asked a foolish question, it does not collapse; it goes on to answer a fool according to his folly. And the questioner being a fool will go on to act on the reply (*1*, p. 91).

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**Reference**

1. E. E. Morison, *Men, Machines and Modern Times* (M.I.T. Press, Cambridge, 1966).

## Pressures at St. John's

Sarno's comments (Letters, 17 Feb.) on Luther Carter's references (News and Comment, 16 Dec., p. 1428) to the captive AAUP chapter [American Association of University Professors] at St. John's University, Jamaica, New York appear to be an uncritical attempt to preserve a veneer of apparent respectability for a sorry educational spectacle. The indications are that St. John's University tolerates professors and professors' organizations on its campus that do not offer critical opposition to its administrators, and banishes individuals and organizations which fail to swear unquestioning fealty. Observers of the struggle for academic freedom at St. John's must agree with Carter that the AAUP chapter at St. John's is now "under the domination of administration sympathizers." Otherwise, would St. John's permit its continued existence?

In December 1965, the violations of academic freedom occurred with the firing of many faculty members. In January 1966, the dues of 32 members of the Vincentian religious order were paid by a single cashier's check (presumably purchased by the St. John's administration) in order to enroll them as new members of the AAUP chapter. (Prior to that, only one Vincentian had belonged to the chapter.) In February 1966, the "election" to which Sarno refers was held. Certainly Carter's conclusions seem justified. An "election" of new officers following the forcible elimination of dissenters and the packing of the electorate might conceivably be described as conforming to certain formal elective procedures, but it assuredly lacks the essential substance of the free democratic process.

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## Safe Use of Propylene Oxide

Kulik's warning (Letters, 27 Jan.) regarding the haphazard use of propylene and ethylene oxides as nondestructive sterilizing agents should be heeded, but needs qualification. These materials are explosive when mixed with air, as is ether, but it is my experience that when used correctly, under vacuum, no risk is involved. I have successfully and safely used ethylene oxide (70 percent by volume) under vacuum for many years to cold-sterilize wood samples to be used for studies of fungal decay. Providing a water pump is used for evacuation, no risk is involved with this closed system. After the sterilizing period, excess ethylene oxide can be removed without hazard through the water pump. I have also used propylene oxide under vacuum as a sterilizing agent; however, this gas is less than half as efficient as ethylene oxide on a comparative volume basis. Also, rate of diffusion of ethylene oxide into biological samples is much less than that of propylene oxide.

Kulik's suggested use of "quenched" mixtures of ethylene oxide and either freon or carbon dioxide is, in my experience, not always successful for complete sterilization. Such mixtures generally contain only 10 to 12 percent ethylene oxide, a concentration minimal for absolute sterilization, or even ineffective against resistant spores.

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## Pollution and Self-Purification

Abelson's editorial, "Toward cleaner streams" (16 Dec., p. 1401) is helpful in calling attention to improvement in water quality as the result of managing the biodegradation of domestic wastes from municipalities. The naturally occurring aquatic biota of most streams are known for their ability to degrade common domestic organic substances, which have been with us as long as life on earth. These aquatic organisms play a most important role in stream self-purification because their communities shift the kinds and numbers of their members to accommodate changes in the amount and chemical characteristics of the domestic wastes.

However, his editorial omits discussion of the large quantities of toxic (to stream self-purification organisms) inorganic wastes and of newer synthetic chemicals that do not undergo biodegradation or which interfere with the metabolism of many beneficial stream biota, thus promoting large standing crops of nuisance planktonic algae. These undesirable algae become a part of pollution because they are unsightly, often impart taste and odor, and have been known to kill fish and other "good" aquatic organisms by producing toxins or by consuming the necessary dissolved oxygen supply.

Most pollution is an ecological phenomenon and has more subtle factors than generally realized. In our big industrial rivers the solution to pollution is not dilution, as generally practiced, but the use of influence to eliminate or reduce industrial effluents, which prevent or interfere with the stream self-purification capacity.

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## Science in Non-Western Cultures

Dart and Pradhan have come to grips with a serious problem for agents of cross-cultural change ("Cross-cultural teaching of science," 10 Feb., p. 649). The problem is especially acute in the teaching of science and in science curriculum design, since there is no currently acceptable alternative to the rational system we call science in modern Western culture, whereas there are very acceptable alternatives in history, social studies, languages, home economics, and others. Teachers with some background in anthropology are increasingly aware that vast indigenous cultures in foreign countries may be endangered. Yet, as representatives of American culture, we have a strong tendency to employ our own dogmatic either-or teaching methods and solutions.

A point which may have been lost is the critical nature of the time period we commonly consider grades 1 through 3, or ages 5 through 9. There is evidence in the research of Piaget (*1*) and others that unless we are able to shape scientific thinking within this period, when the child is setting up perceptual and logical filters that he will carry with him the rest of his