

cially in view of evidence that the U.S.S.R. intends this proposal seriously and considers complete disarmament to be a realistic policy.

Some of this evidence might be summarized as follows: (i) Public speeches by Soviet leaders indicate that they, like some of our own leaders, are worried about the consequences of a continued arms race—notably the increasing probability of war. The U.S.S.R. experienced widespread devastation and the death of some 25 million people as a result of the German attack in World War II.

Present Soviet leaders apparently wish to avoid a repetition of this experience; the new 20-year program of the Soviet Communist Party is reported to give top priority to "saving mankind from devastating world war." (ii) Under the Soviet system of nationalized industry, continued expenditures on armaments represent a wasteful drain on the national economy, with no particular profit to anyone. (iii) The detailed disarmament plan submitted by the U.S.S.R. to the United Nations in 1960 provides for international control and inspection of

all stages of disarmament as well as an international police force and does not include any veto on control measures. Premier Khrushchev has recently repeated his statement that the U.S.S.R. is prepared to accept any control measures proposed by the Western nations if we in turn agree to the Soviet proposal for general and complete disarmament.

Regardless of our opinions about the U.S.S.R., most of us would agree with the Soviet leaders that a world free from wars and the fear of wars would be desirable. If we do not wish to be condemned by "uncommitted persons and nations," we cannot now afford to dismiss the Soviet disarmament proposal without more serious consideration than that of its propaganda value.

The question of complete disarmament involves the decision whether the products of scientific research are to be used for the destruction or for the enrichment of human life. If this choice is open to us now, scientists themselves bear both individual and collective responsibility for the decision.

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#### Exporting Universities

Although I do not totally disagree with the ideas of Arthur F. Burns and H. V. Fairbanks [see *Science* **133**, 1557 (1961); **134**, 225 (1961)], I wish to make the following observations as a foreign student under the Fulbright program.

Very often the foreign student finds it difficult to locate an educational institution offering a suitable program of training bearing on the needs of his country. Perhaps for financial reasons he is forced to enter a school which offers him support, no matter what the nature of the training is going to be. This does not depend on whether or not he makes the choice of the institution before he arrives in this country; when he arrives in this country he has a high hope of making his training most profitable to his country. The choice of a wrong institution results in waste of the talent and resourcefulness of the individual concerned. It is probably for this reason that a foreign student gets discouraged and dissatisfied when he returns home, and not because he is unable to "teach what he has learned."

Further, it is not entirely true that a lack of identical scientific and educa-

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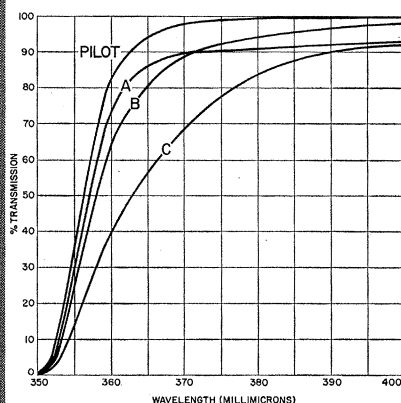
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tional facilities in the home country would prevent a student trained abroad from teaching what he has learned. I feel that it is the principles one learns that are most important, rather than what tools he uses to learn them. As long as the student is able to adapt these principles to conditions at home, he will feel no dissatisfaction when he returns home. Besides, what the student learns outside the classroom and the laboratory goes a long way toward educating the individual and ultimately, through him, many others. In this sense, I feel, students should always be encouraged to visit foreign countries to further their own education and ultimately be useful to their countries.

The idea of "exporting universities," however, is a good one, but it would create more problems than we imagine.

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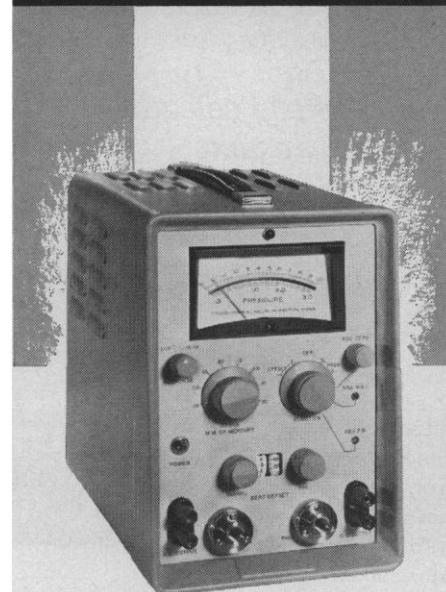
### Discovery and Obligation

The editorial "The jinni in the bottle" [*Science* 134, 359 (11 Aug. 1961)] ends with the curious questions whether the scientist can be expected "to differentiate his role as a scientist from his role as a citizen," and what can fairly be asked of a scientist in relation to anticipated social consequences of his discoveries. It is implied in these questions that his scientific activity divorces the investigator from his responsibilities as an ordinary human being. No such assumption is ever made, nor is its necessity felt, if the economic and social consequences of discoveries are pleasant ones, conferring benefit on humanity. It is even taken for granted, and justly so, that a scientist shall, if necessary, battle the vested interests, academic or otherwise, and openly oppose entrenched ideas and practices once his discoveries have convinced him that doing so is required by the public welfare. Many of our greatest scientists have assumed this responsibility at a heavy cost in personal comfort and peace. Why should the situation be different if the potential consequences of a discovery bode ill for humanity?

Your editorialist concludes reasonably that there is little point in recoiling from a discovery and in putting "the jinni back into the bottle," since, "if he stops, someone else will continue." Un-

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