

“There is a tendency, even a perverse willingness, to suppose that the despoliation sometimes produced by technology is an inevitable and irremediable process, a trampling down of Nature by the big machine. Of course it is nothing of the kind. The deterioration of the environment produced by technology is a technological problem for which technology has found, is finding, and will continue to find solutions. There is, of course, a sense in which science and technology can be arraigned for devising new instruments of warfare, but another and more important sense in which it is the height of folly to blame the weapon for the crime. I would rather put it this way: that in the management of our affairs we have too often been bad workmen, and like all bad workmen we blame our tools. I am all in favour of a vigorously critical attitude towards technological innovation: we should scrutinize all attempts to improve our condition and make sure that they do not in reality do us harm; but there is all the difference in the world between informed and energetic criticism and a drooping despondency that offers no remedy for the abuses it bewails.”

to be said. The influence of science and technology has also become a convenient whipping-boy for uneasiness about the conduct of international relations. But is it sensible to protest that what is called “the bomb” has made the modern world too dangerous a place when there is at least some evidence that nuclear weapons have helped to head off potential conflicts in the past decade, and when the real concern is that governments have been painfully slow to recognize the need for better machinery for resolving inevitable international conflicts? Is it wise that ordinary people should be invited to beat their breasts about what they describe as the unnatural transplantation of organs from one body to another when there is a chance—it may be no more—that developments like these could eventually occupy a place in the powerful and beneficent repertoire of modern medicine? Is it just that people should complain about the supposed despoliation of the environment by the progress of technology when the real need is to hammer out means of regulating the unwanted side-effects? One of the oddest features of the unreasonable campaign against science and technology in the past few years has been the way in which it has brought together a motley gathering of unrelated interests—the gloom about pollution, for example, seems to have been one of the few causes to have united the extreme left and the extreme right in politics.

To say all this does not imply that there are no serious problems to be tackled. Ironically, however, the despondency which absorbs much intellectual energy is also a barrier to the development of the kinds of institutions which could more effectively provide

people with a more positive influence over the course of technical development. Breast-beating about pollution, for example, is one way of stifling hard-headed discussion about the kinds of limits on environmental nuisances which ought to be embodied in modern legislation. Gloom about nuclear weapons saps the will to design effective measures of arms control. Protestations of horror about chemical and biological weapons which ignore the plain truth that these devices are likely in most circumstances to be less effective than other weapons creates a sense of doom which seems to paralyse the mind. Anxiety about what is called “genetic engineering” prevents people thinking straight about important social matters such as policies on eugenics.

The hopefulness for which Medawar was pleading this week is one of the surest ways of removing obstacles like these. There remains the problem of how to make sure that voting populations have a more direct influence on the directions of technological change. This is one of the points raised by a correspondent on page 1082. To the extent that governments are now important determinants of technological research, this is a political issue. And is there any reason why a government should be more free from electoral restraint in deciding to spend money on the development of supersonic aircraft than it would be in the introduction

“Human beings have a history of more than 500,000 years. Only during the past 5,000 years or thereabouts have human beings won a reward for their special capabilities; only during the past 500 years or so have they begun to be, in the biological sense, a success. If we imagine the evolution of living organisms compressed into one year of cosmic time, then the evolution of man has occupied a day. Only during the past 10 or 15 minutes of the human day has our life on earth been anything but precarious. Until then we might have gone under altogether or, more likely, have survived as a biological curiosity; as a patchwork of local communities only just holding their own in a bewildering and hostile world. Only during this past 15 minutes (for reasons I shall not go into, though I think they can be technically explained) has there been progress, though, of course, it doesn't amount to very much. We cannot point to a single definitive solution of any one of the problems that confront us—political, economic, social or moral, i.e. having to do with the conduct of life. We are still beginners, and for that reason may hope to improve. To deride the hope of progress is the ultimate fatuity, the last word in poverty of spirit and meanness of mind. There is no need to be dismayed by the fact that we cannot yet envisage a definitive solution of our problems, a resting place beyond which we need not try to go.”