

Wider implications of the project should then be examined by an interdisciplinary group whose membership should be chosen according to the particular problem under discussion. Such studies, said Mr Benn, are already being considered by the Ministry of Technology for major projects. The final stage, opening up the issue to full public debate, represents the demand that the power of technology be brought under democratic control but, said Mr Benn, it would require a different attitude among members of the public. Many people feel that they are not qualified to comment on technological questions but little technological knowledge is required to suggest that some of the money devoted to space research should be spent on health research, for example.

Mr Benn pointed out that these suggestions are not new but they have not previously been heard from the Ministry of Technology. If the Ministry does change its decision-making process in this way, then perhaps issues such as Concorde, which Mr Benn firmly supports, would be opened up to public debate before a final decision is taken.

DOGS

Rabies at the Races

FOR the second time in five months a case of rabies has slipped through the British quarantine regulations. A mongrel that was imported from Pakistan in May, and released from quarantine in November, died of rabies at Newmarket on February 27. It had been vaccinated against rabies some eighteen months before it reached Britain. There is apparently no danger to local wildlife or to racehorses stabled in the Newmarket area, for the only animals that the mongrel bit were three dogs which have been well isolated, but the case is significant because it represents the first time since 1922, when Britain became free of rabies, that the disease has appeared more than eight months after importation. The present quarantine period was lengthened to eight months with effect from last December, presumably because it would have covered all the earlier cases.

The Ministry of Agriculture is not yet prepared to say whether the period will be extended yet further, although last year the minister, Mr Cledwyn Hughes, promised to review the quarantine arrangements at the end of 1970. He has, however, asked for an official report on the Newmarket case. Clearly there are practical limits to lengthening the quarantine period; a year's quarantine, for example, would double the demand on the space of the quarantine kennels. Even this would not guarantee against a further outbreak, because the rabies virus has sometimes incubated for more than a year (M. M. Kaplan, *Nature*, **221**, 421; 1969). Is there a case for banning the import of dogs altogether, at least from countries where rabies is established? The trouble is that giving the quarantine regulations too savage a bite would encourage the smuggling of dogs into the country.

The Newmarket outbreak adds weight to the view that compulsory vaccination would be a poor substitute for quarantine. If the vaccine works it usually gives immunity for three years, but it seems to be only 60–80 per cent effective. It is too soon to know whether the two-day slaughter of wildlife at Camberley last October

has been successful, but so far no evidence of rabies has appeared.

TECHNOLOGY

Sermon to Mancunians

GREATER participation by the public in technological decision-making and more thorough analysis of the social and economic implications of technological projects were called for last week by Mr Anthony Wedgwood Benn, Minister of Technology. Speaking at a meeting of the Manchester Technology Association in London, Mr Benn said that "increasing fear that technology is being misused, that we are pursuing increased production of goods and services too single-mindedly and without regard for the general quality of life" may lead to a campaign against technology. The answer to this, he suggested, is to open up major technological decisions to public debate, and to encourage research teams to look at the social implications of their work.

Technology can be brought under democratic control in a three-stage decision-making process, said Mr Benn, and his speech was liberally sprinkled with hints that the Ministry of Technology is at present trying to find a way to incorporate such a process into its own decision-making machinery.

For the first stage of the process, Mr Benn suggested ten questions that should be put to research workers and to initiators of technological projects. To answer these questions, the whole research team, board of management or sponsoring agency would have to discuss the likely costs and benefits of the project, to assess its effects on manpower resources and on training, and to evaluate alternative projects. These "ten commandments" are clearly intended to stimulate discussion among technologists of the implications of their activities—a discussion that Mr Benn indicated does not always take place. Instead of saying, for example, love thy neighbour as thyself, Mr Benn suggests that technologists should ask themselves, "Would your project—if carried through—promise benefits to the community, and if so what are these benefits, how will they be distributed and to whom and when will they accrue?"

SOVIET UNION

Plant for Flower Power

HEAVY industry is not always the apple of a Russian planner's eye. A new branch of agriculture has recently been inaugurated in the Azerbaijan SSR—the growing of flowers for the perfumery industry. Roses, narcissi, mint, orange and lemon blossom and other ether-bearing flowers have become the raw material of the latest venture in Soviet production. The State Plan of Azerbaijan calls for the organization of state farms that are to be devoted entirely to this new crop. Processing factories are to be set up, with research laboratories and experimental centres. Present research is concerned with the active principle of saffron (obtained from the stamens of the yellow crocus); the most satisfactory achievement to date has been the isolation of an especially valuable ether oil from the scented narcissus 'Bulgarian Beauty'.