

# CORRESPONDENCE

## Television

SIR,—It is a relief to discover that *Nature* is beginning to watch the television screen with other than a conservative or jaundiced eye. For the most part, your recent writers have understood the weaknesses, strengths, and technical limitations of the medium. Nevertheless, I suspect that some critics are piqued that the programmes are not wholly satisfying to professors of genetics or readers in physics. I feel they might be unaware of the esoteric nature of the group to which they belong. Science programmes reach a narrow band of the potential audience, but this is vast compared with that touched by any other medium which vulgarises science. Television is laical. It is perfectly possible to use it to put across esoteric ideas in an esoteric fashion; however, to do so would be an uneconomic use of the medium. There are better ways of communicating complicated concepts.

In the past, views have been expressed that science misrepresented on television programmes will distort the public's understanding of the function and aims of scientists. This might be so. But it was worrying to see the boot on the other foot in the recent BBC Controversy programme "Soviet Scientists". Elderly members of the scientific establishment shamelessly (or blindly) manipulated a programme into a piece of propaganda. On that showing, the BBC and its attempts at political impartiality and objectivity has more to fear from science than scientists have from television.

Yours faithfully,

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Dr Reid was until recently Head of Science and Features at BBC TV.—ED.

## DNA Methylation

SIR,—In the article by Adams<sup>1</sup> two papers<sup>2,3</sup> from my laboratory have been misquoted. The author<sup>1</sup>, in referring to our publications, states: "These latter experiments, however, indicated that the maximum rate of methylation occurred at about the time of gastrulation; . . .". On the contrary, we wrote<sup>2</sup>, in 1965, "From these experiments we cannot conclude that the amount of 5-methylcytosine of DNA at later stages of development changes, because we have

not analysed as yet such parameters as, for example, the amount of DNA synthesised during the incubation period, the pool of methionine and the rate of synthesis of DNA at the stages indicated." And in the 1968 paper<sup>3</sup>: "No conclusion about quantitative differences of methylation at the different stages can be drawn because no information was collected on the pool of methionine and on the rate of DNA synthesis during the period of incubation with labelled methionine."

Moreover, in the article by Adams<sup>1</sup>, reference 4 is a misprint (page 28, column 2, line 8). The right references should be 2 and 7, namely, our two *J. molec. Biol.* papers.

I wish to add a word of caution for the implications derived by Adams from a stated five-fold increase of the ratio of 5-methylcytosine to thymine in the heavy DNA<sup>1</sup>. It is essential in all work on methylation of DNA in developing sea urchin embryos to consider the 2,000-fold increase in nuclear DNA, which occurs from fertilisation to the pluteus stage with no change in the total mass, the total nitrogen and the total RNA. An additional factor to be considered in the experiments by Adams<sup>1</sup> is the high toxicity of 5-bromo-2'-deoxyuridine to the embryos.

Yours faithfully,

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<sup>1</sup> Adams, R. L. P., *Nature new Biol.*, **244**, 27 (1973).

<sup>2</sup> Scarano, E., Iaccarino, M., Grippo, P., and Winckelmans, D., *J. molec. Biol.*, **14**, 603 (1965).

<sup>3</sup> Grippo, P., Iaccarino, M., Parisi, E., and Scarano, E., *J. molec. Biol.*, **36**, 195 (1968).

## Soviet Science

SIR,—I write, not only as a scientist, but also as a member of the Communist Party since my student days in 1932. Many illusions have been shattered during the 40 or so years since then; the process of achieving communist society is much longer and more tortuous than we believed in the 1930s. The way in which this change comes about is conditioned by the specific historical circumstances in each country.

It would take a vivid imagination to conceive of more difficult circumstances than those which the Soviet Union has

had to meet. One has only to consider that there was almost no experience of democratic forms of government on which to build; that the young Soviet Union was invaded by fourteen foreign armies and that it spent years of preparation for war in a hostile world and suffered the unparalleled destruction of the last war, to understand how it is possible for present Soviet attitudes to have developed and become entrenched.

I firmly believe, however, that great efforts should be made in the Soviet Union to open up the ways in which dissent can be expressed and taken into account, and so far, progress in this field has been disappointingly slow. In so far as administrative action is taken to inhibit the expression of dissent, I believe this to be wrong and against the best interests, not only of science, but also of socialism. It may be true that a good scientist is not necessarily a good politician, but that does not diminish his right to express his opinions on political matters.

It is also true that Soviet scientists have a lot to give the world as well as to learn from it but I do not see how they can do so unless they are able freely to take part in conferences and discussions outside the Soviet Union.

Soviet society is developing rapidly and has many splendid achievements to record. But it also has some big problems requiring solution. One of these is the correct handling of dissent, and its solution is crucial to the future of socialism.

I am confident that the problem will be solved as others have been in the past, but one thing is certain, its solution will not be helped, and may well be retarded, by the organisation of a campaign of public protest outside the Soviet Union.

Expression of concern over authenticated cases, provided it is done with understanding and in a spirit of helpfulness and, if I may say so, humility, is more likely to be effective. But there are powerful anti-Soviet propaganda machines waiting for any material which can be used to stir up the cold war and, if we provide ammunition for their campaigns, our efforts will certainly be counter-productive. This is essentially what I attempted to say in the recent BBC Controversy programme "Soviet Scientists".

Yours faithfully,

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