

Liberties would then be filing suit on the grounds of the First Amendment to the Constitution, that which assures free speech — in this case the teachers'.

Exactly the same argument applies to the disastrous legislation that the state of Arkansas has hung around its neck. (In the past few weeks, Mississippi has followed suit.) By requiring that biology teachers should in future teach "creation-science", it is requiring that honest people should tell what they consider to be lies in public. By doing so, Arkansas will undermine the professional integrity of a substantial part of the state's teaching staff and ultimately of the education system as a whole. Is it too much to hope that, when the trial is over — and however it is decided — Arkansas will have the wit to find some way of delegating the fine control of the school curriculum to those on whom the responsibility properly falls — the educationists employed for that purpose?

What systems analysis?

Laxenburg has a new director but an uncertain future. It also needs a policy.

Not so long ago, in the early 1970s, governments throughout the world were being asked to subscribe to what was intended as a unique instrument of scientific collaboration between East and West — the creation of the International Institute of Applied Systems Analysis at Laxenburg near Vienna. How splendid, the prospectus read, that there should be a research institute (supported principally by the governments of the Soviet Union and the United States) dedicated to the application of objective methods of analysis to problems of contemporary importance throughout the world. Eventually, the misgivings of those who held that the prospectus put the cart before the horse — the objective of East-West collaboration before the definition of a tangible programme of research — were overcome. The institute came into being and has indeed been a place where people, mostly modellers, desk scientists and even social scientists from both sides of the European boundary, have worked alongside each other. The most conspicuous product of this effort has been the study on energy published earlier this year. Now, for two reasons, the institute is in for a sea-change.

The most immediate difficulty is financial. President Reagan's first budget in March deliberately required that the National Science Foundation should reduce spending on overseas activities in general. Nobody appears at the time to have appreciated that United States government support for the Vienna institute is lauded through the National Academy of Sciences until the academy pointed out that it would be unable to pay the subscription due this month. The United States Administration has now found the funds with which the academy can make the contribution legally required of it. Whether it will be able to remain a member in 1983 remains uncertain — and will not be known until the budget for 1983 is published next February. It is, however, a fair guess that if the United States if forced to withdraw, the Soviet Union (whose financial contribution is identical) will also do so. The Laxenburg institute, already somewhat shrunken, must live with uncertainty until the summer.

At first sight, this may seem the worst time for a new director to take charge at Laxenburg. That, however, is the opposite of the truth. If change of some kind is unavoidable, a new director may be an advantage. This is the spirit in which to regard the appointment of Professor C.S. Holling, an ecologist from the University of British Columbia, to Laxenburg with effect from 1 December. He may have to share some of the personal anxieties about the future that afflict the staff of the institute, but he is likely to be less strictly bound by past promises than his predecessors would have been. With a little luck, he may be able to devise a programme of research that can be tailored as the months go by to suit whatever budget becomes available in the year ahead.

But that kind of programme should that be? The trouble so far at Laxenburg is that the original scepticism about the institute has not been stilled by its achievements. The institute has laboured for

a decade and produced not so much a mouse as an elephant — a turgid account of familiar problems in the supply of and demand for energy that might have been illuminating if it could have been published several years earlier. Plainly that is a model for Dr Holling to avoid.

The question remains, however, of what is to be understood by the term "systems analysis" in the institute's title. Computer engineers have a simple answer, but the Laxenburg institute is intended as more than a computing centre. Originally, the phrase may have provided a seemingly innocuous umbrella beneath which people from different economic systems could work together. Now it may be necessary to acknowledge what has always been the truth — that the most useful problems for the institute to tackle are problems that impinge on economics and thus, because economics is the theory of social choice, on politics. What mechanisms should there be, for example, for sharing technological activity among industrialized states, the contemporary equivalent of Adam Smith's classical problem? How most efficiently can the supplies of natural gas to the industrialized world be used? And what can be said about the pattern of manufacturing industry and of world trade in the years ahead? With its unique constitution, the institute is well placed to capture international attention with attempts to answer such unspoken questions. The danger is that it will settle for yet another easy option, and devote itself to important but distant questions such as the problem of the accumulation of carbon dioxide in the atmosphere.

Yellow rain too soon

The United Nations commission on poisonous yellow rain in South-East Asia issued an inconclusive report. It would have been wiser not to comment.

The United Nations has done itself a power of harm by its appointment of a commission to investigate charges by the United States that the Soviet Union has been using biological weapons in South-East Asia and in Afghanistan. Last week, the commission (having been to South-East Asia but not to Afghanistan) said that it had been unable to reach a definite conclusion. This week, the commission (which would no doubt prefer to be released from its responsibilities) is likely to be asked by a formal resolution of the General Assembly to soldier on. Dr Kurt Waldheim, the Secretary-General of the United Nations, is no doubt hoping that by the time the next report on the subject appears, his own continued tenure of his important post will have been confirmed.

The tale of the yellow rain over South-East Asia is far too tortuous for anybody's comfort. The allegation that aerial sprays containing unusual amounts of mycotoxins have recently been sprayed over South-East Asia was first raised at the end of last year but was brought more firmly to public attention some weeks ago by the United States Secretary of State, Mr Alexander Haig, in a speech in Berlin. The subsequent tour of European capitals by a group of Mr Haig's choosing was notable partly for the anonymity of its members but chiefly for the vagueness of the extra evidence it was able to produce (see *Nature* 22 October, p.598). The group left those who heard what it had to say with the firm impression that it would have been happier if there had been more substance in what it said.

Unhappily, the passage of time is death for innuendo. Mr Haig charged that the Soviet Union sprayed mycotoxins from the genus *Fusarium* on innocent people. It was never self-evident why such a stratagem should be followed, even by supposedly malevolent people. Why not anthrax, for example? The classical disadvantage of biological weapons is, after all, well-known to be their slowness. Furthermore, even though further samples of soil containing mycotoxins have been produced, they may be there naturally, and it is premature to claim it as proof that these chemical agents were used. What the US government should do is to publish the data it has to hand in the scientific literature and let others judge for themselves what should be made of it. Jumping the gun is no way to world peace.