
Religion, Rebel Scientists, And Peer Review: Three Hot Topics

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Of some 69 letters from readers that have been published in *The Scientist* since our format and editorial changes of last May, over 40% deal with just three subjects: the difficulty of reconciling religion and science (prompted by William Provine's provocative opinion piece published in our September 5 edition, page 10); the issue of whether to accept rebel or "heretic" scientists who espouse minority views; and the inadequacies of peer review.

While this tabulation is admittedly not a precise barometer of our readers' views and interests, I believe it a fairly useful indicator of issues that provoke sharp responses from scientists. What conclusions, then, can we draw from this mini-survey?

I suspect that the 13 letters we published (and the almost equal number we did not publish) in response to Provine's article—the greatest number of letters we received on any subject—were in some measure a response to the extreme argument he made. Provine wrote that "the implications of modern science...are clearly inconsistent with most religious traditions. No purposive principles exit in nature...Humans are complex or-

ganic machines that die completely with no survival of soul or psyche....No inherent moral or ethical laws exist, nor are there absolute guiding principles for human society. The universe cares nothing for us and we have no ultimate meaning in life."

The vast majority of those who wrote to us strongly disagreed with that position and with Provine's more general point that science and religion are incompatible; only a few told us they agreed with or were sympathetic to Provine's position. Plainly, it is a highly personal matter. There is no sense in refereeing this debate; in fact, we have tried hard to be impartial as evidenced by the two essays on page 9 of this issue. But it is fascinating to note the high degree of interest that the subject of religion and science holds for the scientific community.

Rebellious scientists made up the second most popular category among those who sent us letters. Harold Hillman of the University of Surrey, U.K., believes that experimental results based on scanning tunneling microscopy contain significant artifacts that distort the data. Peter Duesberg of the University of California, Berkeley, holds

the view that AIDS is not necessarily caused by a virus. Just as controversial, perhaps more, is the claim of Jacques Benveniste and his colleagues of INSERM, Clamart, France, that highly diluted solutions have a "memory." The vehemence with which these views, and these scientists, have been condemned by their colleagues has created a stir in the general media as well. Other scientists who have made similar waves are NIH's Walter Stewart and Ned Feder—in the sense that their activities and conclusions about the extent of fraud in science have not been well received by their fellow professionals.

Science's intolerance—if it is that—for minority views also seems to be evident in the third most written-about subject: peer review. As I

have had occasion to observe in the past, there is great dissatisfaction with peer review throughout the scientific community, and especially with blind reviewing and the lack of recourse a scientist has if his or her work is reviewed unfairly.

What all three of these topics share is a concern with the standards, professional and ethical, that the scientific community takes an interest in—matters distinct from the process of scientific investigation itself. I believe that this interest refutes the common perception that the scientific endeavor is a value-free enterprise. In fact, like all other human endeavors, science is replete with expressions of value—moral and ethical. That is not a revelation, but it is important to remind ourselves of this now and again. ■