cause they do not represent large nations. At the present time it appears that the scientifically advanced countries are widening the gap in knowledge and abilities between themselves and the smaller nations of the world as a result of the high cost of conducting modern research.

Finally, the very existence of such a facility as an international laboratory will stimulate the formulation of higher levels of problems which cannot be considered with present resources. New dimensions to oceanographic research will be added with the wider availability of the best tools of the trade.

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Pyrotechnics

The editors of *Science* deserve praise for the clever and subtle cover of the Fourth of July issue. Bombs bursting in air and fireworks represented by droplets of the spray of the bombardier beetle! Man is a part of nature, sermons in stones, scientists as humorists.

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Intellectual Loneliness

Since reading various solutions for preventing the intellectual brain drain from underdeveloped countries and suggestions for improving the "intellectual loneliness" of educated and talented people in those areas (Singer, editorial, 7 June 1968, and Wolfle, editorial, 2 Aug. 1968), I have also found in my copies of *Science* (which arrive in irregular fashion) letters describing both the glut of doctoral graduates in developed countries such as Australia (Willix, 22 Nov. 1968) and the need for relevance in the training of Ph.D.'s who plan to work in underdeveloped countries (Ronkin, 3 Jan. 1969).

These editorials and letters all stress that future planning for technical manpower is essential, but it should not be done at the expense of creative and intellectual freedom. If the supply of Ph.D.'s exceeds the demand in many Western countries, there is a great need for them in developing countries, especially in higher education, industrial research, and government services. I suggest that those Western countries with a surplus of trained people establish overseas research and development divisions which would accept requests, for the services of certain specialists, from hardpressed and understaffed developing countries. This would appear to me to be more relevant than bringing foreign associates from underdeveloped countries temporarily to our Western institutions, as it would answer their immediate problems and use available facilities, instead of farming out the work to be done in a sterile, air-conditioned (and irrelevant) setting in a North American or European institute. The presence of scientists and engineers from the developed countries would also help relieve the "intellectual loneliness" of their less fortunate colleagues in these poorer nations.

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I am a Pakistani who received higher training in England and the United States and am now teaching in Canada. . . . Basically I agree with Ronkin's and Stone's (Letters, 6 June) proposals for certain supplementary training of foreign students. But I object to the idea of training a foreign student exclusively on the basis of the needs of his homeland, although these should be important considerations of the agencies which award fellowships. When a modified program for a particular student is requested, such a request should originate in the student's home institution or his homeland and should not be imposed upon him by the institution where he will be trained. Many universities rightfully impose a few necessary conditions on the foreign students from a developing country, such as proficiency in English, a number of extra courses as prerequisites, and so forth, but to go beyond that and offer them a compulsory modified program would appear to be a kind of selective training, depriving them of working in all other areas beyond the current needs of their homelands. Such a practice will obviously discourage development of future programs in their countries beyond those needs. . . .

As Stone pointed out, it is a fallacy that the developing countries should

not do basic research. It has been proved many times that such countries are capable of producing talented men: for example, Khorana (molecular biology) from India and Salam (theoretical physics) from Pakistan. The foreign training of these two scientists was not limited to the needs of India or Pakistan. Had they been assigned to narrowly selective programs in their early years based on the needs of their countries, they would have provided two more examples of misplacement.

The problems of educating foreign students from the developing countries are many but a selective program custom-made for them is not the answer.

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Starvation: Weapon of Warfare

Abelson's editorial (4 Apr., p. 17) implicating malnutrition with poor learning ability should awaken scientists and politicians to world starvation problems. Winick and Rosso have also recently associated malnutrition with inadequate brain development (*1*). Current reports from Biafra, where great numbers of people, especially pregnant mothers and children, have been deprived of adequate protein and mineral nutrition for 2 years seem to confirm the observations of Winick and Rosso (*2*). The reports are that four babies out of ten born in maternities in Biafra are deformed. This would indicate that severe prenatal malnutrition can induce small fetal brain size as well as severe skeletal and muscular malformations.

The scientific community should publicize these findings in order to educate governments of the inherent dangers of severe malnutrition, whether it is in the ghettoes, in Appalachia, in Mississippi, or in Biafra. . . . It would appear that future generations are equally threatened if starvation becomes a legalized weapon of warfare.

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References

1. M. Winick and P. Rosso, *J. Pediat.* **74**, 774 (1969).
2. B. Gans, *Lancet* **1969-I**, 660 (1969).