



VOL. 6 NO. 1

ORIENTATION WEEK ISSUE

FEBRUARY 29, 1980.

I welcome you to the University of Wollongong. You come to us in "the best of times" and "the worst of times" for universities and university education have now entered a critical stage in their modern development.

"The worst of times?" Economic stringency continues and we shall probably see the level of real resources received by universities from Government declining over the next decade. Financial constraint rides like some sort of apocalyptic horseman with its fellows - Rationalisation and Accountability. Universities are being called upon to make their courses and their research more efficient and more "relevant" to, somewhat ill-defined, economic and social "requirements." Their graduates, skills and ideas are expected to meet the specifications of the immediate situation. At the same time, governments and people look to universities for the means of changing that present situation.

These seemingly self-contradictory demands do raise some real and important questions about universities, so that, by their very intensity, they have presented a challenge to the universities, not only the Australian branch but throughout the great international family, to consider the nature of their very role and function in society.

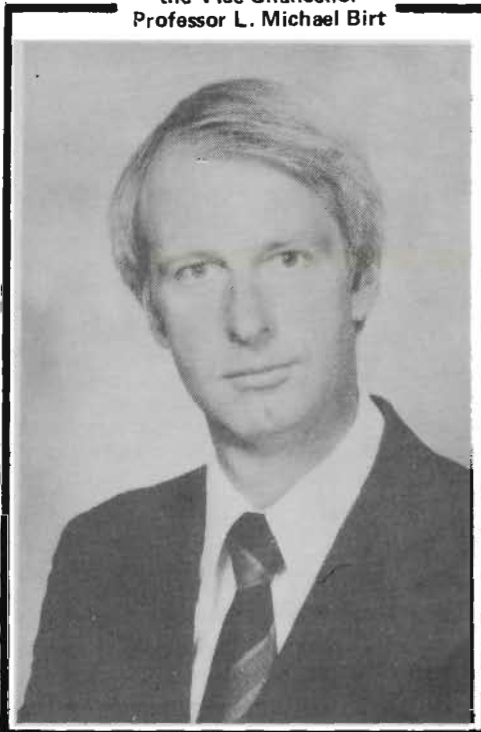
Now for the reasons why you might come to regard your years at this University in the early 1980s as "the best of times."

The University of Wollongong never enjoyed to the full the "growth years" of the Australian University sector. As a result I like to think that it has never lost its accessibility and friendliness in mere bigness and has never ceased its search for improvement nor substituted complacency for enthusiasm.

The campus remains, with much thanks to our site managers and gardeners, a green, pleasant and manageable place. It takes some ingenuity to lose yourself physically and - I would guess - some misfortune and miscalculation to go too far intellectually and emotionally astray. Of course universities are not supposed to be havens for "comfortable minds" and "well furnished souls;" they should rearrange attitudes; reveal our personal misconceptions about basic concepts and require the constant polishing and enlargement of intellectual skills. Like all of us who have entered the university world, however, you will find that even its difficult and solitary

WELCOME TO WOLLONGONG UNIVERSITY

from
the Vice-Chancellor
Professor L. Michael Birt



times need not be lonely or bewildering. There are always those who will help you to find your way in this "community of masters and scholars."

Your fellow students can become friends during leisure and both comrades and opponents in battles of wit and interpretation. In informal encounters, classroom discussion and in the clubs and associations of the Students' Representative Council and the University Union, you will find these companions to be sometimes objectionable, frequently noisy, but usually warm and encouraging. Remember that, with all their different backgrounds, abilities and ages, they now share a common world with you; they experience similar problems

and, among them, are those who understand the language and expectations of your particular fields of study, whether they be those of medieval French civilization or of molecular genetics.

While fellow students will help to give you a sense of belonging, there are others, near at hand on this campus, who will offer you advice and guidance if you find yourself wandering into difficult territory. Your lecturers and tutors will help you with further clarification and explanation, hints about technique and approach and references to sources of information; among them are also your academic advisers who will try to ensure that your pattern of studies is suited to your own needs and to the requirements of the discipline and the University.

If you have general enquiries about form and procedure or if you simply do not know where to turn for advice, go and speak to the helpful people in the Student Enquiries Office on the Ground Floor of the Administration Building. And there is the Counselling Centre which offers professional help and guidance to students for whom study, family, financial and other concerns become a little difficult to manage. The University also has a medical service for the "sick and injured" amongst you.

All these services are there to support your chief activity of unearthing those talents you have and using them to come to understand and explain, and (perhaps) to challenge and to increase our knowledge about human beings and the world they inhabit.

You can also look forward, I believe, to proving to those beyond this campus that the university graduate is capable of making a very important contribution to the future development of our society. The fact that University of Wollongong graduates, at least, are well valued is shown in the report of a recent survey of graduate employment conducted by the Graduate Careers Council of Australia. Wollongong is Australia's second youngest university

Continued overleaf

COAL STUDY DIPLOMA UNIQUE

A combination of the world fuel shortage and a shortage of funds for university teaching has brought about a new course that is unique in the history of Australian universities.

The University of Newcastle and the University of Wollongong will enrol in 1980 their first candidates in a new Diploma in Coal Geology.

The Diploma is unique in that, although each University will bestow its own Diploma on the successful candidates, the course will be taught jointly; some parts at Wollongong and some parts at Newcastle.

This unusual arrangement has been caused by general cuts in government support for universities, with the result that neither Newcastle nor Wollongong could have afforded to build up extra activity even in a priority area such as energy.

COMMENT INVITED

Members of the University are invited to comment in writing on the document entitled "Standing Rules and Orders of the Senate and Faculties."

The document is available from Mr. J. Langridge, Secretary, Academic Senate. Comments should be sent to the Academic Registrar by March 31.

The Federal Government, through the Tertiary Education Commission has been urging universities to rationalise their course offerings. It is not as easy as it may seem on the surface.

Separate Acts of Parliament that created the Universities prevented both Universities offering a joint award, and so each will be offering its own Diploma.

Another problem was that universities are funded on the number of students enrolled. Existing procedures laying down how to "count" a student studying at two campuses did not seem adequate.

The two Universities have agreed to allocate the students by order of enrolment so that odd numbers will go to Newcastle and even numbers to Wollongong: marginally better than tossing a coin, but not much better.

So despite such difficulties the two Universities have been able to establish a programme that can be offered jointly. The new diploma is at the postgraduate level and it is hoped to draw most of the students from people already employed.

There is a world shortage of properly qualified coal geologists. The University of Wollongong and the University of Newcastle are both situated near some of the finest coal yielding land in Australia. They are both well supplied with the staff and equipment to take on this unique and interesting experiment in the rationalisation of tertiary teaching.

all, a wisdom that only experience of the world can give.

You will all, I hope, be members of the University during times that will see a re-emphasis of old and very worthwhile university values and activities - the pursuit of excellence in teaching and research and the re-forging of that special link which the first universities had with their towns and regions.

One final thought! I believe that, while university education is very important for individuals and society, it is not all important. It is concerned with the refinement of those "keen and delicate instruments... human knowledge and human reason."

TOWN AND GOWN

CRICKET TROPHY

Students and staff of Wollongong University are invited to submit ideas for the design of a perpetual trophy for the Town V. Gown Cricket Match which will be held again this year during the Festival of Wollongong.

The match was held for the first time last year and has won a permanent place among annual events. The challenger last year was Vice Chancellor Professor Michael Birt and the challenge was accepted by the Lord Mayor Alderman Frank Arkell. The trophy, which was borne off triumphantly by the Lord Mayor's team, was an inscribed cricket bat.

This year the event is expected to be even more spectacular and must be matched by an outstanding trophy.....so roll in the ideas please and let no inhibitions limit creativity!

CAMPUS NEWS

Published throughout the academic year by the Development and Planning Office for The University of Wollongong, Northfields Avenue, Wollongong, N.S.W. 2500. Distributed to students and staff, and to local, regional, state and national individuals and organisations.

VICE-CHANCELLOR'S WELCOME

and yet its graduates have the lowest unemployment rate in N.S.W. and the third lowest in Australia.

The "mature-aged" students among you are members of the first substantial group of people "coming back" to higher education; I welcome you especially for I recognize the particular qualities and problems you bring to your university career. For your problems, we offer the contacts; amongst students and staff, which I have mentioned earlier; for your special qualities, all of us, including your younger contemporaries, are grateful because you bring to us eagerness, perseverance and, above

These are useful - indispensable - instruments for use in our own lives and in society, but human activities in all their complexity have driving forces other than those of reason and intellect - forces which are political, social, economic, religious, perhaps merely idiosyncratic. It follows that we all must continue to seek a balance between those forces, a "wholeness" in those different facets of our personal experience of the world. The search for that "wholeness" is a lifelong task but, by coming to university, you are, I hope, about to make a very significant and positive change to your own "balance of forces."

L. Michael Birt,
Vice-Chancellor.

UNIVERSITY ACQUIRES FIRST HALL OF RESIDENCE

Wollongong University acquired its first Hall of Residence on Friday, December 14 when the keys of International House were handed over to the Deputy Chancellor, Mr. Laurie Kelly.

At a luncheon to commemorate the occasion, Mr. Kelly made the following remarks: "It is with great pleasure that I accept today these keys to International House and join with Mr. Fancourt in unveiling the plaque to commemorate the occasion. May I express to the members of the board of the Young Men's Christian Association of Wollongong the gratitude of the University not only for the gift of this residence to us, but also for the accommodation which the Y.M.C.A. has made available to some of our students

since International House was built, and more so since 1971 when it became an affiliated college to our parent body, the University of New South Wales.

The University has always been mindful of its closeness and, indeed, its indebtedness, to the Illawarra community. On this occasion we are particularly conscious of the contributions made by local industry over the years to the running of International House.

Residential centres have a firm place in the history and development of universities. Far from being simply places in which to live, colleges and halls of residence

are of great importance in complementing the lectures, tutorials, and general discussions of the normal university day by creating an environment that fosters further the academic and social fellowship that mark one's university years. One of the major factors contributing to the value of living in residence is that of mixing with other students drawn from many geographical areas and from a wide range of backgrounds. In 1979 17% of the International House population was comprised of students from overseas, whilst most of its other residents were from parts of New South Wales beyond the Illawarra. This mixture of experiences has an obvious part to play in highlighting the very concept of universality from which the term "University" was originally derived. International House has, in providing for these students, already established itself as having an invaluable role in relation to the University of Wollongong, and, we trust, its place in our University community will be strengthened in the coming years.

The University would like to commemorate the public-spirited action of the Y.M.C.A. in establishing International House and finally in passing over its control to the University.

While there were many citizens who gave generously of themselves in establishing Y.M.C.A., I believe they would all applaud the idea of one of their number being specially singled out to mark the occasion of the transfer of International House to the University. To this end I formally establish as a permanent memorial to the Y.M.C.A. The Wollongong Y.M.C.A. Gus Parrish Residential Scholarship, an annual scholarship which will enable a student of the University to receive free accommodation for up to 52 weeks at International House. Gus Parrish was one of the great prime movers in establishing International House and we are grateful for the opportunity to establish a permanent memorial to his efforts. Mrs. Parrish unfortunately cannot be here with us today because of ill-health but I know she would be pleased to have her husband remembered in this way.

It is necessary, before concluding, to make mention of those people whose work has contributed to the successful functioning of International House, both in past years, and especially during the 1979 interim period. I refer to the former warden, Dr. Tom Lambert, the Deputy Warden, Mrs. Pat Hall, the acting warden, Associate Professor Bill Upfold, the present warden, Dr. Tony Ng, the members of the board of the Y.M.C.A., and of the International House sub-committee of the council of the University.

May I, in closing, repeat our thanks to the Y.M.C.A., and pass on to the staff and students of International House, both present and future, our every good wish for the years that lie ahead.



The University's Deputy Chancellor, Mr. Laurie Kelly (left) accepts the keys from Mr. W. Fancourt, YMCA President, at the official handing over ceremony of International House.

The Vice-Chancellor, Professor Michael Birt, welcomed the announcement by Premier Neville Wran that significant funding would be provided for the establishment of the Illawarra Regional Information and Research Service.

Professor Birt stated that he particularly welcomed the involvement in the project of the Department of Decentralization and the Department of Youth and Community Services, two State Departments that had contributed much to the development of the region.

The idea of the service had developed from discussions between the University and the Wollongong City Council and later

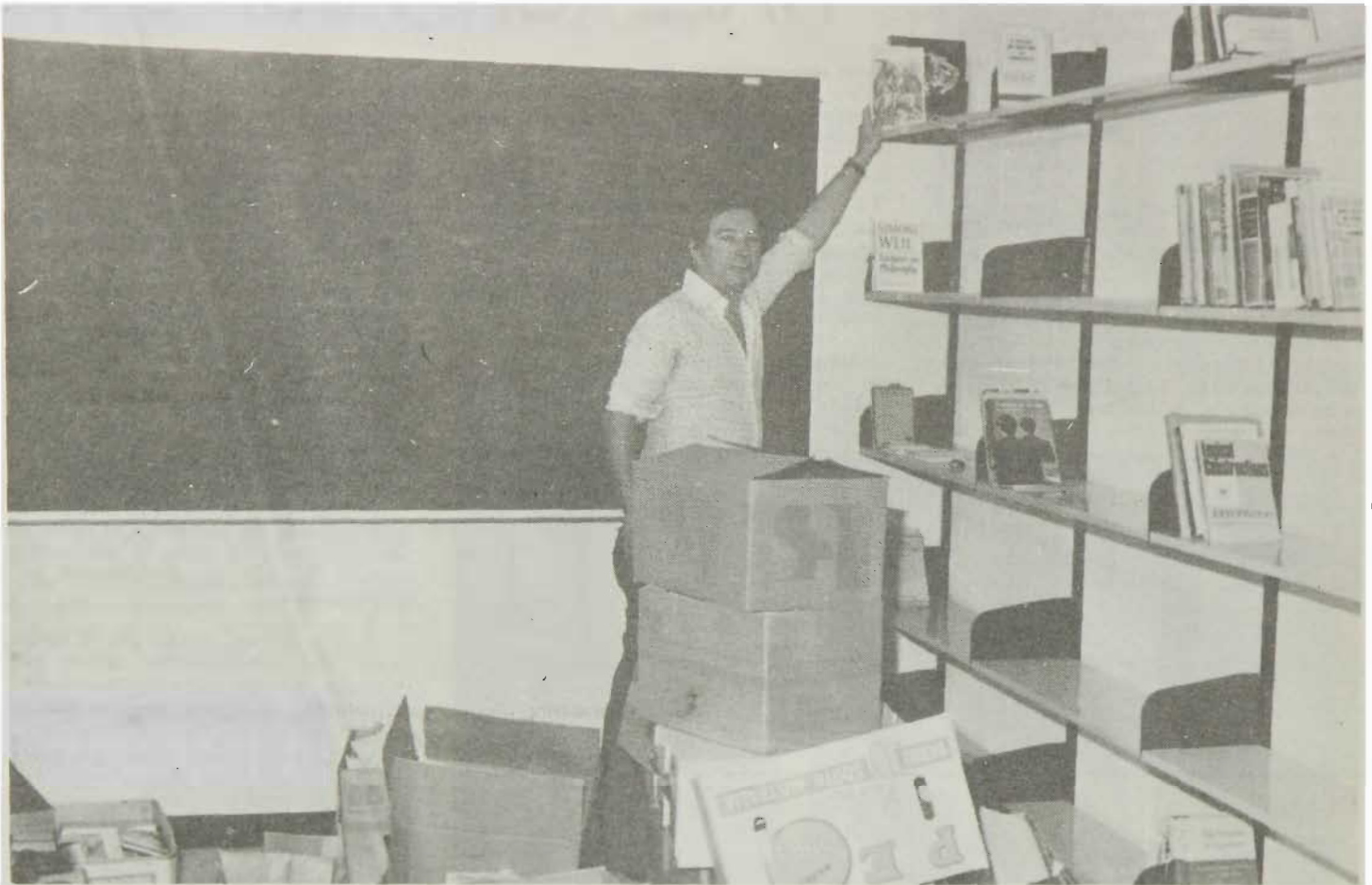
REGIONAL SERVICE

embraced State Departments.

The service, which will be based on the University of Wollongong Computer Centre, would contribute much to the understanding of regional problems.

Policy makers would be better able to make informed decisions about new developments and areas of need, said Professor Birt.

DEPARTMENTS ON THE MOVE



With nine departments on the move in the University this year, some people may be a little hard to find.

Below is a quick reference list of the departments concerned showing where they

have been and where the secretaries of the departments are now located.

GENERAL STUDIES - moved from ACS building to the northern wing of the Social Sciences building. Secretary, Room G013.

PHILOSOPHY - moved from the Hut to the Social Sciences building, northern wing. Secretary, Room 1018.

EDUCATION - moved to northern wing of the Social Sciences building, Secretary, Room 1027.

HISTORY - moved from ACS building to northern wing of the Social Sciences Building. Secretary, Room 2005.

ENGLISH - from ACS Building to Social Sciences Building. Secretary, Room 117.

ACCOUNTANCY - moved to the Northern wing of the Social Sciences building. Secretary, Room 2032.

SOCIOLOGY - moved to other rooms in Social Sciences building. Secretary, Room 247.

HISTORY AND PHILOSOPHY OF SCIENCE - moved to other rooms in Social Sciences Building. Secretary, Room 237.

MATHEMATICS - moved from first floor of ACS building to top floor, same building. Secretary, Room 233.

Picture: Caught in the act.
Professor Lauchlan Chipman moving house.

ASLP APPOINTMENT

A Wollongong University academic has been elected President of the Australian Society for Legal Philosophy.

He is Professor Lauchlan Chipman, who is Chairman of the University of Wollongong Philosophy Department, and Visiting Professor of Jurisprudence in the University of Sydney until September.

He succeeds N.S.W. Supreme Court judge Mr. Justice Samuels to the post. Professor Chipman is a graduate in Law from Melbourne University, and in Philosophy from Oxford University.

The Australian Society for Legal Philosophy discusses moral, social and logical

problems to do with law and involves professional lawyers and judges as well as academics.

It is a national body which is affiliated with the world wide International Association for Philosophy of Law and Social Philosophy.

Professor Chipman is the second Wollongong University staff member to be elected to a top office in a national academic organisation in recent weeks.

In October Dr. Martin Bunder of the Department of Mathematics was elected President of the Australian Logic Association, which will have its national conference at Wollongong University for the first time in 1980.

NEW LEGISLATION LIMITING TEACHING FREEDOM CONCERNS AVCC

The Australian Vice-Chancellors' Committee has informed the Federal Government of its concern about recent Commonwealth legislation which includes a provision limiting the freedom of universities to determine new teaching developments in universities.

The AVCC is also concerned that universities were not consulted by the government prior to the drafting of the legislation.

The legislation, which was passed by the Federal Parliament late last year, was discussed by the AVCC at a meeting at Monash University. Details of the legislation will be considered further by the AVCC Executive, which will recommend what additional steps the AVCC should take.

The provision which concerned the AVCC is contained in legislation which provides Commonwealth grants for universities in 1980.

The section objected to by the AVCC related to arrangements for consideration of new teaching developments in universities. It was a new section which had not appeared in previous grants legislation. Until this year, new teaching developments in univer-

sities have been approved by the Tertiary Education Commission, and before it was established, the Universities Commission.

However the new legislation empowers the Minister for Education, on the advice of the TEC, to disapprove new teaching developments, subject to parliamentary review. Previously, the TEC had guidelines for the approval of major new teaching developments. However the AVCC noted that while the Minister (Mr. Staley) introducing the Bill referred to the new arrangements as affecting 'new developments of national significance' the legislation itself referred to all courses of study.

In a letter to the Minister for Education, the AVCC expressed its concern at these changes. It said the provisions of the legislation imposed a significant additional limit on the freedom of university governing bodies to determine the most appropriate teaching developments to be implemented.

It said governing bodies had the responsibility to determine how universities could best use their academic and financial resources, and there was no evidence of any need to give legislative backing to the imposition of the new, widely-embracing provision.

AVCC 1980 EXECUTIVE



Professor D. W. George

The Australian Vice-Chancellors' Committee has elected Professor D.W. George, Vice-Chancellor of the University of Newcastle, as its Chairman for the next two years.

The new Deputy Chairman will be Professor D. A. Low, Vice-Chancellor of the Australian National University.

The AVCC elected as the other members of its Executive for the next year Professor D. R. Stranks, Vice-Chancellor of the University of Adelaide, Professor R. L. Martin, from Monash University, Professor L. M. Birt, from the University of Wollongong and Professor F. J. Willett from Griffith University.

The new Chairman of the AVCC, Professor George, held the P. N. Russell Chair of Mechanical Engineering at the University of Sydney before taking up his present position in Newcastle in 1975.

Professor George's main research interests are in the area of energy resources and conversion, with particular reference to direct energy conversion and solar energy. He is the author of more than 50 scientific papers and reports in these fields.

Since 1976 Professor George has been Chairman of the Australian Atomic Energy Commission, a part-time post. He has been a member of the National Energy Advisory Committee since 1977.

He is also Chairman of the Australian-American Education Foundation, which administers the Fulbright Scholarship Scheme.

He was elected a Fellow of the Australian Academy of Technological Sciences in 1977 and early this year the Queen honoured him with appointment as an Officer of the Order of Australia in recognition of his services to Science and Engineering.

In 1977 Professor George went to Bangkok at the invitation of the Asian Institute of Technology to advise the Institute on the establishment of a new division of Energy Resources. He has returned to Bangkok at various times, becoming a member of the Board of Trustees of the Asian Institute in 1978 and the Executive of the Board of Trustees earlier this year.

INFORMATION GROUPS ASK GOVERNMENT FOR NATIONAL POLICY

A National body representing libraries, archives and other information agencies has called upon the federal government to adopt a National Information Policy.

Chairman of the Standing Committee of the Australian Advisory Council on Bibliographical Services Mr. Dietrich Borchardt said that the Council had long been concerned that there was no National Information Policy.

Most developed countries had such policies and, given the importance of information in modern society, Australia would continue to be handicapped by not having one.

Mr. Borchardt said that the Council had drawn up statements of Information Policy for both federal and state governments. An efficient Library and Information System could only be set up by co-operation of government at federal, state and municipal levels, and the support of independent institutions such as the university libraries.

The Council has supplied draft statements of policy to ministers from state and federal governments. Mr. Borchardt said that the Council believed that it would be necessary to set up a National Library and Information Planning Body with an Advisory Council representing the library, archive and information community.

The draft policy statement, which is open to comment, appears fully below.

DRAFT GUIDELINES FOR A NATIONAL AUTHORITY FOR PLANNING LIBRARY AND INFORMATION SERVICES.

1. It is the responsibility of government on behalf of the community to ensure that every citizen has reasonable access to the information he or she requires. This may be achieved by direct provision of a national authority for planning library and information services.
2. The integration of library and information services with other services provided to the community is critical to the full realization of their potential and to their usefulness to the community.
3. Where information is supplied by libraries the primary responsibility should be borne by the National and State and local libraries, but government should also encourage, by financial compensation or other means, participation by libraries associated with public or private organizations in the provision of information to the public.
4. The provision of equality of service on a basis of reasonable need should be ensured by Commonwealth and State Governments.
5. Access to public library service should be free of charge to all members of the community. Nevertheless it may be unavoidable from time to time for a library or information service to require full or partial cost recovery in the case of some services.
6. The provision of complete library service cannot be achieved by any one type or unit of library service, but only by the co-operative efforts of all types of information agencies working towards a commonly accepted and planned system.

7. The expansion and extension of individual library service should be achieved through co-operation and/or contractual arrangements and the formation of library systems, networks and support centres based on practical considerations with each service retaining its autonomy within an agreed overall plan for the development of these services.
8. The integration of such systems, networks and support centres developed within the State plans into a national network should be ensured through statutory bodies in each state performing the function of co-ordinating library and information services.
9. Priority should be given to developments which will realize the full potential of existing arrangements for resource sharing such as union catalogues, inter-library loan, etc.
10. The elements of any overall programme of resource sharing are:
 - a) Co-operative collection development,
 - b) bibliographic access to materials,
 - c) reciprocal use privileges,
 - d) channels of communications,
 - e) timely delivery of materials or information,
 - f) compensation to institutions which offer service beyond their normal clientele,
 - g) education of participants in the concept and use of the programme,
 - h) acceptance of appropriate obligations by participating institutions.
11. The participation of staff and users in the planning, marketing, development and extension of library and information services must be actively encouraged.
12. The improvement of library and information services is dependent on:
 - a) Clarification and development of the role of various types of institutions,
 - b) creation of suitable administrative structures,
 - c) provision of funds to facilitate the performance of appropriate functions,
 - d) assessment of user needs,
 - e) provision of appropriate numbers of suitably qualified staff and for their continuing education.
13. Public needs for library and information services will be served more effectively by:
 - a) continuing development of a strong independent and responsive National Library,
 - b) acceptance at the national level of a responsibility to foster the provision of public libraries as proposed in the Report of the Committee of Inquiry into Public Libraries,
 - c) facilitation of network planning,
 - d) provision of public (state, regional and local) libraries to serve the public generally,

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400 METRE HOLE FOR GEOLOGISTS

A 400 metre (1200 ft) hole has been drilled on the Wollongong University campus.

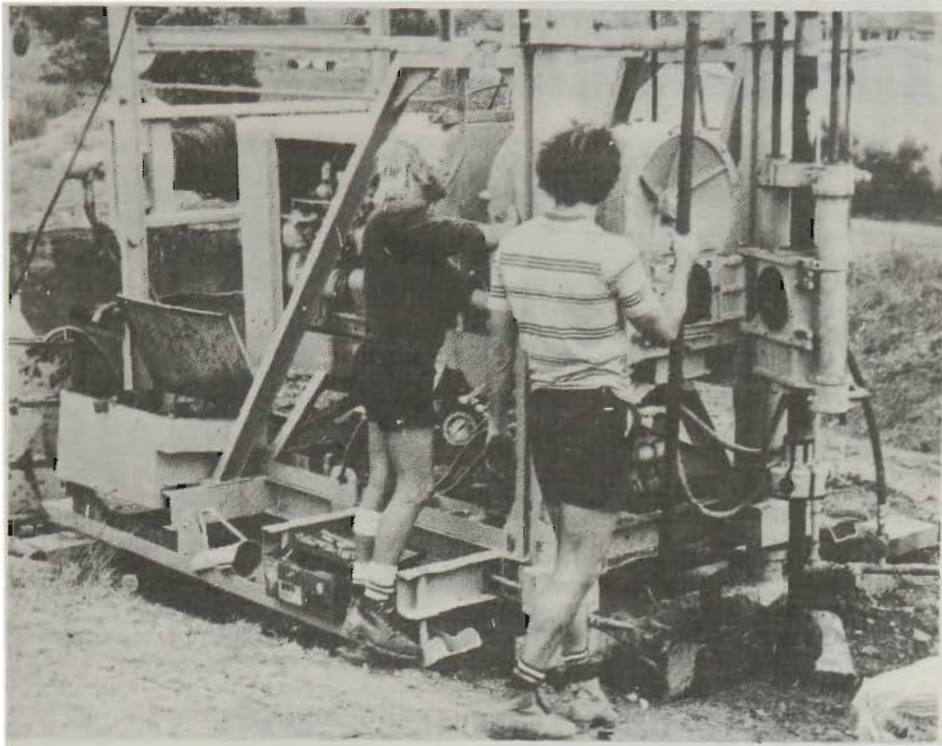
The University's Geology Department has commissioned the work after receiving a grant of \$21,022 from the Australian Research Grants Committee for 1979-80.

The core from the drill hole will be studied to give an idea of the thermal history of the rocks in the coal bearing southern Sydney Basin.

Thermal history studies indicate the temperature to which rocks have been heated, and are particularly useful in coal and petroleum exploration. It also assists in determining the commercial viability of coal and petroleum deposits.

Dr. Richard Facer of the University's Department of Geology said that the heat flow in the southern Sydney Basin below the coal measures has not been accurately studied, and that the drill hole on the University campus should yield valuable information.

The drill core would be made available to other interested researchers and it would be used for teaching purposes.



Above: Drilling of the 400-metre hole for the Geology Department's thermal history studies.

Below: (left to right) Dr. R. Chowdhury (Civil Engineering); Professor Dr. ir Tan Tjong-Kie; Professor C.A.M. Gray (former departmental chairman, Civil Engineering); Professor A.C. Cook (Geology).



CHINESE VISIT

Professor Dr. ir Tan Tjong-Kie of the Institute of Geophysics, Academia Sinica in Peking, visited the University of Wollongong in December to confer with members of the University's Departments of Civil Engineering and Geology.

Professor Tan's particular interest was to inspect the 400-metre hole being drilled at the University as part of research into coal formation temperatures.

Professor Tan holds a doctorate in Civil Engineering, and has specialised in Geophysics. His present interest is in the prediction of earthquakes, and the discussions with University staff concerned the relationship between the on-campus drilling and the determination of temperature gradients as a means of understanding earthquake mechanisms.

This was Professor Tan's first visit to Australia. His visit of 21 days included visits to Universities in each State. The visit to Wollongong was arranged by Dr. Hargraves, Visiting Professor to the Department of Civil Engineering.

COMPUTING SCIENCE BREAKS NEWS

Computers today have become familiar objects in our society whether they are regarded with favour, fear, suspicion or simply with awe. By far the most sophisticated tool invented by man, the computer is the product of a technological advance, the implications of which are not fully realised even now. It is part of a technological revolution that is beginning to affect every part of our society.

Representing this revolution in Wollongong University is the new, small but highly energetic and innovative Computing Science Department headed by Professor Juris Reinfelds. The department came into existence on January 1, 1979. Until then computing science was part of the Mathematics Department which had provided some computing science courses since the beginnings of the University College in Wollongong. But the development of a three year computing science program began with the arrival of Professor Reinfelds in May, 1975.

Every year since then the staff has doubled and it now consists of Professor Reinfelds, Senior Lecturer Dr R. G. Dromey, Lecturers Dr. T. Bailey, Dr. A. Salvadori and Dr. I. Pirie, and Professional Officers Mr. R. Miller and Mr. R. Nealon (software) and Mr. P. McKerrow (hardware).

Latvian-born Professor Reinfelds came to Australia in 1951 and spent his undergraduate years at the University of Adelaide gaining a BSc and later PhD in Mathematical Physics. He entered the computer field in 1965 while working for the NASA Marshall Space Flight Centre in Huntsville, Alabama, U.S.A. There, as a physicist he came across an idle computer and decided to put it to some use. He developed a new computer language, AMTRAN, and hasn't looked back since. Before coming to Wollongong Professor Reinfelds' posts included Assistant Professor of Computing at the University of Georgia and Visiting Scientist at the CERN Computing Division, Geneva.

At Wollongong he has continued an innovative approach by making his department the first in Australia to provide regular laboratory sessions for first year computing science students.

"By all accounts this contributed tremendously to the success of our course," Professor Reinfelds said.

"Other universities are now following our lead - for example Adelaide will install 130 VDU terminals this year to cater for programming laboratory requirements."

Another "first" was the launching of a summer school in computing in December last year. The school, which was a great success was attended by high school students in the region who had been nominated by their schools. The course defined the fundamental concepts of programming and taught some practical skill in an aspect of computing. The department believes that computing science should be taught as a high school subject and will continue doing whatever is feasible to foster the development of computing science awareness in the high schools in the area.

The department currently offers a three year undergraduate course sequence, service courses, an Honours course and postgraduate courses. The undergraduate course, though covering the knowledge consistent with university level computing science requirements, would benefit by expansion to give the student some choice in subjects.

The first year course, Computing Science I, was introduced in 1976, a second year course in 1977 and two third year courses in 1978. The course sequence permits a student to major in computing science. Honours, diploma and masters-by-coursework programs were developed in conjunction with mathematics so the new department started in 1979 with a full set of degree programs. The first honours student was Mr. Ross Nealon, now a professional officer with the department.

"A small department in a small university cannot cover all aspects of any scientific discipline. If it tries to do this it runs into the danger that departmental offerings become shallow and superficial," Professor Reinfelds said.

"This department therefore intends to concentrate its research and teaching efforts in the applied area of software science, or, in general terms, on how to develop programming tools and techniques with which to write correct programs quickly and with confidence."

"This field provides sufficiently challenging problems for research, provides areas where we can benefit from close contact with our colleagues in mathematics and produces employable graduates with good programming and problem solving skills."

Professor Reinfelds said the department would also be willing to provide the core course and coordinate the organization of a common service course for scientists and engineers who did not intend to major in computing science and, if there were a demand, a computer-awareness course could be provided for arts students.

The concentration of research in the area of software science has resulted in the innovative trend of the department being developed still further. Department members have broken new ground in several instances that have been of interest to other universities in Australia and overseas.

Professor Reinfelds own research interests centre around the development of better communication between humans and computers.

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Senior Lecturer Dr. R. G. Dromey believes in keeping a low profile personally, but that hasn't stopped him from forging ahead in three main areas of research. They are (1) designing algorithms (ie procedures for problem solving), (2) text processing and information retrieval and (3) computer applications in chemistry.

The path to computing science for him began at the Swinburne College of Technology in Melbourne where he took a diploma in Applied Chemistry. After gaining a PhD at La Trobe University Dr. Dromey joined the Computer Science Department at Stanford University where he worked on an Artificial Intelligence project which explored the potential capabilities of computers. From there he went to the Australian National University to the Research School of Chemistry and then on to Wollongong.

Dr. Dromey enjoys solving problems and spends a lot of his time solving problems for other people, work that is eventually used in many commercial and industrial areas of society. He is currently looking for more efficient ways of representing and searching large volumes of information with a particular emphasis on chemical information. In July he will be heading back to Stanford University on six months study leave.

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Dr. A. Salvadori, the newest member of the department always gulps when someone asks about his background and his colleagues go off into gales of laughter.

"Born in Italy, grew up in Ireland, went to Canada and now I'm here," he finally says with a grin in his Italian-Irish-Canadian accent.

He came to Wollongong on a one-year appointment from the University of Guelph in Canada, which "few people have heard of but it is one of the largest universities with a huge agricultural component and veterinary science college, and with many

CE DEPARTMENT W GROUND

Campus News this year continues its description of Wollongong University departments. First on the list for 1980 is the Department of Computing Science headed by Professor J. Reinfelds.

Next issue Campus News will look at the Department of European Languages.



Members of the Computing Science Department, from left: Dr. A. Salvadori, R. Nealon, Bronwyn James (secretary), P. McKerrow, Dr. R. Dromey, Professor J. Reinfelds, Dr. T. Bailey. Australian students."

at Michigan State University.

Dr. Salvadori started out as a mathematician doing applied maths for his Master's degree and physics for his PhD. He started teaching computing science and "grew with the discipline." His particular interest lies with assimilating eco-systems ie. developing information retrieval data base systems. While in Australia he is conferring with people who work in all areas concerning the environment and examining how they organise their data. His area of research leads to more efficient ways of organising information used in all types of environmental impact studies.

* * * * *

American-born Dr. T. Bailey has been with the department since September 1978. A graduate of Alma College, Michigan (BSc Maths and Physics) and Colorado University MSc Physics) Dr. Bailey went on to do a PhD in Computing Science

His research centres around pattern recognition ie. the different ways in which computers can be used to decide among the various possibilities it might be observing. His current work is looking at cluster analysis and whether it can be a valid tool of analysis. Dr. Bailey said cluster analysis was a fairly new and rudimentary tool of analysis, often used at present as a last resort in analysing broad area data. It can be applied throughout the sciences and social sciences to simplify certain situations. Data is divided into groups or clusters and then the interaction between the clusters described. The weak spot is that the basis for forming the clustering analysis may not necessarily be sound and research is aimed at developing ways of testing clustering results.

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Mr. P. McKerrow is a "home body" in the department - he graduated from Wollon-

gong University College as a Bachelor of Engineering in 1972 and spent five years at Lysaghts working with electrical engineering machinery and doing a Master's degree part-time.

Meantime computers had come along and his Master's thesis was done on control systems based around computers. On joining the department at the beginning of 1979, Mr. McKerrow took on the task of establishing and maintaining the computing science laboratories.

His is a rapidly expanding task which includes the design and building of equipment for research being done by lecturers. A part-time PhD student, his research centres around logic state analysis which involves the design of a TV screen instrument to examine the internal workings of the computer. He is also doing research on micro-computers and micro-computer applications.

Continued overleaf

HIGHER FEES 'HARMFUL'

Australia, Canada, New Zealand and the United Kingdom will impose new or higher fees and charges on overseas students in 1980 and the following resolution was passed at the Annual General Meeting of the Association of Commonwealth Universities held in London on November 1, 1979:

"The Association of Commonwealth Universities has viewed with great concern the erection of financial deterrents to the movement of university students between the countries of the Commonwealth.

Mindful of the fact that it is a principal object of the Association to promote and encourage the exchange of students and staff between the universities of the Commonwealth.

Believing that all Commonwealth governments share the Association's belief in the value to Commonwealth countries both individually and collectively of such exchanges.

This General Meeting requests the Chairman and the Secretary General to take appropriate steps to bring to the attention of the governments concerned the need to consider the potentially harmful effects of such financial deterrents and to devise ways of avoiding these effects or mitigating them when they are seen to arise."

COMPUTING SCIENCE CONTINUED

His teaching duties this year will include taking the course for honours students on the latest computing systems. He said 1980 promised to be a good year for students with laboratory facilities that had quadrupled in the past 13 months.

Professional Officer Mr. Richard Miller is a graduate in mathematics from the University of Saskatchewan and spent a year at the university working as a computer programmer for the Mathematics Department. He was also a systems programmer for a large computer service bureau in Ottawa. At Wollongong University he has already distinguished himself since his arrival in 1976 by transferring the operating system of one make of computer

AVCC REPORTS

Universities would have to make their own decisions on what action, if any, would be taken to compensate for the Commonwealth Government's decision to continue taxing Commonwealth Postgraduate Awards in 1980, the Australian Vice-Chancellors' Committee has reported.

At its November meeting the committee discussed the various courses of action which the Universities might have taken collectively such as all top up the Commonwealth Awards to make up for the taxation or reduce the value of their own awards to make them superficially less attractive.

But the meeting decided no collective action was practicable in view of the different practices which already existed

in universities.

To assist universities the AVCC has supplied them with information on the following matters:

- . The number of university postgraduate scholarships granted by each university.
- . The value of each university's postgraduate scholarships.
- . Whether universities top up or subsidise Commonwealth Postgraduate Awards and, if so, by how much.

The AVCC has already had discussions with Education Department officers on what action should be taken to remedy the situation in the 1980/81 Budget and further representations would be made to the Government this year, the committee reported.

OVERSEAS STUDENT CONCESSIONS

The AVCC welcomes the Government decision to make some important concessions concerning the overseas students charge.

The Minister for Immigration and Ethnic Affairs announced details of the charges for private overseas students attending tertiary institutions on September 28 last year and made certain exemptions.

On October 10 he introduced the

Overseas Students Charge Bill and the Overseas Students Charge Collection Bill and at that time he introduced further exemptions.

After extensive discussions the AVCC believes further concessions are justifiable however, particularly for postgraduate students many of whom, by their studies and research, make direct and important contributions to the universities they attend. The AVCC will make representation to the Government accordingly.

to another computer, a feat performed for the first time in the world. Technically, the UNIX time-sharing operating system was transported from PDP-11 computers to Interdata computers. This software has been licensed by the University of Wollongong to run at about 12 other locations in USA, England, Holland and Australia.

Mainly because of the reputation established world-wide by Mr. Miller's excellent work on the portability of operating systems, one of the foremost computer scientists of today, Professor C. A. R. Hoare of Oxford University has agreed to visit the department for two weeks in March, 1980, and give a series of lectures on his latest research on the foundations of software science.

Mr. Miller is currently pursuing this area of research which aims to devise more portable systems of software which would solve the problem of having to learn a whole new software system each time machines all changed. The ultimate aim is the development of a single operating system that can be used on all manufacturers' products so programs can be run on any type of machine.

Mr. Miller is working on his PhD part-time and in his "spare time" can be found developing his musical skills on the pipe organ or harpsichord or singing with the University Singers.

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Since a University "is nothing without its students" Campus News will be writing about student activities from time to time and particularly about students who have made some small claim to fame, academic or otherwise. Campus News welcomes any nominations for mention and any information on student activities.

STUDENT STRIKES

A NEW NOTE



Keith Johns - Looking for musicians.

English honours student Keith Johns is looking for musicians.

Not content with the literary tasks of the year ahead, he has set out to form a chamber music group if he can find fellow enthusiasts. He envisages the group meeting regularly with the object of providing lunch time recitals at the University as a beginning.

"We don't have a Music Department here, but I feel it would be a significant addition to University life to have a chamber music group. The University Singers have set the ball rolling musically and a chamber group would be a splendid follow up," Mr. Johns said.

Well-qualified to form the group, Mr Johns has been studying piano since the age of five. His first teacher was Richard Smith in Wollongong, then he worked with Charles Glenn and Diane Selmon at Wollongong Conservatorium. At the end of 1974 he studied with international pianist Greville Rothan who was visiting Wollongong and studied with him again at the end of 1975 after a year under Nancy Salas at Sydney Conservatorium. Mr Johns travelled to Munich in February last year for more work with Rothan and during his time there visited New York to meet Rothan's mentor Claudio Arrau with whom he hopes to study in the future.

Meantime he will be busy in Wollongong tackling his English Literature honours course and thesis and trying to fit in up to eight hours practice a day on the piano. Mr. Johns said English had been an afterthought in his academic life - he had begun with History and Sociology.

"I've always loved English literature but I didn't think I was good enough when I first began University. In my second year I decided to give English a go anyway and haven't looked back since," Mr. Johns said.

He proved a rather good hand at Philosophy too, topping the course in Aesthetics last year.

"That was a real pleasure to do and it dealt with literature to a large extent," he said.

In his "spare time" Mr. Johns indulges in "my other great passion - Carl Jung" and prepares to give recitals.

Any musicians interested in becoming the foundation members of a chamber group are invited to contact Mr. Johns at the Development and Planning Office.

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OPERATIC CONTEST

On Saturday 14th June, 1980, the Illawarra Music Club will present the Finals of its First National Operatic Aria Competition.

Mr. Richard Bonyng, Musical Director of the Australian Opera has agreed to judge the Finals of the Competition. The Illawarra Music Club is guaranteeing a minimum of \$1,000 prize money, but hopes to increase this sum substantially as a result of donations.

ations.

The Competition to be held in the Wollongong Town Hall, will be under the distinguished patronage of Dame Joan Sutherland and Mr. Richard Bonyng.

Application forms will be available soon, and may be obtained by writing to the Illawarra Music Club, or by contacting Abe Segal, Physics Department.

ENERGY RESEARCH

Researchers into aspects of the mining industry at Wollongong University's Geology Department have scored grants totalling \$210,640.

The funds, covering three research projects, have been provided by the National Energy Research Development and Demonstration Council.

Department Professor A. Cook said the funds will do a great deal to help the research program in geology which has been growing steadily for 15 years.

The three projects assisted by the grant are:

Research into oil shale - high priority work which will help provide alternate oil supplies in Australia.

Research into coal carbonisation - a program that aims to find ways of providing higher grade cokes for large blast furnaces.

Research into the stress factors affecting any given mine in the past, present and future.

Professor Cook said the research into oil shale was aimed primarily at finding better ways to identify the shale, especially the lower grade commercial shale which was not particularly distinctive.

Finding and assessing the size of deposits would prove vital to Australia's fuel oil shortage, Professor Cook said.

"Oil shale reserves in Queensland have shown one small deposit has reserves equal to Australia's major petroleum reserves. Recovering oil from shale is a better proposition than coal liquefaction," he said.

This research was being done in collaboration with Professor Slade Warne at Newcastle University.

Much of the coal carbonisation work had been done in collaboration with Australian Iron & Steel researchers, Professor Cook said.

The work had been prompted by the problems associated with producing cokes that gave high quality performance in large blast furnaces.

Researchers were developing high stren-

gth coke that meant low coke rate and high throughput in the furnaces.

Professor Cook said the research affected the domestic industry and exports of coke that were destined as feed for large blast furnaces.

The third project was aimed at developing a technique to discover stress patterns and the history of stress in any mine.

"While the weight of the overlying strata (roof) is the most obvious factor in the stability of mine openings, roof falls generally occur when this vertical force interacts with lateral forces," Professor Cook said.

Lateral stress could also cause roof falls when there was very little actual roof weight.

"If we can work out where and when failures will occur, we can minimise the effect on productivity and costs," Professor Cook said.

He said research into stress factors was also related to gas outburst zones.

The team of researchers on this project included Mr. Ian Stone, a PhD. Student now working for Clutha.

The Australian Government Assistance Bureau and the Tertiary Education Commission have invited the AVCC to present evidence that universities incurred increased costs in training overseas postgraduate students.

When this evidence is presented, both bodies are prepared to consider whether some form of additional funding should be provided to meet the increased costs.

The request for evidence came after the Minister for Foreign Affairs announced payment of the \$500 grant-in-aid for sponsored postgraduate students under the aid programme would cease this year.

The Education Minister added that the grant-in-aid for postgraduate students under the Commonwealth Scholarship and Fellowship Plan and the Australian-European Awards Programme would also cease.

The AVCC was invited to comment and show that, if the grant-in-aid was to be retained there were costs incurred by sponsored overseas students which were not incurred by private overseas students and Australian Students.

The AVCC had to concede it was not possible to differentiate between the costs of training sponsored and private overseas students.

OVERSEAS NEWS

Universities and research establishments, academies of science and other professional bodies, or qualified individuals in Australia are invited to nominate appropriate individuals from developing countries in the Commonwealth for the Guinness Awards for Scientific Achievement. The awards are for recognition of individual or international achievement in the application of Science and Technology in the service of the community, in a developing country. For further information contact Mr. J. P. Shelton, Senior Adviser on Science, Technology and the Environment, Department of Foreign Affairs, Administrative Building, Parkes, ACT. 2600.

The Twelfth International Course on Vocational Education and Teaching in Agriculture organised by the International Centre for Agricultural Education, Berne, Switzerland, is to be held from 17 July 1980 to 14 August 1980 at Langnau and Zolllikofen, Switzerland. For further information contact the Secretariat of the CIEA, Federal Office of Agriculture, CH - 3003, Berne, Switzerland.

Advice has been received that the Perugia University for Foreigners will not accept any further enrolments of foreign students for the academic year 1980/81 to the introductory courses in Italian Language and Culture leading to admission to Italian Universities.

The Association of Indian Universities, Deendayal Upadhyaya Marg, New Delhi 110002, has forwarded a catalogue which details the publications available from the Association, particularly in the area of Examination Reform and Economics of Education.

The Sixth International Conference on "Improving University Teaching" is to be held from 9 July 1980 to 12 July 1980 at Lausanne, Switzerland. For further information contact the Secretariat, Improving University Teaching, University of Maryland University College, College Park MD 20742 USA.

GRANT FOR COAL FLOW STUDIES

The National Energy Research Development and Demonstration Council (NERDDC) recently announced a major grant to the University of Wollongong.

Dr. P. C. Arnold and Mr. A. G. McLean of the Department of Mechanical Engineering will head up a \$61,648 project to study the flow properties of coal for storage bin design.

The researchers will study particle size, shape and distribution, chemical composition, moisture content and temperature; and explore how these properties influence the flow of Illawarra coals in bulk handling systems.

"Too little is known about these factors," said Dr. Arnold, "and consequently storage bins and bulk handling systems can sometimes be designed wrongly resulting in waste and inefficiency."

Extensive use will be made of the University's Flow Property Testing Laboratory, one of only two such laboratories in Australia.

A grant of \$12,000 from the Electricity Commission of N.S.W. will enable the Mechanical Engineering Department to purchase a Pulse Phase Pneumatic Conveying system for the Bulk Solids Handling Laboratory. This equipment will be used to study the dense phase conveying characteristics of pulverised coal fuel, a form of fuel which will receive much more attention as the price of liquid fuels continues to rise.



Professor S.A. Marshall (left) and Dr. P. Arnold in the Department of Mechanical Engineering's Flow Testing Laboratory. Dr. Arnold is putting samples into the Jenike Sheer Testing Machine.

A grant of \$3,686 will enable Dr. Peter Arnold and Dr. Max Lowrey (Department of Civil Engineering) to study methods for the "Structural Design of Storage Bins for Bulk Solids." Australia, in line with the rest of the world, has a history

of catastrophic failure of storage bins. Some of these failures have led to several lives being lost. This project will examine modern structural design methods to provide more reliable techniques for designing bulk solids storages.

Basic moral issues to do with life, death, and human freedom will be studied in a new subject to be introduced at Wollongong University in 1980.

Called Social Philosophy, the subject will touch on questions selected from a range including abortion, euthanasia and suicide, warfare, punishment, animal rights, civil disobedience, and privacy.

Announcing the introduction of the subject the Chairman of the University's Philosophy Department, Professor Lauchlan Chipman said that admission to the new subject would be restricted to those second and third year students who met certain

strictly defined prerequisites.

"Although we recognize that very many students are vitally interested in these questions, we are determined that this subject will be offered at a very high level," Professor Chipman said.

He added that one of the purposes of the subject was to raise the standard of debate on these questions from what he described as the "dreadfully muddled" level of much popular and even educated discussion.

Students taking the subject will need to have passed a general first year philosophy course, and also a course in Ethics, which studies fundamental principles to do with

moral thinking.

The lecturer in Social Philosophy will be Ms Suzanne Uniacke, who joined the University of Wollongong in 1976 from the staff of La Trobe University in Melbourne, and is currently conducting research in the area of human responsibility.

COURSE COVERS MORAL ISSUES

DRAFT ILLAWARRA REGIONAL PLAN

On Friday 19th October, 1979, the Development & Planning Office organized a Seminar for members of the University and the general public to discuss the Draft Illawarra Regional Plan. The plan was produced by the Planning & Environment Commission. Over 100 people attended the Seminar and the major concern expressed in discussion was the question of Transport. The key note address was given by Professor Malcolm Logan, Professor of Geography at Monash University. The full text of his address is below.

Before one begins to criticise a planning document such as this it is important to be aware of the context in which it is prepared and presented. This is a regional strategic land use plan using a traditional broad-brush, top-down approach. It is also a draft plan. It seeks to identify regional problems and to provide a broad outline of future development, a framework within which local authorities may prepare statutory plans, whereby they can control development by land use zoning and other statutory means. Within these parameters, which are in fact extremely constraining parameters, the Draft Illawarra Regional Plan is a good competent example of a regional strategic land use plan. Its merits are as follows:-

- (a) It appears to be based on fairly careful and wide ranging research, and emerges as a very practical, no-nonsense, well presented document.
- (b) It is not a parochial document, but shows an awareness of national and state issues and pressures and of the way in which these impinge on the region. This is important because, with regions, we are dealing with particularly open systems, greatly affected by national immigration policy, tariff policy, trade policy and so on.
- (c) The Report shows an awareness of at least some of the major economic, social and environmental problems of this very unique region. I will say later that these problems are not articulated clearly enough nor is their resolution argued strongly enough, but at least the report identifies many serious problems, such as:

- (i) the relative fragility of a regional economy in a highly uncertain future based so strongly not only on a single industry but a single enterprise;
 - (ii) other problems of a narrow employment base, including few jobs for women and high unemployment rates generally;
 - (iii) problems in the rural sector flowing from rising production costs and the fall off in demand for dairy products;
 - (iv) the problem of conflict resolution as between the preservation of attractive natural landscapes and coal mining; between recreation demand, subdivision pressure and farming; between water catchments on the Tablelands and future mining and extractive activities;
 - (v) The relative underdevelopment of tertiary and cultural activities in the region and the leakage to Sydney;
 - (vi) the existence of some particularly deprived areas within the region e.g. Shellharbour and of deprived groups, e.g. migrants.
- (d) The Report identifies the public agencies whose support is going to be needed for implementation; Implicit in this identification is a recognition that the Regional Plan is only an advisory document.
- (e) It identifies problems related to changing population influx and structure.
- (f) The Plan looks at matters associated with quality of life; not only at economic growth.

2. So within the bounds in which regional strategy plans are formulated and operate this Report has achieved quite a lot. To me, however, there are two surprising omissions in the document, judging it within these bounds.

- (a) There is a lack of emphasis on public transport needs, especially in the northern part of the region, which, with fairly concentrated settlement and a unique geography would appear to be suitable

for a public transport system. The high car ownership mentioned a number of times in the report could be a function of an inadequate public transport system. In the context of high energy costs it is rather disturbing to see a continued reliance on the motor car as the main means of transport.

- (b) There is a lack of analysis of the linkages between the Illawarra Region and Sydney. Proximity to a large city brings both advantages and disadvantages - the advantages, for example, of access to tertiary services in the big city and the underdevelopment of these in the Illawarra, of access to jobs and so on. Various parts of the Region are probably more closely tied to Sydney than to each other, e.g. Mittagong and Bowral probably have few linkages with Wollongong. I suspect the northern part of the Region is functionally a part of the Sydney Metropolitan Area and probably should be planned as such. I would have liked to see more analysis of how this Region hangs together and of how it is linked to Sydney. Is it in fact a unified Region? What are the effects of the southward spread of Sydney? What are the economic and social links with Sydney?

3. However, while there are strengths in the Report, it also shows all the weaknesses of traditional planning; and I therefore find it a rather disappointing statement when we consider the magnitude of the problems - and the opportunities - of the Illawarra Region. There is a great mismatch between the first half of the Report, which identifies many of these problems and the second part, much less successful, which talks about implementation and related issues.

4. This brings me to my major criticisms:

- (a) The Report is negative in nature. The only mechanism available is the zoning of land for particular uses, and then waiting for the private sector to take the initiative. Is it not possible for the public sector to play a more positive role?
- (b) Although a good deal of time is spent on identifying social and economic problems the Report in its implementation side is strictly limited to physical planning. This is the most disappointing part of the Report. In some overseas

countries, notably in the U.K., with the growing awareness of economic and social problems, planning has come to take a lot more on board. Largely because there were no other bodies to do it, planning has been forced to become concerned about deprivation, poverty, unemployment and other questions that are more than physical. Moreover authorities, in tackling these kinds of problems have taken a corporate approach to planning which this document ignores. The corporate approach involves the close co-ordination of all government agencies right at the planning stage. It is based on problem identification and a listing of priorities for action. In many ways it is a new approach to government which argues that all the resources of government should be used to address these priorities. It argues against incrementalism in resource allocation.

This approach might address the following sorts of questions:

- (i) can we get a more equitable distribution of resources in Illawarra both relative to other regions and within Illawarra itself?
- (ii) what kinds of programmes would be needed at State level?
- (iii) is physical planning enough or should we be talking about something else?
- (iv) should we be looking towards a more policy oriented approach related to the spending of government money?

I think something of this kind of approach could have been taken in this Report so that the reader could get a ready appreciation of the great social, economic and environmental problems of the Illawarra, ranked in some order of priority. The next step would be to

mobilise resources within the Region and outside in order to address the problems. That is, rather than to simply say that there is a highly uncertain economic future for Illawarra, a plan of this sort should tell us what the options are and what to do about them.

- (c) The Plan is essentially apolitical. It does not really tell us how to proceed to get things changed. This is not unusual in planning documents which try to preserve the value-free neutrality of the planner. Actually planning is a highly political act: although the motivations can be technical and neutral it has highly political effects on the ground. Some people are advantaged and some are disadvantaged by planning. If this is so a planning report should spell this out because just by land use control you can do a lot; and, as well, should refer to policies necessary to solve problems and indicate ways of convincing governments - at all levels - to overcome the problems.

Finally, once again as often happens, there appears to have been a rather limited direct involvement of local "outsiders" in the plan making. The Regional Planning Committee appears to have had 13 members of whom 5 represent state agencies, 5 represent local councils and only 3 are outsiders (one from commerce/industry, one from regional education and only one from community groups). Surely more people could have been involved in preparing the Plan, e.g. women and migrants, rather than simply providing them opportunities for public reaction.

CONCLUSION

5. So overall I think this is a practical kind of document that tells us something about what is going on. It reflects all the limitations of strategic, land use, top-down regional planning but has probably overcome these

limitations better than its counterparts.

6. But I do not get a great sense of either purpose or urgency from the Report. Problems are identified but in a piecemeal fashion and there is little sense of the tremendous uncertainty of the economic and social future of this Region. Of our outrage at the poverty of some areas it tells us nothing nor how the communities might be mobilized to do something about it. All this is disappointing.

7. But I wonder if there is not now an opportunity to build on this Report. Most of the spade work is done; now we need to tie it all together, to see the unity of the problems, to identify the levels of government that need to be involved, and to make it possible for the community to take action.

VISIT FROM CULTURAL AFFAIRS OFFICER

Miss Shirley Scher, Cultural Affairs Officer of the United States Consulate General, Sydney, visited the University on 24th January, 1980. She talked to members of the Economics Department about prospective visitors from the United States, information available on special subjects such as energy and industrial relations, and monetary policies, and the prospect of seminars in Sydney based on direct communication with U.S. specialists in such areas.

INFORMATION POLICY CONT.

- e) provision of appropriate library services in educational institutions where such provision is cost-effective and necessary:
 - i) to meet essential needs of users in connection with their work within such institutions having regard to the availability of public library service,
 - ii) to supplement the provision of specialized services to the public through public libraries where this is appropriate.
- f) continuing acceptance of a responsibility on the part of special libraries established to serve the needs of a particular clientele, to make resource material available in the public domain and to provide specialist services to serve public needs through appropriate channels and with appropriate compensation.
- g) development of effective referral services to link users with public or private corporate or individual information sources,
- h) development of specialized collections and services not otherwise provided.

Campus News welcomes letters to the Editor, for publication, on any subject. Letters should be reasonably short to allow for the publication of as many as possible. Longer letters will be considered in some circumstances. Ed.



TAKE NOTE

POSITIONS AVAILABLE

The Development and Planning Office receives the monthly list of University Vacancies - Overseas and in Australia, compiled by the Australian Vice-Chancellors' Committee. Details of staff vacancies are also received regularly from individual universities.

CSIRO PUBLICATIONS.

The following CSIRO publications are available for perusal in the Development & Planning Office, Room G04, The Hut.

CSIRO Directory 1979
CSIRO Research Programs 1979-80
CSIRO Industrial Research News
The Researchers TV Series, Catalogue

CONFERENCES, SEMINARS, SYMPOSIA.

Details of the following items are available from the Development and Planning Office, Room G04, The Hut.

AUSTRALIAN INSTITUTE OF TERTIARY EDUCATIONAL ADMINISTRATORS, 4th National Conference. Griffith University, August 15-17, 1980.

11TH AUSTRALIAN COLLEGES OF ADVANCED EDUCATION COMPUTER CONFERENCE. Brisbane, May 12-14, 1980. Call for papers.

CENTRE FOR EDUCATIONAL RESEARCH AND INNOVATION, 5th General Conference. Paris. September 8-10, 1980.

1980 MANAGEMENT EDUCATORS' CONFERENCE. Monash University, August 25-27, 1980. Call for Papers.

1ST PAN-PACIFIC CONFERENCE ON DRUGS AND ALCOHOL, Canberra, Feb. 26 - March 5, 1980.

RADIATION PROTECTION COURSE NO. 3. Lucas Heights, May 26 - June 20, 1980.

THIRD NATIONAL RELIABILITY CONFERENCE. Birmingham, U.K. April 29 - May 1, 1981.

WORKSHOP IN CONTINUING EDUCATION. ANU Centre for Continuing Education March 3 - April 11, 1980.

SCHOLARSHIPS, FELLOWSHIPS, AWARDS, GRANTS.

Details of the following items are available from the Student Enquiry Office, Ground Floor, Administration Building. Closing dates are in brackets.

AUSTRALIA-CHINA COUNCIL, Fellowship in Australia-China Studies tenable at any University in Australia (March 14, 1980)

AUSTRIAN GOVERNMENT SCHOLARSHIPS 1980-81 (March 14, 1980)

CHINA - Scholarships for Chinese language and culture studies. (March 31, 1980).

DANISH GOVERNMENT SCHOLARSHIPS - 12 months or 6 months duration (March 8, 1980).

FINNISH GOVERNMENT SCHOLARSHIPS 1980-81 for postgraduate study in aspects of Finnish culture. (March 1, 1980).

FINNISH GOVERNMENT SPECIALIST GRANTS AT POSTDOCTORAL LEVEL, 1 or 2 months duration.

'Take Note' will now always appear on the back pages of Campus News instead of on a separate sheet as previously. Items should be presented to Beatrice Henderson at the Development and Planning Office.

FRENCH GOVERNMENT SCIENTIFIC & PROFESSIONAL SCHOLARSHIPS 1981, 3 to 6 months duration. (June 2, 1980).

MULTIPLE SCLEROSIS RESEARCH, Post-doctoral Fellowships, (March 31, 1980).

QUEENSLAND UNIVERSITY POST-GRADUATE SCHOLARSHIPS.

SCUOLA NORMALE SUPERIORE, PISA, ITALY - Graduate studies in Mathematics, Physics, Astrophysics, Chemistry, Biology, and in the Humanities. (April 30, 1980).

ST. JOHN'S COLLEGE, CAMBRIDGE, RESEARCH STUDENTSHIPS (April 1980).

COURSES AVAILABLE AT OTHER UNIVERSITIES OR INSTITUTIONS.

Details of the following items are available from the Student Enquiry Office, Ground Floor, Administration Building.

CATHOLIC UNIVERSITY LEUVEN, BELGIUM. Master of Business Administration.

CATHOLIC UNIVERSITY OF LOUVAIN, BELGIUM. Master's Degree in Urban and Regional Science and Planning.

COLUMBIA UNIVERSITY, U.S.A. Graduate work in History.

COLORADO RESEARCH INSTITUTE. Short Courses in Hydrology, Hydraulics and Water Resources. June-July 1980.

DANISH INSTITUTE FOR INFORMATION. Scandinavian Summer Seminars, August, 1980.

INSTITUTE OF JAPANESE LANGUAGE. Courses in Japanese Language.

MACQUARIE UNIVERSITY. Special Part-time courses in Languages; School Librarianship in the BA Dip Ed Program; School Experience Program.

SOPHIA UNIVERSITY, JAPAN. Summer Session in Asian Studies, July-August, 1980.

UNIVERSITY OF MELBOURNE. Master of Environmental Studies.

UNIVERSITY OF SUSSEX, Master's course in Operational Research.

UNIVERSITY OF TORONTO, Graduate Programs in History and Philosophy of Education.

UNIVERSITY OF WESTERN AUSTRALIA, Master's Degree in Industrial Relations.

COUNSELLING PROGRAMME TRAINING

The Counselling Centre and the Psychology Department of Wollongong University sponsored the second one month intensive residential training program ('the Gestalt Approach') at Mr. Buller, Victoria, during January.

The training program was directed by Dr. James Oldham of Melbourne. Twenty two participants from all over Australia attended.

The organising bodies hope the training workshop in Gestalt therapy will become an annual event. Planning for the third workshop, to be held in January 1981, is now underway. The workshops are intended primarily for professionals in counselling, education and administration.

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Don Diespecker and Carolyn Perry are offering three weekend residential workshops at Gerroa. They are titled 'Personal Power and Life Planning' (March 14 - 16); 'Self-awareness and Creativity' (May 23 - 25); and 'Communications and Relationships' (June 20 - 22). Enquiries tel. Psychology Department, Don ext. 990; Carolyn ext. 961.

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Dr. Don Diespecker, senior lecturer in psychology, has been invited to give a paper and lead a workshop at the first Psychic Orientation Conference to be held at La Trobe University, March 1 - 2, 1980.