Scientific publishing

Academic backs down on books

EUROPEAN publishers were last week astounded by the announcement by Academic Press London (APL) that it is to make redundant more than half of its 247-strong workforce. The recent history of APL has been troubled (see *Nature* **303**, 192; 1983) and changes were expected, but the scale of job losses came as a shock to both staff and the publishing community. Most significantly APL is to shut down its book production department entirely, with the loss of some 30 jobs. The new warehouse opposite the company's offices in Camden, North London, opened only a few months ago, will also close. From the middle of 1984 almost all book production and the fulfilment of orders for books will be carried out in the United States. The editorial department in London is largely unscathed, however, and the very profitable journals department is not affected.

APL is a wholly-owned subsidiary of Academic Press in the United States, which in turn is a subsidiary of Harcourt Brace Jovanovich (HBJ), a Fortune 500 company with diverse interests. The redundancies in London are part of a large-scale reorganization of the company as a whole, implicit in which is the curtailment of the output of scholarly books because of "very high overheads and price resistance in the marketplace". By contrast, a memorandum of 21 October to senior staff and agents from Mr William Jovanovich, president and chief executive of HBJ, makes clear that "the number of . . . journals can be increased".

While a number of academic publishers have recently experienced difficulties because of steeply rising costs, many of APL's problems have undoubtedly been self-inflicted or imposed by the American parent company. Print-runs, reflecting estimated demand, have in the past been over-optimistic which has resulted in large amounts of stock being written off. And, because of a pricing policy described as "sheer incompetence" by one member of staff, APL had to sell at a very narrow margin books produced by the company in the United States. The decision last year to lease Joel House, in Camden, as a warehouse seems also to have been financially disastrous.

The effects of a reduced output of scholarly books by Academic Press as a whole will not be felt immediately. One long-term possibility is that worthy but unprofitable books will be even less likely to be published, another that scientists will turn increasingly to journals.

Tim Lincoln

Collective phenomena

Absent Soviet friends

Stockholm

THE Sixth International Conference on Collective Phenomena last week cast light on the problem of scientific "refusniks" in the Soviet Union. Although many Western scientists have in the past ten years visited the regular Sunday seminars organized by the refusniks (Jewish scientists denied exit visas but dismissed from their scientific posts), and have participated in the three conferences on collective phenomena which the Soviet authorities have grudgingly allowed to take place, such participation has been more an act of solidarity with oppressed colleagues than a serious scientific effort. (The first and fifth conferences were prevented by *force majeure*.) For last week's conference, the first to be convened outside the Soviet Union, was a serious effort to put the continuing scientific work of refusniks into an academic context.

The Stockholm meeting focused on the continuing work of Jewish scientists in Moscow who for the past decade have been denied what is normally considered the basic prerequisite of scientific research, access to libraries and laboratories. Four refusnik papers were presented, by Viktor Brailovskii, Yakov Al'pert, Aleksandr Lerner and Naum Meiman, supported by papers on related themes by Western colleagues. This "supporting cast" contained such eminent names as Paul Flory (United States) on the configuration of macromolecular chains in condensed phases, Andrew Sessler (United States) on collective motion in free electron lasers and Peter Whittle (Great Britain) on a socio-economic model showing collective effects.

The four refusniks papers were presented by colleagues working in related fields — not an ideal arrangement, since the ensuing discussion raised a number of unanswered questions. Thus Professor Al'pert's mathematical analysis of the absorption of ELF electromagnetic waves in the terrestrial magnetoplasma suggested an unexpectedly large value for the absorption under certain circumstances for which, owing to his limited possibilities for practical work, he provided no physical explanation. And Professor Lerner's paper "on the theory of mass behaviour in developed human communities" arrived without several pages of vital mathematics.

The fact that so many questions were left unanswered is evidence that, in spite of all difficulties, the refusnik scientists continue to do valuable theoretical work. This would seem to justify the exhortation that scientists on official trips to Moscow should continue to try, in spite of increasing difficulties, to visit the refusnik seminars.

Vera Rich

Creationism

Still in evidence in Texas

RELIGIOUS fundamentalists are shifting their efforts to local school boards, having largely failed in the courts and state legislatures to force the teaching of "creation science" in public schools. The current multiplicity of relatively low-key efforts seems, at least in some areas, to be paying off. In Columbus, Ohio, teachers are instructed to approach evolution as a "controversial" subject. In a Virginia county, teachers must preface a discussion of evolution with a reading from *Genesis*. And in the many southern states that select textbooks for statewide use, creationists have forced the elimination of references to evolution in biology texts.

The shift in tactics has come in the wake of some spectacular failures for the creationists in well-publicized court cases, notably the finding by a federal judge last year that an Arkansas law requiring equal treatment of evolution and "creationism" was an unconstitutional violation of the separation of church and state. "It cost Arkansas a bundle of money" to defend the statute, says Wayne Moyer, former executive director of the National Association of Biology Teachers and now a staff

Factor VIII cloning

GENETICS Institute, the Cambridge (Massachusetts) biotechnology corporation, claimed last week important progress towards the production of factor VIII, the blood-clotting agent in which haemophiliacs are deficient. The institute says that it should have been able to clone and express the gene for human factor VIII by next summer and to have a product in clinical trials roughtly two years from now.

Some aspects of the work are being kept confidential for commercial reasons, but Dr Robert Kamen, scientific director at the institute, explained on Monday that the starting point has been the use of monoclonal antibodies for the isolation of fragments of factor VIII from pigs (in collaboration with Dr David Sass of the Mayo Clinic) and the use of microsequenator techniques (by Dr Rodney Hewitt of the institute) to derive partial amino acid sequences and then candidate gene probes. The probes have been used to identify substantial parts of the human gene, which turns out (as expected) to be on the human X-chromosome.

Precisely why Genetics Institute has made its announcement now is not entirely clear. Stock in the corporation is privately held, and there are no immediate plans for a public offering. The factor VIII programme is sustained by a research contract with Baxter Travenol Laboratories.

John Maddox

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member of People for the American Way, a first amendment activist group; the lesson has not been lost on legislators in other states, Moyer says. Equal-time bills filed in Alabama, Mississippi, West Virginia and 21 other states have failed.

The place where creationists may be having the most success is in the state textbook adoption proceedings, particularly in Texas. Texas is now beginning its annual cycle of textbook selection, and last month the state's elected, and traditionally populist, Board of Education issued draft guidelines for publishers which hope to have their biology texts chosen as one of five that will be purchased for every school district in the state. The guidelines contain no reference to evolution; Charles Darwin is absent from a list of biologists who made important discoveries. The Texas board as early as 1974 issued administrative rules requiring textbooks that mention evolution to "clarify that the treatment is theoretical rather than factually verifiable" and to include a disclaimer that evolution is "only one of several" explanations of human origins.

With 8 per cent of the national market at stake, Texas has become the focus of considerable concern for opponents of creationism The Texas board routinely holds meetings with publishers to demand specific changes in the texts. Publishers frequently comply, saying that because it is not economical to produce a special Texas edition, the changes demanded by Texas determine textbook content throughout the country. In testimony before the board last month, People for the American Way produced several examples of changes ordered by the board and complied with by publishers. These typically consist of demands to preface such statements as "the earliest people lived on the Earth over 1 million years ago" with disclaimers such as "many scientists believe" or "according to scientific theory". A number of textbook publishers appear to have anticipated objections and adopted a policy of self-censorship, notably in purging the word "evolution".

Some more subtle forces may favour the creationists at the local level as well. Mary Long, chairman of the science department at a high school in Austin, Texas, told a meeting sponsored by People for the American Way last month that a teacher who covers evolution in biology class and who receives a complaint from a parent is, in Texas, unsure of being backed by the school administrators. Most teachers, she said, prefer to avoid the hassle.

Despite the inroads that creationists appear to be making at the local level, Michelle Aldrich, who monitors the creationist efforts for the American Association for the Advancement of Science, says that "committees of correspondence" set up by scientists and educators to counter creationism have been "surprisingly successful" in attending local board meetings, presenting the scientific case and explaining the likely consequences if the matter goes to court. The school board in New York City recently went against the Texas tide by rejecting several biology texts because of their inadequate coverage of evolution. **Stephen Budiansky**

UK biotechnology

Where there's muck . . .

ENCOURAGING signs of life in British biotechnology have been discovered by Biotechnology Investments Limited (BIL), the two-and-a-half-year-old company sponsored by the merchant bank N. M. Rothschild & Sons Limited. Since the end of May, when BIL's second annual report showed investments of $34 million in about 30 companies (including six in the *Nature* index below), none of them in the United Kingdom, three essentially British investments have been made and a fourth is soon to follow.

The largest investment has been £5 million in Celltech last June; very recently $0.6 million has been sunk in British sludge and this week the same sum is potted in ornamental plants.

The first of the two $0.6 million investments has bought a 25 per cent interest in WMC Resource Recovery Limited, the ten-year-old brainchild of Victor Lawson, a consultant mechanical engineer. The patented process on which his Bristol-based company is built involves the anaerobic fermentation of domestic waste and sewage sludge to produce a fibrous material that can substitute for either wood pulp fibre or horticultural peat. As biotechnology goes, the process is steam-aged, but the results of four years of operation of a one-tenth scale plant has convinced BIL that the process works and that the products are commercially viable. The peat substitute has been extensively tested by Agricultural Research Council scientists and shown to be of good nutritive value, although some additions will be necessary for certain markets. Although heavy-metal content of the product is on the high side, the metals are mostly in slow-release form so that only acceptable amounts end up in plants grown on the product.

WMC Resource Recovery Limited has recently negotiated its first firm order for a unit (in Spain) and expects others to follow. With the aid of UK government and EEC grants it will soon build a full-scale demonstration unit in Bristol. BIL's investment is designed to capitalize the company and provide it with a financial partner for a phase of anticipated growth.

BIL's investment in ornamental plants is through Twyford Laboratories, in Somerset, whose parent company, International Plant Laboratories Inc. in Boston, has just raised some $4 million from nine investors, of which BIL is one of four contributing $0.6 million. Twyford Laboratories currently produce about 5 million plantlets a year by micropropagation, mostly for houses and offices in Europe but also have a growing interest in crop plants.

The third BIL investment in UK biotechnology is in a Cambridge-based diagnostics company; details will be announced in a week or two.

Peter Newmark

Nature index of biotechnology stocks

12-Month high	12-Month low	Company	Close previous month	Close 25 Nov.	Change
23¼	10½	**Biogen (Switzerland)**	12¼	12	**0**
6¼	1⅞	**Bio-Logicals (Canada)**	2⅛	2	**−⅛**
16⅛	7¼	**Bio-Response (USA)**	11¾	11¾	**0**
19	10⅞	**Cetus (USA)**	11⅝	12⅜	**+¾**
15½	6¾	**Collaborative Research (USA)**	9½	8	**−1½**
39⅞	15	**Damon (USA)**	20⅛	17⅝	**−2½**
34¼	16⅜	**Enzo-Biochem (USA)**	24¼	24¼	**0**
18⅞	8⅝	**Flow General (USA)**	9¼	11¼	**+2**
49¾	25⅞	**Genentech (USA)**	26½	36½	**+10**
17¾	7⅞	**Genetic Systems (USA)**	9¼	10⅝	**+1⅜**
23¼	12⅞	**Genex (USA)**	15½	15	**−½**
31	19½	**Hybritech (USA)**	22½	12½	**−1**
22¼	12	**Molecular Genetics (USA)**	13¼	12⅞	**−⅜**
23¼	13	**Monoclonal Antibodies (USA)**	14¼	14¾	**+½**
73½	42	**Novo Industri A/S (Denmark)**	66	65	**−1**
30¼	13⅝	**Pharmacia (Sweden)**	25⅛	21	**−4⅛**

Closing prices are for the last Friday of the month. For over-the-counter stocks, bid price is quoted; for stocks on the American and New York exchanges, the transaction price. *Nature*'s weighted index of biotechnology stocks stood at **196** on 25 November, compared with **203** a month earlier and **221** in September. Data from E.F. Hutton, Inc.

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