French universities

# Laying down the laws

A NEW law for the French universities and *grandes écoles*, the first since the "democratic" reforms that followed the troubles of 1968, is working its difficult way through the French Senate. Since the Senate is profoundly conservative, and the architect of the new law — minister of national education Alain Savary — is "profoundly liberal" (according to one of his advisors), the passage is proving stormy.

Moreover, all might have gone better if M. Laurent Schwartz, renowned professor of mathematics at the Ecole Polytechnique in Paris, had not seen fit to publish a few weeks ago a book with the provocative title *To Save the Universities* (by implication, to save them from Savary). This has armed senators with useful facts — but, say its detractors, it is misleading about the true nature of Savary's law.

The problem may lie more in what the law leaves out, and leaves undefined, than in what it puts in. Take the "selection" of students for example. Lecturers are often appalled at the size of unselected first-year classes; Savary would increase them, regarding the first year as "orientation". He abhors "selection". But because of the realities of space limitations at the universities another clause in the law allows selection to take place in the second year, as it does now. To find the room to avoid selection it would be necessary to create new para-university institutes, whose students are "selected" or "oriented" towards them; these are recommended by M. Schwartz, but their foundation is also implied by M. Savarys and his law. The two sides, in this as in many cases, use different rhetoric but arrive at the same conclusions.

Another point at issue is the question of "decrees", and their relation to research. Schwartz wants to protect research; so does Savary. But Schwartz claims that Savary's law ignores the subject. In fact the law is about education, and the true place of research is to be defined in a forthcoming decree. The decree, (a law defined by government independently of parliament) will define the rights and duties of university staff and will, say ministry officials, put great emphasis on the role of research. A recent, interim decree appeared to increase the teaching duties of professors and lecturers greatly, and made no distinction between the two categories; but, says the ministry, the full decree on rights and duties will allow a professor or lecturer to trade off teaching duties against research or administration time, and since these vary among categories there will be an effective variation of teaching load. The real question now to be resolved, says the ministry, is who will decide, and by what means, who can trade teaching for research and by how much.

**Robert Walgate**

India in Antarctica

# Science — and politics — on ice

INDIA'S Antarctic ambitions continue to prosper. On 15 September, P.K. Basu, Secretary of the Indian Ministry of Mines, told the Central Geological Programming Board in Calcutta that a third scientific expedition to Antarctica is scheduled for 1983–84. Like the previous expeditions, it will carry out multidisciplinary scientific research and will again include geoscientists of the Geological Survey of India.

India's first foray to Antarctica began at Goa in December 1981 (see *Nature* **295**, 640; 1982). The *Polar Circle*, an icebreaker chartered from Norway, took the 21-man Indian team led by Dr S.Z. Qasim of the Department of Ocean Development to the Antarctic, where it landed on 9 January 1982 in the sector claimed by Norway. Logistical problems reduced the length of the stay from the planned 25 to 10 days, but a wide range of scientific observations was carried out. The expedition returned in February 1982, when Mrs Indira Gandhi, the Prime Minister, told the *Lok Sabha* (Lower House in Delhi) that "the main objective was to study the meteorology and other conditions of Antarctica, which are believed to control the monsoons" and to influence the climate of the Indian Ocean region.

To this end, an unmanned solar-powered weather station, *Dakshin Gangotri* (Southern Ganges), was established at 70° 45′S 11°38′E in order to provide a continuous record over one year on a cassette to be retrieved by a second expedition. A further objective was to test the suitability of Indian equipment at subzero temperatures, while a significant discovery along the way was a sea-mount (named inevitably as Indira Mount) at 53°22′S 48°03′E, where it extended a line of sea-mounts already reported by the Soviet Union.

The second and much larger expedition of 28 scientists followed, and a third is planned, to prepare the ground for a permanent manned Indian scientific station to be established in 1985.

Clearly these expeditions reflect a natural desire to learn more about the relatively unknown Antarctic continent, which is thought to interrelate with various aspects of the Indian climate, geology and so on. In this respect, India is complementing the work of other nations, and particularly of the Scientific Committee on Antarctic Research (SCAR); in fact, the Antarctic Treaty of 1959 was designed largely "to promote international co-operation in scientific investigation in Antarctica" through the removal of political and other obstacles to research.

A further motive is the prestige attached to Antarctic research. Mrs Gandhi, whose personal enthusiasm played a major part in mounting the Antarctic project, implicitly admitted as much when she told the *Lok Sabha* in February 1982 that the expeditions offered "one more proof, if such be needed, that Indian scientists and technologists have the capability to undertake the most hazardous and complex tasks . . . In undertaking this advanced work India has now joined a select band of countries".

Inevitably, however, other motives have been imputed to India, partly because, in Antarctica, it is difficult to disentangle scientific from political and economic considerations. Thus scientists have sometimes been regarded as political instruments, in the same way that increases in support for scientific research by the British Antarctic Survey have appeared to some to be more a political consequence of the Anglo-Argentine dispute over the Falklands than a result of a cool appraisal of the scientific possibilities.

In the past two decades, India has been the most articulate critic of the exclusivity of the Antarctic Treaty. India has argued that Antarctica should be treated as the common heritage of mankind, so that all countries should have equal rights to share in Antarctic decision-making and resources. India has thus been seen as a threat to the survival of the Antarctic Treaty system. During 1982–83, this threat seemed to increase not only because of India's two expeditions to Antarctica but also because of the interest shown by developing countries in a United Nations-based alternative to the Antarctic Treaty. Over the past year, for example, Dr Mahathir, the Prime Minister of Malaysia, has advocated the creation of a new Antarctic regime in the UN General Assembly (on 29 September 1982) and the Non-Aligned Summit Meeting in New Delhi (8 March 1983).

In the face of pressure from the non-aligned movement the UN General Committee agreed on 21 September 1983 to place Antarctica on the agenda of the current session of the General Assembly. Hitherto, the United Nations has steered clear, or rather has been steered clear, of Antarctica, but events there and at the Non-Aligned Summit suggest that Antarctica may become yet another focus for North–South controversy.

In this context, the intentions of India, one of the leading members of the non-aligned movement, proved a major preoccupation of the Antarctic Treaty powers until, in August 1983, India astounded most observers by its accession to the Antarctic Treaty. (Accession entails acceptance of the treaty's principles.) India also applied for consultative party status — the right to participate in decision-making which is open only to those countries "active" in Antarctic research — and its application was approved by a special meeting of the consultative parties held in

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Canberra on 12 September 1983. An application from Brazil was approved at the same time. So India is now part of the treaty system that it has heavily criticized in the past. The two expeditions can be seen in retrospect as attempts to satisfy criteria for membership of the Antarctic club.

Why has India confounded the experts, and apparently caused a serious rift in the anti-Antarctic Treaty camp? While disclaiming any territorial ambitions, India has been reticent in referring to the wider political aspects of its Antarctic policy. In 1982 Dr Qasim told *The Tribune* (published in Chandigarh) that "India considers Antarctica to be the common heritage of mankind and not a preserve of a few nations". It is clear that the Indian Government believes that a seat at the consultative party sessions will provide a better opportunity to influence developments in the southern continent, particularly in promoting the "common heritage" concept.

Qasim also conceded a more selfish motive when he said that India had ensured that it would not be left behind in any international race to exploit the hidden resources of Antarctica. The potential marine resources are viewed with particular interest in India, and it is probably significant that the Department of Ocean Development has been the main agency behind the Antarctic expeditions.

Scientific research has proved the chief beneficiary of the Antarctic Treaty system, and science will continue to benefit as long as the treaty survives. It is therefore ironic that, at the very time when the treaty system has been reinforced by recent additions to its ranks — 1982–83 saw not only the admission of Brazil and India as consultative parties but also the accession of Spain and China — it should face its most serious test yet. Internally, there have been difficulties surrounding the Antarctic mineral regime negotiations, which were begun in Wellington in January 1983, and continued at Bonn last July, while externally there is the Malaysian campaign to replace the treaty by a regime led by the United Nations, perhaps modelled on the International Sea-Bed Authority. Indeed, many countries feel that the principles underlying the Law of the Sea should be extended to Antarctica.

Scientists need to watch future developments closely, for any United Nations intervention in Antarctic affairs will be oriented towards resources rather than science. The recent enhancement of the Antarctic Treaty system — and the fact that it may soon be further strengthened by the addition as consultative parties of China, Spain and East Germany — encourages the view that the treaty will survive, so that any intervention by the United Nations will occur only within the parameters established by the 1959 treaty. If so, Antarctica may remain the "continent for science" advocated by Sir Vivian Fuchs in 1973. **Peter J. Beck**

British universities

# Survival by questionnaire

Sir Peter Swinnerton-Dyer, the new chairman of the University Grants Committee, has set out to alter the committee's reputation for secretiveness. Encouraged by Sir Keith Joseph, Secretary of State for Education and Science, to conduct an "open and wide-ranging" debate on the future of the British university system over the next ten years, the committee has published in full a circular letter sent to universities.

The letter takes the form of an all-embracing series of Catch-22 questions on what changes the universities would like to see — or be able to tolerate. Although the questions are addressed to vice-chancellors, Sir Peter expects many of them to be answered by particular groups within universities, to avoid delay and "answers with the consistency of babyfood".

On the central question of how resource per student will change, universities have been asked to consider a number of options specified by Sir Keith. They range from level funding, in real terms, to a 2 per cent annual decrease. In response to a request from Sir Peter's predecessor to find places for an extra 5,000 students, next year and in the year following, at no extra cost, universities have submitted proposals for 2,500 more science students and 1,000 more humanities students for each of the years in question. But Sir Peter was unable earlier this week to give any clear idea of how resources might change in future, and observed that the Department of Education and Science is unlikely to have a master plan that it is working towards. Universities' responses may in part determine future policy.

Despite the long term uncertainty, the fact that resource per student will certainly not increase, together with the fact that student demand seems certain to decrease later this decade, must imply a substantial contraction of the university system. If the present balance between universities and the public sector is maintained, the universities must shrink by 15-20 per cent during the early 1990s. Against this background, universities are asked for their views on changes in organization and subject balance.

Sir Peter refused to rule out the possibility of closures, but observed that there would be serious constitutional difficulties in such a course. To revoke a Royal Charter is without recent precedent (although this was apparently done by James II of England before he was deposed in 1688). But Sir Peter pointed out that several universities are now as small as is economic — about 4,000 students for a university offering a full range of courses. The most likely scenario is that some universities might merge with polytechnics or other colleges, and cease to be supported mainly by the University Grants Committee.

Whatever happens, there will certainly be a blurring, if not a disappearance, of the "binary line" between universities and other institutions of advanced further education. And any plans for the universities must be reconciled with plans now being drawn up for the public sector.

The government is also keen to encourage universities to find other sources of funds than the public purse, and financial links with industrial companies seem likely to increase. One of the questions now asked of the universities is disarmingly frank: do you think that the dual support system can survive, and would you wish it to do so? But Sir Peter conceded that there may be difficulties in asking some universities to find all their support from industry, although he observed that there are excellent universities in Japan supported in this way.

One major problem taxing the committee is the age distribution of academic staff. As most universities coped with the 1981 cuts by encouraging early retirement, the present distribution is very unbalanced. The replacement rate now in prospect is below that considered desirable by the Department of Education and Science a year ago. One possibility is that the "New Blood" scheme for recruiting extra academic staff might be extended beyond the three years planned. But some researchers are fearful that the scheme could be used as an instrument to force unwelcome change: after the first year of an appointment under the scheme, allowances are subsumed within universities' recurrent grant. The question of security of tenure is also raised in this context. The inviolability of tenure has still not been fully tested, but the question cannot be put off indefinitely.

Universities are also asked to consider whether the research component of their recurrent grant should be "earmarked". This controversial proposal has been made several times recently, and is favoured by some researchers. But, although the University Grants Committee is exercising "positive self-restraint" in not pre-judging issues before universities have replied, it was made clear that the committee sees unusual and difficult problems in this course, chief of which is the difficulty of accurately costing the time of someone who is both a teacher and a researcher.

Many of the questions could be fairly described as speculative — for example, how would universities react to a replacement of the present system of sixth-form education by a broader alternative? And universities are encouraged to add any further comments of their own on whatever subject they wish. Answers are requested by 31 March 1984, and will be marked by the following October. Results (not, apparently, graded) will then be sent to the Secretary of State. But this will be only the first stage of the debate. **Tim Beardsley**

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