

# Letters

## SST's Bag of Mischief

In "Sonic booms from supersonic transport" (24 Jan., p. 359), Kryter presents well-documented grounds for concluding that supersonic transport planes (SST) will not be permitted to fly at supersonic speed over populated land. The case against the sonic boom is, in fact, even stronger than he indicated: (i) The new design of the Boeing SST, announced after his article was drafted, has a 50 percent more severe sonic boom than the earlier design (3.5 lb/ft<sup>2</sup> as compared to 2.3 at start of supersonic cruise) (1). (ii) One of the greatest annoyances of the sonic boom is its tendency to awaken sleeping people—the boom is especially startling in the quiet of the night. (iii) There is no basis for assuming that persons on ocean-going ships will tolerate booms judged far too severe to be tolerated on land; estimates of the tolerable level of sonic boom overpressure range from 0.1 to 0.7 lb/ft<sup>2</sup> (2), and accordingly the proposed SST's 3.5 lb/ft<sup>2</sup> boom would be excessive by an order of magnitude.

Is the financial success of the multi-billion-dollar SST program to hang by the thin thread of unsubstantiated hope that people on ocean liners, freighters, tankers, fishing vessels, pleasure boats, and so forth will tolerate a day-and-night jolting ten times too great to be tolerated on land?

WILLIAM A. SHURCLIFF

*Citizens League Against the Sonic Boom, 19 Appleton Street,  
Cambridge, Massachusetts 02138*

### References

1. C. M. Plattner, *Aviat. Week* 89, 21 (1968).
2. W. A. Shurcliff, *SST and Sonic Boom Handbook* (Citizens League Against the Sonic Boom, Cambridge, Mass., 1968), chap. 29.

... No one has asked, "Is the SST a needed means of ordinary human transportation?" On the basis of what is already known about circadian rhythm, I say NO. Much has been published about the problems we humans encoun-

ter in transferring ourselves across several time zones. One article, I recall, stated that many business firms require their globetrotters to travel on weekends and forbid them to transact any important business until they have been in the new location at least a couple of days. With our jet planes, we can cross the continent in about 5 hours and fly from the East Coast to Europe in an hour or two more. These durations have reduced the fatigue of the journey itself to tolerable levels, which is a gain. But the adaptation time at the new location is far longer, the aforesaid couple of days. What will we gain by reducing the cross-continental travel time to 1½ hours and the time to Europe to 2 hours? You couldn't serve the passengers a good meal, including a couple of cocktails and a liqueur. Most feature movies would be too long. And that inexorable circadian rhythm. . . .

WILLIAM D. LYNN

*2809 Summerfield Road,  
Falls Church, Virginia 22042*

## Population and Famine

In his article, "Beyond family planning" (7 Feb., p. 533), Berelson disregards what needs to come *before* family planning. In the developing countries with very low literacy, villagers lack understanding of how a lower birthrate might improve the community's chances of economic development. Starvation is evidently around the corner; health is unpredictable; life span is generally short. Such people have little hope for improvement in their lifetime, little faith in the government; they cannot be expected to take a long-range view, and they can hardly even be persuaded that it might be profitable to try to control their own destiny. In such a society, the creative approach of overall community development, as exemplified by the volunteer service programs in various parts of the world emphasizing education, health, nutrition, and others, and

encouraging community cooperation, individual initiative, and self-sacrifice may provide the vital spark needed to get the development and planning process started. Sooner than expected, the reward may be planning behavior in all spheres, including family planning!

Without this vital spark, neither voluntary family planning nor the more radical coercive programs suggested can possibly succeed. Garrett Hardin is right ("The tragedy of the commons," 13 Dec., p. 1243). The solution is not technological, but social.

JOHN C. COBB

*Department of Preventive Medicine  
and Comprehensive Health Care,  
University of Colorado Medical Center,  
Denver 80220*

"All serious students of the plight of the underdeveloped nations agree that famine among the peoples of the underdeveloped nations is inevitable," and informed estimates of the time when food production will be exceeded by the requirements of the world's population range from 1975 to 1985 (1). This occurrence will impose a growth rate of close to zero on the world's population by causing the death rate to increase to the level of the birth rate. While the number of deaths would be influenced by the birth rate and the rate of increase in food supply, indications are that the number of people dying will rise from the present level of 50 million to about 120 million per year. The increase of 70 million deaths per year will be accompanied by the intense and extended suffering of malnutrition and starvation. These painful deaths will continue until the birth rate is drastically reduced.

Unless we intervene by lowering the birth rate, we will be faced with a catastrophe greater than any that has yet occurred in human history. Under these circumstances what kinds of intervention are appropriate? Shall we subscribe to AID's policy (Ravenholt, Letters, 10 Jan.) and hope that the extension of family planning will be effective? Berelson's analysis of measures that go beyond family planning is superb and realistic, but it leaves the impression that because of their present unavailability, the difficulty of gaining public acceptance, and other important factors, effective methods that go beyond family planning do not provide much hope in programs aimed at curbing the birth rate in underdeveloped countries.

I have attempted elsewhere (2) to

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make the point that involuntary methods of population control, which are now considered unacceptable, may become acceptable when society realizes that the alternative is mass starvation. If we wait until massive starvation is upon us to begin to develop such methods, millions of people will suffer and die unnecessarily while the effective methods are being developed. As scientists, we should provide society as soon as possible with adequate means to cope with the problem, even though such methods would not be used at this time. As informed citizens, we should try to make society aware of the consequences of inaction in reducing the birth rate. Ultimately, whether or not involuntary methods are used is a decision which should be made by society, not by scientists; but if scientists wait to develop effective involuntary methods until they are acceptable to society, the time lost may result in an enormous amount of avoidable death and suffering.

MELVIN M. KETCHEL

Department of Physiology,  
Tufts University School of Medicine,  
Boston, Massachusetts 02111

### References

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2. M. M. Ketchel, *Perspect. Biol. Med.* 11, 687 (1968).

## Pharmacology Institute Proposed

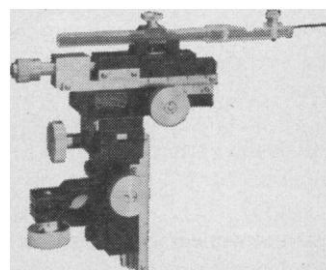
Rockliff's comments (Letters, 20 Dec.) on the Food and Drug Administration requirements for filing toxicity reports by pharmaceutical companies and his reply to my letter (16 Aug.) call for some explanation. . . . The Kefauver-Harris amendments requiring that drugs be both safe and *efficacious* became effective 1 June 1963. Since that time, we have made four studies, two of which were not submitted to the FDA. The legal status of toxicity data of a specific drug at a certain time and place is for government and industry attorneys to determine in court. This is a legal ambiguity that needs clarification. In the meantime, who protects the drug consumer? The seriousness of the problem to the patient and doctor is illustrated in a drug surveillance study by Borda (1) which showed that 35 percent of hospital patients on a medical service have adverse drug reactions. Prevention of drug reactions begins with the original evaluation of a new drug.

It appears to me that the coordina-

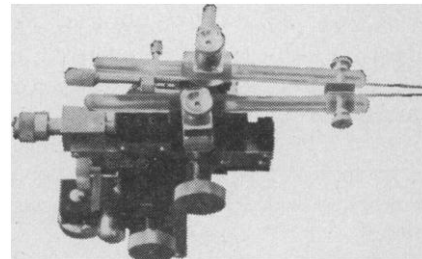


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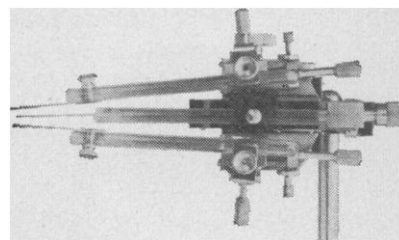
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