

letters

whose only crime has been to speak out for human rights. There is also more than enough proof that just wanting to emigrate from Russia brings on the wrath of the government in a most pernicious manner, such as loss of employment resulting in the crime of "parasitism," publication rights removed, name removed from previously published papers, and in some cases imprisonment or exile to Siberia.

Perhaps as a Jew I am more sensitive to these issues because of the rampant antisemitism within Russian officialdom. Perhaps Toohig doesn't see this as his problem, but he should reflect in the words of a fellow theologian, Martin Neimoller:

"... then they came for the Catholics, and I didn't speak up, as I was a Protestant. Then they came for me. By that time, there was no one to speak up for me."

GEORGE GLASS

3/3/80 Texas A&M University

THE AUTHOR COMMENTS: Eric Hamp is, of course, correct. There are many aspects of Soviet culture that are different from ours. Many have dwelt at length on these differences, particularly those we would view as negative. I deliberately chose to emphasize the similarities, because I believe they are too often passed over. If we see the faces of ordinary men, women and children instead of an abstract "the Russians" it is much harder to tilt towards war, which is unthinkable.

Incidentally, Hamp is not quite correct about equality of treatment, as any unskilled Caribbean black or Latino trying to enter the United States will tell him. Our universities are staffed with professors who are welcomed to our land while the black or Latino is sent back to the grinding poverty of his native land. It makes it hard for us to throw stones.

TIMOTHY E. TOOHIG

Fermi National Accelerator Laboratory
4/21/80 Batavia, Illinois

Sartre's Black Hole

Inspired by C. Krishna Kumar's letter (June, page 13) in which he quoted from Mark Twain's short story, "Jim Baker's Bluejay Yarn," the experience of a "black hole" by the little bird who tries, in vain, to fill it with acorns, I would like to share with your readers an equally exciting and vivid account of a "black hole" by another celebrity in literature, Jean-Paul Sartre, in 1938.

As a matter of fact, in Mark Twain's passage, the hole is described as anything ("a perfectly elegant hole," "a mighty long hole," "a totally new kind of a hole," "a long hole and a deep hole

and a mighty singular hole altogether") but *black*.

Sartre's "Nausea" (translated by Lloyd Alexander, *New Directions*, 1964) presents a more intimate description of the black hole through the eye of Antoine Roquentin:

"... I enter the black hole. Seeing the shadow at my feet lose itself in the darkness, I have the impression of plunging into icy water. Before me, at the very end, through the layers of black, I can make out a pinkish pallor..."

He also depicts the personal experience of being in the black hole:

"... I stop to listen. I am cold, my ears hurt, they must be all red, but I no longer feel myself; I am won over by the purity surrounding me; nothing is alive, the wind whistles, the straight lines flee in the night..."

"... I am so happy: this cold is so pure: am I myself not a wave of icy air? With neither blood, nor lymph, nor flesh. Flowing down this long canal towards the pallor down there. To be nothing but coldness..."

He presents an existentialist's view of the black hole by saying that:

"... (it) is inhuman. Like a mineral. Like a triangle..."

I remember that, in an amusing article entitled "A theory of Ghosts" (*Physics Bulletin*, December, 1972), D. A. Wright tried using elementary ideas of wave mechanics to explain some "human experiences" of ghosts. It would be interesting to see if any of our black-hole theorists could explain this *petit rapport* of the black hole by Sartre!

ALBERT WONG

4/9/80

Cantab College
Toronto, Ontario

Oppenheimer

My wife and I thank you sincerely for your excellent article in the April 1980 issue on the career of Robert Oppenheimer, who was a close friend of ours during the late 1940's, the formative period of atomic energy. We had met Oppenheimer when he was directing a series of technical lectures at the Cooper Union in New York. He had organized the lectures around various prominent scientists of the region. We met Bob one night in the green room of the hall, after the program, and found him a brilliant and cheerful person. His first greeting was to ask us if we could take him to the Pennsylvania Station to catch a last train. After this first encounter we made sure not to miss any of the lecture series, which he was kind enough to let me join toward the end. Many of the series were done by Oppie himself, others from Princeton and other nearby universities. Har-

vard's President Conant was there, and Oppie appointed me later as series' secretary. Bob had organized the whole series himself; he fully deserved the praise your article gave him. We had found in the first few minutes what a brilliant young man he was.

Bob Oppenheimer's portrait in the April issue is a corker, and we saw much of him as time went on. How many times we found him there at the hall, and again, later, at Princeton, smiling and vigorous, no-end knowledgeable and brimming with enthusiasm as he lit his inevitable pipe. On one occasion Oppie invited us to have lunch with him at the restaurant in Princeton's Institute of Advanced Study, of which he had taken over the administration. On this occasion we were highly impressed when Niels Bohr turned up with P.A.M. Dirac in tow; we kept carefully quiet. But the end of that day was loaded even more, for we intercepted and bowed to Einstein himself, climbing the hill outside.

I was privileged to meet Oppie again in Los Alamos, when he asked me to consult with him about an article I was doing on him in *Science Illustrated* entitled, "The Man in the Pork Pie Hat." I did several pieces on him later in other magazines. I doubt if any great man we science writers were privileged to know was so unfailingly kind and agreeable as "Oppie." In my whole writing career there was no personality among the celebrated of the atom, from Fermi on down, who gave us as much inspiration and understanding of the bewildering technical field, as did Robert Oppenheimer, and without being lofty, as some of the others occasionally were.

The PHYSICS TODAY piece brings back to us the charm of a great scientist, and the simplicity of his thought. Please accept our thanks for running your article about a man who may have been misunderstood but was forever charming.

DAVID and INDIA WOODBURY

5/1/80

Ogunquit, Maine

Energy conservation

I was disappointed that Marc Ross's article on energy conservation (February, page 24) stressed "technological fix" solutions rather than changes in lifestyle. It is certainly useful to produce more energy-efficient cars, patch up leaky houses and recycle aluminum cans, but it would lure us into a false complacency to maintain that this would be enough.

As an example, one might note that Americans have developed the peculiar habit of drinking flavored, carbonated water in disposable aluminum cans. We can certainly save some energy by