now considering whether the other scheduled unmanned flight could be dispensed with. Premature cut-off of propulsion firings has been attributed to over-conservative programming of the on-board guidance computer and not to malfunction.

Thorough check-out of the various components of the lunar landing mission is essential, since there is considered to be no possibility of survival or rescue from an accident on or near the Moon. Dr George Mueller, director of the manned spaceflight programme, recently made clear that on the Moon there will be a 36 h oxygen supply for the two astronauts, not a large margin on the projected 22 hour stay. No rescue provisions are being made. It would take a month at least to get a relief party out there, Dr Mueller pointed out.

Nevertheless NASA has recently appointed a Safety Director whose job it will be to look into the problems of orbital rescue as well as the more conventional aspects of spacecraft and range safety. In his mid-40s, Bob P. Helgeson has had experience in atomic energy as well as with the X-15 hypersonic research aircraft programme.

Hovercraft Launched

THE largest hovercraft in the world took to the water this week for its first trial. Built by the British Hovercraft Corporation at Cowes, the hovercraft is called the SRN 4, or, more grandly, the first of the Mountbatten class. It will be used as a cross-Channel ferry by British Rail and by the Swedish firm Hoverlloyd, carrying 254 passengers and 30 cars, or 600 passengers. Despite unpleasant weather conditions for the launching, the four-engined craft got away successfully, and, it seems, comparatively quietly, although so long as hovercraft are propelled by large aero engines driving propellers they are never likely to compete for quietness with muffled oars. The launching is a great moment for those who have supported the development of hovercraft in Britain, and for their inventor, Mr Christopher Cockerell, who was there to see it happen.

Sadly, it is not quite so cheerful a moment for the

design staff of the British Hovercraft Corporation. The company announced this week that 40 members of the design staff working at Hitchen will be laid off over the next 2 months. The reason for this, the company says, is twofold. At the end of 1967, a number of projects which the company had hoped to start work on at Hitchen and Cowes failed to materialize. Coupled with the cuts which the Ministry of Defence has made, this has meant that design staff will have to go. Some, it is hoped, will be found work with Westland Aircraft (one of the two major shareholders in BHC). At Cowes, there should be sufficient work to sustain the design team.

School Mathematics

THE report of the director of the School Mathematics Project for 1966-67 has a cheerful tale to tell about the acceptance of the new courses as qualifications for entry to universities. Dr Bryan Thwaites says that "with only one or two exceptions" all university departments of mathematics are prepared to accept as candidates for entry students with a pass in the Advanced level examination in what is called "SMP Mathematics". Even so, it seems, suspicions persist in the schools that a double dose of SMP is likely to be a safer means of being accepted than a single dose, and these suspicions seem to be borne out by the reaction of some of the universities to the new courses. Dr Thwaites says that "at least some university departments are going against the spirit of their formal acceptance . . ." by asking extra of intending students. It remains of course to be seen whether Dr Thwaites's exhortation will bring backsliding universities to heel.

To judge from what the report says, the publication programme is now virtually complete. This means that courses are available for students between 11 and 18. One innovation, however, is that the School Mathematics Project has turned itself into a trust which will presumably be able to superintend the further development of the teaching materials now available.

Undivided Seconds

from our Oxford Correspondent

RATHER surprisingly, Congregation at Oxford has reversed its decision to divide the second class degree into upper and lower parts, a proposal accepted last term by 101 votes to 99 (see *Nature*, 216, 631; 1967). This term's debate, on an opposition amendment that the division should be indefinitely postponed, was very much better attended. The debate, however, seemed somewhat confused, with members finding it hard to distinguish the germane from the irrelevant. There was a certain amount of doubt whether the original proposal had been to enlarge the second class as well as divide it, or merely to divide it—the two measures having rather different effects. The final vote for the amendment was 171-121, so that for some time at any rate Oxford will be making no official distinction between types of second class. What will happen, doubtless, is that fewer Thirds will be awarded, and that the Fourth Class will cease in practice to exist. So Oxford will be aligning its degree classes with those of other British universities while avoiding the difficulties of subdividing the second class candidates, most of whom would be on the borderline of

The SRN4 hovercraft on its first trial.

the subdivision. As the second class comes to embrace all but the best and the worst, it will become more important to distinguish candidates by giving marks, and by tutorial recommendation, a system more equitable to examiner and candidate alike and one not dissimilar to the practice in universities outside Britain.

While Congregation has been discussing these moves, a group of junior members of the university has petitioned the Privy Council for changes in the procedure under which students are disciplined. At present two senior members—the Proctors—are responsible both for seeking out offenders against university regulations, and also for judging and sentencing them. The signatories of the petition are asking that the roles of police and judiciary should be separated; they propose that students should appear before a disciplinary committee to which they and the proctors would put their cases. The petition also asks that the disciplinary committee should be appointed by the Vice-Chancellor in consultation with the student council, but there is less likelihood that the authorities will accept this part of the proposal. The fact is that the university does not formally recognize junior members or their representatives, although two thousand students are graduates. It is only under an Act of Parliament, which takes a commendably tolerant attitude to their existence, that junior members are allowed to make representations to the Privy Council when new university statutes are being established. There has been no official comment on the petition from the university authorities yet.

New Man at Heriot-Watt

DR R. A. SMITH, Professor of Physics at the Massachusetts Institute of Technology, is to succeed Dr H. B. Nisbet as Vice-Chancellor of Heriot-Watt University on June 1. Dr Smith, who was born in Scotland, began a distinguished career at the Royal Radar Establishment in 1939, becoming head of the Physics Department in 1947. He took up his present chair in 1962.

At Heriot-Watt he will doubtless preside over the university's projected move from its present site in Edinburgh to Riccarton, six miles west of the city, where it will not only have room to expand but will also be less immediately under the shadow of Edinburgh University. The move to Riccarton is expected to take place in 1975, by which time the student population will have grown from 1,500 to 3,000. Whether that change will mean that people no longer ask whether Edinburgh needs two universities is another matter.

Commonwealth Universities

THE United Kingdom has now replaced Canada as the Commonwealth country with most university members in the Association of Commonwealth Universities. This is revealed in the report of the association for 1966-67, in which it is announced that the admission of several new British universities brings the number of member institutions in Britain up to 43, compared with 42 in Canada.

In his introduction to the report the secretary-general of the association, Dr J. F. Foster, describes the association as mainly a service organization promoting the activities in London of its member universi-

ties in all parts of the world, including the United Kingdom. He contrasts the function of the association with that of many other international associations of universities which have as their main aim the spreading of a particular culture and encouraging studies of special questions of educational policy.

One unusual task which the association assisted during the year was the mounting of a "Retrieval Operation" by Canadian institutions. This was to persuade Canadians working in British universities to return to posts at home, and involved the sending of a party of Canadian officials to Britain. The association provided the Canadians with interviewing facilities and secretarial services in London.

The report shows that the appointments service run by the association is mostly used by members in Australia, New Zealand, Malaya and Hong Kong; this appears to be because the North American universities favour the making of an appointment after private enquiry and negotiation.

Oxbridge Admissions

A PLAN for studying the relationships between Oxford and Cambridge admissions arrangements and sixth form curricula in British schools has been launched with £14,000 of the Schools Council money. The operation is being financed for an initial period of two years. The investigation will be directed by Sir Desmond Lee, with a management committee consisting of Mr John Morrison, President of University College, Cambridge, Mr J. D. Mabbott, President of St John's College, Oxford, and Dr E. J. Bowen, Honorary Fellow of University College, Oxford. Sir Desmond will be retiring as headmaster of Winchester College later this year and will take up a Senior Research Fellowship at University College, Cambridge, in the autumn. In the meantime a research assistant will be appointed, and with Dr Bowen in charge of the Oxford end of the project it is hoped that work can begin in the near future.

The movement towards a broader curriculum in schools has been causing concern in Cambridge, where admission arrangements have been geared to highly specialized sixth forms, particularly those in the independent schools. A review of selection methods was thought to be necessary if the university was to continue to attract the large number of good students that it has in the past and if more entrants were to come from smaller maintained schools. The idea of a special investigation body was put forward by Mr Morrison, when the usual monthly committee on the subject was thought to be inadequate for a thorough inquiry. The scheme has grown to include Oxford because the problems of selection there are similar. Mr Morrison hopes that the investigation will reveal the extent of the problem of producing people who are prepared for the highly specialized Oxbridge courses. If there is less specialization in schools, then it will not only be the admission requirements that will need to be changed but also the content of the degree courses.

The organizers of the new project hope that the solutions which they suggest for Oxbridge may also provide something of value to other universities. Whether other universities will accept this view remains to be determined; for some years there has been some reason to complain that the existence of a special