

# Correspondence

## Government Research

SIR,—Your comments on “Green Paper to Burn” (*Nature*, 228, 1; 1970) raise again the question of the government’s relations with industrial research. A fair amount has been said on the subject, but there is one form of analysis that I have not seen applied simply and directly.

This arises from categorizing research activities in the dimension that ranges from long term, fundamental and speculative work through applied research to development. Such classification can in fact be done quite straightforwardly in terms of the time expected to elapse before the work in question will be applied outside the laboratory. The time scale stretches from about one year for development that will be used very soon to the nearly pure research looking ten or more years ahead. (Work at the ultra-short end of the spectrum could hardly be called R or D.)

Generalizing for the overall national picture, I suggest that industry is looking after 1–2 years work and the universities are covering work at 5–10 years range: with the recent expansion of universities, we need not be unduly worried over shortage of long-term effort.

The serious gap occurs in the intermediate region, research looking, say, 3–6 years ahead. This is the area where spin-off from defence research was most applicable and where the old look of research associations was aimed. Only a few industrial laboratories are long-sighted enough to reach this territory, and the current tendency for research associations and the UKAEA laboratories to look for short-term income is making them also neglect this middle range of applied research.

I have myself come across two projects recently which, under the climate of a few years ago, could have been funded largely with government money. They were recognized to be promising, but because they were somewhat speculative and could only come to fruition in three or four years’ time, industry, with its present tight purse-strings, was reluctant to put up the necessary finance. I suspect that these are typical of many cases formulated and unformulated.

Of course, there are honourable exceptions and, of course, diagnosis is easier than cure. But I believe that Britain’s technological health will be endangered until this particular weakness in the R and D structure is recognized and attempts made to remedy it.

Yours faithfully,

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## A Congress is a Congress is a Congress

SIR,—In view of the opinions expressed in *Nature* (228, 13; 1970) on international meetings, you may be interested in the “case history” of the Second International Congress of Parasitology which took place on September

6–12, 1970, in Washington DC and which involved some 1,600 participants from many parts of the world.

The organizers of this congress wanted it to be different from any previous similar gatherings by proposing a greater informality of the meetings and a full opportunity for free and ample discussion. This was attempted by parcelling up the proceedings of the congress into a large number of small “colloquia” on a well defined subject.

In addition there were eight formal meetings under the banner of “Technical Reviews” dealing with topics of wider interest (taxonomy, genetics and evolution of parasites; pathology of parasitic infections; phyto-nematology; pharmacology of antiparasitic agents; immunity; seroepidemiology; physiology and biochemistry of parasites; drug activity against trematodes).

In organizing the congress the selected chairmen of seventy-five colloquia approached a number of participants with requests for relevant papers. Other unsolicited contributions on the same subjects were grouped accordingly. 980 papers submitted to the congress were published in advance in three special issues of the *Journal of Parasitology* and distributed to the participants at the time of registration.

Chairmen of colloquia urged the participants not to present their papers formally but to make a single point, thus stimulating the discussion. Moreover, participants were not committed to any specific colloquium and were given free rein to follow only their personal interests. All this was done to avoid the general criticism of large international meetings that too little time is left for discussions.

The final result of this unconventional convention was hailed as a success by a majority of the participants. No doubt the new formula worked well in some colloquia and was less effective in others, especially when several chairmen were unsure how to apply it. There were complaints that a large number of colloquia and their simultaneous running were responsible for a degree of frustration in people whose interests were overlapping and who were anxious to be exposed to the greatest possible amount of cross-fertilization.

It seems that the degree of intercommunication achieved by a gathering of scientists is not proportional to the numbers assembled, and that there is a critical limit beyond which even the informal exchange of views becomes difficult. There is no uniform or infallible method applicable to a large congress intending to preserve the intimacy and the free give and take of a small meeting. The Second International Congress of Parasitology was undoubtedly a courageous and an interesting attempt to square this particular circle. The next congress will take place in Munich in 1974. *Qui vivra, verra!*

Yours faithfully

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