

# CORRESPONDENCE

## Doomsday Syndrome

SIR,—In the article by John Maddox on “The Doomsday Syndrome” in *Nature* for September 3 (233, 15; 1971) it is said that the current alarm about the effects of exhausts from supersonic aircraft on ozone levels in the stratosphere is quite unfounded. It seems to me that this statement does much less than justice to the calculations by Harold Johnston (*Science*, 173, 517; 1971). His very sober and detailed calculations of course involve a very complicated set of equations. He may have made errors, or may have overlooked some factors, as he himself is careful to admit. It would seem to me that Johnston’s calculations are an excellent example of the proper use of basic scientific knowledge in considering the impact of a new technological development. Like any scientific contribution, this is open to criticism and revision; but surely it is far better to raise these issues, and thrash them out, before building a fleet of commercial SSTs rather than after.

As to Mr Maddox’s larger thesis, I am not one of those who is crying out “Doom within the Decade”, but as far as keeping the world a livable place is concerned I regard present trends as extremely ominous. As one example, I suspect a survey of the world would show a steady increase, over the last half century and more, in the amount of land that is becoming desert or semi-desert. The Israelis, of course, are reversing this trend in their own small country; but the net trend, on a world wide basis, seems certainly to be for the deserts to increase. I spent nearly three months in Australia last year, and enjoyed it immensely; but the more thoughtful and well informed Australians evidently think that this is happening to them. It has certainly happened in the Middle East, in many parts of the Mediterranean Basin, and elsewhere, throughout the course of human history; but I suspect that modern technology, and the need of feeding a rapidly rising population, are accelerating the process. I want to see mankind develop a world that will be at least as good to live in a hundred years hence, or ten thousand years hence, as it

is today. I am not giving way to despair, and I believe in working to change what I see as the present trends; but I cannot be an optimist.

Yours faithfully,

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## Research and Development

SIR,—Professor S. Luria’s assertion (*Nature*, 233, 171; 1971) that the only option for control is at the level of development of technology and not of basic research should be accompanied by a clarification as to who should be responsible for the control. Should general citizens participate in the decision-making (and I believe they should), then they could do a proper job only if the possibilities of innovations emerge from the basic research at such a slow rate that they can keep up with the ideas about novel developments in science. Otherwise, the development of technology cannot be properly assessed.

As regards the control of basic research, these days most of the scientists cannot conduct the work on their own private funds, and some organizations are required to allocate public money to individual scientists. Since there are always more competent scientists with curiosity and more ideas than available funds, some sort of control has been, is, and will always be exercised. The crucial point then does not lie in the unrealistic question as to whether or not to impose a control on basic research, but what type of control should be chosen for whose benefit on both research and development.

Yours faithfully,

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## Insecticides

SIR,—Of three articles on insecticides in *Nature* of October 15, 1971 (leader on “DDT may be good for people” on page 437, Norman Borlaug’s support for the pro-DDT lobby on page 444, and “Pyrethrin prospects” on page 441), the last will be the most encouraging to many biologists. Your leader and Norman Borlaug appear to miss one important point—that the proposed banning of DDT in the USA will stimulate the search for better insecticides and integrated pest control which involves biological as well as chemical methods adapted to the ecosystem concerned. Efforts in these directions remain at a relatively low ebb so long as the bludgeon of DDT and other persistent synthetics is readily available. In the words of IBP’s Working Group on Biological Control which includes a number of leading specialists on pests and which met in September 1971 at Canberra, there is “increasing realization that the recent era of nearly sole reliance on pesticides for insect control has been a major failure—due to the attendant problems of pesticide resistance, inducement of secondary pest species, the ever-increasing need for more pesticides (pesticide addiction) and mounting costs, yet poor insect control and severe harm to non-target species and the environment. In short, a more ecological approach has become a recognized necessity”.

Few would go so far as to recommend the banning of DDT on a world basis until better methods become available and cheap. The present day leaders of developing countries are really too intelligent to follow the example of the USA blindly, as Borlaug suggests they would.

Yours faithfully,

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Should books be prohibited on the grounds that such a step would stimulate the search for better methods of communication?—Editor, *Nature*.