who might bear adverse consequences — dealt with “the fundamental nature of human life”.

Finally, the whole issue may come under review by the newly established President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioural Research. Following an approach from the National Council of Churches, the commission is exploring whether any major reviews of the ethical implications of genetic manipulation are already in progress. If not, the subject might be selected for study by the commission when it meets in September.

David Dickson

Biotechnology

European setback

Brussels

THE European Commission's programme of research in biotechnology was seriously set back last week, when a meeting of CREST failed to endorse the programme or even to agree on a compromise. Over the past four years, the commission has developed a plan for spending £28 million over the next five years (half of it to be supplied by national governments) on a number of projects.

France was the chief stumbling block at last week's meeting of CREST, the committee which advises the European Community on research and development policy. French representatives argued for an alternative programme of fellowships to help train potential genetic engineers. The meeting of CREST was the last at which the biotechnology programme will be considered — a decision on what to do now rests with the Council of Ministers of the European Community, on which France will be able to exercise its veto.

According to reliable national sources, the council will have to choose between the commission's original plan, the French proposal and a compromise between the two supported by the United Kingdom. That would entail spending a total of £18 million over only four years and the elimination of some of the research projects proposed by the commission.

The CREST decision has caused much ill-feeling among European states. West German delegates at the meeting last week supported the French position, but more flexibly. One angry Dutch observer said last week that the smaller European states would feel misled by the larger states. An Italian official said that France had opposed the commission's plan because it wished to keep all projects with “pace” to itself.

The difficulty now is that the Council of Ministers, when considering the biotechnology programme, will be advised by an *ad hoc* scientific subcommittee of COREPER — the committee of community ambassadors in Brussels, which is well used to taking political considerations into account. It could, for example, think

of trading an agreement on the biotechnology programme for an agreement on sheepmeat.

There is nevertheless a chance that a compromise proposal may be adopted, if Germany can be persuaded to agree. The compromise would involve restricting the research projects to:

- the development of new reactors involving immobilized multi-enzyme systems;
- the transfer of genes to *Escherichia coli*, *Saccharomyces cerevisiae*, and other organisms;
- gene transfer in microorganisms and plants important to agriculture;
- safety studies.

The compromise also emphasizes mobility of manpower, in line with the French proposals, by devoting 30 per cent of the budget to training of foreign nationals in national laboratories, training of industrial scientists in university laboratories, and short courses in biohazards and safety measures. However, the French proposal does not mention safety questions, which must be satisfactorily answered if public confidence in the emerging technology is to be maintained.

In Britain, the possible demise of the European initiative is seen more as a danger signal than as an unmitigated disaster. Dr Duncan Davies, Chief Scientist at the Department of Industry, and chairman of the Cabinet Official Committee on Biotechnology which has just produced a draft White Paper on biotechnology in Britain, told the House of Lords recently that the commission programme — as it would affect the UK — would amount to only 10 per cent of the probable British effort over the next five years.

At Imperial Chemical Industries Limited, which probably has the most advanced industrial biotechnical team in Britain, the loss of the European programme is seen as less sad for ICI than for “UK Limited”. Things could be done on the European scale, said Dr Bernard Langley of ICI's Policy Group last week, “which would help everyone”. Coordinating safety standards and experimentation and developing new host-vector systems were examples.

In academic circles, where the UK Spinks report on biotechnology recommended an immediate injection of 20 new posts, and cash, the loss of commission money is taken more seriously. “Unless we have more posts soon, we are in deep trouble” said one leading biotechnologist last week. “And I see no sign at all of the Department of Education and Science taking an intelligent interest in the issue.” The loss of the European programme could be the end.

The draft version of the White Paper currently in circulation also may be little consolation to Britain's biotechnologists. According to one comment, “it offers everything short of real help”.

Robert Walgate

Yugoslav academics

No liberalization

At least for academics and scientists in Yugoslavia, there seems to be little sign of the liberalization expected to follow Tito's death.

Ivan Supek, a leading Yugoslav nuclear physicist and an active participant in the Pugwash movement, has just published in Britain a defence of his view that scientific research must be based on ethical principals, and of his resolute opposition to nuclear weapons. His views, he claims, have been consistently misrepresented by the official Communist press, which treats him, at best, as some kind of Don Quixote.

Supek, who is now head of the Institute of the History and Philosophy of Science in Zagreb, was formerly in charge of the Rudjer Boskovic Institute of Theoretical Physics in Zagreb. While working there, he watched with increasing alarm the development of a nuclear institute on the outskirts of Belgrade where, he suspected, preparations were being made for the development of nuclear weapons.

His own anti-nuclear campaign of the 1960s was, he says, only one aspect of a growing discontent among intellectuals and scientists, who felt their status had been devalued by the Party in the name of the working class. The University of Zagreb's 300th anniversary in 1969 was seized on by the academics as a unique opportunity to redress the balance.

The appearance of Supek's apologia coincides with an appeal to the world academic community by seven professors from the University of Belgrade for support in their campaign against the latest revision of the Serbian law on universities.

These lecturers were closely associated with the philosophical journal *Praxis*, founded in the mid-1960s as the organ of the Croatian Society for Philosophy. Originally in the hands of Zagreb academics who took a generally social democratic line, it gradually became associated with the more liberal-marxist Belgrade philosophers. Finally, it was closed in 1975, and eight lecturers were suspended. They were not allowed to teach, lecture or publish; they did, however, draw a reduced salary and could benefit from the free health service.

Their status will however be radically changed by the revision of Serbian law on universities, passed on 5 June. Under the previous law, (introduced in 1974) lecturers could be suspended if they “damaged social interests”. Under the new law, they can be sacked after two years' suspension. Persons already suspended for more than two years will be sacked in six months' time. The seven lecturers still under suspension (one has since found another post) maintain that this law has been brought in specifically to deal with their case. They further state that it is unconstitutional, being against the

Yugoslav Federal Labour code in which the specified grounds for dismissal do not include the nebulous charge of "damaging social interests", and because it specifically excludes any right of appeal. Most seriously, they see it as a violation of the Universal Declaration of Human Rights and the Helsinki Final Act, both of which have been ratified by Yugoslavia. They conclude that such "arbitrary interference and discrimination constitutes not only an act of harassment but an act of imperilling the very conditions of existence of a scholar".

Vera Rich

Scientists' pay

UK rumpus

A decade of discontent among scientists in the British Civil Service will come to a head on 5 August, when the dispute about salaries for 1980 will go to arbitration. The most immediate issue to be settled is whether the Civil Service will accept the latest pay offer by the Civil Service Department (CSD). Underlying the dispute, in which the Institution of Professional Civil Servants has taken most

of the weight, is whether existing methods for settling Civil Service pay should apply to scientists.

The chief humiliation in this year's pay offer is that some grades of the scientific Civil Service are to be offered no increase of salary. After a period in which the general level of salary increases in the United Kingdom has been running at something like 20 per cent, it is not surprising that passions have been roused.

Thus the salaries of those at the top of the Senior Principal Scientific Officer grade will, if the CSD proposal is unchanged by the arbitration award, remain unchanged between 1979 and 1980.

Mr William McCall, general secretary of the IPCS, has said in a circular to his members that the offer of 1980 salaries is "disgraceful". The offer, if it is upheld by arbitration, may have repercussions outside the Civil Service, and among the staffs of research councils in particular.

The pay of scientists in the British Civil Service has been a contentious issue since the early 1970s, but the professionals within the service appear to be divided in how they would like to see the present arrangements changed. The ICPS bases its complaints chiefly on the use of what is

called "pay research" to determine public servants' salaries.

This procedure entails the search for groups of scientists carrying out comparable work in the private sector of British industry. Quite independently, the use of pay research for determining civil servants' pay has recently been criticized in the United Kingdom on the grounds that the comparisons are flattering to the Civil Service and in any case take no account of the value of index-linked pensions to which retired public servants are entitled.

The IPCS objects to pay research because of the element of circularity which, it says, is likely to be introduced into the comparison because the Civil Service is the largest employer of scientists on research and development in the United Kingdom. But it also says that for some categories of senior people, suitable comparisons with private industry do not exist.

Other members of the scientific Civil Service are, on the other hand, anxious that there should be a more radical revision of the arrangements for regulating both pay and career prospects for scientists in the Civil Service. One body of opinion holds that the pay of scientists in the Civil Service compares well with that of scientists in,

Long-standing pay dispute continues

The dispute between the Civil Service Department of the British government and the Institution of Professional Civil Servants, the principal union representative of government scientists, has been rumbling on for two years. Since the early 1970s, the institution has reluctantly agreed that the pay of some categories of scientists should be determined on the recommendations of the Pay Research Unit Board, which is responsible for comparing civil servants' salaries with those of comparable groups outside.

The institution's misgivings about "pay research" for fixing the salaries of scientists stems from its belief that the Civil Service, which is the "largest single employer" of scientists working in research and development, is also a major influence on outside salaries. It also holds that pay research does not provide for the practice within the Civil Service of allowing for the promotion of individuals on the grounds of merit and says that career patterns outside are, in any case, quite different from those within the service.

The notion that civil servants should be fairly treated compared with people doing comparable civil work has been a cornerstone of Civil Service salary determinations since the Priestley Commission reported in 1956. More recently, however, the Fulton Commission on the organization of the Civil Service in 1968 advocated two further principles — the barriers

between the scientific and the administrative branches of the Civil Service should be broken down and salaries in the two branches should be linked. From 1968 until recently, the salary scales of Principal Scientific Officers and of Principals (in the administrative branch) have thus been identical.

The first breach in this principle came last year, when Principal Professional and Technical Officers (including engineers) in the Civil Service were awarded a salary increase which, although three per cent above the general increase, gave them salaries which were £729 less than those of Administrative Principals.

This year, scientists within the Civil Service come off even worse. The offer from the Civil Service Department on 26 June, based on the work of the Pay Research Unit, would have increased the salaries of all but the more senior scientists in the Civil Service by between 14.0 per cent and 25.3 per cent. Senior Principal Scientific Officers, of whom there are more than 700, were however offered no increase of salary, while it was proposed that four points should be added at the bottom of the salary scale to be occupied by future entrants.

Senior Scientific Officers and Principal Scientific Officers also fare badly, with increases at the top of the pay scales concerned of 9.1 per cent and 6.2 per cent respectively. More significantly, to many civil servants, the link with the salaries of Administrative

Principals has been broken — under the terms of the new offer from the Civil Service Department, the salaries of Principal Scientific Officers would in future be nearly £2,000 less than those of Administrative Principals.

The basis for the offer apparently rests, at least where the PSO grade is concerned, on the observation by the Pay Research Unit that in many industrial companies scientists are paid less than engineers. This has been held to justify the differential between the salaries of the Principal grades for scientists and engineers.

One of the issues in dispute between the Institution of Professional Civil Servants and the Civil Service Department is that of whether pay research can apply to the salaries of the small numbers of people in the grades of Senior Principal Scientific Officer and above. The CSD is insisting that comparisons with outside industry are possible at least for the SPSO grade.

There is also a dispute about the applicability of the agreed arbitration procedure.

Maximum salaries offered for 1980

Grade	No. in service (1979)	Salary offer	Percentage increase
Senior Principal SO*	728	£15,748	Nil
Principal SO	2,458	£12,050	6.2
Senior SO	3,830	£9,500	9.1
Higher SO	4,194	£7,900	17.3
SO	2,982	£6,400	16.7
Assistant SO	3,120	£4,925	22.2

*SO = Scientific Officer.