assumed given by the formula $S = \pi(1-p_i)$, with p_i the probability of succumbing to the ith hazard in that year; thus $\ln S = \Sigma \ln(1-p_i)$. It is now reasonable to assume that a given fraction k of the existing hazards is removed each year, so that $d(\ln S)/dt = -k \ln S$, from which $\ln\ln S = A - kt$, with A another constant. Since the annual infant mortality I is equal to $1-S$, we find that $\ln\ln(1-I)$ varies linearly with time. When I is small compared with unity (the case considered by Sternglass) a linear variation of $\ln I$ itself is predicted; for larger values of I a departure from linearity occurs.

Yours faithfully,

PHILIP L. TAYLOR

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Cleveland, Ohio 44106.

View that may Upset Scientists

SIR,—Your editorial of January 31 (*Nature*, **225**, 397; 1970) attacked the Thames documentary "And on the Eighth Day" as a symptom of a current "sense of hysteria" over pollution. I will happily defend the programme both in detail and overall, but I think the most important point for your readers is that you misinterpret the message of the film. It is not at all "an attack on rationalism and the pursuit of scientific knowledge". Quite the contrary. What the film queries is whether what today passes for scientific method is a sufficiently sophisticated instrument to cope with complex environmental problems.

In the programme we were arguing that pollution was certainly a cost that ought to be taken into account by industry and had not been. But we were also warning that scientific research could be just as narrow and misleading as old fashioned accountancy. Laboratory results may be incontestable in the laboratory but utterly misleading if too readily applied to the more complex circumstances of the environment. The interaction of variables may mean that the picture as a whole is quite different from the sum of its parts. I am not a scientist, but it seems to me that scientists ought to be examining (more humbly than your editorial) the appropriateness of their methods and outlook to the solution of complex problems.

I think they will also have to accept that if these problems affect all of us then non-scientists will have views on them. If in some respects the world is now a laboratory in which we are all experimental animals, we are unlikely to be reassured by a scientific outlook (or an industrial one) that says that because a danger is not proven with full scientific rigor nothing should be done about it. We cannot wait for proof if the proof may simply confirm that harm is already happening to us.

This view may upset some scientists. Let me make it clear that I do not suggest that a scientist as a scientist should deviate from the most rigorous search for scientific proof. But scientists are also citizens and if, before they have definite proof, they begin to fear that what they are investigating may point to widespread and long term dangers for everyone, they have a duty as citizens to say so. This should not then influence the scientific investigation of these possible dangers, but it most assuredly should influence public policies that may be creating dangers. It should transfer the onus of proof from the critics of hazards to the creators of them—the industrialist, the Atomic Energy Commission, the food manufacturers, the local authorities, the fertilizer producers, the drug manufacturers and so forth.

We cannot continue to assume that any scientific or technological innovation is fine until someone has spent 10 years proving otherwise. That is what the argument is about. You ask confidently, "Must man really be forbidden to use fire?" Your choice of metaphor is unwise. There are many occasions when men are forbidden to use fire, and rightly. And there are few things more terrifying than fire carelessly used and out of control.

Yours faithfully,

IAN MARTIN

Thames Television Limited,
Kingsway,
London WC2.

University News

Dr Baruj Benacerraf has been appointed Fabyan professor of comparative pathology and head of the Department of Pathology at **Harvard Medical School. Professor Ralph Mitchell** has been appointed Gordon McKay professor of applied biology in the Division of Engineering and Applied Physics at **Harvard University.**

Professor H. Jones has been appointed Pro Rector of the **Imperial College of Science and Technology, University of London,** and **Professor J. D. Smyth** has been appointed to the chair of parasitology at the College.

Dr Eric R. Bryan has been appointed professor of structural engineering in the Department of Civil Engineering, **University of Salford.**

Appointments

Mr Reginald G. Voysey has been appointed deputy director at the **National Physical Laboratory.**

Professor Lloyd Motz, Columbia University, has succeeded Dr Irving J. Selikoff as president of the **New York Academy of Sciences.**

Professor Walther Manshard, Justus Liebig University, has been appointed director of **Unesco's Department of Environmental Sciences and Natural Resources Research.**

Dr Alan L. Pinkerson has been appointed assistant chief of the **Myocardial Infarction Branch of the National Heart and Lung Institute, US National Institutes of Health.**

Captain A. A. Murphy has been appointed director of the **Guided Weapons Research and Development (Naval) Branch, Ministry of Technology,** in succession to **Captain K. A. W. Pilgrim.**

Dr L. Rotherham, vice-chancellor of Bath University of Technology, has been appointed chairman of the **Advisory Committee for Scientific and Technical Information, Department of Education and Science,** in succession to **Dr F. S. Dainton.**

Announcements

Professor B. L. Horecker, Albert Einstein College of Medicine, has been elected vice-chairman of the **Pan-American Association of Biochemical Societies** for 1971, and will succeed **Dr D. R. Whitaker,** National Research Council of Canada, as chairman, in 1972.

Professor F. S. LaBella, University of Manitoba, has been awarded the **1969 Steacie Prize** in natural science.

The third **Clark Kerr award** for extraordinary and distinguished contributions to higher education will be presented to **Sir Eric Ashby.**

The managing trustees of the **Drummond Trust** invite applications for a senior Drummond fellowship for research in nutrition. The fellowship will normally be tenable for 2 years and preference will be given to biochemists with interests in the field of inherited metabolic disease. Further details can be obtained from the Honorary Secretary, Drummond Trust, University College London, Gower Street, London WC1.