. Thus Byers remarks that Einstein's familiar verdict on quantum mechanics that "God does not play dice" was said at the turn of the 20th century, decades before it was. Nevertheless, both books offer penet-

rating insights into mathematics for those who have studied the subject to at least undergraduate level. For the rest of us, much of the mathematics is comprehensible with effort, while the discussion of philosophical issues and personalities is generally engaging and, in places, profoundly interesting.

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David Gosling

A physics chauvinist tackles Islam



By the book
Conservative Islam leaves little room for science.

An Illusion of Harmony: Science and Religion in Islam

Taner Edis
2007 Prometheus Books
£19.99/\$28.00hb
265pp

Conservative Muslims believe that the Koran is the direct, infallible word of God – a view that discourages scientific questioning and rational argument. As a result, modern science and conservative versions of Islam do not make comfortable bedfellows. But are more liberal interpretations of the Koran any more compatible with science? This question is a central concern of *An Illusion of Harmony*, a perceptive study by Taner Edis, a physicist at Truman State University in Missouri, US, of the relationship between science and Islam, which is probably the fastest growing major world religion.

Edis was born into a Muslim family in Turkey but claims to be sceptical about the existence of God. "I am a bit

of a physics chauvinist," he writes. "I think that according to the best of our current knowledge, our world is an entirely natural, physical place that does not depend on any supernatural powers." This view would be alien to the majority of Muslims since – as with the Christian religions – the idea that the world was created by God is absolutely central to Islamic thought.

In the modern world, however, the economic benefits of science are undeniable, and as a result even the most fundamentalist Muslims are at pains to minimize the apparent contradictions between their faith and science. For example, popular Turkish religious tracts tell of US astronaut Buzz Aldrin hearing strange noises on the Moon, which he later realized to be

the call of the minaret. This is, of course, nonsense, but it illustrates the extent to which religious conservatives *want* to be in tune with the most progressive aspects of Western science – especially the shiniest technologies.

Edis points out that not all Muslims insist on following a literal interpretation of the Koran. In fact some strands of Islam are able to look at this ancient text in critical ways that evaluate language and interpretation from a historical perspective. Nonetheless, he argues, accommodating modern science is problematic for even these strands, since the idea that the world seems governed by natural laws is fundamentally incompatible with the belief that the world is a product of divine omnipotence.

This conflict, of course, also occurs with the Christian faiths, and throughout *An Illusion of Harmony* Edis compares Western and Muslim attempts to harmonize science and religion. He has some interesting things to say, for example, about the growth of Renaissance science, which he – unlike many historians – does not attribute to the prevailing Christian cultural context. As Edis points out, Isaac Newton spent more time on biblical prophecy and alchemy than on physics. Indeed, the author claims that "Europeans stumbled upon modern science by a series of accidents; it was not an inevitable outgrowth of their particular religious culture."

Darwinian evolution – for obvious reasons – is the scientific idea that presents the greatest challenge to Christians and orthodox Muslims. But problems also occur when apologists try to appropriate what they see as "gaps" in modern physics to intro-

Current research in cognitive neuroscience will become of increasing concern to Islam

duce some sort of divine agency. For example, the randomness and inherent uncertainty that quantum mechanics places at the heart of physical systems have led defenders of both Christianity and Islam to claim a role for God in guiding these apparently random processes.

Edis considers these attempts in some detail, and his opinion is summed up on page 104. "The randomness in fundamental physics does not signify mere ignorance," he writes. "Neither does it stand for causes set in motion by inscrutable personal agents—quantum mechanics presents nothing like the sort of patterns in data that would allow us to infer any intent or purpose behind apparently random events...Everyday cause and effect are not basic features of the world; they are built on a substrate of uncaused events and large-scale statistical regularities." Some apologists for Christianity should heed Edis' observations! He is equally decisive in his uncompromising rejection of US-style creationism and the so-called intelligent design arguments for the activity of God.

In addition to the problems posed

by Darwinian evolution, Edis believes that current research in cognitive neuroscience will become of increasing concern to Islam. That research seeks to explain human perception, intelligence and consciousness in a materialist fashion, so threatening the concept of an immaterial soul. Although neuroscience has not yet attracted any significant Muslim attention, Edis thinks that this is only a matter of time. As he says, "It is not hard to imagine Muslim thinkers lining up to insist that the soul is real, no matter what Western materialist scientists may say."

On the whole, Edis gives a good account of the most prominent contemporary Muslim schools of thought about science, but he would have benefited from saying more about southern Asia. The support of rational thought and notions such as heliocentricity shown by the 19th-century Indian scholar Syed Ahmad Khan and his fellow Muslim the poet-philosopher Muhammad Iqbal, for example, significantly contributed to the reconstruction of Islamic intellectual thought during the late 19th and early 20th centuries. This resulted

in at least a temporary rapprochement between Islam and science. Iqbal even admired Einstein's new vision of the universe.

Edis focuses mainly on Turkey and the Middle East, and refers to Pakistan and other major Muslim countries such as Indonesia only in passing. This circumvents – and therefore oversimplifies – some of the complex reformulations of Islam that took place alongside parallel changes in the Hindu and Christian traditions in the 19th-century northern India, as well as the manner in which Sikhism emerged from the encounter between Hindus and Muslims.

The debate continues, and in some respects it is much less sterile than in some Western theological circles in which religious thought is predominantly cerebral and Eurocentric. What Edis offers us is a fascinating and well-informed insight into an increasingly important contemporary issue.

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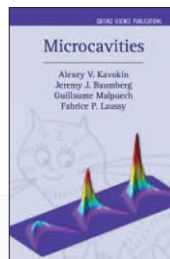
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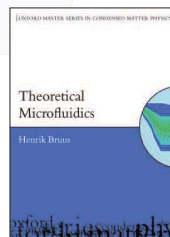


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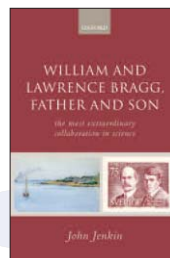
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