

# Letters

## The Question of South Africa

To respond to Jeffrey Hoffman's letter (3 Sept., p. 868) with anything less than wholehearted support is to risk being condemned as a racist and a reactionary. [The letter invited readers to join in a protest against the support given by the Smithsonian Astrophysical Observatory and the Harvard College Observatory to the Boyden Observatory in South Africa.] I run that risk because I think Hoffman does a disservice to astronomy and to political reform in South Africa.

The British newspaper the *Guardian* described Hoffman's letter as a call for a ban on "South African aid" (1) and speculated about the effect that such a call might have on the proposal, which I originated, to develop a new astronomical venture at Sutherland in the Karoo. I am delighted that this proposal is now being carried out as a joint British-South African venture, although I left the employ of the British in South Africa largely because I could get nowhere with it when I made the suggestion 5 years ago.

This is not just a question of South African aid. Foreign observatories are established in South Africa because of the scientific opportunities available there. All the most interesting sky objects are in the south, and South Africa is one of the few areas from which their observation is possible. Sometimes, as in the case of the 1971 expeditions to South Africa to observe Jupiter, there is no alternative. British optical astronomy, currently in a depressed state, would have been practically nonexistent over the past 20 years but for British operations at Pretoria and Cape Town.

Successive South African governments have facilitated the operation of foreign observatories on their soil for a long time. The Boyden Observatory at Bloemfontein has received many kinds of help from South African sources, including the construction of houses and the relocation of the Defence Force Tank School, which threatened the environment of the station.

The Boyden Observatory was origi-

nally supported by Harvard alone but is now controlled by a consortium of European nations. It has had no continuing director and has received too little money to maintain either a high standard of astronomy or a high reputation for Harvard in South Africa. It is high time to increase contributions for its support.

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### Reference

1. A. Tucker, *Guardian*, 9 Sept. 1971, p. 4.

I have lived in Bloemfontein for the last 25 years as a Netherlands subject and a professor of botany. I do not wish to try to explain the extremely complicated racial situation in South Africa, which is different from that in many other countries (including the United States). I only wish to put on record that everybody in South Africa can express his views against apartheid in word and in writing without any fear. This is exactly what is being done daily in a number of newspapers, and scientists take a very active part in discussing, attacking, and supporting the government policy of apartheid. If scientists from outside South Africa take sides on this complicated issue they should at least check their facts. In the letter that was sent to the Smithsonian Institution, the statement "Any scientist speaking out against apartheid would be banned from the country if he were a foreigner and imprisoned if he were South African" most certainly does not conform to the basic requirement in science that facts must be stated accurately, honestly, and without bias.

I lived for 5 years under Nazi occupation and took an active part in opposing that system at the risk of my life. I know the difference between the freedom of speech and press in South Africa and the kind of serfdom where an opponent of the authorities is exterminated. I support freedom and happiness for every human being, whether he lives in Russia, Czechoslovakia, Hungary, or other oppressed nations,

and I hope that our colleagues in those countries will soon have the same freedom to attack their government that scientists have in South Africa. We will not reach that happy state by writing emotional letters with distortions of fact and by misusing the cathedra of science.

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That "Any scientist speaking out against apartheid would be banned from the country if he were a foreigner and imprisoned if he were South African" is simply not so. In 1965, as a graduate student visiting South Africa, I spoke out vigorously against the government's apartheid policy, as do numerous South African politicians and scientists. At least one white South African professor I met often made his antiapartheid feelings a matter of public record in letters to the editor of a large Cape Town newspaper. Nearly all of the English-language newspapers had anti-apartheid editorial policies. While the editors of these newspapers were subject to various forms of government harassment (a problem that is not peculiar to South Africa), they were allowed to continue to publish.

Thomas J. Cox's letter (3 Sept., p. 868) protesting the acceptance by *Science* of an advertisement from South Africa expresses a position with which I completely agree. I do not believe that it is morally defensible for the U.S. government or for private white U.S. citizens to support in any way those institutions in South Africa that would, by their segregated nature, subject both black U.S. citizens and black South Africans to constant insult and humiliation.

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## National Security and the Environment

Philip H. Abelson, in his editorial "Conservation and the minerals industry" (2 July, p. 9), discusses some of the difficulties that arise as we try to provide the materials necessary for a "satisfactory" standard of living, and, at the same time, attempt to minimize the adverse impact on the environment.

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One aspect of this subject that needs to be examined is how U.S. national security policies affect the decision to obtain minerals from domestic rather than foreign sources.

Domestic production of all the raw materials needed by the United States has never been an attainable U.S. policy objective. However, U.S. production of many minerals has been effectively promoted by various kinds of encouragement (the word "subsidy" is not inappropriate). The history of the national stockpile program makes this abundantly clear (1). There is ample evidence that the stockpile program has, on occasion, provided support for the domestic production of certain minerals in excess of national security objectives, while the acquisition of scarce materials from foreign sources has been discouraged (2). National security objectives have thus become entangled with domestic and regional economic interests.

National security policies, through their impact on the domestic minerals industry, can significantly affect the environment. Knowledge of the environmental effects of alternative national security policies is essential to an understanding of the total environmental impact of the minerals industry. Particularly in debates about national energy policy and the oil import quota system, the paucity of knowledge about the possible effects of alternative energy policies is staggering (3). Analytical frameworks are needed for assessing the probability, duration, and intensity of an interruption of foreign petroleum supplies so that plans for alternative methods of adjusting supply and demand can be prepared (4).

The oil import quota method of assuring national security reserves through support of excess domestic capacity has been convincingly scored as a poor method of assuring petroleum reserves for national security (5). A much better alternative might be a system of government-owned natural reservoirs, strategically located and ready to produce on short notice. Such a system would have less impact on the environment, could provide more security at a lower cost, and the burden borne by citizens could be distributed more equitably (6). It would also benefit the economic development of countries that export petroleum, whose revenues would increase as a result of greater U.S. imports. Many of these issues are discussed in the report of the President's Task Force on Oil Im-

port Control, which recommended a phase-out of the oil import quota system (7).

The oil import quota system has probably hastened the adoption of nuclear power generating facilities, as well as the commercial production of oil from western oil-shale deposits, the drilling of high-cost offshore oil wells, and the drilling on the north slope of Alaska. Research on the relationship between national security policies, domestic mineral industries, and the natural environment is badly needed.

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#### References

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2. U.S. Senate, National Stockpile and Naval Petroleum Reserves Subcommittee of the Committee on Armed Services, *Inquiry into the Strategic and Critical Material Stockpiles of the United States: Draft Report on the National Stockpile* (88th Congr., 1st session, 1963).
3. U.S. Energy Policies: *An Agenda for Research* (Staff report, Resources for the Future, Washington, D.C., 1968).
4. W. F. Lovejoy, *Quart. Colo. Sch. Mines* **64**, 145 (1969).
5. S. L. McDonald, *ibid.*, p. 157.
6. W. J. Mead and P. E. Sorenson, *Land Econ.* **47**, 211 (1971).
7. U.S. Cabinet Task Force on Oil Import Control, *The Oil Import Question: A Report on the Relationship of Oil Imports to the National Security* (Government Printing Office, Washington, D.C., 1970).

#### Test Bias Bibliography

Reference 6 in Clark and Plotkin's response (Letters, 24 Dec., p. 1278) to Stanley's article of 19 February (p. 640) contains the statement:

Accustomed as we have become for our study to be the launching pad for ETS papers, we were shocked to find that in the latest bibliography of test bias compiled by ETS (*TM Reports No. 2*, 1971) our study is not listed. Our problem now is to decide which is worse, misrepresentation or oblivion.

The introduction to *TM Reports No. 2* states:

The bibliography is limited primarily to material which deals directly with the question of test bias; for example, research reports or commentaries. It does not list reports which are primarily descriptive in nature, such as normative studies of tests on two or more culturally or geographically different groups.

Clark and Plotkin's book, *The Negro Student at Integrated Colleges* (National Scholarship Service and Fund for Negro