

Science and religion

Sir, - This is to reply to comments (Letters, January 24) on my review of Richard Dawkins's *The God Delusion* ("A deadly certitude", January 19). F. Jamil Ragep, of the McGill Institute for Islamic Studies, disagreed with my statement that after the death of Abu Hamid al-Ghazali in 1111, there was no more science worth mentioning in Islamic countries. In support, Ragep mentioned the development of trigonometry, but this was primarily the work of al-Battani (858-918) and al-Biruni (973-1048), long before al-Ghazali. He also mentioned the conception of a moving earth, and referred to mathematical and conceptual tools that were essential to the Copernican revolution. But Copernicus credited the idea of a moving earth to Pythagoras and (in a passage he subsequently deleted) to Aristarchus of Samos. The Muslim astronomer on whom Copernicus chiefly relied was al-Battani, who died 200 years before al-Ghazali.

There were talented Muslim scientists after al-Ghazali, but their work found no place in Islamic society. For instance, Ragep mentioned the discovery of the pulmonary circulation of the blood. I presume that he was referring to Ibn al-Nafis (d. 1288). Al-Nafis did propose the pulmonary circulation of the blood, but his theory had no effect in the Islamic world, perhaps because for religious reasons he did not demonstrate its truth by the dissection of animals. Ragep also pointed to "the first large-scale astronomical observatories". There were great observatories in the Islamic world, used largely for predicting prayer times and the Muslim lunar months. In 1577, Taqi al-Din built an observatory in Istanbul comparable to Tycho Brahe's famous observatory in Denmark. But on the instigation of the Chief Mufti, al-Din's observatory was destroyed by a squad of janissaries, and had no impact on astronomy, while Brahe's observatory provided the data that made possible the work of Johannes Kepler and Isaac Newton. It is too strong to say that there was no science at all in the Islamic world after al-Ghazali, but such science as there was led to nothing important. Certainly the great period of Islamic science came to an end around the twelfth century. Nor has it been revived. A 2002 survey by *Nature* identified just three areas of science in which Islamic countries excel: desalination, falconry and camel reproduction. Nikolai Tolstoy asked why, if religion is

harmful, it has not been discarded, and why some eminent scientists are religious. I would think that the promise of life after death is sufficiently attractive to account by itself for the survival of religion, even among eminent scientists. But surveys show that religious belief is far less prevalent among scientists than in the whole population.

Several letters sided with Terry Eagleton's quip, that for Dawkins to write on theology is akin to "someone holding forth on biology whose only knowledge of the subject is *The Book of British Birds*". I had better explain more fully why I disagree with Eagleton's comparison. Biology is a real science. It has agreed methods for settling arguments and correcting errors by reason and experiment. No one today seriously disputes the pulmonary circulation of the blood, or the germ theory of disease. Of course there are still open questions in biology, but research in biology is cumulative; so much has already been learned, and the techniques for learning more require so much technical training that issues in biology really have to be left to experts. In contrast, disagreements in theology go on forever, with no way of ever settling anything, which is not surprising since it does not deal with anything real. For the same reason, unlike biological discoveries, theological doctrines lead to nothing useful. As a phenomenon of intellectual history, theology, like astrology, deserves careful study, but as a body of knowledge, again like astrology, it is not worth taking seriously. It is precisely the experience of working in a real science that best qualifies Dawkins to see the hollowness of theology.

James Ramsay says that "theological language is allusive, not exact". Both he and Leslie Houlden eloquently describe their religion as a way of life, but I can't tell from their letters if they think it has anything definite to say about the supernatural. If not, then Ramsay and Houlden provide a further example of the welcome decline of religious certitude in the West.

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Sir, - Steven Weinberg's review of Richard Dawkins's *The God Delusion* contains some

inaccurate remarks about the history of Weinberg's discipline, mathematical physics. If the contemporary debate between religious thinkers and defenders of "scientific" conceptions of the world is to be constructive, we must recognize the historical specificity of the current positions. The fault lines of the raging debate about intelligent design, and related matters, may seem permanent, but the relation between science and religion was decidedly different during the era of modern physics's emergence. For instance, although contemporary physicists like Weinberg may now understand Sir Isaac Newton as having promoted a secular conception of natural phenomena and of their ultimate origin, this characterization reflects a decidedly anachronistic picture of Newton's own conception of his work.

Weinberg contends that Newton's theory of gravity in *Principia mathematica* challenged religion because it provided a natural explanation of various phenomena, such as the planetary orbits. But this was certainly not Newton's own understanding of his theory; indeed, in the first edition of the *Principia*, published in 1687, Newton argued that the solar system could only have been given its current configuration by the intervention of a wise and intelligent being. Weinberg misrepresents Newton again when he contends that the "argument from design" was refuted by Newton's explanations of the world. In fact, Newton himself endorsed a version of the design argument, and in the very text in which he presents his explanations of natural phenomena. In the famous "General Scholium", added to the second edition of the *Principia* in 1713, Newton writes that "the diversity of created things" could only have arisen "from the ideas and the will of a necessarily existing being". More generally, Newton made it clear that discussing God by analysing the phenomena of nature is a proper part of his natural philosophy. The task now confronting us, then, is to understand precisely why science and religion are understood as conflicting with one another, given their intertwining in the past.

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Chaucer's Englishness

Sir, - How good it was to read Derek Pearsall's vigorous assault on the myth of Chaucer's "Englishness" (January 12). He is absolutely right to trace this to the Victorians, when a number of English writers - and not just English ones, as he shows - began to feel the need to invent an "English tradition" to match the national traditions being so actively excavated, and in most cases also actively invented, on the Continent at that time. What is striking is the recent return, by a number of British literary scholars, to this endeavour to establish the quintessential Englishness of many notable early writers, from Chaucer and Langland to Shakespeare and Milton. It all seems part of a desperate attempt to prove that the English have always been as nationalistic as any nation, and that there is a long-lasting, deep-seated, English nationalism. Why not rather accept, and celebrate, the absence for a

considerable period of time in England of what Pearsall calls a "xenophobic national consciousness", and the novelty of its expression today?

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Arberry's version

Sir, - Much as I enjoyed Robert Irwin's article "Wines in the Koran" (January 26), I was disturbed by his comment that A. J. Arberry's pioneering translation of the thirteenth-century al-Baghdadi's *Kitab al-Tabeeh* is "very poor indeed".

I have read the new translation by Charles Perry, compared it with the Arabic original, and with Arberry's version, and can say with all confidence that the new translation is by far

the most excruciatingly literal rendering I have ever encountered, linguistically awkward, at times verging on incoherence. While correcting some of Arberry's mistakes, the new translation has a good share of its own inaccuracies. Arberry's rendering makes a good read. It has grace which the new version utterly lacks.

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An unlovable puddle

Sir, - In his review of David P. Mindell's *The Evolving World* (January 19), Simon Conway Morris says that "Mindell's overall aim is to produce a rather weak version of Daniel Dennett's 'universal acid' of Darwinism, in itself an incoherent concept given that the theory of evolution

itself should be no more immune to this metaphorical dissolution than anything else". This completely misreads the main point of my metaphor. As I said when introducing it, "People fear that once this universal acid has passed through the monuments we cherish, they will cease to exist, dissolved in an unrecognizable and unlovable puddle of scientific destruction. This cannot be a sound fear; a proper reductionistic explanation of these phenomena would leave them still standing but just demystified, unified, placed on a more secure foundation" (*Darwin's Dangerous Idea*, 1995, p82). And yes, of course, the theory of evolution is itself a fruit on the tree of life, just like the beaver's dam and the spider's web, but much more sophisticated, having benefited from several millennia of cultural evolution in addition to genetic evolution. All the design in the theory has to come from somewhere - no sky-hooks allowed - and the "genius" of Darwin and his successors is as explicable a natural product as the slyness of the fox. There is nothing incoherent in the hypothesis that the theory of evolution is itself a product of evolutionary processes.

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'Pappanozza'

Sir, - J. C. (NB, January 26) enquires whether anyone has ever tried to cook from a recipe in a novel. During the past few months I have enjoyed *pappanozza* - "potatoes and onions boiled a long time, mashed into a porridge with the back of a fork, then dressed with an abundance of olive oil, strong vinegar, freshly ground black pepper and salt", from Andrea Camilleri's *Excursion to Tindari*, and my wife has cooked "burning *piriciati*" from his latest novel *The Scent of the Night* - pasta with a sauce of "olive oil, half an onion, two cloves of garlic, two salted anchovies, a teaspoon of fine capers, black olives, tomatoes, basil, half a pimento, Pecorino cheese, and black pepper"; though our reticence with the pimento meant that we didn't quite achieve the "alternating groans of extreme agony and unbearable pleasure" that Camilleri's gourmand hero Inspector Montalbano experiences.

We have also been tempted to try out some of the more esoteric recipes in James Hamilton-Paterson's last two books, *Cooking with Fernet Branca* and *Amazing Grace*, but his supplier for smoked cat seems to have gone out of business and we haven't yet succeeded in obtaining a freshly killed badger.

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Sir, - J. C. asks whether anyone has ever tried to cook from a memoir or novel or poem "with recipes". Thomas Hardy's short story "The Three Strangers" contains the following: "Now the old mead of those days, brewed of the purest first-year or maiden honey, four pounds to the gallon - with its due complement of white of eggs, cinnamon, ginger, cloves, mace, rosemary, yeast, and processes of working, bottling, and cellaring - tasted remarkably strong; but it did not taste so strong as it actually was".

I made this years ago; it had quite a kick.

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