

THE HOME UNIVERSITIES CONFERENCE

THERE can be no doubt that the Home Universities Conference, held in mid-December each year, is achieving increasing importance. The topics chosen for discussion are always live, as the fact that the Conference is sponsored by the Committee of Vice-Chancellors and Principals should guarantee. In addition to four or so delegates from each university, there are always representative guests present—members of the University Grants Committee, of the Ministry of Education, headmasters and headmistresses of schools and distinguished visitors from Britain and abroad.

Last December, the first subject for discussion was "The Place of Residence in the University To-day"—chosen because of the recent publication of the report of the sub-committee of the University Grants Committee on halls of residence. The Conference was clearly a strong believer in the educational value of halls of residence, but doubted whether they are being provided quickly enough. "Every new generation is a new invasion of savages", and if it behoves universities to play their part in civilizing their students, halls of residence are demonstrably among the most efficient means for doing this. As Prof. W. R. Niblett said, they should not be merely fringe enterprises in a university: they are closely related to its very *raison d'être*. But though professors may almost all be converts to the cause of halls of residence, they are sometimes apt to regress rapidly when asked to make a contribution at a financial cost to the development of their own departments. Prof. Seaborne Davies penetratingly remarked that it is chiefly upon the support of the disinterested that halls of residence have to rely.

During the Conference someone might have pointed out that halls of residence are among the best assets to a modern university in capturing good students for any department. It is not in the quality of their research or their teaching that modern universities are most open to criticism. These often, indeed, are first-rate. But too many students who might in favourable circumstances have emerged as leaders, with a wide interest in life and able to make human contacts with ease, remain over-specialized and insufficiently awakened; and with increasing numbers of 'first generation' students in our universities this is increasingly true. Industry to-day realizes more and more that a period in a good hall of residence is an immense asset to a student, and especially perhaps to a scientist. For many scientists in their maturity are not going to be primarily scientists but managers—and therefore makers—of men.

The introductory speeches, and also the contributions to the discussion on halls of residence, acute though some of them were, scarcely brought out sufficiently fully the differences between the older and newer universities in the living conditions they provide. It was suggested, for example, that really large halls in modern universities might still have something of the same civilizing effect on their inhabitants as Trinity College, Cambridge—for few declared that to be too large. In actual fact, many do, of course, regard Trinity College as far too big;

but it is at least doubtful whether a hall of residence in a modern university will be so potent in its influence unless size is limited to a reasonable number of students under each warden (possibly not more than one hundred), each student having a private room of his own in which to work and live a private life. Of course, this is not to deny for a moment, any more than the Niblett Report does, that groups of halls of residence on one site have many possibilities.

At the second session of the Conference, on "Procedure for the Selection of Undergraduate Students", the different points of view on this subject of people from universities and schools showed up sharply. Sir James Mountford, commenting on the report published a few months ago under the auspices of the Committee of Vice-Chancellors on "Applications for Admission to Universities", emphasized that the basic problem was the number of applications compared with the number of vacancies. In his view, there was deplorable chaos in the procedure for the selection of students. He did not believe that a clearing-house system was a practicable solution to the problem, though universities might well be less secretive about the number of vacancies they had. It seemed to him, however, that the chief remedies must be supplied by the schools themselves. They should refuse to let their weak candidates apply for university entrance at all. They should support a movement for transferring the parts of the examination for the General Certificate of Education on which selection is based, from July to some time in the spring term.

As representatives of the schools hinted, these proposals really left the universities with very little of the burden of the problem: it was evidently the schools, not the universities, who were required to make the difficult adaptations. It is not easy to refuse candidates a chance of getting into a university if parents and boys themselves are keen on such a chance being allowed. As for change of date for the General Certificate (Advanced Level) examinations: it must be remembered that sickness in schools is at its maximum in the spring term, and that the effect of such a change might be to cut to five terms the total sixth-form course of a number of boys and girls—both those hoping for a university career and those with no such intention—who needed at least six if they are to be given an adequate sixth-form training. In a sincere and practical address, Miss M. J. Bishop, herself a very experienced headmistress, protested against the continuing onerous weight of faculty requirements. These were a threat to all unexamined sixth-form work. The rampant individualism of universities was the despair of the schools.

Dr. C. L. Pratt, of Christ's College, Cambridge, supported the idea that a vigorous pruning of faculty requirements should be made. The Imperial Chemical Industries' bursary scheme suggested that some schoolboys at least can be orientated, after they have entered a university, to a scheme of specialized study—for example, in science—when their sixth-form course had been almost entirely concentrated on the arts. He emphasized that what matters most

in choosing candidates rightly for university entry is the shape of the curve of the candidates' progress up to the time of selection: Was a particular boy or girl likely to develop a great deal, or was he already near his peak? He suggested that the selector must not be professionally and whole-time on the job: he should be made to live with the people he chooses. Selectors should suffer the consequences of their own decisions.

In the discussions on this key subject of selection for university entrance, it is to be noted that the headmistresses were able to speak knowledgeably of the problems of entry to both older and newer universities. No headmaster from a grammar school made a contribution, and the heads of public schools who spoke could only speak about selection for Oxford and Cambridge. One fancied that within the next few years, with the intense pressure on university entry and little chance of any significant increase in the number of students taken at Oxford and Cambridge, the public schools will have to make themselves much more aware of conditions at modern universities. Incidentally, it was pointed out that in Scotland the examinations which determine entrance qualifications to universities start in mid-March each year. But England rarely learns from Scotland in such matters.

The final session of the Conference tackled the problem of academic mobility. The investigation undertaken by the Association of University Teachers in 1956 suggested that too many members of university staffs stayed too long in one place. 22 per cent even of professors have never taught in a university other than that in which they hold their chair. Prof. A. G. N. Flew, of the University College of North Staffordshire, pointed out that a period of university teaching overseas could be of immense value in broadening the mind—in indicating, for example, that the English division of the curriculum into arts and sciences was not part of an inevitable ordering of things. Dr. R. S. Aitken, vice-chancellor of the University of Birmingham, considered that mobility among science staff was about right but that among arts staff it was insufficient.

Discussion in the Conference indicated that there was a widespread feeling that at present there was too great a degree of academic immobility. In

particular, it was held that universities ought to advertize senior lectureships wherever possible, whereas the almost universal present practice is to promote from within the institution. Strong pleas were entered for further exchanges within the Commonwealth: a number of Commonwealth countries are at a critical stage in their university development, and it would be of the greatest value to them that some of the best people should have a period of university service in them. But pleas were also entered for exchanges within the United Kingdom itself: even one term of teaching in a different university might be a great stimulus.

With the rapid increase in numbers of university staff during the past few years, there is to-day an altogether disproportionate number of university lecturers in the 30–40 age group. Some speakers saw a good deal of discontent ahead when many of these people were still lecturers and yet in the 50–60 age group. They suggested that this was an argument for providing more senior posts—more new universities even—for then there would be more chairs for which to compete.

There appear to be great differences between university departments of applied science in the closeness of their contacts with industry. In some, it is standard practice for lecturers in, say, engineering to be taken from industry and to return to industry after a period of teaching and research. In other universities this is rare. But the Conference did not clearly show what its mind was in this matter.

In fact, the Home Universities Conference is much better as an assembly to which thoughtful and challenging contributions can be made either from platform or floor than as a place in which there is a keen to-and-fro discussion. Perhaps this is inevitable when there is a large and representative collection of university dons assembled with their vice-chancellors in the comfortable and dignified—if apparently underground—William Beveridge Hall of the University of London. Be that as it may, British universities in general are in great debt to the University of London for its kindly and hospitable welcome to a Conference which is bringing together, as no other conference does, people from the staffs of all British universities at a time of year when they are prepared to be thoughtful in a creative way.

AUTOMATIC MEASUREMENT OF QUALITY IN PROCESS PLANTS

AUTOMATIC control has been utilized by the process industries for many years; indeed, many commercial processes in use to-day could not function efficiently without its aid. Over the past decade, however, the basic philosophy of automatic control has undergone a marked change as a consequence of the introduction of powerful new instrumental techniques. The function of automatic controllers has hitherto been that of regulating certain basic parameters of a process, in the hope that adherence to fixed values of such parameters—temperature, flow or pressure—would result in an end-product of unvarying quality. The analysis of the end-product has, of necessity, been carried out in laboratories

remote from the plant, with the consequent introduction of long delays between the detection of variations in the end-product quality and the initiation of the appropriate remedial action on the plant itself. The economic benefits which could be obtained by carrying out such analyses directly on the process stream have stimulated the development of a wide variety of instruments for the purpose, many of which have passed the experimental stage and are now accepted as sufficiently reliable for plant use.

The Society of Instrument Technology is to be congratulated on its choice of "The Automatic Measurement of Quality in Process Plant" as the subject of the 1957 Conference, which had as its aim the bringing