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Rutherford Building

Chemistry - Physics Block Named

The Chemistry-Physics building at Ilam is to be known as the Ernest Rutherford Building in memory of Lord Rutherford, the University's most famous graduate.

Announcing this last evening, when he introduced the 1971 Rutherford memorial lecturer, Professor P.H. Fowler, F.R.S., in the University Hall, the Chancellor, Mr T.H. McCombs, said it was peculiarly appropriate that the building should be named after Rutherford for his discoveries were of fundamental importance to both disciplines and profoundly altered their course.

Professor Fowler, a grandson of Lord Rutherford, and Royal Society Professor of Physics at the University of Bristol, spoke on the 'Evolution of Elements'.

Introducing Professor Fowler, Mr McCombs said that in looking back through the yellowing matriculation records of the University one stopped in amazement at the year 1891. Signatures in that year included those of William Marris, who was to become Governor of Assam 30 years later; James Hight, who became the most loved, respected and influential figure in the University's nearly 100 years; Apirana Ngata, who went on to Ministerial office and led his fellow Maoris out of despair; John Angus Erskine, the engineer who left a fortune to the University for Erskine Fellowships; and Ernest Rutherford.

Mr McCombs said the city site of the University was redolent of Rutherford. He sat his examinations in the hall, walked the quadrangle and used lecture rooms still used today. This link would not be entirely severed with the move to Ilam as a result of the naming of the Chemistry-Physics building after Rutherford.

Last month the University received warm greetings from a colloquium held in Moscow to celebrate the centennial of Rutherford's birth. A message signed by Academician Peter Kaptiza, a colleague of Rutherford at Cambridge, said: 'In the course of the thirteenth national congress of the history of science in Moscow a special colloquium is being held to celebrate the birth of the great physcist Ernest Rutherford. We the members of the colloquium send warmest greetings to his native country and the University of Canterbury which started him on the road to science. We wish to express our appreciation of the imprint which his personality has made on the whole world of physics.'

In a message in reply Mr McCombs reciprocated these greetings and outlined the steps the University had taken to celebrate the centennial of the birth of its famous son.

Estimates for 1972

The University's estimates for 1972 show a projected income of $6,984,760 and if all staffing positions were filled expenditure would amount to $6,955,392. Present indications suggest that the amount likely to be spent on salaries will not reach the salaries provision in the estimates ($4,717,859) because of positions remaining unfilled.

The Registrar (Mr G.G. Turbott) says the projected balance of $29,368 will be increased by the amount of reductions in salary costs arising out of unfilled positions, although a changing pattern of employment is becoming evident in most disciplines, and this could result in reduced staff turnover and progressive filling of most vacant positions.

'This budget is for the third year of the present quinquennial period, and records significant increases in income and expenditure. During the past year and for the remainder of the present quinquennium, this University is expected to absorb cost increases arising out of award wage rate changes, and price rises. These effects could not be foreseen; it is a matter of some concern that the University may not in consequence be able to achieve the intended level of growth in the current five-year period,' Mr Turbott said.

The following figures taken from the estimates show the more significant items:

	1971	1972
INCOME (Main Items)	$	$
Government Grant	5,167,269	5,939,560
Tuition fees	800,880	834,250
Extension Studies fees	33,000	36,000
Rentals from endowment lands	40,000	40,000
EXPENDITURE (Main Items)		
Salaries	4,081,120	4,717,859
Research Fund	60,000	65,000
Re-equipment Fund	55,000	60,000
Working Equipment	334,790	374,730
Extension Studies — salaries	78,712	84,002
— other	40,657	38,367
Cleaning and Caretaking	194,000	204,000
Expenses of staff appointment	95,000	100,000
Upkeep of Grounds	52,000	56,000
Heating and Lighting	175,000	190,000
Library	216,000	250,000
Maintenance	223,000	230,000
Study Leave	69,500	78,000
Telephones, Postages	59,500	70,000
Travelling, Staff Conferences	25,000	32,000

Ottawa Experiments With Examinations

The relaxed examination procedures at the University of Ottawa interested Mr P. Hampton (Economics) who spent seven months there as a visiting professor during his study leave.

Mr Hampton said in a report to Council that considerable experimentation was going on with examination procedures, the main stipulation being that the end of semester exams should not be given a weighting of more than 60% or less than 30% in the calculation of the final grade. Within this framework, examinations could be written or oral, or any combination of the two methods.

'One unwritten stipulation quickly became apparent: given that a fairly radical student body existed, and that any student could demand a line-by-line justification of his mark, examinations became largely factual and definitional exercises. Essays requiring interpretation or synthesis were virtually impossible to set, given student beliefs that their interpretations were at least on a par with those of the lecturer,' he said.

'The essentially relative nature of the examining process can be illustrated by reference to the marking scales in force at the graduate level. Sixty per cent was regarded as the pass mark, and anything under 75% as a vote of no-confidence in the student. Approximately the same percentage of students passed at Ottawa as at Canterbury, the average expenditure of effort was similar, but the grades were 15% higher. Students at Ottawa were not as able, or as well equipped mathematically as the economics students at Canterbury.

'In contrast to the relaxed examination procedures in force at Ottawa, some of the regulations pertaining to student attendance and admission deadlines appeared most restrictive. For example, undergraduate students had to attend 90% of lectures in a specified subject before being entitled to write final examinations. This rule applied to all absences, whether justified or not.'

Mr Hampton said a great deal of discussion at Ottawa centred on student evaluation of teachers and courses. The essence of the approach decided on was contained in a document, jointly prepared by staff and students entitled *Report of the Task Force on Course Evaluation*. The Hector at Ottawa said that he intended to implement as speedily as possible the main recommendations in this report, which included widespread and continuing questionnaire appraisals of all courses taught at the University, and a system of incentives and sanctions operating on the academic staff. At the time of his departure just what the 'sticks' and 'carrots' would be had not been decided.

Prestige Fellow

Professor W. Hayes will be visiting New Zealand during September and October as a Prestige Fellow at the invitation of the Commonwealth Scholarships and Fellowships Committee. Professor Hayes holds the Chair of Molecular Genetics at the University of Edinburgh where he is a member of the Department of Molecular Biology. Previously (1958-1968) he was Director of the Medical Research Council's Microbial Genetics Research Unit at Hammersmith Hospital, London, and Honorary Senior Lecturer in Bacteriology at the London Postgraduate School of Medicine. He is well known for his work on bacterial conjugation and his book *The Genetics of Bacteria and their Viruses* has become a classic in its field. While in New Zealand, Professor Hayes will be visiting universities in all the major centres, lecturing on topics in molecular genetics. He will be accompanied by his wife.

Professor Hayes will spend six days in Christchurch from September 14 to September 19 as the guest of the University of Canterbury and Lincoln College. He will give one public lecture at the University and a series of four lectures at Lincoln College.

Debate in Club

An evening of wit and repartee is expected in the University Club on Wednesday, 15 September when a group of debaters takes for its subject the proposition 'that opiates are the religion of the masses.' This promises not to be so much an exploration of contemporary tendencies towards drug-taking as a look at all the apparatus now available in modern society for escaping from reality.

The debaters will include a Chief Inspector of Police, a producer of the Students' Revue and two solicitors. Interjections and speeches from the floor are expected to be a feature of the evening. Supper will be available at 50 cents.

TENDERS FOR ILAM LECTURE BLOCKS SOON

'One further step on the long road to Ilam' was how the Vice-Chancellor described the approval given by the University Grants Committee for the calling of tenders for two lecture theatre blocks at Ilam.

To be built to the east of the James Hight Library, now under construction at Ilam, the lecture blocks were designed by Trengrove, Trengrove and Marshall, who were commissioned by the Ministry of Works. The north block consists of one large lecture theatre seating 321, one seating 200 and another seating 150 and the construction period is two years. The south block, comprising three lecture theatres seating 100 and three seating 66 has a construction period of 21 months.

Tenders are to be called immediately. The Building Projects Authority has authorised construction to begin in October.

Amendment Was Carried

The motion on university accommodation quoted in the last issue of the *Chronicle* was not the motion approved by Council. An amendment to this motion was carried as follows: 'That this Council, noting that accommodation shortages at the Universities of Auckland and Wellington may lead to the imposition of restrictions on student enrolment there, with consequent pressure for increases in student enrolment at the University of Canterbury and elsewhere, requests the University Grants Committee to advise it urgently whether sufficient accommodation is going to be available at universities throughout New Zealand to meet anticipated student enrolments over the next five years.'

It was this motion to which the chairman of the University Grants Committee, Sir Alan Danks, replied. The error is regretted.

A prize of $50 to be awarded to a student with the best performance in mechanical engineering has been given to the University by the Canterbury Manufacturing Engineers' group of the Canterbury Manufacturers' Association. It is to be known as the Canterbury Manufacturing Engineers' Prize.

Vending Machines

'Unfortunate Action' by Students

Strong disapproval was expressed by Council at the action of the Executive Committee of the Students' Association in causing contraceptive vending machines to be installed in the Student Union buildings without reference to Council.

It expressed regret that the committee should have proceeded before obtaining a clear expression of approval from the student body; suggested that it place the issue before a special general meeting of the Association, with full details of the agreement made with the supplier; and decided to inform the committee that Council would consider the matter again at its next meeting.

Moving a resolution to this effect, the Vice-Chancellor (Professor N.C. Phillips) said it was emphatically not his intention to provoke any debate on the merits or demerits of the installation of these machines. He hoped that Council would reserve their views on the substantive issue until the students as a whole had had an opportunity to express theirs on 15 September. However, it seemed probable that he would not be present at the next meeting of Council and it seemed less a right than a duty to speak out rather than to seek the refuge of silence through absence.

'I find the action of the students' Executive Committee unfortunate on at least four grounds,' Professor Phillips said. 'First, when I saw the acting President on the morning of 3 August I explained to him, to remove all possible misunderstanding, that the legal control of the Student Union buildings was vested in this Council by Act of Parliament, and that to proceed with such a controversial action would be to tempt Council to exercise powers which it possessed but which it had used with great restraint and tolerance in the past. About twelve hours later, the students' executive decided to have the machines installed without delay and the next morning they were installed. This action I can only describe as lawless.

Failure to Consult

'Secondly, this action infringed the more or less tacit pact which enables an institution like a university to work. One of the articles of this pact is communication upwards and downwards, and we have heard much of this. The acting President would be peculiarly insensitive if he did not note the contrast between the Council's action in inviting him to attend this meeting with the precipitate action of his own executive and its use of the tactics of the *fait accompli*.

'The failure to consult was twofold, for it was neglectful not only of this Council but also of the student body, which three years ago threw out a similar proposal when it was still only a proposal. What is really at stake here is the question of whether or not the university is a community, bound together by the kind of pact or mutual understanding I have mentioned If it is a community, the students' executive had a moral obligation to consult before embarking on a course that was bound to reverberate not only through the university but also through the city and the country and to affect the university's public reputation.

'If, on the other hand, the university is not a community but two separate powers, of which the Students' Association is one, then the students forfeit all right *inter alia* to participate in decisions made by the university, to have the university collect the Association's fee or to have the university subsidise the running of the Union buildings. It is not tenable in the long run to claim the rights of membership of the university community when it is convenient to do so but to opt out of that community when the duties of membership are inconvenient. The students' executive cannot have it both ways and I put it to them that they give serious thought to resolving the ambivalence in their attitude.

'Thirdly, I doubt whether the students' executive took their decision in a way in which university-trained people should take decisions, that is, after carefully ascertaining and analysing the facts. No doubt they have heard lectures about venereal disease and even about its local incidence; but there is a curious lack of facts and figures in any statement emanating from the students. It is simply not good enough to say that the installation 'is a good idea'. Such information as I have been able to gather suggests that it is far from the truth that this disease is rampant in the university. In any case, decisions so hastily taken (on grounds, incidentally, quite different from those advanced three years ago) forbid the calm, dispassionate deliberation that the case calls for. The reason why this Council has taken no action to have the machines removed is to prevent the disturbance of an atmosphere in which rational discussion is possible,' Professor Phillips said.

'Finally, I do not much care for the particular kind of commercialism disclosed by this incident. Monetary gain, to be sure, can hardly be the aim of the students' executive; but someone is presumably hoping to profit financially from their decision. To have these machines installed in a university of all places would doubtless make it easier to have them installed in other places of public assembly.

'On the substance of the matter, I shall only say that I find it repugnant and quite unnecessary. This, however, is a personal judgment. I do not want to impose my codes upon people who are old enough to be responsible for their own opinions and many of whom are legally adults. Nor can I, for my part, think the university as such has a duty to try to regulate the moral conduct of its students, except insofar as this affects the specific academic functions of the university. Scholarship and learning have their own ethical standards and these we must uphold; equally we must protect the university's property from damage and its activities from disruption. Whether we should go beyond this I doubt, though I understand that many people, within the university and without, will find it hard to reconcile themselves to this contraction of the university's role.

'I have great sympathy for this point of view, but with reluctance I have come to believe that, as Mrs Partington failed to sweep back the Atlantic Ocean, so the university cannot successfully stem the great tides of society. We cannot perform what the family, the school and society before us have failed to perform.

'My personal hope, therefore, is that Council will take very careful note of what the students assembled in a general meeting decide. I further hope that the students will follow the path of reason and well-informed argument and that they will not be carried away by the good old youthful impulse to cock a snook at authority. For my part, there can be only one happy

Graduate Employment

'Situation in U.S. is Grim'

'The situation is grim and with no immediate prospect of improvement,' said Dr H.K.J. Powell (Chemistry) in commenting in his study leave report on graduate employment in the United States.

He said neither Government nor industry feels it can support as much basic research as in the past. Workers in research and development were losing their jobs at the expense of sales promotion personnel. This trend must be arrested soon as innovation and development were essential to continued and increasing sales.

'Cornell Aerospace Laboratories is a case in point. It is a non-profit research organisation existing to fulfil research requests for industry, Government and the armed services. In August 1970 its staff numbered 1700 and in March 1971, 700. The 1000 unemployed would be mainly skilled engineers and physicists,' he said.

Dr Powell spent his leave as a teaching-research associate at the State University of New York, Buffalo (SUNYAB). He said discussions with the past Assistant Director of the University Graduate Placement Office indicated that its work could be effective and reliable for employer and employee only when it was done on a personal basis. This was hardly the case at SUNYAB, which in 1969 granted 218 doctorates, 274 professional degrees and 895 master's degrees.

'It suggests that Canterbury may consider vocational guidance units and officers (from faculty) within each major department. To assist our graduates one can see a need for an increased (but not major) orientation of University research with the needs and industrial activities of our community,' Dr Powell said.

His first impression was one of shock at the shallow academic preparation evident among the average American freshman student. SUNYAB was currently ranked about 40th in academic standing among American Universities (1964:65th; 1969:41st) and reject 90% of freshman applicants. Therefore the freshman student would fairly represent the average.) Special tutorial classes were necessary for large numbers of students unfamiliar with slide rules and log. tables and basic points in science.

'One could not gain respect for a semester system,' he said. 'The short, twelve-week semester yields little depth in a student's understanding before final exams. Thirtyfive percent of evaluation was based on weekly tests; because of their frequency and brevity these were necessarily very shallow and encouraged students to seek facts rather than understanding.

'In freshman Chemistry lectures were two per week with the real 'teaching' effort being left to graduate student instruction during recitation. Despite attending lectures and receiving instruction from teaching associates the graduates were often ill-prepared and always a poor substitute for a Professor with a vision of the course as a whole. Graduates supervised laboratory work and Professor-student contact at the bench was virtually nil. Fortunately these conditions are in complete contrast to the situation at Canterbury.'

He said the chemist was finding increasing difficulty in gaining research funds from industry or Government agencies. In 1970 chemists presented 99 research proposals to the U.S. National Institutes of Health; of these 35 were approved in principle and only two were funded. These facts indicated how difficult it was for new U.S. faculty to launch research projects, but it was having bearing on the reappraisal of teaching ability as a basis for promotion.

'There was little evidence of collaboration among faculty over research projects; this contrasts markedly with the situation in the Chemistry Department at Canterbury. This aspect of our science impressed Professor W.A.E. McBryde, University of Waterloo, when he visited New Zealand in 1969 on invitation from the New Zealand Vice-Chancellors' Committee,' Dr Powell said.

Vending Machines

outcome to this affair and I think everyone here knows what it is.

'I should like to repeat what I said at the outset: that I do not wish to incite a debate on the merits of this issue,' Professor Phillips added. 'Let us keep the focus where I have tried to place it, that is, on the manner in which the thing was done. Let the students as a whole first make up their mind on the rights and wrongs of having these machines about the place, so that we and the public may take a fair and unbiassed view of them.'

ACCOUNTANCY TEACHERS' CONFERENCE

The Department of Accountancy was host to the annual conference of the Australasian Association of University Teachers of Accounting, held at Ilam from August 16 to August 18. Of the 57 persons who attended the conference, 28 were from universities in Australia.

On the first day the papers presented to the conference were: 'The Future of the Past in Accounting', Professor L. Goldberg (Melbourne University); 'Future of Accounting and the Profession', Professor T.K. Cowan (Otago University); and 'Evaluating Information in a Management Information System', Mr D.A. Richards (Queensland University). In the evening a reception was given by the Chancellor at the Ilam Homestead.

Papers presented on the second day were: 'The Anguish of the Accountant', Professor R. Chambers (University of Sydney); and 'Simulation, Its Use in Investment Decision Making', Mr D.S. Karpin (Newcastle University). In the afternoon there was a sightseeing tour of Christchurch and in the evening the annual dinner of the Association was held at the Ilam Homestead.

On the final day of the conference Messrs W. Birkett and R. Walker (University of Sydney) presented a paper on 'The Reaction of the Accounting Profession in Australia to Company Failures' and Mr K.E. Kindgren (Newcastle University) examined aspects of 'The Law Relating to Professional Negligence'. The conference concluded with a luncheon.

Visitors from overseas included Professor R. Chambers of the University of Sydney, Professor A.S. Carrington from the University of New South Wales, previously Professor of Accountancy at this University, and Mr Fong See Weng, Head of the Department of Accountancy, University of Singapore.

NEW APPOINTMENTS

The Roman Catholic Bishop of Christchurch, the Most Rev. Dr B.P. Ashby has been appointed a co-opted member of Council. He was appointed to the Academic Committee.

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Professor R. Park, Dr D.G. Elms, Dr A.J. Carr, Dr T. Paulay and Dr J.C. Scrivener, all of the Department of Civil Engineering, attended the third Australasian conference on the strength of structures and materials held in Auckland last month.

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Dr H. Andreas von Biel, principal engineer in the Electronics Research Department of Cornell University's Aeronautical Laboratory, has been appointed a senior lecturer in physics. Dr von Biel graduated B.E. (Elect.) from Cornell University in 1955 and M.Sc. in 1959, when he joined the scientific staff of the Applied Physics Department at C.A.L. as project engineer and principal investigator for a number of projects which were concerned primarily with the iono-sphere and characteristics of radio wave propagation. In 1965 he was appointed head of the Aeronomy Section. A two-year sabbatical fellowship granted in 1967 enabled him to join the staff of the University of Canterbury, where related research in atmospheric physics was being conducted, and the degree of Ph.D. was conferred on him in 1970. Dr von Biel is married, with three children.

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The resignation of Mr J.L. Karasek (Fine Arts) has been received by Council with regret.

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A graduate of the University, Dr Lois E. Tucker, has been appointed an assistant lecturer in Zoology. In May 1963 she graduated B.Sc. from the University and M.S. from the University of Hawaii in June 1964. Dr Tucker then directed research in marine ecology at the Friday Harbor Laboratories of the University of Washington, and in 1965 was senior biology mistress at St Cuthbert's College, Auckland. Enrolled as a Ph.D. student at the University she completed her thesis under the supervision of Professor Pilgrim and her degree was conferred in May 1969. Dr Tucker is at present conducting post-doctoral research in neurophysiology in the A.R.C. Unit of Invertebrate Biochemistry and Physiology, of Cambridge.

Mr Kevin C. O'Meara, a post-graduate student in mathematics, has been appointed a lecturer in the Department of Mathematics. Mr O'Meara came to the University from Otago in 1967 as a B.Sc. Honours III student, graduating with first class honours. He is at present completing his Ph.D. dissertation on ring theory.

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Dr Detlef Schaffer has been appointed a lecturer in German, to commence duties in July 1972. Dr Schaffer, who was awarded his Ph.D. in German and English philology by the University of Vienna this year, undertook a thesis, at present being published, dealing with both grammatical and aesthetic aspects in the evaluation of a literary text. Since 1966, he has been a member of the teaching faculty of the Austro-American Institute of Education where he has taught German as a foreign language and German literature to students studying in Vienna.

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Associate Professor William E. Long of the Department of Geology, Alaska Methodist University, Anchorage, will join the Department of Geology as a visiting lecturer from October 1971 until August 1972. In association with the International Geophysical Year 1957/58, Dr Long was a field researcher in Antarctica, and has published several articles on the geology of the Horlick Mountains and the Nilsen Range. His current research includes a glacial meltwater prediction investigation of the South Fork of the Eagle River, Alaska, in conjunction with the University of Alaska Water Resources Institute. Dr Long graduated M.S. in 1961 and Ph.D. in 1964 from the Ohio State University and is married with two sons.

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Miss Jane Browning, who is completing a Ph.D. in organo-metallic chemistry at the University of Bristol, has been appointed a post-doctoral fellow in the Department of Chemistry for 1972.

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Mrs H.E. Jottkandt, a temporary assistant lecturer in the Department of German, has been appointed to an assistant lectureship. After graduating B.A. (Hons) from Monash University, Victoria, Mrs Jottkandt enrolled as an M.A. candidate and has tutored at Monash and at the University of Melbourne, especially in 19th-century literature. She has also spent a year teaching both German and English at a Melbourne secondary school.

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Best wishes for a pleasant journey, a useful conference and a safe return were expressed by the Chancellor (Mr T.H. McCombs) to the Vice-Chancellor (Professor N.C. Phillips) at the August meeting of Council. Professor Phillips left on 24 August to attend a Conference in Ghana. During his absence Professor A.M. Kennedy is acting-Vice-Chancellor until the return of Professor J.C. Garrett from study leave.

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Mr Kirby M. McMaster, lecturer in sociology, California State College, will commence duties in the second term of 1972 as a lecturer in the Department of Sociology. Mr McMaster graduated from Brigham Young University, Utah, majoring in mathematics for his B.Sc. degree and physics for his M.Sc. degree. He is currently completing his doctorate on mathematical sociology, research methods and complex organisations. Mr McMaster has held a National Science Foundation fellowship as a graduate student, and has visited New Zealand serving the LDS Church in 1961-63.

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Dr R. Maclagan, Research Associate, Johns Hopkins University, Baltimore, has been appointed a visiting lecturer in chemistry for 1972. Dr Maclagan graduated B.Sc. (Hons) from the University of Western Australia and Ph.D. from the Australian National University. Under an A.N.U. Travelling Postdoctoral Fellowship, he spent a year with the Mathematical Institute, Oxford, and has been with the Department of Chemistry at Johns Hopkins University for the past year.

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Mr B.F. Anderson has been appointed a representative of Council on the committee for the Sir James Fletcher Chair of Industrial Administration.

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Mr N.B. Ullrich has been appointed a representative of Council on the Student Union Planning Committee and the Committee on Patents.

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Mr R.H. Bowron has been appointed a representative of Council on the Gymnasium Planning Committee and the Joint Committee on relations with the Christchurch Technical Institute.

Appointments

Dr M.G. Maginness, temporary lecturer in the Electrical Engineering Department, and formerly a Ph.D. student in the Department, is to take up an appointment as research associate at Stanford University. He will be engaged on the development of integrated circuit devices for the interrogation of ultrasonic transducer arrays, which is a continuation of some of his work at Canterbury. The work is to be sponsored by the U.S. Office of Education. Dr Maginness expects to spend about 15 months at Stanford and will be accompanied by his wife and family.

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Dr J.D. Hunter, who has been working both during and after his Ph.D. research with Mr R.H.T. Bates on electromagnetic diffraction, has taken up a post-doctoral fellowship at the University of Manitoba. He will be working in the Electrical Engineering Department with Dr M.A.K. Hamid on the practical application of the geometrical theory of diffraction. Dr Hunter and Mr Bates have extended the geometrical theory of diffraction by developing a new diffraction coefficient and they have published their results in a series of papers in the International Journal of Electronics and the Journal of Engineering Mathematics.

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Mr D.W. Bain has been reappointed a member of the Executive Committee until the end of July next year.

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Mr C.H. Perkins has been reappointed a member of Council on the Canterbury Medical Research Foundation for the next three years.

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The Rev. D.R. Wilson has been elected a member of Council on the Student Liaison Committee.

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Miss J.M. Herbison has been appointed a representative of Council on the University Naming Committee.

Lincoln Wins Golf Shield

The University has lost the challenge shield it held for golfing supremacy over Lincoln College during the last two years. In a match played at Lincoln in the vacation, Canterbury was beaten 6 – 14.

Student Unrest is Continuing Overseas

Student activities produced their fair share of interest for Professor R.A. Caldwell (Law) on leave. In a report to Council on his leave, he said he arrived in San Francisco on the day after America troops entered Cambodia. The protest which followed was described by the local newspapers as a 'day of decision for one million students.'

'This Californian version of the stop-work meeting successfully inhibited my projected visits to Berkeley and Stanford Law Schools as my hosts and I readily agreed that I could make no useful contribution to that decision – whatever it might be,' he said. 'In England I witnessed from the sideline such spectacles as the Keele nudity incident, the Garden Hotel riot case and the Atkinson and the Dutschke furores. Of more lasting and deeper interest was the aftermath of the Warwick University troubles which seemed to me to raise serious questions about the relationship between a university and the community at large.

'I was also interested to observe that many English Universities are overhauling their disciplinary machinery and procedures. In doing so they are concerned to preserve the 'domesticity' of the disciplinary tribunal without infringing on the student's right to legal representation – a task which is not made any easier by the somewhat nebulous and ambivalent attitude of the English courts to the criteria of Natural Justice in this context,' Professor Caldwell said.

For Dr H.K.J. Powell, (Chemistry) who spent his study leave at the New York State University, Buffalo, the 1970-71 academic year was heralded with several bomb scares which forced him to abandon experiments and vacate buildings. This was an after-effect of the March 1970 riots and not the start of a new wave.

'Campus security was a major problem,' Dr Powell said. 'Being part of the N.Y. State University System the campus is open to all the public and drug trafficking is rife, particularly by high school students visiting campus. The security force (campus police) of 40 men was largely ineffective as they patrolled the campus by car. The unarmed police, several with gun-shot or knife wounds from the March 1970 riots, would not enter buildings with high student density. This eventually forced the Director of the Student Union to close some facilities because of unchecked drug trafficking. Six weeks' negotiation led to a combined student-police patrol for these facilities. A visit to the Student Union was never a thoroughly comfortable experience,' he said.

Erskine Visitor in Accounting

Professor Ray J. Chambers, Professor of Accounting at the University of Sydney, visited the Department of Accountancy during August under an Erskine grant.

Professor Chambers, who is one of the world's foremost scholars in accounting theory has an impressive record of achievements. Following his appointment as a senior lecturer in accounting at the University of Sydney in 1953 and his appointment as Professor in 1960, he has been visiting Professor at the Universities of Chicago, Berkeley, Stanford, Washington, Florida, Kansas and came to Christchurch from holding the Leverhulme Fellowship at the Waseda University, Tokyo. In addition Professor Chambers has undertaken a study of accounting education in United States Business Schools, has acted as a consultant on education to the Australian Institute of Chartered Accountants and as a consultant to the Research Division of the American Institute of Certified Public Accountants. He is also a director of the Nestle Company (Australia) Limited.

Professor Chambers is the author of five books and has prepared numerous articles for a wide range of academic and professional journals. One of his books *Accounting Evaluation and Economic Behaviour* won him the American Institute of Certified Public Accountants Gold Medal in 1966, whilst in 1969 fifty of his papers were reprinted in *Accounting, Finance and Management*, published by Arthur Anderson & Co., one of the leading international firms of professional accountants.

While at Canterbury Professor Chambers conducted a series of staff-graduate student seminars and presented papers to the Extension Studies seminar on 'The Foundations of Business Policy' and to the conference of the Australasian Association of University Teachers of Accounting.

Tribute Paid to Dr. Hagyard

Regret at the death of Dr T. Hagyard, who was to have retired in January after 21 years as a senior lecturer and reader in chemical engineering, was expressed by Council at its last meeting.

The head of the Department of Chemical Engineering (Professor A. M. Kennedy) wrote the following tribute to Dr Hagyard. It appeared in the *Canterbury Engineering Journal* shortly before Dr Hagyard's sudden death.

Who's Who in New Zealand tells us that Thomas Hagyard was born in Stockton-on-Tees and educated at Stockton Secondary School, that his further education at London University led to the award of B.Sc. (Honours) and Ph.D. degrees in physical chemistry; and that he worked as a chemist and chemical engineer in research and development with I.C.I. Ltd, Boots Pure Drug Coy Ltd and sundry other British companies before being appointed in 1950 to a senior lectureship in applied chemistry at Canterbury University College. What we cannot glean from this entry is an appreciation of the pervasive influence since exerted by him upon a whole generation of chemical engineering students.

Tom Hagyard was unusually well qualified, academically and professionally, when he took up his post at Canterbury. From the outset, he applied the most rigorous academic standards to his own work and demanded such standards of his students. His first undergraduate laboratory classes afforded an early glimpse into the Hagyard experimental approach to open-ended problems, so much a characteristic of all his later work. The pithy and sometimes devastating comments penned in the margins of his students' reports reflected his own precise appreciation of the proper use of the English language.

He encouraged postgraduate research in chemical engineering well before it was generally recognised that one of the essential functions of an engineering department is to do research. The growth of an active postgraduate school within the department owes much to his efforts.

His electrochemical work is well-known internationally. With the use of novel high-speed techniques, he and his students have been able to study the basic electrode kinetics of aluminium and its alloys, and of magnesium and zinc and other reactive metals. Fundamental work this; not of the kind one would seek in a department of chemical engineering unless one knew the man and his background. Yet we have a delicate balance between this basic thread of investigation and a whole series of applied studies in which the cathodic protection of boilers has been examined, hypochlorite has been made from seawater, agressive solutions have been concentrated electrolytically, and corrosion of power-station penstocks has been examined in the laboratory and the field.

So it has been with his research into the behaviour of fluidised beds of particles. On the one hand, his students have investigated the viscosity of fluidised systems. On the other, they have been asked to consider the possibility of fluidising a channel in the sea-bed as a means of preventing the formation of sand bars at river or harbour mouths. One hopes that the saga of his efforts to mobilise Cabinet Ministers, Ministry of Works Engineers, local body men, and public relations experts in the defence of the harbours of his beloved West Coast will some day be committed to print. That his efforts have attracted more serious and significant attention from overseas than from within New Zealand is a manifestation of the local scene with which chemical engineers are all too familiar.

Perhaps one sees Tom Hagyard at his best in the intimate relationship established between research student and mentor, yet he has consistently developed the same sort of relationship in his dealings with the final-year design class. Until quite recently, every graduate from the department had been privileged to work as a small design group, with Dr Hagyard as supervisor, preceptor and constant goad. In all parts of the world there are men who remember with warmth, and respect amounting almost to awe, the demands he placed upon them during the design course.

Design and research under Tom Hagyard's direction have been inextricably interwoven. A theoretical investigation of salt production in solar ponds is followed by design studies of magnesia recovery from bitterns, and potassium chloride and ethyl bromide production from seawater. Design groups evaluating the production of titanium dioxide from West Coast ilmenite sands point the way to research into better means of reducing the ilmenite to metallic iron and separating this from the residual titania. A design study of the possible manufacture of geraniol from beta-pinene is followed by research into the chemistry of perfumery chemicals production from turpentine as a raw material. A commercial plant is designed, built and operated profitably. More research and design problems crop up and are fed back to the students.

A whole design class is asked to examine possible ways of stripping out the uncommonly large amounts of carbon dioxide present in Kapuni natural gas. A half-dozen processes are suggested, conventional and unconventional. The staff collaborate to submit a proposal for the extraction plant when tenders for it are called; and a new line of research into the thermodynamics of natural gas systems emerges.

So one could continue; by describing, for example, Tom Hagyard's pioneering efforts to establish an industry based on South Island power, coal and limestone resources for the production of calcium carbide and acetylene and its derivatives, and by citing the many design and research investigations that have stemmed from this. But perhaps the clearest example of his symbiotic approach to design and research is seen in his work on anode carbon.

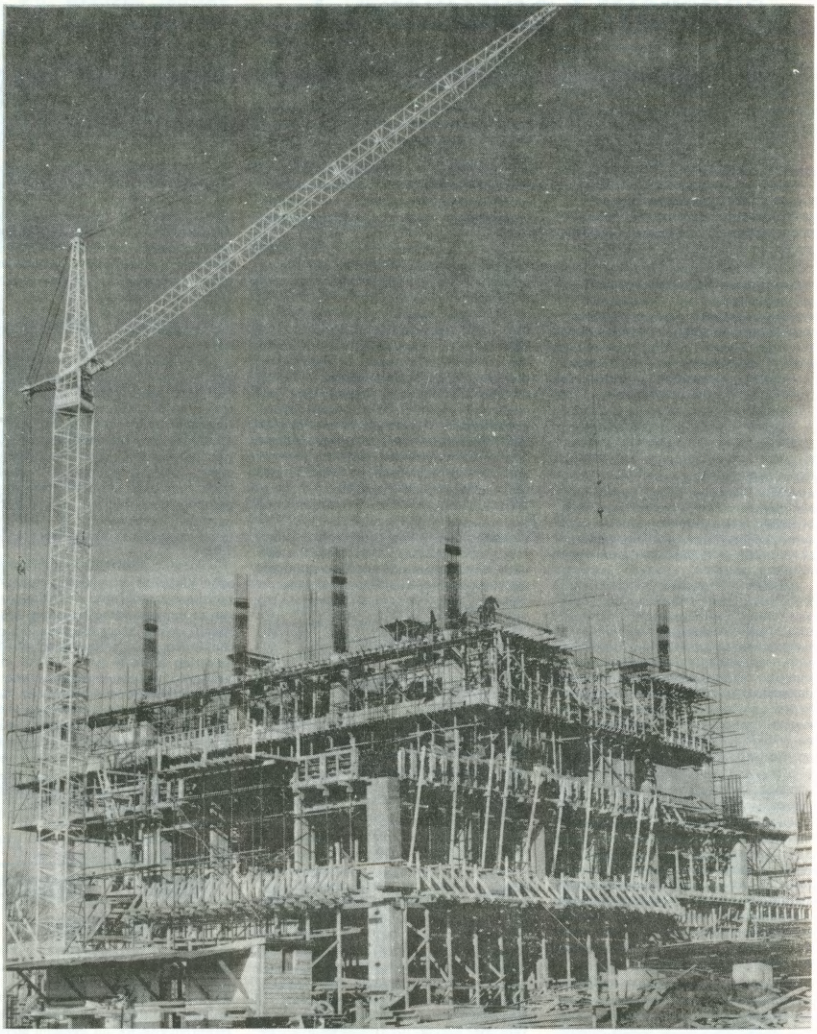
Almost a decade ago, undergraduate students were doing research on problems associated with the production of anode carbon from low-ash coal found in the Stockton No. 2 block of the Buller coalfields. With aluminium smelting soon to be a reality at Bluff township, the work received the interest and financial backing at Government level denied it earlier. At the present time, ten students and two research assistants are attacking various facets of the problem: investigating experimentally the coking, grinding and briquetting operations, doing a computer simulation of an electric calcining furnace, and carrying out design studies to find the optimum process conditions.

Visit by Japanese Students

Council has approved in principle the admission of up to four students from Daito Bunka University, Tokyo, in 1973. The approval is subject to the students fulfilling the normal academic requirements for ad eundem admission with credits for overseas students.

The students are expected to take courses in the Faculty of Arts.

Progress on James Hight Library



– Photograph by David Sims

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