

fessional community involved in nuclear energy", he said recently.

"There has been a consistent unwillingness to react in responsible ways to the questions that members of the public ask. In too many instances the official attitude has been overbearing, arrogant and intolerant."

Dr Schwarz, on the other hand, feels that the type of concerns raised by the Harrisburg incident may—legitimately—spill over to what he considers a far greater health issue, namely the spread of nuclear weapons. "We have to show that the same institutions that run the nuclear power programme also run the nuclear weapons programme—and that we have been told the same lies. I am not against nuclear power in itself, but I am opposed to it because, as with nuclear weapons, I don't trust the people in control of it at the present time".

The university has itself been reconsidering its relationship to the two laboratories. A committee established in 1977 under the chairmanship of Dr William Gerberding, Chancellor of the University of Illinois, issued a report last year, suggesting that the university should continue to manage the laboratories, but through the operation of a powerful board appointed by the university, which would play a much closer role in overseeing the operation of the two laboratories than under present arrangements.

In an attempt to counteract charges that even under a board such as that proposed by the Gerberding committee, there would be little public discussion of the laboratories' activities, one university vice-president, Dr William Fretter, has proposed as an alternative arrangement the establishment of an advisory council to the university president, containing scientists, faculty members and students.

"I did not find the Gerberding proposals realistic, since the programmes of the laboratories—especially the weapons laboratories—are determined in Washington by the federal government, and it seemed unrealistic that these could be influenced substantially by a university committee", Dr Fretter said last week.

He argues that although the committee which he has proposed would only be an advisory one, it should

operate in public "since both the university community and the general community need more information on what goes on in the laboratories". Critics such as Dr Schwarz, however, maintain that since the committee would not deal with the laboratories' classified activities, and since it would have no executive responsibility—which would remain in the hands of President Saxon—it would lack any real teeth, and hence be little improvement on the current situation.

Debate within the university on the future relationship to the laboratories has been put temporarily on ice following the announcement in December that the Department of Energy was itself planning a review of the current arrangements. The department's report is due to be presented to Energy Secretary James Schlesinger next month, and is awaited with interest (particularly since, although being prepared by a subcommittee, the report is officially to be submitted by DOE's Energy Research Advisory Board—and this contains a number of individuals from the public interest community as specialists in alternative energy sources).

But if there is a pause in the official debate, grass-roots opposition is continuing to grow. The future of the weapons laboratories was among the issues raised at a mass rally held in San Francisco two weeks ago to protest at the opening of the Diablo Canyon nuclear power plant in the state, a meeting held under the shadow of the Harrisburg incident. And organisers of next month's demonstration at Livermore predict many thousands will turn up for a mass march, rally and 'peace conversion fair', with groups fasting at the laboratory gates, and others walking to the laboratory from all over California.

To judge from reactions elsewhere such activities are unlikely to be warmly welcomed by the university authorities. Last week a film crew was thrown out of Harvard University while trying to make a film about the 1960s protest movement. The film's director, Mr Jim Zinneman, admitted that a three-story mural showing some American soldiers trampling on Vietnamese "upset some faculty members and alumni". Nostalgia is not what is used to be. □

ISABELLE team denies setback

RUMOURS that the US ISABELLE project is having difficulties producing superconducting magnets for its 400 GeV proton-proton storage rings were denied last week by Dr Jim Sanford, the project head. In an interview with *Nature*, he said there were no problems with quadrupole magnet production, although they had run into difficulties with the dipole magnets.

Overall, progress was "90% satisfactory". "We are having problems in meeting the ultimate field of 5 teslas. We have reached 5 teslas in a model but not in the production prototypes. They are operating now at around 4½ teslas," he said.

The dipole magnets were first designed to operate at 4 teslas. The team made 13 model magnets and most of these exceeded this field. Recently the design was modified to operate at 5 teslas, and one model reached 5.1 teslas. However, when this was put into production, the magnets only achieved a field of 4-4½ teslas, Dr Sanford said. "We are not entirely sure what is causing this problem. Maybe it is the materials in the superconducting braid. We wanted to have a bigger margin than 5.1 teslas and so we added more niobium-titanium in the production, and in the process we may have lost some of the stability of the materials."

Production of the superconducting magnets is the major technological challenge of the ISABELLE project. The project has already had one setback—the US Department of Energy will only fund ISABELLE over seven years and not the five years the scientists had hoped for. However, Dr Sanford is confident the magnet problem will be solved by the summer so the contract for production can be issued by the end of the year. This will keep ISABELLE on schedule, and may even provide an argument for advancing to a 5-year target, said Dr Sanford.

In Europe, ISABELLE'S competition in the race to produce the heavy intermediate vector boson, the CERN proton-antiproton experiment, is expected to produce hard evidence by 1982, said a CERN spokesman. □

UK and Sweden attack lead poisoning studies

A NEW US report on lead pollution published in *The New England Journal of Medicine* by a team of researchers from Harvard Medical School and the Children's Hospital in Boston has not been openly welcomed in Britain.

The study indicates that currently accepted lead levels may be set far too high to be safe for children in urban

areas. The team, headed by Dr Herbert Needleman, examined lead levels in children's milk teeth, which is considered to be a better indicator of long term exposure than blood lead levels.

Starting with a sample of 3,329 children, two samples matched for social and environmental variables including social class, mother's age and

parental IQ were constructed. The 58 high lead children (20ppm in dentine) and the 100 low lead children (less than 10ppm) were given standard psychological and mental tests. (The mean blood lead levels in the two groups were 355 µg/l and 238 µg/l, both of which are well within the normal range for children in UK urban areas.)

The results showed that the high lead children performed less well on all the tests including reaction time, word processing and standard IQ tests.

Professor Pat Lawther of St Bartholomews Medical School in London and chairman of a Department of Health and Social Security working party on lead pollution in the UK calls the Needleman study "the result of very careful work" but says that the statistics "have to be gone into in great detail" before he could evaluate it. "There are 39 variables subject to regression analysis, and besides, behavioural studies are very difficult" said Professor Lawther.

According to Anthony Tucker, science correspondent of *The Guardian* newspaper, the DHSS working party has been primarily concerned with criticising earlier studies that showed lead induced behavioural changes in children in the UK. "But since no studies of this standard or scale have been carried out in Britain or elsewhere it is difficult to see how its findings can be refuted" writes Tucker.

Meanwhile one of Britain's specialists

on lead whose work is supported by Needleman's study, Professor Derek Bryce-Smith of the University of Reading, was subjected to some extremely unprofessional behaviour when he visited Stockholm recently to take part in a panel debate on lead and children. His visit followed a minor furor caused by the publication (in the journal *Ambio*) of an article which he co-authored, alleging that body lead levels considered normal in children actually appear to be pathogenic.

The article had prompted denials from two Swedish researchers, one of whom—Professor Ake Swensson—agreed to take part in the debate. In deference to Bryce-Smith, the Royal Academy of Sciences, which arranged the debate, announced that it should be held in English. This was duly printed on the programme and all the Swedes complied—except one. Docent Carl-Johan Göthe, ignoring the chairman's admonition and in spite of the fact that there was no official interpretation provided, announced that he would speak Swedish. He then proceeded to attack Professor Bryce-Smith, coming to the

very edge of personal insult. A little later he answered a question in English.

But Bryce-Smith himself was more disturbed by the behaviour of Professor Magnus Piscator, the other critic of the *Ambio* article. Piscator published his critique in a Swedish-language medical journal, accusing Bryce-Smith—among other things—of distorting information in some of his reference material. He made no attempt to contact Bryce-Smith to make his charges in English, and even refused to participate in the panel debate, saying it was stacked with people sharing Bryce-Smith's views—which was not the case.

"The allegation of distortion is untrue and libellous as far as we are concerned", says Bryce-Smith. "Piscator's article was extremely discourteous and unprofessional. His behaviour is very irresponsible and not in the best traditions of science."

Professor Bryce-Smith was not impressed, either, with the level of the debate. "These people do not seem to be aware of recent literature on the subject", he said, citing the Needleman paper. □

Soviet science boss refused Academy membership

SERGEI P. Trapeznikov, the Soviet top Party boss for science, has been refused full membership of the Soviet Academy of Sciences. So far as is known, this is the first time that the academy has ever refused an application from a member of the Central Committee of the Communist Party of the Soviet Union.

Trapeznikov is chairman of the Science Commission of the Supreme Soviet, and as such, formally has both the State Committee for Science and Technology and the Academy of Sciences under his jurisdiction. His appointment, however, was made on political grounds, not scientific. He has the reputation of a hardliner, and during the 1960s vigorously opposed the economic reforms proposed by Professor E. G. Liberman, which were aimed at loosening the Party's hold over the economy.

Since his appointment as Chairman of the Science Commission in 1968, Trapeznikov has tried several times to get elected to the academy. In 1976, he finally achieved the rank of "Corresponding Member" (i.e. Associate Member). Election as Corresponding Member, however, does not require a vote from the full General Assembly of the Academy, but only confirmation by the general assembly of a decision already made by the relevant section.

Applications for full membership, however, must be discussed by the general assembly, and are then decided

by secret ballot—the academy is the last remaining body in the Soviet Union to exercise this method of voting. It is due to this right of secret ballot that Academician Andrei D. Sakharov remains a member of the academy, in spite of several attempts to have him ejected.

Sakharov, indeed, took part in the debate on Trapeznikov's candidacy, stating that the latter's works on the collectivisation of agriculture were not of sufficient scientific value to qualify him for admission. Trapeznikov was rejected by a majority of 212 to 137.

Regarding these figures, it is interesting that Mark Popovskii, a journalist who emigrated from the Soviet Union in 1977 claimed in his book *Controlled Science*, that secret ballot notwithstanding, there are certain members of the academy who would never dare vote against the election of the chairman of the Science Commission. Discussing just such an election as an example of the degree of "humility" the academy shows towards the Party, Popovskii states that the Chairman of the Science Commission (i.e. Trapeznikov) has within his competence the appointment of the directors of scientific institutes, "one of the most longed-for jobs in the country". Secret ballot notwithstanding, Popovskii suggests that in such an election, although the "rank and file" academicians can "play their game of democracy", those who hold the post of director of an

institute simply would not dare.

Popovskii also relates a number of other cases when persons of political status but insufficient scientific quality have been turned down by the academy. These include the present Minister of Education, V. P. Elyutin, and the Minister of Health B. V. Petrovskii. (The latter has in fact good medical qualifications, but medical personnel, however distinguished are not admitted to the Academy of Sciences—they must apply to the less prestigious Academy of Medical Sciences).

Some years back, however, the Academy of Sciences seems to have been more complaisant—during his term as Minister of Geology, Aleksandr V. Fedorenko managed to become a Corresponding Member (1953) and then a full Member (1966).

Why though should Trapeznikov and other politicians whose work verges on science be so keen for election to the academy? Is it simply a desire for increased status? Possibly. However, membership of the academy brings more than status; it includes a generous salary, and a number of valuable fringe benefits in housing and the like. Moreover, these are held, effectively, for life. Expulsion from the academy is virtually impossible, although it is reported that during the last few months the academy's statutes have been amended to ensure that anyone deprived of his Soviet citizenship would be automatically expelled.

Vera Rich