The University of Wollongong is pleased to introduce the new Vice-Chancellor, Dr. Ken McKinnon in this, the third issue of Unity. Dr. McKinnon took up his appointment on August 4th, 1981. In his article in this issue he discusses some of the future aspects of the University’s development and his own feelings about University life and its place in the community. Unity is also pleased to welcome back Dr. Ross Robinson who returns to the University after three years with the United Nations. His work there is described in the article on page 6.

*The name UNITY symbolises the University of Wollongong’s special efforts to build strong ties between the University and the community.

The University of Wollongong
Northfields Avenue
Wollongong, N.S.W. Australia.

Arms of the University:
Incorporates the blue of the sea, the gold of
the sand and the red of the Illawarra Flame
tree with the open book often used by
educational institutions.

ISSN 0705-9973
“Unity”
Published by: University of Wollongong
Produced by: Creative Ideas Pty. Ltd.
Edited by: Nadia Hillary Public Relations
Printed by: Weston & Co., Kiama
Designed by: Kathryn Orton & Jutta Vincent

FRONT: University of Wollongong’s new
Vice-Chancellor, Dr. Ken McKinnon finds out how
busy a Vice-Chancellor’s life can be during his
first few months at the University – but there has
been time to browse in the library and meet students.

BACK: Dr. McKinnon meets his colleagues –
University Secretary Mr. Charles McDuff (top),
from left to right, Senate Leader Professor
Geoff Brinson and Deputy Vice-Chancellor
Professor Alex Clarke, (middle) and Secretary/
Manager of the University Union Mr. Geoff Williams
(below)...and then there’s been time for a quiet
moment by the duck pond.
Vice-Chancellor's message for Unity

The University of Wollongong attracted me for a number of reasons. Not least of these was the fact that it is situated in one of the most beautiful and under-rated parts of Australia. Congenial living conditions aside, the youthfulness of the University, its balanced offerings, its size, and the type of students it caters for, and its location in a mixed industrial/rural setting were important attractions.

It is not accidental, in my view, that some of the world's best universities, Oxford, Cambridge, Harvard, Yale, Stanford are not in the centre of large cities, so I do not see it as a real disadvantage for Wollongong to be away from Sydney. Indeed, I see this University as being in an advantageous position to relate successfully to the surrounding community. Nor need the descriptive term "regional" necessarily imply parochialism of outlook. Wollongong University can and should aspire to excellence in world terms, while nevertheless capitalising on its regional location.

Wollongong University's characteristics and objectives led me to think that I would be able to make a contribution of social and educational value in a young institution, aspiring to excellence, in an attractive physical setting - personally fortunate circumstances.

These first impressions have rapidly been reinforced. For at my first meeting of Council on 21st August, 1981, Council passed a resolution setting out, in more detail than that provided in the University of Wollongong Act, its view of the responsibilities of the University, which include:

(ii) The University has a primary responsibility for the cultivation of the intellect through scholarship, teaching and research, as part of the international community of scholars and universities.

(iii) in addition to this primary commitment to the provision of university education and subject to the University of Wollongong Act and the By-laws, the University has some special responsibilities in its region, namely:

(a) to facilitate access to university education;
(b) to undertake teaching and research in those disciplines relevant to industry and employment;
(c) through all its activities to:
   1. contribute to the cultural life and development of the wider society recognising the cultural diversity of the population of the region;
   2. act as a resource and information base;
   (d) to encourage cooperation among educational institutions.

While my beliefs are consistent with those objectives, allowing me to support them wholeheartedly, I appreciate that my role is primarily one of encouraging others within the University, and members of the wider community, to clarify how the crucial mission which society has given universities can best be realised here. I do not see the University as an organisation apart from its environment; we in the university community are an integral part of the region in which we reside, being both affected and affecting the life around us.

All universities, if they are to justify that name, have a fundamental commitment to knowledge, scholarship and research. They create, extend, conserve and transmit knowledge. Their reputation and integrity depend largely on their self-governing nature and on their being part of and judged by the international community of scholars. These roles themselves, especially those of creating, extending and conserving knowledge, generate internal tensions and, added to these, are the demands of the society which supports the universities.

The virtue of universities is that they are able to harness these (proper) tensions to form a creative environment which benefits not only the members of the universities, but also the communities that support them.

Wollongong, for all its natural beauty and its industrial and resources strength, is relatively disadvantaged in terms of incomes, education, health, transport and housing. In this environment the University has the challenge of providing better access to higher education. Access, in these terms, means not only a higher proportion of the population enrolling in the courses in the University but also access to the fruits of the University's research.

Already the University has launched programmes to reduce disadvantage and improve access, through its special admissions programme which counter-balances any lack of formal education as preparation for formal higher-education, through its Centre for Multicultural Studies which encourages ethnic groups to understand themselves and be understood by others; through its research into environmental issues, waste disposal, trade union histories, industrial relations, engineering and metallurgical problems, coal and fuel innovations, financial management, and economic development, educational issues, studies of health and safety, women's issues, and so on. At the same time, the University has maintained its basic commitment to teaching and research in the arts and the sciences.

But more can be done. The University would like to attract greater resources for further research into the concerns of the regions, particularly in fuels, the use of computers, the environment, ethnic disadvantage, the application of technical knowledge to the production and distribution of goods and service, the development of language studies.

Page 3
Attempts will be made to make greater use of the University's resources - physical and human - through such initiatives as Summer sessions, so that current and potential students can benefit from courses of all kinds, including university preparation and professional updating. Better use of resources will also be possible as a consequence of the federation of the University and the Wollongong Institute of Education, including a broadening of the range of advanced education courses available. Expansion of sub-degree programmes will also encourage those potential students who are nervous about embarking on degree courses but who can contemplate the prospect of a one or two year vocational study. The experience might lead them on to farther, more rigorous study.

In any case, lifelong education or at least recurrent education is becoming increasingly a necessity, especially for people in those professions where knowledge and techniques are changing rapidly. More generally, we all pay for higher education through our taxes and have the right to participate in educational offerings. Further stages of education are more likely to be of value to us if we can choose when we take them, so I hope to encourage the development of offerings that respond to different needs and different age groups.

Finally, I would like to see arrangements developed further to bring the University and its communities closer together. The University's main initiatives in this area so far have been the Friends of the University of Wollongong and the Illawarra Regional Information Service (IRIS), which provides an information and data base for users in the region, but their successes will depend ultimately on how we can break down the barriers between "us" and "them". I look forward to the time when we are all "Friends" of Wollongong and the University, because I am sure we share common aims towards improvement of the quality of life.

I should add that I see "Friends" as being those who care enough about each other to nurture their relationship constantly. This would include the asking of difficult questions. As Sir Charles Carter, the eminent scholar (and Vice-Chancellor) said recently, in discussing the future of higher education in the United Kingdom and the need to encourage spontaneous radical responses to new circumstances, "What is lacking is enough people to ask awkward questions: "Here is a new educational need - what are you doing about it? Why do you continue to do things in that way? How do you justify this distribution of your resources?"" We need to be friends enough to ask such questions and to listen, and where possible act on the answers.

A reflective moment for Vice-Chancellor
Dr. K. McKinnon.
The heads of two University of Wollongong departments have been awarded $52,000 by the Federal Department of Education to conduct an evaluation of the Commonwealth Postgraduate Research Awards Scheme.

Professors Steve Hill and Ron Johnston, from the Departments of Sociology, and History and Philosophy of Science respectively, have combined forces to carry out the 18-month project which will involve the gathering of data from universities from all parts of Australia.

The professors outlined the three major objectives of the project as:
1. To investigate and establish the process of the present awards system.
2. To examine the effectiveness of the present scheme in achieving its objectives.
3. To examine the appropriateness of the present objectives of the scheme and to explore the advantages and disadvantages of alternative policies.

Professor Johnston said the award system had not been effectively evaluated since its inception in the 1950s.

The scheme's main objectives at that time had been to build up research schools in Australian universities, to promote the full intellectual development of students and to maintain the flow of highly trained personnel into the workforce.

"Although the Department of Education has had a few internal reviews of the scheme, no substantial work has been done in this area", Professor Johnston said.

"We will assess the effectiveness of the present scheme primarily against the objectives established when the awards were initiated, but a number of other specific issues will be examined as well."

The three objectives established in 1959 were:

1. To develop postgraduate research schools in Australian universities.
2. To maintain a flow of highly trained personnel to the workforce.
3. To promote the full intellectual development of the most talented students.

A number of specific issues to be examined include:

(i) limitations and opportunities posed by the present system in terms of mobility of postgraduate students between universities and disciplines;
(ii) opportunities available for inter-disciplinary and team research training;
(iii) research output of academic institutions and its relationship to postgraduate students;
(iv) cohesion and viability of research schools as a product of throughput of Award-holding postgraduates;
(v) "concentration effects" of the present Award system both to universities, and particular fields and departments;
(vi) factors influencing students to progress to higher degree work (Award-holders vs. other postgraduate students);
(vii) the qualifications and background of Award-holders vs. other postgraduates (contrast against success rates);
(viii) the link between Award-holder research interests and established Departmental research priorities;
(ix) completion rates and times according to discipline and university of Award-holders vs. other postgraduate students;
(x) the financial level and completion requirements of Awards (with, for example, possible differentiation between city and provincial universities in cost-of-living);
(xi) effect of the financial value of Awards on attraction of quality students.

An important feature running through all these issues will be a comparative study of the effectiveness of the Awards Scheme with other support schemes (e.g. internal University awards) and with non-Award holding postgraduate students. Thus effectiveness will be assessed not only against externally-determined criteria, but also by comparison with other systems.

"Since the objectives of the scheme were laid down in 1959, the research climate in Australia has undergone major change. Research enterprise has grown significantly, there has been a marked decline in the level of research in industry and the Federal Government has moved some distance towards linking the research system to national goals, as for example, in special funding for energy and marine research", Professor Johnston said.

"As well as examining the scheme in the light of this new context, we will be looking at the value of the maintenance and support of a minimum level of postgraduate education for social, economic and cultural reasons."

Professor Hill said the examination of the actual process of the awards scheme would require a detailed interview programme.

He said the present operation was based on a highly centralised system. Cabinet determined the number of awards based on advice from a number of Ministries. The allocation of awards to universities was determined by a Postgraduate Research Awards Committee, constituted largely of academics. Within universities, the allocation of awards occurred by a variety of processes.

"It appears that under its present operation, the scheme has been guided principally by the internal dynamics of university procedures of selection and evaluation."

"We will seek to determine the relative advantages and disadvantages of centralised versus decentralised methods of allocating awards," Professor Hill said.

He said specific issues which could be included were the linking of research training to centres of excellence, the linking of research training to national goals and the responsiveness to employment demands through linking training more effectively with government and industry organisations.

The research funds would provide for the employment of a full-time professional officer, research assistants and for travelling to universities in Australia. Work has commenced on the study and the professional officer has now been appointed. It was anticipated that interview sites would be set up at a major metropolitan university (such as Sydney), a smaller metropolitan university (such as Flinders) and a smaller university still in a more remote location such as Tasmania.

Both Professors said it was a significant step for the University of Wollongong that they had been approached by the Federal Government to undertake this research, the results of which would clearly be of great interest to academics and education and research administrators.

The two Professors have collaborated previously on a number of projects in the area of Science and Social Policy, and have considerable experience in the area of the study. However, they are anxious to draw on the studies of academics and universities in this area, and would welcome inquiries.

For information contact Professor Ron Johnston - Department of History and Philosophy of Science - 297311 - ext. 900 or Professor Steve Hill - Department of Sociology. 297311 - ext. 993.
Reader in the Department of Geography and present Acting Chairman of the Department, Dr. Ross Robinson is back on Campus after a second assignment, this time, three years, with the United Nations.

He reckons himself to have been fortunate indeed to have been able to combine his academic interests with those of the United Nations and has been quick to appreciate that few University staff have enjoyed the privilege of serving with the United Nations, of having diplomatic status and carrying a diplomatic passport as well as discussing problems of development with representatives of at least 40 governments.

Dr. Robinson has been on leave in Bangkok at the United Nations Economic and Social Commission for Asia and the Pacific. The Regional Commission in Bangkok is one of five such United Nations commissions - others are in Latin America, West Asia, Africa and Europe. All are responsible for the implementation of the resolutions of the General Assembly and have the task of assisting member Governments in all matters related to economic and social development.

ESCAP in Bangkok deals with more than 40 countries in Asia and the Pacific, including countries with very large populations such as China and India as well as those with few people, as Fiji and Kiribati. The ESCAP region stretches from Iran in the West to Japan and Korea in the north, and east to include the Cook Islands, New Zealand and Australia - and includes more than half of the world's population. The U.S.A., U.K., U.S.S.R., Japan, France and Germany are included, among others, as donor countries. The Regional Commission in Bangkok has the distinction of being the only one which has a special group dealing with shipping and maritime development in its Division for Shipping, Ports and Inland Waterways.

During his time with the United Nations Dr. Robinson was director of the Port Development Programme in ESCAP, responsible for the development and implementation of programmes leading to increased efficiency of ports in the developing countries of the region.

The programme of assistance to the developing countries included special training projects for top level managers in ports (seminars, workshops, study tours), a wide range of research projects, including those related to container handling, management information systems, vessel delays, industrial development around ports and so on. It was funded almost entirely from extra-budgetary funds from donor countries. The funds for the programme amounted to between half and three quarters of a million dollars.

Dr. Robinson said he was particularly proud of the development of special training courses in containerisation, using not only routine teaching material but also a series of video tapes for closed circuit television teaching.

Extensive travel was another by-product of service with the United Nations, throughout Asia and also to and from the capitals of the world. Regular visits to Hong Kong, Singapore and Manila were part of the schedule as well as trips to India, Bangladesh, Pakistan, Vietnam and Fiji.

Sometimes the schedule was rather hectic - as in the case of a two week seminar in Yokohama, then discussions in Hong Kong, direct to London for a two day conference and the presentation of a paper to my largest audience yet, of 700, then direct to Bangkok and into a major policy meeting," Dr. Robinson said.

On his return to Wollongong, Dr. Robinson became very aware of the changes at the University.

"The Campus has become delightful. The landscaping is a credit to all involved and it is certainly a place we can all be proud of. The physical context provides a place most conducive to study and learning," he said.

Another outstanding impression, after years in Asia, was the "sheer affluence of the country" and the "remarkable absence of people", not to mention the ease of driving.

"However, I must admit I'm concerned with the parochialism and selfishness which seems, regrettably, to be characteristic of the Australian society as a whole," he said.
Opening remarks at a training seminar in the special training room in the Division for Shipping, Ports and Inland Waterways, at ESCAP. The room was equipped with 6 video units together with 2 video cameras, monitors etc.

A Plenary Session in the main conference room at ESCAP headquarters in Bangkok, Thailand.
On September 26 this year, the University of Wollongong and the Institute of Education combined forces to present the world premiere of a children's opera written by distinguished Australian composer Anne Boyd.

The opera, "The Little Mermaid", based on the story by Hans Christian Andersen, proved an enchanting piece, made even more so by the amount of work that went into the production and the performances by a cast of over 100, including an orchestra of young people.

At the opening night, composer Anne Boyd expressed herself well pleased with the first performance of an opera that she regards as very special and she paid tribute to the Wollongong people, and in particular to the Musical Director David Vance, for their initiative and success with the production.

She said she had been delighted to find so much young musical talent in Wollongong and people who were prepared to support it.

All performances of the opera were well attended and school matinees were completely sold out for the short season.

Press reviews were excellent, commenting favourably on all aspects of the production. Quotations from Roger Covell's review for the Sydney Morning Herald have been used with the photographs on these two pages.

The little mermaid (Petra Davis) with the Witch of the Sea (Elizabeth Shawell).
“Petra Davis, heir to the clear, even treble that many musical girls possess, has a slightly shy appeal appropriate to the title role.”

The little mermaid (Petra Davis) swims up through the "waves" to the surface of the ocean.
MATHEMATICS

-figures in sculpture

"Mathematics rightly viewed, possesses not only truth, but supreme beauty - a beauty cold and austere, like that of sculpture." - Bertrand Russell, 1872-1970.

C

old and austere" is not the way perhaps, that Chairman of the Department of Mathematics, Professor John Blake, would describe the beauty of mathematics, but he most certainly does consider that certain areas of the discipline to have an inherent beauty.

The beauty of pure mathematics is not easily defined, but amongst the solutions to mathematical problems, every now and again one stands out for its clarity, precision and completeness. This is to be savoured," Professor Blake said.

For those who would venture further into this realm, Professor Blake recommends G.H. Hardy's "A Mathematician's Apology" with a foreword by C.P. Snow, a piece of writing "justly famous."

Whatever the secret of its charm, the art of mathematics has been capturing the imagination of people as far back as 2000 B.C. at least. Huge quantities of baked clay tablets covered with cuneiform, or wedge-shaped, characters have been excavated from the sands of Mesopotamia and many of the tablets, when deciphered, were found to have mathematical content. There were tablets with simple calculations and also tables for multiplication and division in the Babylonian sexagesimal number system which was based on the number 60 rather than on 10, as in the decimal system. There were also more complex problems including computations of areas of triangles, rectangles and trapezoids, and some examples dealt with volumes of pyramids and cones.

The Babylonians were also aware of what later came to be called the Pythagorean theorem and were skilled in algebraic problems. Egypt was another source of early records in mathematical studies. The creation of mathematics as a deductive science was accomplished by the Greeks who transformed the Babylonian and Egyptian techniques into a logical system which has been retained throughout history, continuing to expand through Mediaeval times, the Renaissance, the 17th and 19th centuries, and with an enormous period of growth in the 20th century. The present day mathematician must, of necessity, be a specialist in a relatively small area.

Because of its infinite scope, any attempt to define mathematics with any completeness or finality seems doomed to failure but at the same time, mathematics is becoming more and more relevant in every aspect of our society and search for knowledge.

"There would be few, if any, disciplines that do not make some use of mathematics to contribute to their body of knowledge," Professor Blake said.

At the University of Wollongong, the Department of Mathematics is the largest in terms of lecturing staff. The staff includes the departmental Chairman, an Associate Professor, two Readers, five Senior Lecturers, three Lecturers, two Senior Tutors, two Tutors, two Post-Doctoral Fellows and two secretaries. Student numbers are high, especially at first year level where the number of students this year is between 370 and 380. A large number of these students are either enrolled in one of the Engineering degrees or are taking Computing Science. Employment prospects for graduates, especially at honours level, are excellent. Last year, Professor Blake said, all six honours students has gained employment before the year had ended. Other students over the years had distinguished themselves in postgraduate studies and in their careers.

The Department teaches Pure Mathematics, Applied Mathematics, Statistics, and Operations Research, the last two, with Numerical Analysis, being popular as computer-oriented mathematics. Professor Blake said a major boost to research activities in the Department had been the appointment this year of two Post-Doctoral Fellows, and Statistics lecturer Barry Quinn and Tutor Glen Fulford, the last two coming from the Australian National University.

Professor Blake completed his undergraduate studies at the University of Adelaide, graduating with honours, and went on to do his Ph.D. at Cambridge. He has held a number of scholarships and Fellowships and distinguished himself in Australian Rules football (he has been invited out of retirement to play for the University of Wollongong's football team). Professor Blake has had teaching and lecturing experience at the University of Adelaide, Cambridge University, the Australian National University and the University of Wollongong. He is a Fellow of the Cambridge Philosophical Society, a member of the Australian Mathematical Society, Division of Applied Mathematics, the Illawarra Mathematical Society and the Society for Industrial and Applied Mathematics. His teaching commitments in the department include a second year course in Dynamical Systems, a third year course in mathematical modelling and the honours course in fluid mechanics.

Post-Doctoral Fellow, Dr. P. Cerone is a "total product" of the University of Wollongong gaining his Ph.D. in 1979. He is currently developing a mathematical model to gain a better understanding of the mechanisms underlying cavitation damage to turbine blades with Professor Blake. The work will enable them to determine the effects of coating turbine blades with a suitable resilient material with the view to controlling or even completely eliminating damage caused by collapsing vapour bubbles.

Dr. Cerone's one teaching commitment is with the honours class this year.
He is single, enjoys a game of squash, swimming, and reading. Of Italian descent, he hopes to visit Italy, which he left as a child, before too much longer.

Another Post-Doctoral Fellow doing research with Professor Blake, Mr. Peter Vann is currently working on the problems of ovum and mucociliary transport. The research is being funded by a National Health and Medical Research Council grant. Peter is a graduate of the University of Queensland and has a Master of Scientific Studies. He has submitted his Ph.D. thesis, titled "Mechanics of Blood Flow in Very Narrow Capillaries and Some Applications".

Peter is married, lives at Wornambool where he enjoys the proximity of the bush and the ocean, likes photography, guitar playing and listening to a wide variety of music.

Professor Blake is married with a family of five children with ages ranging from a few weeks to 11 years. His wife, Denise, is not a mathematician ("she's a classicist...") and they both enjoy spending most of their "spare" time with the children at home or taking family outings. Squash and football are Professor Blake's sporting interests, although he had played football for 12 years before joining the University team as a team member and coach.

Associated Professor D.J. Clarke can, more often than not, be found on a beach somewhere - but this is no idle surf 'n sun activity. Armed with various pieces of electronic equipment (which are the bane of his life...) he can be seen taking various measurements in order to be able to calculate beach sediment movement and construct beach water tables. In his research area he has combined mathematics with oceanography and has worked closely for years with geographer Dr. Ian Eloc who recently left Wollongong for a post at the University of Western Australia. The teamwork is still flourishing however by telephone and study leave projects on N.S.W. and Western Australian beaches.

Professor Clarke completed his undergraduate years at the University of Western Australia, did a Master's degree at Adelaide and his Ph.D. at Sydney. His research interest since then have centred around the movement of fluid (surface and internal waves, seiches) with reference to many bodies of water in the Illawarra region. When he is not in the field, he can be found processing up to 41,000 data points or so, which go through the computer up to 20 times before the required information is obtained. For those interested in oceans, beaches, pollution, harbours and mooring problems, electronics, long distance communication and the joys of field work, it is well worth the effort to either Professor Clarke into conversation, not only for the knowledge to be gained there by, but also for a taste of the rare and exciting enthusiasm that he brings to his work.

Married with two sons, the Professor enjoys family life, talking with his wife (a geographer), body surfing, canoeing and bushwalking.

Reader Dr. J.M. Hill enjoys working at a small university where staff and students can communicate with ease.

He comes from the north of England where he was an undergraduate at the University of Durham before completing his degree at the University of Queensland where he graduated with honours. He stayed in Queensland to complete his Ph.D., taught at the Darling Downs Institute of Advanced Education, had two years back in England with the Science Research Council and was then a Post-Doctoral Fellow at the University of Nottingham.

Dr. Hill came to the University of Wollongong in 1975 with a strong background in research in Applied Mathematics, especially the problems related to the inflation of rubber in tubes, and load deflecting relations of rubber engineering components. His present research interest also include diffusion in media with double diffusivity... (an area he is delighted to enlarge upon should anyone wish to seek an appropriate time and place). Other departmental activities include giving talks to school children and contributing to the organisation of the Applied Mathematics conference to be held at Bandanoon next year (see panel on page).

Married with two daughters, Dr. Hill has an interest in local history and believes there is a growing community interest in this field. He would like to see more people involved with local history. He and his wife, a physiologist, decided to go for country living and have settled down at Robertson where the whole family is thoroughly enjoying a rural lifestyle.

Reader, Dr. Keith Tognetti obtained his first qualification in Mathematics only last year when he gained the first Ph.D. awarded at this University on the basis of publications (he currently has about 40). Previous to this he regarded himself as an unqualified success. However, in 1962, he graduated with a Master's degree in Nuclear Engineering whilst working at the Atomic Energy Commission as a Research Scientist and this course had a large component of mathematical methods. He then joined the Department of Defence where he commenced his work in Operations Research and in particular discrete simulation modelling. For this work he was elected a Fellow of the Australian Computer Society. He then moved from the "death sciences to the life sciences" joining the newly created Research School of Biological Sciences at the Australian National University where he began his work on population modelling.

In 1968 he came to Wollongong again specialising in Operations Research and produced a large simulation of ship movements in the Port Kembla Harbour system with an A.R.C. Grant. At this stage he became bitterly disillusioned with the Industrial-Military Complex and returned to population modelling. This time he specialised in human populations and developed mathematical models to describe the effects of various time dependent birth control policies. Recently he extended these models to describe for the first time the position and age dependent growth of a column of cells such as in a plant root.

Dr. Tognetti is married with three sons and through them pursues an interest in music, art and pottery. He also has a great love for native plants and thinks that they should be included in the E.F.T.S. count. "Look up the roof of academic" he says "you will find that it comes from Academica, the garden where Plato taught". His great hope is that his mathematics will lead into a mathematics of aesthetics.

Senior Lecturer Dr. M.W. Bunder's research area Mathematical Logic is one that many would regard as exotic. Logic however has many applications to other areas of Maths and also to Computer Science and Electrical Engineering.

Dr. Bunder's main research is in Combinatorial Logic which aims, basically, to simplify the foundations of Mathematics and Logic to a point beyond the use of quantifiers and variables. This leads to a more abstract but simpler, form of reasoning. The work greatly simplifies investigations into the consistency of Mathematical Systems. Work in this area began in the 30s and 40s and has been progressing steadily ever since. Dr. Bunder has been invited to several international conferences to speak about his work.

An undergraduate at the Newcastle University College, Dr. Bunder then completed an honours year at the University of New England and worked as a tutor for three and a half years after graduating. He did a Master's degree in logic with the Department of Philosophy there and a Ph.D. at the University of Amsterdam. He came to Wollongong in 1969. His other research interests include number theory and axiomatics of other algebraic and logical systems.
Dr. Bunker is married (his wife was an occupational therapist) and has four children, two boys and two girls. He is well-known on campus for his prowess at table tennis and is president of the University Table Tennis Club. Other interests include bridge and stamp collecting.

Senior Lecturer Dr. Greg Doherty finds the biggest challenge in teaching mathematics lies in "being able to say the same thing in enough different ways to make sure everyone understands it..." - an approach that requires no small amount of ingenuity.

Dr. Doherty did his undergraduate studies at Kensington "when it was still the size of Wollongong University", graduated with a science degree and went to work at Lucas Heights in the Reactor Physics Division where he stayed for the next 12 years. During that time he had a two-year stretch in the U.K. at a reactor establishment there. Dr. Doherty came to Wollongong in 1973 after completing his Ph.D., and some part-time teaching at the University. His thesis discussed methods of calculating reactions in nuclear reactors. His current research interests include numerical analysis and some work with Dr. Peter Burton of Chemistry and Margaret Hamilton, a student, on calculating the behaviour of small molecules. Dr. Doherty is also supervising Ph.D. students who are working at Lucas Heights and at the Institute of Technology. He teaches numerical analysis and computer programming at all levels in the Department.

Dr. Doherty is married with four children "which effectively disposes of all my spare time..." but he does like mathematics as a hobby as well as work. He, his wife Jean, and two girls, spent 1977 in England on sabbatical leave where Dr. Doherty worked at Chilton Atomic Energy Authority laboratory. His twin boys were born in that period.

Senior Lecturer Dr. Tom Horner says "if you can think in mathematics, you can think in anything..." and thinking in mathematics involves mastering a technique which begins with an understanding of mathematical ideas and goes on with lots of practice with practical examples. He also claims that teaching mathematics is as much a learning experience for the teacher as it is for the students.

Dr. Horner was an undergraduate at the University of Sydney, graduating with a science honours degree and going on to do a Diploma of Education. He then taught for seven years, three years in the Riverina and four at Wollongong High School, before coming to the University of Wollongong in 1981.

His Ph.D. thesis, which he completed in 1978, has the mind-stretching title (to a non-mathematician of course) of "Chebyshev Polynomials in the Solution of Partical Differential Equations" and this subject has remained a major research interest. Dr. Horner is also interested in computer assisted learning and has been working on the writing of lessons for CAL. He said he hoped to be able to use this teaching technique with bridging courses in 1982.

Dr. Horner is married with three children, he enjoys swimming, walking on the beach, reading, and the whole family enjoys listening to music and travelling. The children, two girls and a boy, have all enjoyed attending different schools from time to time. So far Dr. Horner and his family have been to England twice on sabbatical leave and they all hope to do more travelling.

Senior Lecturer Dr. Rod Nilsen is another mathematician with an intriguing title to his Ph.D. thesis - "Fixed Points in Choquet Simplexes", which, broadly, deals with generalisations of triangles.

He is still working on aspects of this topic and also on differential equations (with a college in Canada), both in the area of Pure Mathematics. Dr. Nilsen teaches at all levels in the Department, this year teaching Calculus, Linear Algebra, and Functional Analysis. He did his undergraduate studies at the University of Tasmania, Hobart, graduating with honours, and then went to Flinders University, Adelaide, to do his Ph.D.

After Adelaide, he spent four years overseas, two years in Malta lecturing at the Royal University of Malta, and two years in Wales, with a Fellowship at the University College of Swansea (a part of the University of Wales). Dr. Nilsen came to Wollongong in 1974.

He is married, enjoys listening to classical music, especially Bach, and enjoys reading and bushwalking. He was secretary of the Conservation Society in 1977 and retains a keen interest in conservation.

Dr. Barry Quinn has just arrived in the Department this year to lecture in Statistics.

He comes to Wollongong from the Australian National University where he obtained his B.A. and Ph.D.

His current research interest are connected with time series, a sub-field of Statistics, and probability theory. The research involves the study of any quantity that changes in time. Barry is preparing a book based on his Ph.D. thesis, (titled "Fixed and Random Coefficient Time Series") and work done since in the same field.

Barry's teaching duties include a third year course in design and analysis for Social Science students and an Honours Statistics course. In second session he will also be giving a course in time series.

He is single and enjoys listening to modern music. Volleyball and squash are his sporting interests, somewhat curtailed at times with an old knee injury. And if you're buying him a drink for his birthday or at any time, you can make it Foster's Lager.

Senior Tutor, Peter Castle has reason to feel completely at home in the Department - he moved smoothly from student to staff status and has "never left the place since".

He is currently deeply involved in the complex business of producing computer graphics for the University. He wrote the University's graphics system and updates it constantly. Peter feels computers will play a major role in teaching in the future, especially as it becomes less expensive to organise. One of the problems is that a personal approach to teaching cannot be mass produced and the personal preparation of programmes is extremely time-consuming.

Peter's teaching commitments include courses in Statistics and Operations Research.

On campus, he has become mildly famous, not as a mathematician (yet) but as the organiser of the highly successful Unimovies programme. Unimovies operates on the same basis as other commercial cinemas so...

Page 12
current movies can be provided every Wednesday night. There is also a programme of lunch-time "oldies" that companies don't mind being screened on a non-commercial basis. Peter says profits made go into better equipment so the University can provide an increasingly good service. Lunch-time programmes, of course, run in several branches of the University. The proceeds go into the general fund of the University.

Dr. Frank Prokop is the co-ordinator of first year studies in mathematics. He has not only been with the Department for some years but has won Professor Blake's (and others') admiration for his skill and accuracy as a mathematical typist. Miss Debbie Turner is a novice still but finds the course has been showing good results and is an innovative program for the University.

Dr. Prokop is married with six children (four boys and two girls) and his wife is an educationist. His hobbies include fishing, basketball, slow running, "just to keep fit".

Dr. Prokop is another mathematician in the Department absorbed with teaching techniques. His enthusiasm led him this year to devise a questionnaire for first year students to find out their reasons for doing mathematics. The answers were very revealing. In some cases the students had some idea about what they were embarking on, but in many cases showing students didn't really know what mathematics was all about. There was little agreement on the essentials of mathematics and little understanding of the fact that while mathematics is essentially a problem-oriented discipline it is also a discipline of ideas.

Dr. Prokop did his undergraduate studies at the University of Detroit and continued on there for his Master's degree. Before coming to the University of Wollongong he taught for two years as head of the Mathematics Department at a high school, went on to teach at the United States Naval Academy, Bradley University, was a business manager for a company dealing in data communications equipment and finally came to Wollongong High School to teach. But instead of hopping across to the University from there, he took the long way around, going back to America before taking up the position of Senior Tutor.

Tutor, Dr. Frank Prokop is the co-ordinator of first year studies in mathematics. He has not only been with the Department for some years but has won Professor Blake's (and others') admiration for his skill and accuracy as a mathematical typist. Miss Debbie Turner is a novice still but finds the course has been showing good results and is an innovative program for the University.

Dr. Prokop is married with six children (four boys and two girls) and his wife is an educationist. His hobbies include fishing, basketball, slow running, "just to keep fit".

Tutor, Dr. Frank Prokop is the co-ordinator of first year studies in mathematics. He has not only been with the Department for some years but has won Professor Blake's (and others') admiration for his skill and accuracy as a mathematical typist. Miss Debbie Turner is a novice still but finds the course has been showing good results and is an innovative program for the University.

Dr. Prokop is married with six children (four boys and two girls) and his wife is an educationist. His hobbies include fishing, basketball, slow running, "just to keep fit".

Dr. Frank Prokop is the co-ordinator of first year studies in mathematics. He has not only been with the Department for some years but has won Professor Blake's (and others') admiration for his skill and accuracy as a mathematical typist. Miss Debbie Turner is a novice still but finds the course has been showing good results and is an innovative program for the University.

Dr. Prokop is married with six children (four boys and two girls) and his wife is an educationist. His hobbies include fishing, basketball, slow running, "just to keep fit".

Dr. Frank Prokop is the co-ordinator of first year studies in mathematics. He has not only been with the Department for some years but has won Professor Blake's (and others') admiration for his skill and accuracy as a mathematical typist. Miss Debbie Turner is a novice still but finds the course has been showing good results and is an innovative program for the University.

Dr. Prokop is married with six children (four boys and two girls) and his wife is an educationist. His hobbies include fishing, basketball, slow running, "just to keep fit".

Dr. Frank Prokop is the co-ordinator of first year studies in mathematics. He has not only been with the Department for some years but has won Professor Blake's (and others') admiration for his skill and accuracy as a mathematical typist. Miss Debbie Turner is a novice still but finds the course has been showing good results and is an innovative program for the University.

Dr. Prokop is married with six children (four boys and two girls) and his wife is an educationist. His hobbies include fishing, basketball, slow running, "just to keep fit".
A world centre for research

Research into microbial water reactions and osmoregulation within the University's Department of Biology has led to the Department's being established as a world centre in this research field.

Describing the work, Chairman of the Department, Professor A.D. Brown said several groups of micro-organisms could grow under "drier" conditions (less available water in solution) than any other living thing. The mechanisms under which this was achieved had extensive implications for microbial physiology, cell physiology in general and the physiology of adaptation to arid environments of higher organisms, especially plants.

Professor Brown has pioneered work in this area with three types of micro-organism, the extremely halophilic (salt loving) bacteria which live in salt lakes, the single-celled alga, dunaliella, which also inhabits salt lakes, and some yeasts that can grow in very concentrated sugar solutions.

He said that in recent years the halophilic bacteria had also acquired fame for their ability to convert light to chemical energy in the absence of chlorophyll. They achieved this with a purple pigment, bacteriohodopsin, which is almost identical chemically with rhodopsin, the so-called "visual purple" of our eyes.

Research had shown the adaptive mechanisms used by all three types of organism had features in common, most notably the accumulation of a compatible solute, a substance that lessened the inhibitory effects of low water availability. All, however, differed in the manner in which the content of the solute was controlled. Control of the content of a compatible solute was part of the phenomenon of osmoregulation whereby a cell maintained approximately constant volume and turgor pressure when the amount of water in the environment changed. This process was currently a major focus of study with yeasts and Dunaliella. The other major centres for research of this type were in Israel and Germany, Professor Brown said. Studies of yeast water stress physiology related to those in Wollongong were in progress at Goteborg, Sweden.

Last year the Biology Department was visited for six months by Professor H. Onishi from Japan who came to work on an aspect of yeast osmoregulation. Next year the department would host Professor Helge Larsen from Norway who would spend six months working on an aspect of microbial adaptation to low water potential.

A by-product of Dunaliella research was a growing interest in its industrial potential since some species, when grown at high salinity, produced very large amounts of glycerol and B-carotene, the latter being a precursor of Vitamin A.

Other research in the Department

Dr. R.M. Lilley is carrying out research into regulatory interactions between photosynthesis and dark respiration in plant leaves.

Dr. Lilley's work starts with the cells of plant leaves. These cells contain two types of organelles, chloroplasts and mitochondria, which supply usable energy to the plant. Chloroplasts contain the photosynthetic apparatus and convert sunlight into chemical free energy, this representing the starting point of a food chain on which nearly all living organisms, including man, are dependent. Mitochondria which are also present in animal cells, are the sites of respiration and supply the energy requirements of the plant during darkness when photosynthesis is inoperative.
Dr. Lilley said little was known about how chloroplasts and mitochondria interact in plant leaf cells to ensure a continuous supply of energy to the plant during changing conditions e.g. at sunset. The aim of the research was to investigate how these alterations occurred.

The project would utilise a new technique for the rapid separation of chloroplasts and mitochondria from the other components of the cell. This technique was developed by Dr. Lilley last year while on an outside study programme at the University of Gottingen. He said it permitted the measurement of the concentrations of energy-linked metabolites to gauge the energy state of these organelles under different conditions to identify the basis for regulatory interactions between chloroplasts and mitochondria.

SEED PROTEINS

The quest for sources of proteins of improved nutritional value has led Mr. Franklin Vairinhos (honours student) and Dr. David Murray to a study of the seed proteins of chick pea, Cicer arietinum, also called Bengal gram. Chick peas are a major crop in India, parts of the Middle East, and Central America. The seeds have about 35% of their total protein as water soluble albumins, with 65% as salt-soluble globulins. Willi pea seeds Pisum sativum Dr. Murray has already shown the albumin fraction to be of interest._

The globulin fraction of chick pea, while seven are present in the wild progenitor of chick pea, Cicer reticulatum, a species found only in Southern Turkey. This species was discovered as recently as 1975 by Dr. G. Ladinisky of the Hebrew University of Jerusalem, who kindly supplied the seeds of the wild chick pea used in the current investigation.

Not only do chick peas have an albumin fraction comparable to that of pea seeds, the quality of the chick pea globulins also shows a marked improvement compared to the vicinian fraction of pea seeds. Six proteins rich in sulphur-containing amino acids have recently been identified in the globulin fraction of chick pea, while seven are present in the wild progenitor of chick pea, Cicer reticulatum, a species found only in Southern Turkey. This species was discovered as recently as 1975 by Dr. G. Ladinisky of the Hebrew University of Jerusalem, who kindly supplied the seeds of the wild chick pea used in the current investigation.

Since chick peas contain about 20% of dry matter as protein, and since this protein is of higher quality than that of peas, beans and broad beans, it is to be hoped that the decline in planting occurring in India can be halted.

THE MECHANISMS OF MEMORY

Dr. Hugh Spencer is involved with investigation of the nerve transmitter substances released from the mammalian central nervous system, in particular the region known as the hippocampus which is understood to be involved in laying down memory traces.

Dr. Spencer said these substances appeared to be amino acids which were released by the nerve cells in very small amounts, necessitating the use of techniques such as mass spectroscopy to identify them.

Establishing the identity of these substances was an important first stage in unravelling the mechanisms of memory, he said.

ECOLOGY AND THERMAL BIOLOGY OF PLATYPUSES (Ornithorhynchus anatinus)

This research by Dr. T.R. Grant, in collaboration with Dr. Mervyn Griffiths of the C.S.I.R.O., Division of Wildlife Research in Canberra and the Department's Dr. Tony Hulbert, involves the investigation of some basic ecological questions in which both the layman and the ecologist have an interest.

The questions include population size and distribution, breeding, biology, movements, thermal biology and feeding.

To answer questions concerning population size and distribution, animals are marked and recaptured in a main study area and the capturing of animals in other areas, especially N.S.W., is limited.

For breeding research animals are trapped throughout the year in order to pick up juvenile animals when they emerge. All females injected with a hormone which permits the expression of milk in animals that are lactating. This gives the numbers of females successfully rearing young each year, and, in conjunction with the estimates of population size, recruitment to the population can be assessed.

To measure movements, mark and recapture is carried out and some animals have also been tracked over short periods with radio transmitters.

The thermal biology aspect covers the question of how the animals cope with the extremes of water temperature which reaches 0°C in parts of their range, as the species must feed in water. Initially Dr. Grant carried out laboratory work for his Ph.D. which investigated metabolic rate, fur insulation and body temperature changes in artificially imposed extremes.

In recent work with Dr. Hulbert, for which there is an A.R.G.C. grant, Dr. Grant has been monitoring body temperatures in free-ranging animals and investigating hormonal and body fat changes associated with seasonal adaptation to climatic inuas.

On the question of feeding, analyses of material taken from cheek pouches of living animals has shown that animals, in the Shoalhaven River at least, are eating very small invertebrate animals from the bottom of the river. This work was done in collaboration with the N.S.W. State Fisheries and now an investigation is underway of the nature of the food of the platypus in other habitats, such as cold mountain streams, where conditions and metabolic demands on animals are harsher than in the Shoalhaven River.

SOCIAL BEHAVIOUR OF THE CRICKET

Dr. D.J. Campbell is researching several aspects of the social behaviour of the Australian field cricket, Teleogryllus commodus.

Adults are abundant in the field during late summer and autumn and the males produce a loud song. The song functions both to attract females and as a territorial signal which results in spacing between singing individuals. Spatial pattern between singing males has been analysed. Three distinct songs are produced, depending on whether a male senses the presence of a conspecific female, a male, or no other individuals. These are the courting, aggressive and calling songs respectively. Computer generated songs are being produced and the responses of crickets to these are being studied both in the field and under laboratory conditions. The advantage of this approach is that the song parameters can be easily controlled.

A further aspect of cricket behaviour currently being examined is the temporal pattern of migration dispersal. The song is important here also because crickets, both male and female, completing a migratory night flight are attracted to singing individuals on the ground. These advertise the existence of a favourable habitat. The newly arrived males then space out in a territorial fashion if sufficient space is available. If not crowding may occur. Males then become gregarious and the development of swarming is likely.
A member of the staff of the University of Wollongong's Department of Philosophy has gained one of the distinguished Fulbright Awards which gives select Australian scholars a year of studies at an American university of their choice.

Senior Tutor with the Philosophy Department, Dr. Jim Mackenzie is the second scholar from the University of Wollongong to have gained this award. A logician, he nominated the University of Pittsburgh where some of the most recent work in his field is taking place.

Dr. Mackenzie said he had found that the present theory of logic contained certain difficulties for logicians when giving their accounts of validity and proof.

He said he had chosen the University of Pittsburgh for his work as he could present his account of validity which was intended to overcome some of the difficulties so far encountered, and he could learn more about relevance logic as an attempt to overcome some difficulties.

"Members of the faculty at Pittsburgh have led the world in the development of relevance logic. Study at Pittsburgh will have direct value to my present and future academic activities in Australia," Dr. Mackenzie said.

"But from then on I had to pursue another course of study, I decided on History Renaissance Italian History finally, although I studied all aspects of European History as part of my course," Dr. Ianziti said.

He kept up his studies in Italian language as well, did a Masters degree at the University of North Carolina, Chapel Hill, and then found that he wanted to specialise in cultural history so he did his doctorate in literature, Italian literature of course.

After completing his Ph.D., Dr. Ianziti became a Fulbright Scholar to Italy for one year and ended up staying for three with a teaching post at an Italian university.

"It was there that I saw an advertisement for a lecturer at the University of Wollongong and after a trip out here I liked what I saw," Dr. Ianziti also speaks French fluently although he says he owes that to his French wife rather than any formal studies in that language.

"I did sign up for a course in French while still in America. My wife was a teaching assistant just out from France for a year. She didn't speak any English then so I quickly became her best student - and she stayed."

The Ianzitis have found Wollongong ideal for their other interests which are lots of swimming and bushwalking. Their trip to Italy, which will be for a total of 15 months, will enable them to meet up with many close friends.

Dr. Mackenzie has been lecturing to third year students on modal logics (of which relevance logics are a species) and to fourth year students on the philosophy of logic. He took up his studies in Pittsburgh in September this year.

Chairman of the Department of Philosophy, Professor Lauchlan Chipman said he had been delighted to learn Dr. Mackenzie had received the Fulbright Award.

He said the Department could now number a Rhodes scholar and a Fulbright scholar among its staff members.

The Fulbright Awards are presented each year for academic excellence on a highly competitive basis by the Australian-American Educational Foundation which came into being in 1965 to replace the United States Educational Foundation in Australia. Funds are provided equally by the Australian and United States Governments.

The overall purpose of the Foundation's programme is to increase understanding between the peoples of the United States and Australia. The awards are given each year to Australians wishing to study at American universities and Americans wishing to study in Australia.
An international note for Wollongong graduates

When Economics was offered for the first time as a degree subject in Wollongong University College, Julie Irving was one of the small group of students who enrolled.

That was in 1964 when John Steinke had just been appointed as the first staff member in Economics. Julie began as a mature age, part-time student.

She went on to become the first Wollongong student to graduate with first-class honours in Economics and the first to be appointed (in 1965) as a member of the Economics staff. Then, in 1978, she became the first to complete the requirements for a Ph.D. (Wollongong) in Economics as a part-time student.

Now, Dr. Julia Lessman, married last year in Mannheim to Dr. Franz Lessman, is on leave from Wollongong and is engaged in research on the sociology of knowledge as applied to economic thought. She is writing a book on the significance, from this point of view, to the ideas of the romantic movement of the late 18th and early 19th centuries, mainly in England and Germany.

Dr. Lessman's undergraduate experience was unusual; her specialisation in Economics was combined with studies in both History and History and Philosophy of Science. She developed a dominant interest in the history of economic theories and has specialised in this field. Her doctoral research was based on an exploration of P.W.S. Andrews' "revolution that failed" in industrial economics. This led to a more general study which drew on the sociology of knowledge and which linked up with important contemporary developments in England and America in the study of the history of concepts of modern economics.

At the invitation of the International History of Economics Society, Dr. Lessman presented papers in this subject area at conferences at Durham, England (1975) and Urbana, Illinois, U.S.A. (1979) and participated in the Society's seminar at Bath, England (1979). She has been a Visiting Fellow at the University of Lancaster, England (1975) and in Germany she has worked at the Universities of Konstanz (1979) and this year at Heidelberg.

Another interest dates from the time when Dr. Lessman was one of the original committee responsible for setting up interdisciplinary studies at the University of Wollongong, and when she contributed lectures on the economics of women and work to the series on Women in Society.

She is participating in a seminar in Heidelberg with Professor R. Bendix who is well known for his works on the sociology of work and employment. Dr. Lessman is preparing a paper on economic theory and women's work.

The University of Wollongong's Mark Cutifani is the 1981 winner of Atlas Copco's Travelling Scholarship for Mining Undergraduates.

Mark, a miner employed by Coalcliff Colliery, is in the third year of a part-time civil engineering course.

His award will enable him to study mining techniques in an eight-week tour of the United Kingdom, Belgium, Germany, Sweden and France.

Mark's day and night commitments keep him busy but he still finds time to play first grade Rugby in the Illawarra competition.

He will begin his overseas tour in early January, 1982.

(Photograph shows Mark Cutifani with the Atlas Copco award judges.)

Left to right: Mr. J.K.A. McLeod, Mr. D. Tennent, Mr. Cutifani, Mr. J. Mackenzie - Managing Director, Atlas Copco Australia, and Professor J.P. Morgan, President of the Institute of Mining and Metallurgy.
On the road to success...

With one highly successful season behind them and another one in the making, Theatre South members have plenty of reason to be entirely optimistic about the future, according to Artistic Director Des Davis.

Wollongong’s first professional theatre company, Theatre South, presented its first full season this year with three plays (Travelling North, Might As Well Talk To Yourself and Playboy of the Western World) and a number of productions for schools.

The company was founded last year by Des and his wife, professional actress Faye Montgomery and was launched with a pilot production (The Con Man) during the second half of the year.

Des said that while building up a theatre company in Wollongong had not been without its problems, he and the company felt that the response to the first season had more than justified the initial concept. The audiences had reacted very well to the programme offered. Enthusiastic support had come from many parts of the community and long range plans for development were in the melting pot.

“Most importantly, we have established that our standards are comparable with professional theatre anywhere and members of the company are proving first class talent,” Des said.

“Our resident Stage Designer Bill Pritchard has proved outstanding, our younger members have enormous potential and the school programme has proved an unqualified success.”

Des said the feedback from schools throughout the region had been marvellous, with an inflow of cards, letters, artwork and craft work from children who wished to express their appreciation and enjoyment of the company are proving first class talent.” Des said.

“Enthusiastic support had come from many parts of the community and long range plans for development were in the melting pot.

“Most importantly, we have established that our standards are comparable with professional theatre anywhere and members of the company are proving first class talent,” Des said.

Des said the new season would be announced during November and the feedback from schools throughout the region had been marvellous, with an inflow of cards, letters, artwork and craft work from children who wished to express their appreciation and enjoyment of the programme. A part of the programme was so successful that it would be repeated during the first term of 1982.

Some of the problems the company was facing next year included the development of a new venue, finance for expansion and coping with a company that was virtually becoming a full-time operation. The Technical College Auditorium, while satisfactory, could not be used indefinitely as the College had its own activities to consider and also the size of audiences was growing. With finance, grants so far and the generous support of the University, the theatre company could continue to expand.

“We hope to have the PDS building, owned by Illawarra County Council, as our theatre for the season next and are currently negotiating for this. The season will open in March there will be a lot of work involved in the next few months.”

The company’s major aims for 1982 include building the size of the audiences, providing the opportunity for talent to assert itself, including talented playwrights and of course, providing the region with more first class theatre.

“In our search for new playwrights we hope to hold a number of workshops and play readings using the works of writers in this region whenever possible. The company feels strongly that it should be a supporting outlet for talent in this area.”

“If we feel that a playwright from this area has a play for the company, we will certainly look at the possibility of using the play in one of our seasons. We want plays from all quarters, and especially those which bring out the character of this community,” Des said.

“The company was already planning to include a creation of its own in the next season,” he said. The idea for what the company expected to be an unusual piece of theatre was based on research on migration. It would take the form of a musical documentary on some aspects of ‘new arrivals’ to Australia.

Des said the season would be announced during November and would possibly include some Shakespeare, some comedy and more Australian plays.
July 1st this year saw the retirement of Professor K.A. Blakey (Department of Economics) after 12 years with the University of Wollongong.

He was appointed Professor of Economics in Wollongong in February, 1969 and was initially responsible for both Economics and Accountancy. In those days, the Economics staff numbered three - two lecturers and one tutor. The number of Effective Full Time Students in the Department was 39. Economics B.Com. subject offerings were exclusively at the first and second year levels, there was no honours programme other than 2nd year honours tutorials, and no higher degree programme. All subject syllabi were determined at Kensington and examinations set and marked there.

In 1969 3rd year Economics courses were introduced and the Department commenced setting and marking its own examinations papers. By 1970 a Wollongong course structure was adopted and the Department introduced full honours and graduate programmes. A short and busy 10 years later EFTS in the Department's Economics and Industrial Relations subjects had risen to 173 and the academic staff had risen to 13.

Professor Blakey began his University studies in Auckland, graduating from the University of Auckland with a B.A. (Economics and English) in 1936. From 1936 to 1939 he worked as a financial journalist with the Auckland Star and from 1939-42 served in the New Zealand and Expeditionary Force (21st Battalion) in North Africa and Greece. He was captured in Greece in 1942, escaped from prisoner of war camps and was recaptured on three occasions during 1943-44. A fourth escape attempt in 1945 from a camp in Austria was successful and he joined the advancing American army of General Patch in Bavaria.

Professor Blakey worked as a part time member of the editorial staff of the Glasgow Daily Record and The Times during 1945-47 and gained his M.Sc. (Economics) from the University of London, 1947. He became a Lecturer at the University of Otago in 1948, A Rockefeller Fellow at Nuffield College, Oxford from 1952-54, went back to Otago until 1957 and that year gained his Ph.D. from Oxford. From 1957 to 1958 he was Senior Lecturer at the University of New England, 1959 Senior Lecturer at the University of Melbourne, 1960-66 Reader at the University of Melbourne, 1966-69 Economist with the Education Projects Department, World Bank. On leave from Melbourne in 1962-64 he was also Regional Advisor, Africa Region, with the International Labor Office serving in Burundi, the Congo, Egypt, Libya and Turkey.

As an economic analyst and project evaluator at the World Bank he was responsible for the appraisal of multi-million dollar education projects (subsequently financed by the Bank), in Guatemala, Ivory Coast, Senegal and South Korea, and was leader of a joint UNESCO/World Bank education mission in Chad.