

Letters

Luna IX Pictures: A Question of Ethics

The soft landing of Russia's Luna IX on the moon's surface and its transmittal of photographs of that surface represent scientific instrumentation and discovery at their best. The men who performed this excellent research deserve the first opportunity to analyze and publish the data. The rush of Jodrell Bank Observatory to distribute Luna IX pictures and of scientists both in the U.S. and Britain to comment publicly on the pictures can only be considered a breach of scientific ethics. A proper interval should have been allowed for the Russian scientists to review and reveal their own work.

The Russians probably expected us to receive the radio signals, to process them, and to distribute a few prints secretly to highly placed scientists, thus fulfilling urgent technical needs while preserving scientific propriety. Science has been one of the few meeting grounds of Russia and the West where trust and communication are possible; goals and methods have been similar, and science has done much to further the resolution of our conflicts. This cultural bridge has now been badly damaged. We cannot allow such a breach to occur again out of a misconceived patriotic zeal. The stakes are far too high.

DALE C. KRAUSE
*Graduate School of Oceanography,
University of Rhode Island, Kingston*

We did not "rush" to distribute the Luna IX pictures in advance of the Russians. Our pictures came off the facsimile machine several hours after the Russians had convened a large press conference in Moscow to show the pictures which Luna IX had transmitted the previous night. Why they did not do so, or publish them in *Isvestia* the

following morning, remains a mystery. As for commenting on the pictures before the Russians, my only remarks were that the lunik seemed to be resting on a hard surface with little evidence of dust, and these comments had previously been made by scientists in Moscow. Any suggestion that we published a scientific analysis of the results before the Russians is absurd.

If our success in recording the landing phase of the lunik or in producing the pictures had owed anything to information supplied to us by the Russians, then the situation would have been entirely different. It did not; and I fail to see why our use of these results, obtained by the free use of the instruments at our disposal, constitutes a breach of scientific ethics, when it is perfectly in order for any observer to make use of the signals from Russian and American satellites to derive and publish information about, for example, the atmosphere, the ionosphere, or the orbital parameters of the vehicle.

Jodrell Bank is an open university establishment, and we have no means of prohibiting the entry of the press even if we wished to do so. On this occasion the hall and corridors of the control building were thronged, and it is clear that whatever action I had taken on that afternoon of 4 February would have been publicized and criticized. Krause's suggestion that I might have distributed secretly a few prints seems to me to represent the nadir of all possible actions.

If Krause were familiar with the extent of our cooperative astronomical programs and exchange arrangements with the Russians, achieved by hard work over many years, he would perhaps be more guarded in the accusations made at the end of his letter.

BERNARD LOVELL
*Nuffield Radio Astronomy Laboratories,
Jodrell Bank, Macclesfield, England*

Abelson developed a strong argument in support of conservation in his editorial "Conservation and natural beauty" (17 Dec., p. 1539), but he neglected to emphasize a distinction between conservation and recreation.

Dwellers in most urban areas have easy access to city-, county-, and state-supported parks, many of which are or could be beautiful and could offer recreational opportunities for much of the population. Too often, however, these areas are ineffectually controlled. The harried urbanite who leaves the turmoil of the city to get some fresh air, peace, and quiet too often finds himself in a physical environment dominated by social "outdoorsmen" who equate recreation with an unlimited supply of beer and a portable radio turned to maximum volume. Or he may find himself thrown in with the weekend mechanic whose recreation centers on a noisy and often air-polluting adventure with the engine of the family car. These persons, though possibly few in number, destroy by their selfishness the general enjoyment of the recreational areas provided for the public.

Just as surely, the campgrounds are being dominated by the American need of 100-percent comfort. Many people who profess a respect for the out-of-doors cannot, in the final analysis, give up any of the city conveniences, and too often natural attractions lose out in the competition with these demands for total convenience and comfort. Recreation has become a big business and is emerging unwittingly as an opponent of true conservation.

Conservation implies preservation. Much of the effort currently directed toward recreation destroys rather than preserves. Open natural areas are being crosscut by networks of roads to provide easy access for all. Each road—and especially the new fenced super-highway—cuts off the natural free communication of wildlife with areas of browse and habitation. We must have roads, but roads should be planned not just by engineers, but by persons or agencies interested and participating in wildlife conservation. Furthermore, we build new roads but too infrequently eliminate the old ones.

Conservation activities are often ineffective because the dangers are realized too late by too few. There is a