

LETTERS

Human Rights: Visiting the Soviet Union

I am an American astronomer spending 2 months in the Soviet Union on the Inter-Academy program of exchange scientists. I left the United States at about the time of the trial in Moscow of Yuriy Orlov and subsequently learned about the boycott of international conferences in the Soviet Union by American scientists. The boycott left me in the uncomfortable position of wondering if I had done the right thing by following through with my visit.

The plight of Soviet scientists has been of interest and concern to me for several years, and I have found among most American scientists, both at home and here in the Soviet Union on similar visits, considerable confusion as to what line of action on their part might be most beneficial to our Soviet colleagues. On this and previous visits, I have discussed the question of American reaction with several Soviet scientists and have distilled from the various (and occasionally conflicting) opinions, the following suggested guidelines.

1) Individual scientists should continue to participate in the Inter-Academy program of exchange for both short- and long-term visits. It is of great interest and value for both Soviet and American scientists to have close personal contacts for the exchange of ideas and concepts of science. American scientists, or at least some of them, need a degree of familiarity with the workings of Soviet science—its levels of achievement and rate of development—and such information cannot be readily gleaned from secondhand sources. For those interested in the international aspects of modern science, it is important to understand the working and living conditions of our Soviet counterparts, and this knowledge must be obtained from personal contacts.

2) In response to gross violations of basic human rights of Soviet scientists and scholars by the government of the U.S.S.R., American and Western European scientists and scholars should publicly boycott international conferences held in the Soviet Union. While Soviet scientists are not confident that this will have any effect on their government's treatment of them, they allow that some long-term effect may result. They readily admit that nonparticipation in international conferences inside the Soviet Union will have a long-term negative effect on the growth of Soviet science but are willing to accept this in the hope that some improvement in their

working conditions and prospects for international travel will be forthcoming. Because Soviet scientists travel abroad rarely, and because preparations for international conferences inside their own country are exceedingly laborious and time-consuming, the effect of non-U.S. participation is very strong.

3) American organizers of international conferences in the United States and in Western Europe should continue to invite their Soviet colleagues, with as much advance notice as possible, even if there is no obvious hope for participation. The continuous barrage of invitations may, in the view of several Soviet scientists, eventually help certain individuals reach the point where participation is permitted.

4) Petitions from American scientists through the National Academy of Sciences (NAS) and the Federation of American Scientists should be continued in response to violations of Soviet scientists' human rights, such as the case of Orlov and many others. There is hope that such petitions, when channeled through the NAS and other organizations to the Soviet Academy of Sciences, as well as public statements by NAS President Handler and other prominent American scientists, may have some long-term positive effect.

I have found most scientists here less depressed over the Orlov case than I might have expected and unmistakably resigned to a state of affairs that is not likely to improve soon.

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I have just returned from the Soviet Union, where I visited the Institute of Molecular Biology, the Institute of Virology, and the Cancer Research Center in Moscow. I made the trip, as a guest of the Soviet Ministry of Health, in spite of urgings by some influential American scientists to postpone such visits, because it seemed important to gauge firsthand the impact of postponements on the attitudes and feelings of Soviet scientists.

The scientists I met do not understand the reasons Americans are canceling ("postponing") their trips. Explanations appearing in recent issues of *Science* and *Nature* have been censored by the Soviet government. There is widespread concern that cancellations represent official U.S. policy. When I explained that they did not, and explained the reasons, the invariable reaction was that such postponements are not likely to have a positive impact on Soviet politics which, these scientists felt, are not understood by American scientists.

We are all distressed by the lack of basic human rights in the Soviet Union and wish to help alleviate the situation. However, it is unlikely that Soviet judges are going to interpret their laws to satisfy the ethical needs of American scientists. Instead, pressure from American scientists may have a long-term negative impact on Soviet attitudes toward scientific cooperation. I urge all who are now considering a trip to the Soviet Union to react rationally rather than emotionally: to realistically attempt to evaluate what the outcome of various courses of action might be and not to respond on the basis of what they *wish* the outcome to be.

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Cuban Health Care

The article "Cuban system not without flaws" (News and Comment, 16 June, p. 1247) deserves comment. I know nothing of the Cuban health care system, but I have come to expect a higher degree of biomedical expertise from *Science's* writers than is shown in this article. Examples of medical errors include (i) the implied connection between attending "an outdoor entertainment" and the development of a sore throat and "glands the size of goose eggs" within 5 minutes; (ii) the implication that persons with pneumonia are killed by "cold and drafty" conditions; and (iii) the references to veins (not arteries) being pulsatile and related to blood pressure.

I am sure that, like every other health system, the Cuban one has flaws and I, for one, would be interested in knowing what they are. However, this article told me nothing about them.

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Animal Rights in the Laboratory

News reports and letters in *Science* over the past few years have merely touched on what seems to be a major frontal attack on the use of animals in many laboratories. Philosophers, antivivisectionists, lawyers, humane societies, and a surprising number of scientists are increasingly questioning the scientific and moral basis upon which even the most enlightened animal experiments rest. While there is still a belief by many